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Regional Truck Permitting Study

Draft Final Report

DRAFT
Report

prepared for

Chicago Metropolitan Agency for Planning
on behalf of the Chicago Regional Growth Initiative

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with

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report

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Somehow, I broke our standard report template… These need to be re-tagged and regenerated for the final draft!

Executive Summary

Why truck permitting is important
Northeastern Illinois is the freight and logistics hub of the nation, and a strong freight system contributes to a strong regional economy. Freight is a major employer itself, and also supports other industries including manufacturing and warehousing. To support freight, the region needs to invest in its freight infrastructure, and also ensure that regulations do not prevent the efficient movement of goods.

Trucking industry leaders have long suggested that improved and coordinated permitting processes and systems are needed for trucks that exceed legal size and weight restrictions. Regulation of oversize and overweight trucks is necessary. Public agencies conduct permitting because they have a responsibility for safety and infrastructure preservation, which they accomplish by directing very large trucks to the routes that are safest and most appropriate for them to use.

A truck carrying an oversize or overweight load from a highway to a delivery site may pass through state, county, township, and municipal jurisdictions, each with its own permitting process and requirements. Often three or more permits are required for a single trip. Some permitting systems, such as the statewide system run by the Illinois Department of Transportation (IDOT), are automated, but most others are far less efficient. Response times, communications protocols, and fees vary by county and especially by municipality. The current fragmented system results in a lack of compliance, increases enforcement costs, and adds a burden to the freight industry.

Study background
Through their collaboration on economic growth initiatives, the leaders of the seven counties in northeastern Illinois and the City of Chicago identified truck permitting as a key opportunity. These regional leaders initiated the Regional Truck Permitting Study, which was funded by numerous partners, including each of the region's seven counties, the City of Chicago, the Illinois Department of Transportation (IDOT), and the Chicago Metropolitan Agency for Planning (CMAP).

The study process involved interviews and workshops with industry leaders and permitting agencies, research, and identification of best practices, leading to development of a **vision statement** for truck permitting in northeastern Illinois:

> ***An effective vision for local permitting in northeastern Illinois should reduce industry's operational costs, make goods movement more efficient, and minimize inappropriate impacts on the region's infrastructure.***

To implement this vision, the study considered various alternatives, ranging from a status quo approach to across-the-board consolidation of permitting systems at IDOT or county levels. Maintaining the status quo was rejected, as the current environment places substantial burden on industry and government alike, as was outright consolidation, which was found to be infeasible in the near term. Today, the region's permitting agencies vary tremendously in the scale and sophistication of their operations, which makes a "one-size fits all" solution impractical. Rather, the study identifies a set of recommendations to provide a common foundation for all permitting agencies, complemented with tailored recommendations on how best to apply technology and data management to low-volume, medium-volume, and high-volume permitting agencies. This study's recommendations will help set the stage for greater coordination of permitting activities in the future.

Recommendations for all permitting agencies

Permitting agencies range from small municipalities that receive only a handful of permit applications in a year to larger jurisdictions that receive dozens each week. County permitting agencies typically have full-time staff, while in most municipalities, permitting is only a small portion of someone's job description. Despite this diversity in local conditions, there are several improvements in consistency that all permitting agencies can adopt:

- A **uniform permit application** was widely accepted by stakeholders. Carriers now have to fill out different applications for each municipality or county, some online, some via paper or email. Applications have evolved by agency, and there are minor differences without much additional value. As the majority of carriers must purchase an IDOT permit based on their route, the study recommends a standard permit application for the region that is based on the IDOT application. Online permit submission systems should be able to import an IDOT permit as a starting point for most data entry. With system modifications, the IDOT permit system could even automatically generate permit applications for relevant local agencies.

- **Consistent communications** would improve efficiency. It is not easy for carriers to determine contact information at a municipal level: a variety of municipal departments issue permits, including engineering, public works, transportation, emergency management, or police.   Most municipalities do not provide readily accessible information about truck permitting, and it can take as many as four or five phone calls to reach the right person. The study recommends developing a roster of appropriate contact information for permitting agencies, housed at the subregional or county levels, along with the adoption of a standard email address (e.g., OSOWpermits@<municipal_address>) by permitting agencies. This email address could be used to accept permit applications, deliver approved permits in PDF format, answer questions, and provide links to automated systems for agencies that have them.

- Many communities would benefit from **differentiating between routine loads** and those that are truly unusual. Most oversized and overweight vehicles that seek permits from municipalities typically do not cause pavement issues, and their ability to use bridges could be analyzed in advance for a range of vehicle configurations. Routine loads should be able to be approved on most highway segments, particularly in smaller communities that may only have a few arterials that are relevant for oversize and overweight trucks. Standardizing the process for permitting routine loads will help reduce response time and create consistency for the occasional request. For larger or unusual loads crossing a bridge or a substandard pavement section, more engineering analysis of load rating or pavement capacity would be needed.

While the study respects the responsibility of local governments to issue permits for roads under their jurisdiction, there are opportunities for **cross-jurisdictional coordination**. Given the relationship between counties and townships with respect to engineering data, the study recommends county issuance of permits for unincorporated areas, as Kane County already does. Each county should review its own situation with its townships and work to find an appropriate solution. Some groups of municipalities may also wish to pursue a multi-jurisdictional permit shared between several municipalities.

Recommendations for greater technology adoption based on permitting volumes
The recommendations above provide a foundation for industry and the public sector, establishing some efficiencies at relatively low cost. Opportunities for greater efficiency remain, particularly related to technological applications and data management. In some cases, greater **technology adoption** is recommended, with the appropriate use of technology varying based on permit volume and complexity:

- The technology used by most state permitting agencies is complex and costly, and is inappropriate for most local agencies. One notable exception is the City of Chicago, where the complexity of the road and bridge network and large number of very large loads makes a statewide-quality permitting system a necessity. The City could purchase its own system, or working with IDOT to find a joint solution using IDOT's current technology.

- For other higher-volume permitting agencies such as counties, some additional technology adoption is also recommended. These large permitting agencies should investigate automated systems, although less comprehensive systems than IDOT or the City of Chicago. The main aim of agencies should be on efforts to speed workflow.

- Although many municipalities do not handle enough permits to invest time or money in technology enhancements, some are embracing technology for submission and delivery of permits. Some use simple, web-based systems hosted by third parties (with costs typically covered by carriers as per-permit surcharges) to handle basic submission, delivery, and fee payment. Smaller agencies may find it most efficient to use these third-party hosted solutions, and municipalities with very small volumes may not benefit from an automated system at all.
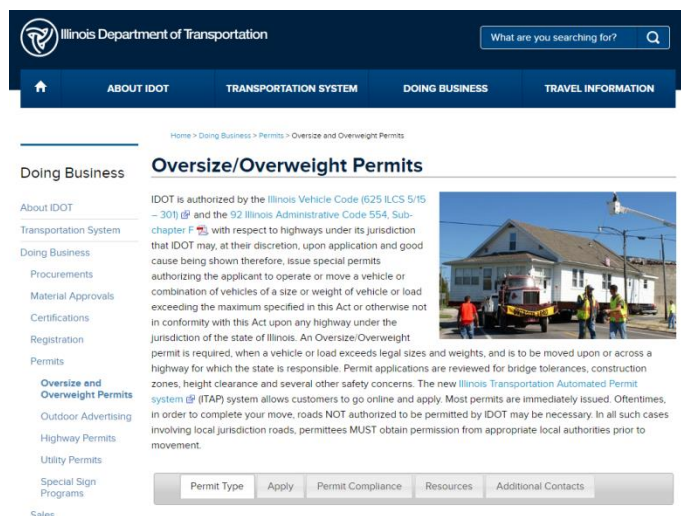
Recommendations for improved data sharing
The study makes recommendations for improved data sharing, which would enable even greater coordination of truck permitting among public agencies and also provide more transparency for private carriers. There are several ways in which **improved data** could make truck permitting more efficient:

- For carriers, identifying the jurisdiction of roads they wish to use can be a substantial challenge, as there is no consistent source for this information. IDOT also lacks access to updated jurisdictional data for local roads; the state does not have timely and accurate information about the latest annexations, or

information about maintenance agreements where permitting authority may differ from road ownership. Improving the **transparency and quality of data of jurisdictional data** would not only benefit truckers looking for an appropriate point of contact, but would also allow IDOT to notify all relevant local agencies if a permit request was approved that would involve travel off the state highway network. In the future, this improved data might also allow the IDOT permitting system to generate a permit application for each relevant local jurisdiction.

- Agencies should **publish static data**, or elements of the permit application review process which change very infrequently, such as highway designations, ownership, permitting responsibility, presence of bridges, lane and roadway widths, and vertical clearance restrictions. This data should be shared with industry and used to recommend route networks for some types of routine loads.

- Agencies should also **publish relevant operational data**. Temporary restrictions to the road network are one of the uncertainties in the permitting process. Northeastern Illinois agencies can take a leading position on local permitting by developing an approach to collect and publish road closure information. These would include planned construction and maintenance closures, as well as shorter-duration incidents and planned events.

Technical resources for permitting agencies
Finally, the study also developed technical resources that public agencies can use to improve the truck permitting system in northeastern Illinois.

- Many stakeholders expressed interest in a **model truck permitting ordinance** which can be used by communities across the region. Many municipalities either do not have established truck permitting ordinances, or do not currently issue permits. The lack of an ordinance has raised questions among enforcement officials as to whether an oversize or overweight load could legally operate on a municipal road without a permit, even if the municipality did not issue permits. A model ordinance would help ensure a clear and consistent approach, helping industry while preserving infrastructure and safety.

- Other stakeholders have expressed an interest in **technical assistance for drafting Requests for Proposals** (RFPs) for technological solutions. Many public agencies interested in automated software and other approaches are unaware of the technical features they should consider for inclusion in an RFP. Publicly-available reference materials would help these agencies as they go through the procurement process.

1.0   Introduction

Many industries, such as construction, agriculture, fabricated metals, and energy, involve the transportation of goods which exceed the typical legal weights and/or dimensions for transportation on our nation's highways. Additional laws are in place at the Federal, State, and local levels to address such transport, commonly referred to as either "heavy-haul" or "oversize/overweight (OS/OW)" transport. These laws, however, are typically implemented in a patchwork due to differences in the impacts of these industries on various sets of communities. The result is a challenging case of interjurisdictional coordination both for motor carriers who must navigate a complex set of laws, processes, and communications in order to transport these loads legally.   A permit or similar permission is needed from the owner of each road traveled on a trip. In Northeastern Illinois, that requirement means that a complex OS/OW trip requires a multitude of permits.

The net effect of such complexity is that it discourages investment in the relevant industries in the region. With 284 municipalities in Northeastern Illinois ranging from small rural communities to the City of Chicago, seven counties, and hundreds of townships, creating a harmonious environment for businesses involved in transporting OSOW products and goods is a regional challenge when a carrier must leave the State-owned highway network. While commentary from industry is anecdotal, the prevailing notion is that the complexity of the highway network and its corresponding ownership poses challenges which discourage businesses from operating in Northeastern Illinois. As Table 1.1 shows, the CMAP region has more municipalities than New York City, Los Angeles, and Houston/Galveston's corresponding metropolitan planning organizations.

Table 1.1: Comparing Counties and Municipalities in Four Major U.S. Metropolitan Areas

Metropolitan Area	Metropolitan Planning Organization	Number of Counties	Number of Municipalities
Chicago	CMAP	7	284
New York City	NYMTC	10	191
Los Angeles	SCAG	6	191
Houston/Galveston	HGAC	13	134

Sources: CMAP, New York Metropolitan Transportation Council, Southern California Association of Governments, and Houston-Galveston Area Council

Commercial vehicles in the United States are limited by statute as to the legal dimensions and maximum gross vehicle weight which can be operated on a highway network. Figure 1.1 shows an example of such limitations for dimensions. Vehicles that operate above these weights or dimensions must receive an oversize/overweight permit from the jurisdictions entered prior to travel. For travel on state and U.S. highways, state statutes and regulations govern the allowable weights, place restrictions on distribution of those weights across axles, and set travel restrictions. Many statewide agencies issue anywhere from 200 to 500 permits per open business day. Depending on the industries in a region and the highway network ownership, counties and municipalities across the country typically issue anywhere from 75 permits a day for the highest volume agencies down to less than 5 permits a year for the smallest volume agencies.

Figure 1.1   Federal Maximum Width and Length Requirements, Commercial Motor Vehicles and Truck Tractor-Semitrailer Combinations
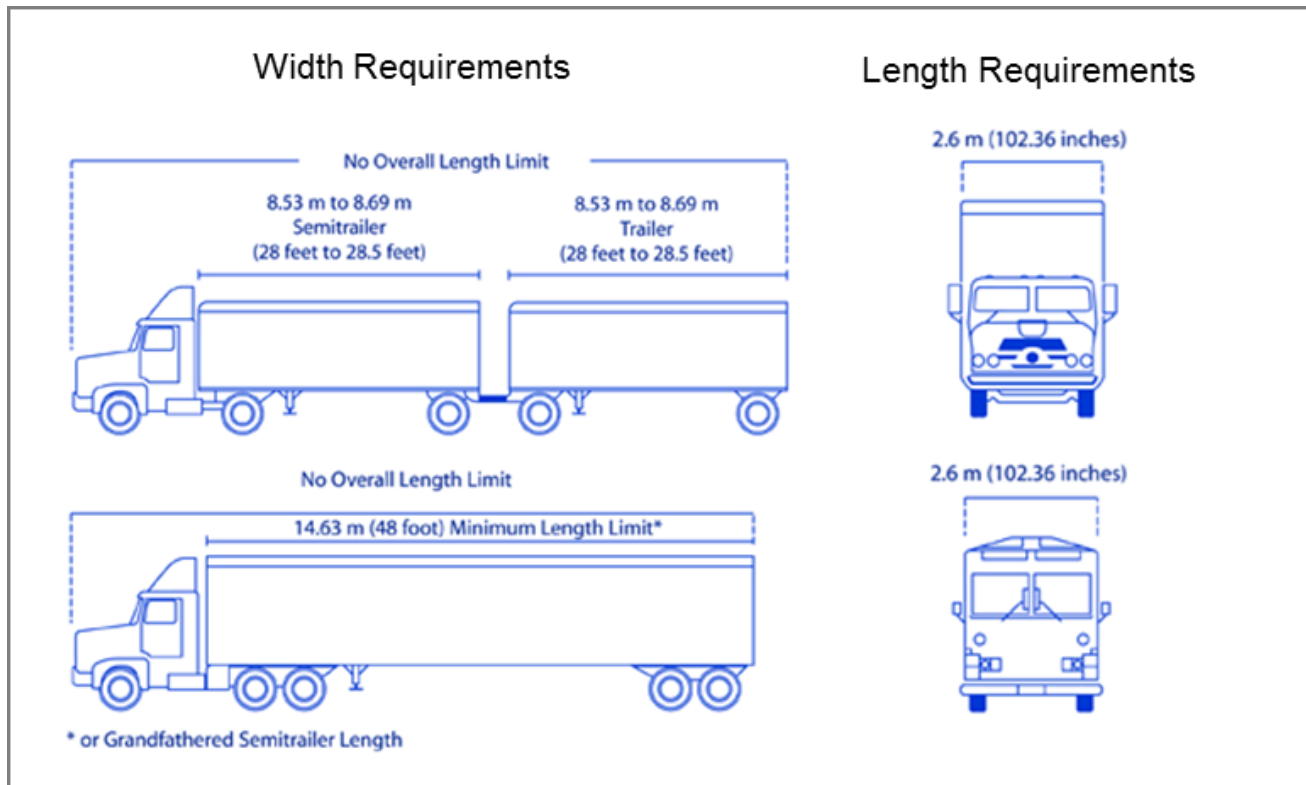
Source: U.S. Department of Transportation, Federal Highway Administration (2015)

At the county and municipal level, however, the state statutes and regulations about truck permitting generally serve only as an upper bound for permitted movements, while local governments can further restrict both allowable size and weight (either gross or per-axle) on portions of their road networks. Trucking industry leaders have long suggested that improved and coordinated permitting processes and systems are needed for trucks that exceed legal size and weight restrictions. Regulation of oversize and overweight trucks is necessary. Public agencies conduct permitting because they have a responsibility for goods movement, safety and infrastructure preservation, which they accomplish by directing very large trucks to the routes that are safest and most appropriate for them to use.

1.1   Local Permitting in Northeastern Illinois

In July, 2016, the Illinois Department of Transportation (IDOT) issued 3,827 permits to use the IDOT-owned state highway network where the trip's origin or destination was identified by the carrier as being in Northeastern Illinois at a location on a county, township, or municipally-owned road[1], and not at a state border. For trips where the number of vehicle axles was recorded, 41% of such trips were for 5 or fewer axles, and 75% were for 7 or fewer axles.

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[1] Source: Illinois Department of Transportation, data extract from their "Illinois Transportation Automated Permits" system.

Table 1.2 summarizes the distribution of these permits across counties. Some of the region's trips are not included here, such as trips starting or ending in Wisconsin or Indiana, or smaller trips within the region which did not utilize a state-owned highway.

Table 1.2: IDOT Permits Issued in July, 2016 Involving Northeastern Illinois as an Origin and/or Destination

County	Total	Origin	Both Origin and Destination
Cook 016	1,947	1,524	1,180
DuPage 022	473	421	368
Kane 045	443	370	257
Kendall 047	52	22	14
Lake 049	200	160	140
McHenry 056	149	126	76
Will 099	563	357	290
Total:	**3,827**	**2,980**	**2,325**

A carrier operating in Northeastern Illinois has a complicated landscape to navigate when it comes to obtaining the right permit credentials for the local portion of the move. Depending on jurisdictional boundaries and maintenance agreements, a carrier's trip could easily traverse any or all of the following permitting requirements:

- *Counties,* which have a mix of contiguous and non-contiguous roadway segments;

- Incorporated *municipalities* (villages, towns, cities) where some roadway segments are owned or maintained by the municipality while others are owned or maintained by the county or the state; and

- Unincorporated *townships* where some roadway segments are owned or maintained by the municipality while others are owned or maintained by the county or the state.

Figure 1.2 is an example of such a potential trip, shaded in blue. The carrier is operating between a point in unincorporated York Township in DuPage County, to a point in incorporated Willow Springs in Cook County. If a carrier was to obtain permits for this trip, the following permits would potentially be needed, in sequence:

- York Township;

- Oakbrook Terrace;

- State of Illinois;

- Burr Ridge;

- Cook County; and

- Willow Springs.

Figure 1.2   Example of a Multi-Jurisdictional Local Permit Move
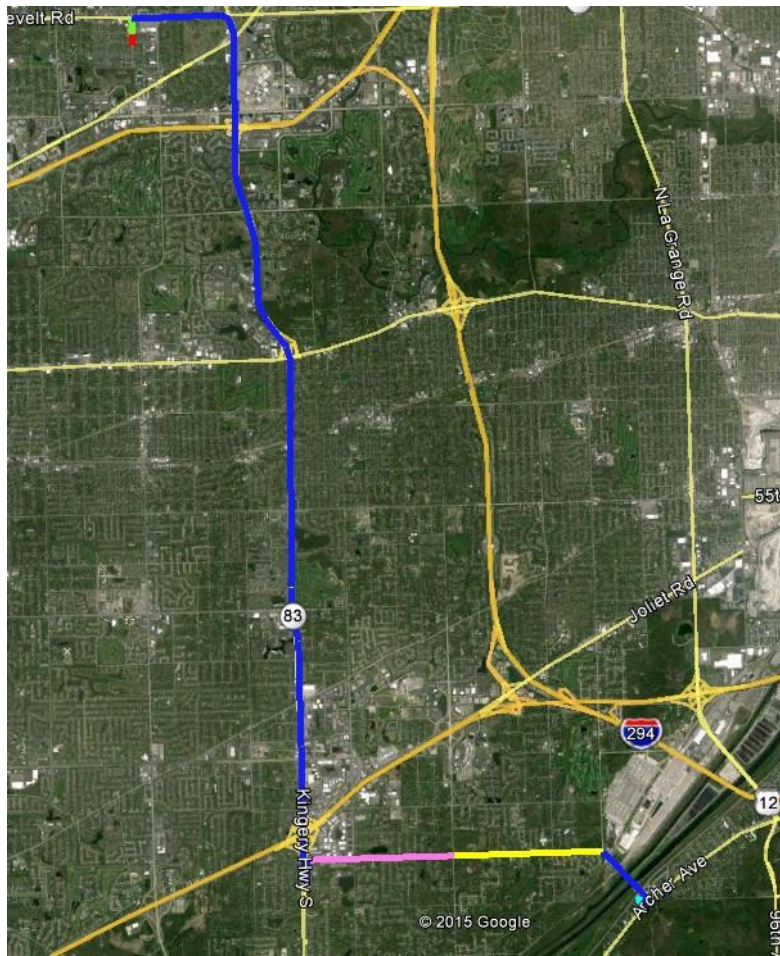
In a previous study conducted by Loyola University on economic impacts of improving OS/OW permitting, a case study included a company where one half of a manager's time was spent simply trying to understand and verify jurisdictional issues, at an estimated annual cost to the firm of roughly $100,000 to resolve these jurisdictional issues[2].

1.2   Project Inception

Through their collaboration on economic growth initiatives, the leaders of the Chicago Regional Growth Initiative (CGRI) identified truck permitting as a key opportunity. These regional leaders initiated the Regional Truck Permitting Study, which was funded by numerous partners, including each of the region's seven counties, the City of Chicago, the Illinois Department of Transportation (IDOT), and the Chicago Metropolitan Agency for Planning (CMAP). The study developed an informed consensus on how a "system" of technology, process, and policy can be identified and recommended based on a structured approach to problem decomposition, alternatives analysis, and stakeholder outreach. Cambridge Systematics, Inc. (CS) led this project team, with support from Metro Strategies, Inc.

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[2] H. Bachour, *A Study of Truck Permitting and Routing Systems in Illinois: The Economic Impact of a Streamlined System*, Loyola University Chicago, p. 2.

An advisory committee was set up including representatives from industry via the Supply Chain Innovation Network of Chicago (SINC) and participating CGRI agencies. Early in the project, the advisory committee was expanded to include municipal participation from the Metropolitan Mayor's Caucus, multiple local councils of government, and the Illinois Truck Enforcement Association.

Truck permitting affects a variety of industries in the region's economy. While OS/OW moves are a fraction of the total truck traffic in any region, these moves are concentrated in industries such as construction, energy, bulk sealed international containers (including export of agricultural products), large-scale manufacturing, and house moving. These industries are important to the regional economy; for example Northeastern Illinois added approximately 29,000 total manufacturing jobs from 2010 to 2014[3].

The Federal role in OS/OW operations does not involve the issuance of permits. Therefore, the majority of innovation over the last forty years in permitting has come at the statewide level. From the introduction of some of the first fax machines in the 1970s, to innovations in on-line customer application data entry and approved permit delivery in the late 1990s, to recent industry innovations in automated route analysis found in technology such as the Illinois Department of Transportation's (IDOT) "ITAP" system, specialized carriers have become accustomed to an increasing level of efficiency and effectiveness in permitting.

Meanwhile, OS/OW loads keep growing each year in both dimension and weight. Manufacturing processes, engineering tolerances, and just-in-time processes have dramatically reduced the amount of on-site assembly of smaller pieces, and have shifted transport to larger equipment, components, and products. In wind energy, for example, a load length of over 200 feet for transporting a windmill blade is no longer uncommon, and gross vehicle weights for nacelles, which hold engines or other equipment on a piece of energy equipment such as a windmill, routinely exceed 300,000 pounds. Similar types of size and weight growth have been experienced in nearly every industry in the OS/OW spectrum.

As a result of local regulations that differ between Northeastern Illinois' municipalities, OS/OW loads often have to take a circuitous path from origin to destination, which adds time and cost to each delivery. For example, a typical OS/OW trip from eastern Wisconsin to the southern part of the city of Chicago would often requiring a routing west of Interstate 39 and south of Interstate 80, turning a trip which would take a "legal" truck 105 miles into a trip which would take an OS/OW carrier over 250 miles. Similarly, a conference presentation in 2012 by a leader of Perkins Specialized Transport about interagency coordination discussed a trip from Houston to western Wisconsin which required a routing as far west as Colorado. Even at smaller trips of 20-50 miles around northeastern Illinois, our informal conversations with leadership at specialized carriers report a substantial amount of routing complexity and occasional gaps in coordination between neighboring jurisdictions.

1.3   The Challenge: How to Leverage Today's Innovations?

Statewide permitting has evolved greatly in the last twenty years. Before 1997, all statewide permitting processes were manual, involving faxes or telephone calls back and forth between permitees and state employees. Most states uses paper files and maps, and permits were often faxed repeatedly to get to the vehicle. Technology combined with a critical mass of permit volumes enabled the statewide permitting industry to evolve. The Internet and customers' comfort level with e-commerce enabled most of the workflows involving permitting to be automated, increased computing speeds enabled bridge load rating to

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[3] See http://www.cmap.illinois.gov/economy/regional-economic-indicators/clusters

be better integrated in nearly real time, and data quality for mapping and geographic information systems gave carriers much greater flexibility in identifying and evaluating specific routes to travel.

County and local permitting, however, is not at this level of technology. The processes and the policies involved in these levels of permitting are often less well defined, and the permit volumes have generally not been substantial amount to invest in technology. Statewide systems have layers of technology and data which are inappropriate for all but the highest volumes or most complex infrastructures at the county or municipal levels.

Therefore, bringing innovations from statewide permitting to county and municipal permitting processes has become one of the prevalent challenges of this decade. Carriers are used to the level of technology and associated service which a larger organization with higher permit volumes and staffing levels can provide, and counties and municipalities are lamented to be "stuck" at the turn of the century. The reality, however, is that ***a different and less technology-focused approach is needed to serve these smaller markets, where a focus on a harmonious interaction with each other and with the state is a higher priority.*** Technologies are emerging at the county and local levels, but the ability to adopt technology will be at different paces depending on the characteristics of the local government and the relative importance of OSOW traffic. Therefore, an *assumption* of technology as a given is problematic in 2016, while it may not be in 2023.

As various states have overhauled their statewide permitting systems in this decade, their focus often includes understanding how state agencies can provide frameworks for local agencies to leverage the state's investments. This is on the surface a valid approach, and states such as Iowa, Maryland, and Virginia have also developed different approaches to incorporate participating local agencies into statewide technology.

The drawback, however, of assuming the bulk transfer of statewide permitting approaches to all local scenarios is that statewide processes and technologies are based on an assumption of <u>resources</u>, <u>complexity</u>, and <u>data</u>.

- **Resources:** A state agency's permitting office often has between six and twelve employees, although that number drops as automated routing approval rates increase. Some larger states such as Texas have much larger numbers of employees. But smaller local governments rarely have one person whose full-time job is OS/OW permitting, and operate with anywhere from 1/5 to 1/3 of a full-time equivalent (FTE) position. Similarly, the costs of technology are often impractical to distribute over the correspondingly smaller levels of data, especially when that technology includes detailed approval workflows and integration with other agency processes.

- **Complexity:** Statewide permitting often considers a much broader set of movements than many local governments. Certainly, a city such as Chicago sees a similar level of complexity, given its unique mix of infrastructure and geography, and its emphasis on large-scale construction, but smaller and primarily residential suburbs with minimal industry may never see any of the more unusual trips. A challenge in local permitting is to tailor the workflows to the appropriate level of complexity.

- **Data**: Statewide processes and technologies are increasingly data-intensive. Examples of "unusual" data often include geometries of grade-separated intersections (can a vehicle "ramp-off/ramp-on" or the presence of a concrete barrier precluding travel), detailed bridge height clearances, information from traveler information systems about construction, and integration with truck size/weight enforcement.

Data needs to be continuously maintained, as the permit systems are rarely the authoritative source but instead rely on interaction with other systems and databases.

As a result, the challenge for local permitting is not how to miniaturize statewide permitting and drop it into each jurisdiction, but rather how to find the right blend of process, policy, and elements of technology to both serve the reasons for issuing permits (transportation safety and infrastructure preservation) while improving the reliability of the supply chain and providing benefits to the industries and employees in Northeastern Illinois which rely on the OS/OW permitting process. For many agencies, a technology solution will make sense, but a harmonious framework has to support a mix of technological adoption across the region at different paces.

Local permitting supports a wide set of industries in the region and helps drive the economy. In our stakeholder interviews, we learned about local permitting supporting a diverse set of efforts, such as:

- Building a new hotel;

- Operating a factory to make consumer dairy products;

- Recycling parts from inoperative large-scale energy equipment;

- The government's own construction projects, such as highway construction; and

- Export of commodities produced in Illinois to locations around the world.

Northeastern Illinois needs a robust, efficient, and effective approach to local permitting to continue to assist its economy and its residents. But a trip through the region could easily require four or five local permits, many of them from smaller municipalities where staff involved in permit issuance have that responsibility as a small part of their job. As a result, there is sometimes confusion regarding processes, response times, and route availability. Meanwhile, differences in design standards between local and state highways drive differences in permit fees. Many smaller municipalities do not even collect a fee, many agencies collect a fee similar to the state's permitting fee, and some municipalities charge much higher rates for smaller distances of travel.

This report explores how the region's OS/OW processes can thrive by defining a harmonized regional vision and creating simple but effective approaches to streamline how the region's county, municipal, and township permitting processes can operate, and provides recommendations for short- and medium-term action items to accomplish this vision.

1.4   OS/OW Processes and the Region's Freight Economy

From 3-axle cranes to energy equipment, from giant metalwork for local factories to thousands of containers of agriculture and manufactured products destined for export overseas, OS/OW processes are an important component of Northeastern Illinois' freight economoy.   The Chicago region is one of the nation's few global centers of commerce. According to Moody's Analytics, the Chicago metropolitan area produced over $585 billion worth of goods and services in 2015, making it the third largest metropolitan economy in the U.S. after New York and Los Angeles. The region is a major origin, destination, and distribution point for primary,

intermediate, and finished products, with nearly $800 billion in goods moving into and out of metropolitan Chicago each year.[4]

Transportation infrastructure plays a key role in fueling the region's economy by connecting northeastern Illinois to the rest of the world. The region is home to one of the busiest cargo and passenger airports in the nation, houses more than one billion square feet of industrial space, enjoys connections to two major waterways, and is the nation's largest inland container port. Seven interstate highways and six major rail networks provide unparalleled access to major ports on the East and West Coasts. Trains leaving the region are able to reach eight of the ten busiest U.S. ports in under three days and all ten ports within five days. Many OS/OW loads reach or leave the local network in Northeastern Illinois from all three modes – the Interstate and selected state highways, intermodal connections with rail facilities, or via barges or ocean-going shipping. Inefficient permitting carries the risk of discouraging transport via the region.

Meanwhile, freight activity generates jobs for the region not only in direct freight industries like trucking and rail transportation, but also in industries that support freight movement like warehousing and wholesale trade. In the past, CMAP has conducted in-depth analysis of the region's freight industry cluster, which is comprised of freight and freight-supportive jobs.   In 2015 the region's freight cluster accounted for over 185,000 jobs.[5] The cluster has been one of the fastest growing parts of the region's economy since the end of the 2007-09, having added over 27,000 jobs since 2010. Many of these jobs pay well and have entry level education requirements that are accessible to a large portion of the region's workforce. The average regional freight cluster job pays nearly $74,000 per year.[6]

In addition to being a driver of economic growth in its own right, the region's freight cluster plays a key role in supporting industry clusters like manufacturing, where timely, cost-effective transportation is important. Modern manufacturing supply chains are become increasingly complex, and the need for efficient movement of freight has led to a growing level of embeddedness between manufacturing operations and the freight and logistics needed to distribute intermediate and final goods. OS/OW moves are frequent when constructing a large-scale manufacturing facility, and many high-value and difficult to export industries involve the manufacture of products or equipment which require OS/OW permits for delivery to customers.

1.5   Project Methodology

The project was conducted through three major sets of activities. The first activity set was to develop an understanding of current conditions for local permitting in Northeastern Illinois, and investigate whether the region differs from other large metropolitan areas. These activities, summarized in Section 2, included individual interviews with each county, group meetings with interested municipalities and industry representatives, discussions with representatives from the Illinois Department of Transportation and the Illinois Tollway, targeted interviews with industry leaders from outside the region, and literature review of publically available information about several other major US and global cities.

Findings from the current conditions activities informed the development of a visioning workshop for approximately 40 members of government and industry, held at CMAP's offices in January, 2016. This workshop and its findings are summarized in Section 3. The workshop presented the findings of the earlier

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[4] Chicago Metropolitan Agency for Planning analysis of Freight Analysis Framework 4.2 data.

[5] Chicago Metropolitan Agency for Planning analysis of Economic Modeling Specialists International data.

[6] *Ibid.*

interviews, and participants were asked to then describe attributes of their vision for permitting in Northeastern Illinois through a structured interactive keypad polling exercise. The keypad polling allowed the project team to identify key vision themes that were important to participants for an effective and efficient local permitting process.

Both the findings regarding the vision themes and the corresponding discussion at the workshop fed into the third set of activities, the development of the recommended vision for local permitting in Northeastern Illinois described in Section 4, and the corresponding set of recommended action items described in Section 5.

1.6   Key Findings

The most significant attributes of local permitting in Northeastern Illinois, and stakeholders' vision for how it can improve, are that:

- **There is a general belief that the vision developed for local permitting has a lifespan of 5-7 years.** Evolution in e-commerce and e-government tools, data acquisition and monitoring, and coordination and communication, as well as the emergence of technologies and public policies to support innovations in connected vehicles, are all converging to a point in the middle of the next decade. This is not unusual to either permitting or Northeastern Illinois, and mimics what happened in the statewide permitting landscape across the United States from 1999 through 2010.

- **While the original project problem statement emphasized county permitting processes and technologies, many of the issues faced by the industry stem from the information and staffing deficiencies frequently found at the municipal level**. Approximately 800 units of government in Northeastern Illinois reserve the right to issue OS/OW permits, divided between statewide agencies, counties, municipalities, and townships. The smaller units of governments which issue permits often issue a very small number each year, sometimes less than one permit a month. As a result, the resources these agencies can put into permitting processes and technologies is currently minimal.

- **While technologies are evolving and emerging, there is no "one size fits all" solution for the entire region; but there are legislative, process, and technology solutions which benefit clusters of similar organizations in a way that is beneficial to industry.** For example, the City of Chicago has the most complex operations in the region for local government with respect to bridge design and load rating. In many ways, the City's structures are as or more complex than the structures in the region owned by the Illinois Department of Transportation or the Illinois Tollway. Both the City and industry would benefit greatly from the implementation of the type of permitting software typically found at a statewide level, where bridge load rating can be performed in real time and proposed routes can be validated automatically for engineering viability. This level of engineering sophistication and technology integration, however, would be inappropriately detailed for every other municipality in the region. By comparison, many municipalities and counties are implementing simplified e-permitting technologies which focus on route selection, workflow, and payment, but not engineering analysis or automated permit approval.

- **There is a tremendous amount of "low hanging fruit" which require a simple organized structure for improved communication and access to reference information**. Many of the recommendations in Section 5 are not complex or expensive, but can yield significant improvements in helping motor carriers navigate the permit process in Northeastern Illinois. This could include a centralized place or places that provide jurisdictional maps, phone numbers, and emails for local permitting points of contact,

common application forms, and lists of fee structures, among other basic resources for carriers seeking OS/OW permits. Questions as simple in concept as "who actually owns this stretch of roadway" are often difficult for carriers to answer today due to institutional and data management barriers. Some recommended activities are required at the base unit of government, such as a municipality or a county, while others benefit from coordination at an aggregated level such as one or more Councils of Government or the Metropolitan Mayors' Caucus.

- **Variation in permit cost across agency continues to be a point of contention with industry**. Our observation is that the contention primarily stems from industry concerns that the pricing methodology is either not directly related to infrastructure damage or is based on incorrect assumptions. Fees will generally be higher on a per-mile basis at the local level compared to the state level due to differences in infrastructure design and in distributing administrative costs across less permits, but there is some wide variability in per-mile costs across the region. The same carrier could face a $100 charge in one jurisdiction and no fee in another jurisdiction, for the same load and the same travel distance. While the specifics of engineering costing are beyond the scope of this study, we recommend that the Illinois Department of Transportation take a leadership role in promoting methodology development to help agencies understand the marginal engineering costs of OS/OW shipments and enable them to review pricing models to set more appropriate user-based fees.

2.0   Analysis of Current Conditions for Local Permitting

With approximately 800 units of government in Northeastern Illinois reserving the right to issue OS/OW permits, a comprehensive compilation of every unit of government's approach and conditions was beyond the project resources. As units of government get smaller, the project team found that even identifying somebody to answer a question or two about permitting became increasingly difficult. Unlike other types of goods movement-related studies, the information regarding permitting processes and data is general unstructured in nature. For example, there is no consolidated public source of maintenance funding agreements which include transferring the authority of who issues the permits from one government agency to another, and as a result there is not a single data layer of all permit issuing authorities for the entire road network.

As a result of these characteristics, the project team undertook an interview-based approach which split the information collection resources roughly equally between county and municipal governments. In addition, the project team conducted targeted outreach to motor carriers working through industry associations such as the Supply Chain Innovation Network of Chicago (SINC), the Illinois Trucking Association, and the Specialized Carriers and Rigging Association.

2.1   Analysis of Relevant Laws

This subsection is still undergoing revisions. We expect to cover the following topics in approximately two to three pages total.

- Federal Laws on Size and Weight

As per: https://idot.illinois.gov/doing-business/permits/Oversize-and-Overweight-Permits/index

- Illinois State Statutes

- County Statutes

- Municipal and Township Statutes

2.2   Interviews with County Staff

The project team manager conducted a series of interviews at each of the seven county permitting offices in the region during August and September of 2015. These interviews involved utilizing both a structured interview format as well as open discussion of issues, opportunities and trends. Key findings from these interviews are described below:

Typical daily permit volumes during peak periods varied by county. DuPage and Cook Counties had the highest volumes, frequently approaching 50 permits in a single day. Kendall County had the lowest

volume, rarely exceeding 10 permits in a single day, although it had issued four to five times as many permits during the home construction boom of the mid-2000s. The other counties typically had peak days of between 20 and 30 permits. Unlike most municipalities, counties had staff resources focused on permits.

Peak periods are highly seasonal. Given the role of construction and commoditized agriculture as a driver of OS/OW permits, the transaction volumes for permitting are seasonal. This is not a phenomenon only in Northeastern Illinois, but in large portions of the country. In Northeastern Illinois, the peak period is typically in July and August, with medium levels of permits starting in March and lasting through October, and low numbers of permits in November through February. Larger counties utilized between 0.8 and 1.2 full-time equivalent staff during peak permits, and typically reassigned employees to also cover other duties during slower periods.

Staff redundancy is difficult. In most counties, there were only two or three people properly trained in issuing OS/OW permits, including a supervisor with a much broader portfolio of job responsibilities who could serve as an emergency back-up. During staff vacations or unplanned absences, coverage of permit responsibilities is often challenging.

Counties were varied in their current technologies for permitting. When interviewed, McHenry County was in the process of procuring a new technology solution, and DuPage County's interviewees indicated a desire to obtain a new system in 2016. Kendall County did not have a system, but did have forms available online. The other counties had systems for permit purchases of varying ages and complexities. The most complex current county technology solutions covered the basic submission and delivery process, with manual approval workflows by county staff. When available, route maps were static and in PDF format, and did not contain maintenance or construction information. These systems are in many ways analogous to how an earlier generation of statewide permitting systems across the country typically functioned in the 2000-2005 timeframe.

One of the challenges for permitting at the county level is that the roads owned and permitted by the counties are not contiguous. For example, DuPage County has several County roads that end abruptly, particularly County Roads 18, 21, 27, and 19, as shown in Figure 2.1. As a result, local permitting off of the State network frequently requires both a county and one or more municipal permits. Unlike the municipalities, the counties started getting notifications from the Illinois Department of Transportation in 2015 of state-issued permits where the carrier indicated a desire to utilize county, municipal, or township roads in the county. Having more information about the state permit was seen as helpful; while many of the notifications did not utilize county roads, carriers often still call the counties first for assistance and seeing the permit data enables county staff to help carriers get in contact with the right municipality.

Figure 2.1   DuPage County Highway Map
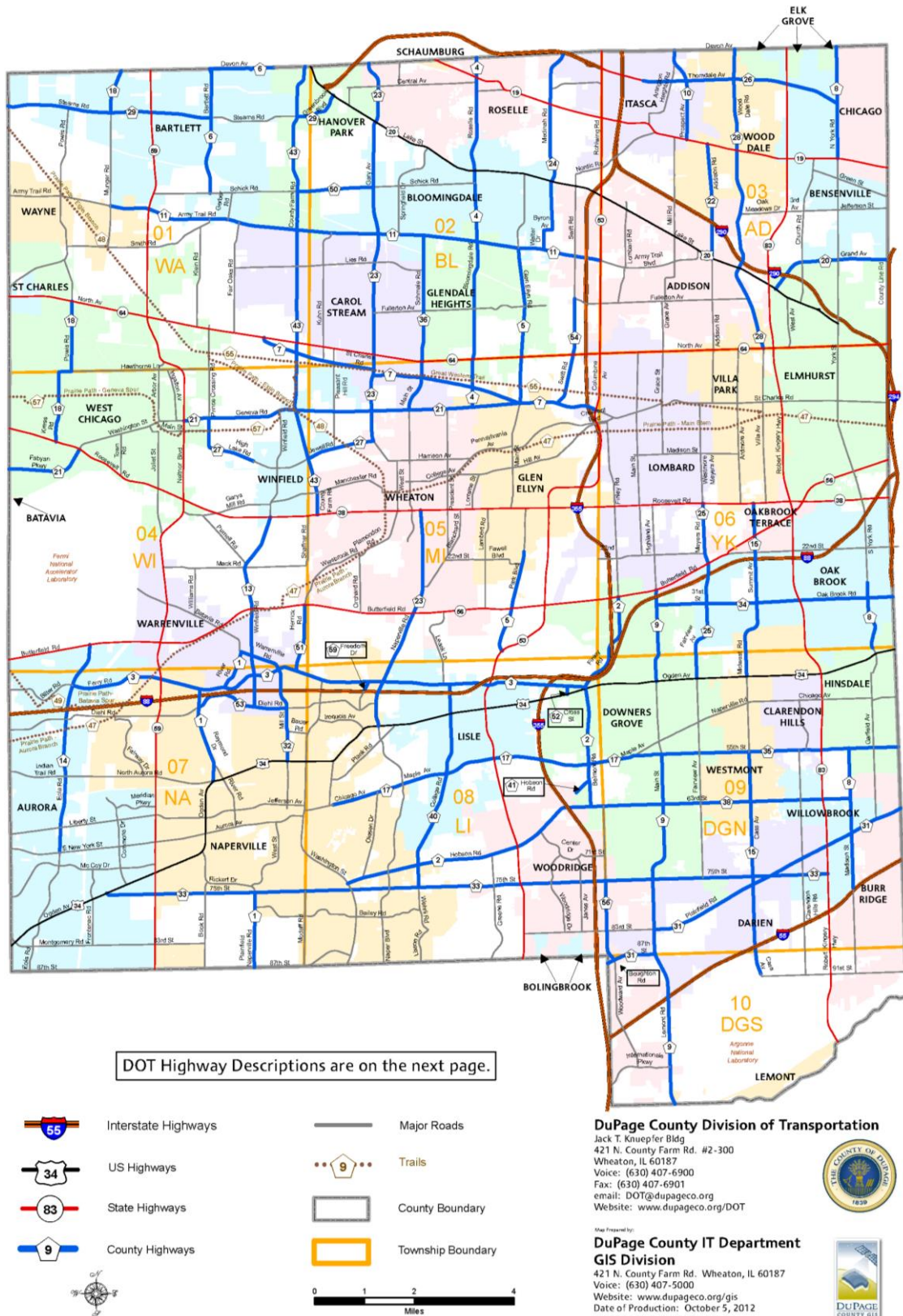
Source: DuPage County Division of Transportation

Kane County was the only county interviewed which issued permits on behalf of all of its townships. Kane County issued <get current number> permits for townships in July, 2016. Interviewees in other counties indicated that the potential for confusion for which townships choose to issue their own permits versus allowing the county to issue the permit on behalf of the township was worse than the benefits from having the county issue township permits at the township's request.

The question was asked of all interviewees as to why the county chooses not to issue on behalf of smaller municipalities with very small volumes. The technical answer was uniform, that there was a lack of data available from municipalities to ensure that the permit could be properly issued and not be in conflict with scheduled construction or other local issues. In addition, there were financial and staffing considerations. These concerns are similar to those expressed by IDOT staff about why it would be inappropriate for IDOT to issue permits on all county and municipal roads.

2.3   Group Interviews with Municipalities

The project team identified and connected with representatives of over 150 municipalities in the CMAP region to solicit their perspective on OS/OW permitting on local roadways. From those municipalities, over 35 municipalities, as well as representatives from several local councils of government, agreed to participate in small group interviews and optionally fill out a short questionnaire about their permitting processes.

Several guiding principals were utilized to ensure that all portions of the region and municipalities of all sizes were included in the interview process:

- We divided the region's 284 municipalities into 13 interview zones;

- We emphasized municipalities hosting or bordering an open intermodal facility, or with close access to the Interstate system;

- We coordinated with local councils of government in areas with high freight volumes in the southern portion of the CMAP region;

- We used input from county and MPO officials as well as staff from SINC and the Illinois Truck Enforcement Association to identify key municipalities to attempt to include; and

- We attempted to balance representation of jurisdictions from three groups:

  - The first group contained any town with an intermodal facility. Because of the direct connection to intermodal rail terminals, we expected these municipalities to issue OS/OW truck permits more frequently as a result of these facilities. Understanding the permitting procedures of the most actively permitting towns was an essential part of this research, and the highest priority to interview.

  - The second group contained any town with over 25,000 people. Only 22 percent of municipalities in the CMAP region have greater than 25,000 residents, many of which have higher levels of active commercial and construction activity that may require OS/OW vehicle permits from these municipalities.

  - Finally, the third group contained all remaining municipalities, sequenced randomly to avoid underrepresenting smaller communities.

With a variety of interview subjects in a group meeting, it was important to build consistency into the interviews while allowing subjects to focus more on specific topics of more interest to them. Table 2.1 presents an annotated interview agenda utilized in the group meetings. The interviews did not strictly follow the agenda in sequence, but care was taken to attempt to cover all topics in the time available while still focusing on the subjects' interests and concerns.

In some meetings, we were able to have motor carriers active in the region join the meeting. In these cases, the guide was modified to emphasize the carrier's perspective on similar topics. The interviews with the carriers were more focused on current experiences and anecdotes. In all cases, the interviewers emphasized that the focus of the interviews were issues and opportunities for process improvements, and not a discussion of specific technical solutions.

Table 2.1: Annotated Agenda for Local Agency Interviews

Describe how truck permitting works in your municipality.
>What is your permitting process? Is there an online submission, a web-based form, phone call, etc.?
>Who does the review? What do you do to review the permit?
>What does your permit form look like?
>What are the volumes? How many permits are issued per week/month/year?
>How do you store records of the permits?

What type of traffic occurs on local roads, and what kinds of commodities are being transported?
>What are some of the move types by carriers that happen in your municipality?

Would you consider letting your representative County issue permits on your behalf?

What are the challenges with managing permitting data?

What are your permit rates, and do they differ?
>What are the rates for single-trip, multi-trip, etc.?

Do your towns have designated truck routes on local roads?
>If not, how would a strategic truck routing system help or hinder your area?

How would your towns coordinate truck permitting if CMAP were not leading the initiative?

What's a reasonable vision for how a municipality can handle this level of permitting?

To what extent is there collaboration between city employees/departments with respect to truck permitting?
>For example, how often do the enforcement and permitting staff coordinate with city engineers?

What are some of the biggest issues that carriers have with your process?
>For example, do you have carriers that are against an automated system?

What are some aspects of the permitting process that you would like to improve on over the next year, assuming resources are available?

What other aspects of the permitting process would you like to improve on?

A reoccurring challenge during the municipal interview process was finding and connecting with the right municipal employee to discuss truck permitting. Depending on the town, OS/OW permitting is either handled

within the police department, public works department, or engineering department. If ownership of the permitting process was not evident online, it could take as many as five separate phone calls – often starting with the town's main line – to identify the correct department, unit, and person. In the case where OS/OW permitting information was available online, occasionally the website was not updated with the correct contact name or phone number, requiring more phone calls. Finally, in many cases, the municipality did not actually issue OS/OW permits even though there was the potential for OS/OW travel in the municipality. In these cases, it often took several phone calls to identify this information.

For some municipalities, email addresses for employees in the public works, engineering, and police departments were available online. For these situations, the project team members would send emails to several people with the hopes of locating the correct person more quickly. However, many emails did not receive responses despite multiple follow ups, suggesting that there was either outdated information posted or a lack of interest in participating in the workshops.

Despite the spotty response rate to emailed invitations, we found that this was the most effective method in receiving positive responses. In many cases, an email to one person was forwarded to several interested parties, often across departments. Or, a person would respond to an email with several of his or her colleagues copied, which helped the project team directly connect and follow up with different municipal employees with varying perspectives on the process. We also found that connecting with a person over the phone after corresponding over email helped secure interest in the project and occasionally boosted attendance at workshops.

2.4   Industry and Carrier Outreach

In addition to interviewing government officials, attempts were made in conducting outreach with the motor carrier industry. Relevant carriers were identified by many of the county officials, and by industry groups including the Supply Chain Innovation Network of Chicago, the Illinois Trucking Association, and the Specialized Carriers and Rigging Association. Project team staff attended several events, and presented a summary of the project at the Mid-America Association of State Transportation Officials' permitting symposium. The project team manager also spoke "on background" with officials from a number of motor carriers with whom there was a past outreach relationship in other parts of the country.

As can be expected, carrier issues were slightly different than county or municipal issues. The perception of a wide and somewhat arbitrary variation in permit prices across jurisdiction for a similar configuration and distance was a common theme. Carriers also did not have an understanding of the lack of data sharing across jurisdictions and often did not understand why it would be difficult for the Illinois Department of Transportation to issue all permits. Finally, the biggest concern for many carriers was the variability of the process and the impact that variability had on the carrier's ability to efficiently manage drivers and fleets, both of which affect the firm's net profitability. In many cases, a single one-hour delay or a single violation for entering the wrong municipality by accident could negate or exceed the total profit from taking the move, and some staff from national carriers indicated that many parts of Northeastern Illinois were de-emphasized to their sales teams.

2.5   Initial Observations from Outreach and Research

Overall, the interviews provided a wealth of information about the types of loads that are moving on local roads, how those loads are moving, and how the local permitting process is working at the county and local and municipal level. While disparate approaches toward OS/OW permitting are evident among the

interviewed agencies, several common themes emerged throughout the process. These themes were identified and presented to the project steering committee, then incorporated into the planning of the visioning workshop described in Section 3.

There is a Hierarchy of Permit Volumes

One of the first questions asked at every interview was "what is your typical permit volume?" Permit volumes can be thought of as a hierarchy, ranked by frequency:

Low Frequency ⟶ *High Frequency*

No ordinance	1 per month	1 per week	1 per day	1 per hour	1 per minute

The majority of municipalities have no permits, one per month, or one per week. We found that a small percentage of municipalities receive one permit application per day, but none interviewed receive as many as one per hour. On the other hand, most counties receive more than two permit applications per hour, and Illinois Department of Transportation (IDOT) has roughly one permit application per minute during peak periods.

The highest volume levels were in areas with a high amount of international containerized cargo, with the Village of Elwood having the highest permit volume. The City of Joliet transitioned their approach towards containerized cargo during the course of the project. In both of these cases, the permitting process is relatively routine and can be completely automated in terms of approvals and fee calculation.

There is Minimal Staffing for Local Permits

County permitting agencies typically operated with approximately 0.7 to 1 full time equivalent staff person for much of the year, with perhaps an extra person contributing occasionally during the peak season during the summer. At the municipal level, however, permitting was generally a small portion of somebody's job description. In multiple interviews, when asked what happens when the person responsible for permitting was out of the office, the response was that permits were simply not issued until their return.

There is No Interest for County Issuance of Municipal Permits

The project team found that representatives of the interviewed municipalities were not interested in outsourcing permit approvals to the county. Similarly, county representatives interviewed were generally not interested in issuing permits for municipal highways absent a substantial change in data ownership and fee structures, and even then county representatives raised questions about a potential process.

The issues raised are similar to those raised by IDOT staff when asked about issuing permits on county highways: the ownership and availability of timely engineering, public works, and congestion data. Detailed data on short-term travel restrictions is considered to be extraordinarily difficult to, and there are concerns that longer-term data such as bridge and pavement conditions, restricted turning movements, and utility clearances, are best managed at the level of highway ownership and operation.

At the township level, however, the situation is different. The township situation is different because state statute mandates a different type of relationship between county and township with respect to engineering

processes. Counties in Illinois have a responsibility to assist townships with engineering matters, and thus have ownership of relevant data. As a result, county issuance of township permits has a higher likelihood of feasibility. Kane County, for example, issues permits on behalf of its townships. Other counties, however, indicated less interest in issuing such permits during their interviews.

Different Municipal Departments Issue Permits

At the municipal level, there was no clear pattern of which municipal department actually issued the permit. Engineering, public works, transportation, emergency management, and police were all departments mentioned in the interviews. The police departments appeared to have emerged as the permitting department in many municipalities due to the 24-hour availability of somebody to take a permit request over the telephone. Police officers, however, generally did not have access to current engineering or public works data, and frequently permits were issued based on historical knowledge or intuition.

Local Highways are Generally less Complex

One point of discussion that emerged during the interviews is that almost every permit issued by a municipality would be automatically issued by IDOT if those roads were State roads. This is because IDOT has ownership and construction data *for state-owned roads* that allows for an automated permit issuance system. For any state-owned roads with the characteristics of most local roads, the actual decisions to be made when the data is known are very routine and rule-driven, and the IDOT system would simply approve the permits without staff interaction. If IDOT had similar data for the locally-owned roads, it could do the same thing; but obtaining and maintaining such data at the state level for every road in Illinois is a massive and unreasonable undertaking given how roads are maintained and improved across jurisdictional ownership.

Although local highways typically have fewer bridges to cross or drive underneath, most municipalities do not keep detailed enough records to have a similar automation system; the engineering analysis is less complex. Municipalities often do not have load rating analyses for their bridges or access to software to conduct such analyses.

For permit reviews where intuition and local knowledge come into play, areas of intuition would be coded as restrictions. For example, 135-degree turns would not be permitted in a 100-year old village, where roadways are not designed for larger vehicles. As a result, there are opportunities to define an element of a regional vision where local government staff defines which roadways they own where routine loads can be easily approved.

There are Limitations to the Data which IDOT Owns Regarding Local Highway Networks

Despite IDOT's current data capabilities, it cannot realistically be responsible for all of the OS/OW-relevant data in the State of Illinois. Although the agency keeps important transportation data for State use, there are local construction projects, emergencies, and other events that temporarily change transportation patterns in a municipality or county. This data would be cumbersome and expensive to collect and maintain, and would be of little use for State planning efforts. Some examples of local level transportation data are:

- Water main break that requires emergency repairs underneath a local road;

- Pavement project to replace aging infrastructure;

- Lane closures as a result of a house or building being demolished; and

- Road closures for a parade celebrating the local high school sports league winning a big game.

Although these events are important for a municipal transportation department to track, they are not important or necessary for a State agency to manage.

When counties were interviewed and asked what the benefits and challenges would be to having counties issue permits on behalf of all municipalities, the same topics were raised.

Issues with Data Ownership and Accuracy

It is generally understood that the agency that owns the truck permitting data will also own the permitting process. However, conflict arises when no single agency owns the data. On some sections of highway in denser suburban areas, road ownership changes from municipality A to county B to municipality C, without any signage to that effect[7]. Annexation data and local maintenance agreements were frequently mentioned as complex issues where the ownership of the data shifted over time and is not easily accessible without detailed knowledge of the highways involved. For carriers, this is a substantial challenge as there is no readily available source of these types of information. As a result, the decision about which counties or municipalities to contact regarding obtaining permits is often incorrect.

Lack of Municipal Ordinances

Many municipalities we contacted did not have established truck permitting ordinances, or do not currently issue permits. This finding was not limited to the smallest municipalities. For example, Elgin does not currently issue truck permits, while it had done so previously up until approximately a decade ago. As mentioned previously, Joliet was in the process of revising its ordinance during the interview period to enable the City to issue permits and collect fees, and passed their ordinance a few months later.

The lack of an ordinance raises an interesting question about what happens when an OS/OW load has to utilize municipal roads. Several enforcement officials interviewed were concerned that an OS/OW load could not legally operate on a municipal road without a permit, even if the municipality was accepting of such loads without one. In some municipalities interviewed, the "permit" was simply verbal approval from a municipal official. One example of this is in the Village of Diamond, in the far southwest part of the region. The Mayor is responsible for reviewing permit requests and issuing permits, but the permit is simply an instruction that it is acceptable to proceed and that any concerned law enforcement officer should call the Mayor's office for verification.

There is an implied nuance in these points, which is the definition of what actually constitutes a "permit." In Hanover Park, permit purchasers contact the municipality and are given a reference number corresponding to an entry in the municipal operations log book, similar to an airline's electronic ticket. There is no paper document and no fee is collected. The question beyond the scope of this research is what level of interaction a permit's purchaser must have with the municipality to truly define a "permit." Automated permit issuance systems are considered sufficient, but what about honor systems? Is there a difference in a municipality deciding "you do not need a permit" versus "you can issue yourself a free permit?"

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[7] In Cook County, Wolf Road between Lake Street and 31st Street is an example of multiple owners for a short stretch of roadway across several suburbs.

Carriers Experience Difficulty in Finding out Municipal Requirements

In general, while counties have sufficient documentation on their web sites and sufficient staff to answer telephone inquiries, it is not easy for carriers to find out what the truck permitting requirements are at a municipal level. Although some municipalities upload web-based documents or include a page with information on their website, we found that most CMAP municipalities do not provide readily accessible information about truck permitting. For carriers, particularly those new to the area, it can take upwards of four or five phone calls to reach the right person and obtain OS/OW permitting information. This proves to be challenging to businesses, and could potentially hinder growth and economic development in municipalities lacking clear information.

Strong Desire for Uniform Permit Application

As previously noted, truck permitting processes can vary greatly between local governments throughout Northeastern Illinois. A move that requires carriers to travel on local, county, and State roads could require many separate permits, all of which are found on different websites with different requirements and timelines. In some cases, carriers require five or six local permits. Applying for a substantial number of permits takes both staff and trucker clock time, with no guarantee that all will be processed before the move has to take place.

Given these bureaucratic hurdles, we found that interviewees shared a strong desire for a single, uniform permit application for all counties, townships, and municipalities in the region. Ideally, it would feature a pair of uniform submission and delivery processes as a baseline, with one optimized for municipalities with automation and another for municipalities without existing automation. This would allow municipalities to more easily adopt the new baseline, and require little capital improvements to the existing system. Some of the carriers interviewed wanted to see an IDOT permit process enhanced, so that it generates all necessary local permits for a move using State roads at some point of the process. Not only would this eliminate excessive time spent completing multiple permit applications, but it would also ensure that any permits are not missed for small road segments or local roads for which a permit is not obvious.

Desire for IDOT to Notify Municipalities of Upcoming Permits

Interviews with municipalities indicated that there was a strong desire for IDOT to notify municipalities of expected permit needs on local roads from IDOT-issued permits. At the time of the interviews, IDOT notified the county permitting agency if there were any movements indicated on the state permit which utilized non-state highways in that county, but municipalities were not notified.

Ideally, this notification would result in a uniform permit application process that is integrated with IDOT's existing process. However, in order for this approach to be feasible, IDOT must have the right information about road ownership, including annexation updates, in a timely and consistent manner. This information would have to be regularly maintained by municipalities, and provided to IDOT once updated. One confounding factor that complicates this idea are the maintenance agreements where permitting responsibility shifts with funding. This would have to be closely monitored by municipalities and communicated to IDOT whenever permitting responsibility changes.

Model Ordinances Could Help Structure Processes

As noted earlier, some municipalities do not have ordinances outlining the truck permitting process. In order to increase the likelihood of these municipalities developing their own ordinances, it would be helpful to have

a guide in place to facilitate the process. Specifically, model ordinances developed by CMAP, the Metropolitan Mayors Caucus, or associations such as SINC or the Illinois Truck Enforcement Association would help structure the process in a meaningful way, in addition to helping industry while preserving infrastructure and safety, and promoting goods movement.

Most Common Loads on Local Highways are 3- through 6-Axle Vehicles

At the IDOT level, 65% of all permits starting or ending in Northeastern Illinois were for loads of 6 or fewer axles, including many 3-axle cranes. As such, the process adapted for the region should generally focus on that type of load, which includes construction vehicles, energy vehicles, vehicles containing manufactured goods, containers, and others.

Some Municipalities are Embracing Technology

Although some municipalities do not handle enough permits to invest time or money in technology enhancements, some are embracing technology for submission and delivery of permits. In particular, from discussions at the workshops, it seems that this type of technological solution is most frequently adopted by municipalities where police review the application. There are a number of simple, web-based systems hosted by third parties that municipalities have had success integrating into their current process. Most of these programs are at no direct cost to the agency through per-permit surcharges to carriers, and are designed to handle basic submission, delivery, and any payments or fees. The simple workflow also enables reviewers to approve, edit, or decline an application.

Municipal Fees vs. IDOT Fees

We found that most municipal fees do not exceed the IDOT fees charged for a similar trip on State roads. Many municipalities either do not charge a fee at all, or simply charge a token amount for trip permits. A few of the municipalities interviewed charged higher amounts based on pavement damage, but this practice is not the norm. Literature that the consultant team has reviewed for other projects shows that pavement damage on municipal- and county-designed level highways is generally higher than on State highways, in large part due to difference is design standards. This difference may suggest that the permit should be priced differently at the local level. However, questions remain for the future vision for OS/OW permits in the CMAP region. Specifically, it is not clear whether potential pavement damage from projects should require OS/OW modes be incorporated in the planning and zoning process instead of the permitting process.

3.0 Recommended Vision for Local Permitting for Northeastern Illinois

3.1 Vision Workshop: Concept and Logistics

While a number of key themes emerged from the individual and small group interviews, there were several reasons why they were not sufficient in and of themselves to define a local permitting vision for the region. They were developed through multiple isolated discussions, and while the project team members were able to understand and isolate themes, the participants themselves did not have the benefit of the breadth of the discussions. In addition, these themes were primarily characteristics of current processes as opposed to desired processes, and in and of themselves were not sufficient.

To move key stakeholders towards a unified vision, participants were asked in the county and municipal interviews if they would consider participating in a larger group process to help articulate elements of a regional vision for local permitting. Additional stakeholders from law enforcement, economic development, councils of governments, and industry were recruited by the project team, CMAP staff, and other participants.

The result of these efforts was a half-day "visioning workshop" convened at CMAP offices in January, 2016. The workshop was organized by the project team with input from the CMAP project manager and SINC representatives, and was facilitated by the project team's project manager. The results of this workshop were intended to feed into operating scenarios for local governments, help set expectations of service levels for local permitting in Northeastern Illinois, and provide recommendations to improve permitting cycle time and reliability.

There were three major sets of activities for the workshop:

- Provide participants with background on the project to date and the findings from the county and small group interviews (as described earlier in Section 2);

- Enable additional perspectives to be heard through presentations by government, economic development, and industry representatives; and

- Enable participants to provide opinions on key points identified to date in the project which would be relevant to a regional permitting vision.

3.2 Keypad Polling

One of the challenges in convening the workshop was to have people with different backgrounds and experience levels with local permitting all feel comfortable in contributing to the vision development process. To facilitate this objective, the project team utilized CMAP-owned technology for keypad polling. Each participant was issued a small keypad which connected to a voting hub via a wireless connection. The voting hub was integrated into a PowerPoint presentation which contained the polling questions. As each poling question was started, participants could vote for their preferred answers using the keypad.

The project team developed a set of 24 keypad-enabled questions for the workshop. The questions addressed elements of the topics covered in the county and small group interviews. Some questions were

prioritization exercises to ask participants to identify key themes out of various conflicting messages heard during interviews. Others were more direct opinion questions about elements of permitting such as communications and customer service, data management, fee calculation, technologies and the Internet, and review processes.

Appendix B contains a summary of the raw workshop results, including the questions, the potential answers, and the number of votes which each answer received.

3.3   Workshop Findings

The following vision elements had the highest ratings from workshop participants in the keypad polling exercise:

- Define a uniform permit application for the region;

- Define a standard way for carriers to communicate with local permitting agencies;

- Identify ways to reduce the time carriers spend on obtaining permits, especially in the processes before actually submitting an application;

- Create a uniform general process for agencies based on the complexity of their operations;

- Improve IDOT stewardship of information regarding the local governments through collaboration, including elements such as a jurisdictional map and contact list;

- Enable groups of governments to issue a single permit if they desire, either for all permits or for specific high-frequency corridors crossing ownership boundaries;

- Provide alternative approaches to provide technical assistance on bridge load ratings for smaller municipalities;

- Provide a process for reviewing and identifying model ordinances; and

- Provide examples of common functional requirements for agencies considering an online permitting system.

In the discussion part of the workshop, several additional key topics emerged which can be classified into four higher-level themes:

- **Consistency in Expectation and Level of Service.** It was understood that the expectations of carriers should differ between larger and more complex jurisdictions, such as the City of Chicago or large suburbs such as Joliet, Naperville, or Evanston, and small municipalities with much smaller networks and fewer resources. But within those tiers, there should be a generally shared experience in terms of approaches and service levels. For example, for smaller municipalities, it was generally understood that same-day response may be problematic at times, but situations where one town takes two days and the adjacent town takes eight days should be avoided.

- **Evolution of Technology Adoption.** Most participants concurred that at the end of a planning horizon, such as 5-7 years in the future, that technology for local permitting review, issuance, and data

management would greatly evolve. Some communities are currently positioned to be innovators in these areas, and, while not every community has the wherewithal to do so today, participants felt that these innovative technologies would eventually reach all but the lowest-volume agencies over time.

- **Cost Analysis for Different Engineering Standards.** When charged, permit fees in the region are generally consistent. Many municipalities charge nothing; most other permits are less than $75 for a typical 5- or 6-axle load, with a few outlier municipalities at higher rates. County and municipal permits frequently cost more on a per-mile basis than state permits, but the corresponding highways are often at lower design standards with respect to weight on pavements and bridges. While a detailed engineering analysis was beyond the scope of this study, many participants felt that IDOT leadership on this topic was crucial to establishing trust with the motor carrier industry and the relevant shippers of goods in the region.

- **Failure to Improve Local Permitting is Not an Option.** The industries which utilize local permits are important for the economic health of Northeastern Illinois, and failure to improve local permitting would have negative long-term consequences for those industries and, consequently, for the region.

The January, 2016 workshop identified a number of key themes which a representative mix of stakeholders believed would improve the permitting process in Northeastern Illinois and provide benefits to both industry and government agencies. The next step is to weave these themes into a regional vision for OS/OW permitting, and ultimately recommendations for action. In this section, we will address our recommended vision for local permitting in Northeastern Illinois, as well as consider two visions which were rejected by participants.

In crafting a regional vision, it is important to recall that government agencies conduct permitting because they have a responsibility for three concepts relevant to these types of movements. ***Infrastructure preservation*** is the most commonly stated theme when talking with local officials. Larger and heavier trucks requiring permits run the risk of disproportionately affecting the infrastructure compared to either smaller commercial or transit vehicles, or passenger vehicles. ***Safety*** is an additional concern. Larger loads are infrequent and have the potential for more points of conflict where a safety issue may arise. Finally, ***efficient goods movement*** is critical to any region's economy. Permitted loads disproportionately affect several key industries, such as construction, energy, and agriculture.

3.4   What Should a Vision Accomplish?

We assert that an effective vision for local permitting in Northeastern Illinois should:

- Reduce industry's operational costs;

- Make goods movement more efficient in the Northeastern Illinois region; and

- Minimize inappropriate impacts on the region's infrastructure.

By setting reasonable expectations for public agencies and industry to:

- Improve regional collaboration and strengthen intergovernmental collaboration;

- Streamline the multiple "systems" involved in permitting (both customer-facing technology and data management);

- Improve compliance with the region's laws for extralegal movement by facilitating proper permit applications, reviews, and purchases; and

- Improve the correlation between permit revenue recovery and its correspondence to infrastructure and safety costs.

We are comfortable making this assertion because its elements are consistent across the project team's experience with OS/OW permitting for other states, counties, and municipalities. Specifically, this includes the team's national experience with permitting processes and process improvements, individual interviews with state and local government representatives involved in Northeastern Illinois, individual discussions with leading members of the heavy haul industry, and the discussion and results of the project's visioning workshop.

3.5   The Rejected Visions

Before articulating the recommended vision, let us consider two visions posed by various stakeholders early in the project process, and understand why these visions were ultimate rejected by stakeholders:

3.5.1   Rejected: Maintain the Status Quo

When engaged in a structured discussion about the various parts of the permitting process, the vast majority of stakeholders rejected the concept that permitting improvements are not really an issue. These discussions included supporting topics such as ordinances, data management, and accounting, and insights from motor carriers about how Northeastern Illinois' permitting affects their businesses. The status quo places substantial burden on both industry and government. For almost all agencies, process improvement does not need to mean major financial investments. Ultimately, maintaining the status quo is unacceptable as a regional outcome.

3.5.2   Rejected: Consolidate Permitting Authority into either County or Statewide Agencies

When project team members engage industry representatives, either here in Northeastern Illinois or elsewhere, a common theme expressed to us is that there are too many agencies issuing permits. Our experience is that this assertion stems from the differences in how carriers and government consider data. While the private sector believes that consolidation of responsibility is logical, the nature of truck permitting is that data is crucial, and when accurate and reliable data is not available the experience and intuition of those closest to the network is critical.

The structure of government agencies in the United States generally does not lend itself to single-agency permitting. This starts at the national level, where the Federal Highway Administration sets several laws for the Interstate network, but defers the actual permitting for those highways to the states which have the data about current conditions, maintenance, congestion, and other factors. While some states are leveraging technology investments to issue permits for counties and municipalities, these pilot programs are either for simple "blanket" vehicles, which typically carry standard non-reducible OS/OW loads, where agencies can opt-in portions of highway, or require that agencies provide copious amounts of data to the statewide

agency. For example, in Virginia the statewide agency has been integrating many of the larger municipalities into the statewide permitting system. But Virginia has done it in small batches of a few municipalities at a time, where it can control the process and review the availability of the data[8].

In Northeastern Illinois, neither of those situations is particularly viable. The region has a higher number of government units than most other regions. Illinois has a high number of local governments compared to other states, totaling 1,200 municipalities, townships, and counties, while the entire United States had 19,492 in 2007[9]. For IDOT to take on full control of permitting would require coordinating data, process, and funding these municipalities in addition to counties and townships. It is not a realistic option from simply a coordination perspective, both from the perspective of managing relatively *static infrastructure data* about bridge and pavement location and quality, turning radiuses, and changes in things such as one-way street designations, as well as *dynamic restriction data* such as maintenance operations, closed highways due to incidents, special events such as parades and festivals, and local weather issues.

The situation does not improve if one asserts that the counties should issue permits for all municipalities. The same issues arise with dynamic data, as those are owned or at least known anecdotally by the municipal staff. As discussed in Section 2, the data issues are reduced for townships, because counties have statutory requirements for assisting townships with engineering analyses and thus must have much of the necessary data for permitting. Meanwhile, county governments have much fewer resources than IDOT when it comes to local permitting.

None of the above, however, should imply that counties have *no* opportunity to assist with local permitting processes, data, or technologies at either the municipal or township level. Additional coordination and harmonization is always beneficial, and counties should continue to champion efforts to assist local governments. Examples might include technical assistance on information technology, helping municipalities identify bridges where an investment in a full load rating for a variety of OS/OW loads may be appropriate,

3.6   A Vision for Harmonized OS/OW Permitting in Northeastern Illinois

The workshop participants identified a number of key vision elements, as described in Section 3. These elements fit into a framework that is being utilized at the national level for minimizing differences between individual states on permitting topics. The framework is to stress a harmonized experience with respect for agency-specific characteristics over a uniform process where every element is completely standardized.

Harmonization is not the same as *uniformity*. Harmonization establishes baseline performance expectations, but allows individual agencies to determine how to get there in a manner which is appropriate to their constraints as well as their broader objectives. Harmonization allows and encourages each agency involved in permitting to find the appropriate, less restrictive measures that will serve both the citizens of their state as well as the relevant industries which purchase permits.

Our vision for what harmonized permitting looks like in Northeastern Illinois is described over several dimensions in the following sections, and summarized in Table 3.1.

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[8] Wayne Davis of the State of Virginia has presented on this topic at multiple industry conferences.

[9] Retrieved from the website nlc.org. We are looking for a better reference. ⬥

Table 3.1   Operating Scenarios and Corresponding Recommendations

OS/OW Permitting Recommendation	OS1: Low-volume agencies where industries involved in OS/OW goods movement are not prevalent and where resources are scarce	OS2: Mid-volume agencies where permitting is a routine part of the work week	OS3: High-volume agencies with dedicated staff and more complex engineering challenges	OS4: Agencies with disproportionately high volumes in containerized international freight
Baseline Uniform Permit Application Tied to IDOT's Application	●	●	●	●
Establishment of "Routine Load" Profiles and Procedures	○	○	●	●
County Issuance of Township Permits	●	●	○	○
Consistent Communications Baselines	●	●	●	●
Scenario-Driven Service Levels	●	●	●	●
Consistent Static Data Management	●	●	●	●
Appropriate Adoption of Technology	◐	●	●	●
Consistency of Functional Requirements for Permit System Technologies	○	●	●	●
Scenario-Driven Bridge and Pavement Engineering Analysis	◐	◐	●	◐
Fee Structures Correlated to Infrastructure and Administration	◐	●	●	●
Integration with Municipal Planning and Zoning	●	●	●	●
Applicability Measure: Less applicable ○ ◐ ● More applicable				

3.6.1   Multiple Operating Scenarios

Our recommended vision has each of Northeastern Illinois's nearly 300 county and municipal agencies self-selecting into one of four operating scenarios (OS1 through OS4):

- **Operating Scenario 1: Low-volume agencies where industries involved in OS/OW goods movement are not prevalent and where resources are scarce**. This scenario would include most of the municipalities which do not have any current ordinances regarding permitting, as well as those agencies which generally issue less than one permit a month on average. These jurisdictions rarely serve as "through" communities, and loads are frequently destined for a specific project within the community. These agencies should focus on standardized processes for routine loads and efficient communication with industry. Special loads that are larger or heavier than routine are likely to be extremely rare (if ever seen) and tied to specific development efforts. Technology is not really an issue for these agencies, but there is no reason they shouldn't adopt emerging technologies if they feel

comfortable doing so. The administrative costs of fee collection are likely to dwarf any revenue, so the choice to collect a fee should be considered by each jurisdiction as a matter of local judgment, not regional or statewide policy.

- **Operating Scenario 2: Mid-volume agencies where permitting is a routine part of the work week [or where permitting is desired but has not been implemented].** In these agencies, primarily municipalities, permit volumes typically range from a permit every few weeks to a permit or two every day. These agencies typically have one or two individuals who review and issue permits as a small part of a broader job description. These individuals might be in a public works, engineering, or police department. In addition to the base communications and customer service from OS1, data is more critical, because there is higher variability in the permitting requests. Technology is starting to become important, and serious thought should be given in coming years to planning to adopt automation for at least basic functions like application acceptance, permit delivery, and fee collection. Fees aligned to infrastructure damage should be considered. *Note that jurisdictions can profile themselves as OS1 but still pursue an approach more consistent with OS2*.

- **Operating Scenario 3: High-volume agencies with dedicated staff and more complex engineering challenges.** This scenario encompasses most of the counties, as well as many of the busier municipalities. Volumes on business days can get up to 40-50 permits in a single day, and typically there are one or two people who issue permits as a core part of their job and are intimately attuned to the data. Keeping current in technology for basic workflow (submission, review, delivery, and fees) is necessary, and for the larger agencies (such as the City of Chicago) integrated bridge load rating and ties to real-time restriction management are important. These agencies should look at learning from what IDOT has accomplished at the statewide level or perhaps even finding ways to partner with IDOT, and are key players in the regional economy with respect to truck permitting.

- **Operating Scenario 4: Special Case for Agencies with disproportionately high volumes in containerized international freight.** Based on discussions in the small group meetings, containerized international freight could account for over a third of all local OS/OW activities off the IDOT system in Northeastern Illinois. As a result, communities that are home to the region's intermodal rail facilities would be most closely affected by this type of movement. Further, agricultural products are commonly shipped by container, and so the communities on the southern and western portions of the region would also be affected. While volumes of up to 100 permits a day are not uncommon for some communities, the loads are relatively standard, and thus completely automated permit issuance is a realistic and important goal. For this operating scenario, the focus should be on pavement infrastructure, and fees should be aligned with incremental effects and consistent with results from national truck size and weight studies. Excluding these envelope vehicles, which could receive a permit for a nonspecific and non-reducible vehicle or cargo load that does not exceed certain OS/OW specifications, these municipalities would likely fit into either OS1 or OS2.

3.6.2   Baseline Uniform Permit Application Derived from IDOT's Application

The vast majority of local permit holders also have an IDOT permit for the same trip. This is not true for every permit holder, as some permit holders have very short trips where a state highway is not needed, and in the northern and eastern extremes of the region the carrier may be entering from Wisconsin or Indiana on local roads. But almost everybody has already filled out one application, and the question comes up as to why they should have to provide different variations of that same information for each additional permit jurisdiction.

A uniform permit application was widely accepted by stakeholders. This does *not* mean that every jurisdiction should require every field from an IDOT permit and find some way to utilize each field. For example, a jurisdiction with no bridges most likely does not have a purpose to understand detailed axle by axle spacings for a permit load. What it does mean, however, is that every jurisdiction should be able to take the types of information which a carrier provides to IDOT and be able to use what that jurisdiction needs to evaluate a permit request and issue a permit. Most important, it means a carrier can fill out a master set of information one time, and not have to repeatedly recreate applications which are slightly different.

Applications have traditionally evolved by municipality, often through asking a colleague at another municipality, and there are minor differences without much additional value. There are some core principles regarding a uniform permit application:

- There should be a standard permit application for the region that is based off of the IDOT application. There might be two versions, one for agencies which own bridges, and one for those which do not and thus do not need as much detail regarding axle spacings and axle weights.

- Jurisdictions may identify which fields are not used in their particular business logic and thus can be omitted. But a standard form enables a carrier to send the same application everywhere without rekeying.

- Agencies which are asking for additional data should reconsider that policy, and instead determine how that data is actually being used in application review or for fee calculation.

- The IDOT permit system should provide carriers with a simplified local application as a one-page addendum to the issued IDOT permit, at the carrier's request. Fields which are specific to IDOT would be omitted from this sheet, and the data would be geared towards the local review process.

- Online permit submission systems should be able to import an IDOT permit electronically as a starting point for most data entry.

We envision this attribute being adopted by agencies in all four operating scenarios. We have included an example of a starting point for a uniform application as Appendix A[10].

3.6.3 Establishment of "Routine Load" Profiles and Procedures

One of the themes found in the initial project interviews described in Section 2 is that most loads in the region are consistent in a maximum size. Very few loads on local roads are more than 6 axles, and very few loads exceed a routine set of dimensions. Establishing a difference between something that is routine and something that is unusual for that municipality is important when it comes to defining processes and service level expectations.

An example of a routine load might be any of the following:

- A load that is of legal dimension, but up to 90,000 pounds on five axles;

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[10] Appendix A is under construction and will be in the final draft.

- A load that may be of either legal dimension or an extra foot of width, but up to 98,000 pounds on six axles; or

- A load that is of legal weight and does not exceed 14 feet in height, 14 feet in width, or 90 feet in length.

One of the challenges with local permitting is the lack of current automation, and thus the lack of current data about where the breakpoint comes between routine and unusual. Therefore we do not recommend any specific definition at this point, but instead recommend that at least the OS3 agencies review a representative sample's worth of permit data and draw appropriate conclusions. As communities continue to pursue automation, the improvement in the volume and quality of data will enable a more detailed look at this topic.

3.6.4   Exploring County Issuance of Township Permits

Given the unique statutory relationship between counties and townships with respect to engineering data, we recommend that the vision for the region include the option county issuance of permits for unincorporated areas, *at the township's discretion*. We do understand, however, that the collar counties with more rural and unincorporated areas may have more implementation challenges. Each county should review its own situation with its townships and work to find an appropriate solution.

3.6.5   Consistent Communications Baselines

As seen in our efforts to attempt to contact municipalities for the small group interviews, trying to find the right place to contact in a municipality can be a challenge. One of the immediate "low hanging fruit" for the region is to adopt a standard for initial inquiries from the motor carrier industry to each community:

As an example, we recommend the region-wide adoption across all four operating scenarios of a standard email address that is not an individual employee's address. We recommend OSOWpermits@<municipality>.il.gov. Agencies with automated permit issuance systems could generate an automated response with a link to the system and other pertinent information. Agencies without automated systems could use this email address to accept permit applications, deliver approved permits in PDF format, and answer questions. The signature block for email from this address could include other information such as a telephone number, a point of contact within the government, standard business hours, and typical response times. If a municipality does not require permits, an automated response explaining this point would be appropriate.

Taking this approach region-wide would remove one of the biggest headaches for carriers. It still will not address the issue of identifying the right agencies, but it will reduce the time it takes to make initial contact. When combined with the vision for a uniform permit application, the process of an initial inquiry to multiple municipalities becomes consistent regardless of the complexity of the trip.

As more jurisdictions move towards automated submission and delivery of permits, opportunities will exist for broader expansion of communications standards. Some of these opportunities may be seized upon by technology providers, others by individual or groups of jurisdictions.

3.6.6   Scenario-Driven Service Levels

Service level agreements are a common feature in customer service functions. For example, an e-commerce company may guarantee third-day delivery for customers purchasing a minimum amount of merchandise. In our context, the notion of service level refers to what a carrier can expect from an agency issuing permits, primarily with respect to responsiveness.

It is not realistic to expect that an OS1 agency which issues two permits per year should have the same response time as an OS3 agency which issues 50 permits on a busy day. The underlying business processes are different, and the staff levels are different. Similarly, routine loads should have consistent service levels, but non-routine loads are going to have greater variation by their nature, and be more variable based on the capabilities of the agency.

We envision the following *minimum* service levels for initial review of applications for routine loads becoming accepted within Northeastern Illinois:

- OS1 agencies: two business days;

- OS2 agencies: one business day;

- OS3 agencies: one half business day during off-peak seasons, one day during peak seasons; and

- OS4 agencies: preferably automated online self-issuance, but otherwise two hours.

3.6.7   Consistent Static Data Management

In this context, *static data* refers to the elements of the permit application review process which change very infrequently, and change primarily due to an event. Examples of this data include highway designations, ownership, and permitting responsibility, presence of bridges, lane and roadway widths, and vertical clearance restrictions (bridges, utility lines).

In general, the more of this static data which can be shared with industry, the more benefits will be reaped. At a simpler level, OS1, OS2, and OS4 communities should be able to recommend route networks for routine loads where the static data indicates that permit approval will be highly likely absent any temporary restriction. OS3 agencies with more complex networks should consider publishing GIS layers with these types of information. In all cases, static data related to permitting should be reviewed on a periodic basis to make sure that it is still accurate and up to date.

3.6.8   Appropriate Adoption of Technology

In today's business climate, the technology used by most state permitting agencies is very complex and can have up-front costs of over one million dollars, plus annual maintenance and improvement costs. These are excessive for almost any local agency, because the permit volumes and the simplified loads cannot justify the expense. The exception is the City of Chicago, where the complexity of the road network, the complexity of the City's bridges, and the presence of large-scale construction and other drivers of very heavy (greater than 270,000 pound) and very large (16-17 feet high, for example) loads should make a statewide-quality permitting system a priority. This might involve the City purchasing its own system, or working with IDOT to find a joint solution using IDOT's current technology.

For the rest of the OS3 agencies, technology adoption is primarily about workflow. The key parts of a system for these agencies include at a minimum:

- Customer account management;

- Permit application submission, including selecting a preferred route from a map interface;

- Automated queueing of applications for human review and approval, as well as secondary queues for items such as more detailed bridge or pavement analysis or coordinating police escorts;

- The ability to integrate static data into the system to be utilized by various system processes such as calculating fees, determining route feasibility, and setting up workflows and notifications;

- Automated fee collection,

- Delivery of an approved permit in an electronic format; and

- Management reporting tools.

Meanwhile, OS2 and OS4 agencies adopting technology can also utilize this level of functionality, although the static data portions may be more limited because there is less data to manage, there are less people to maintain the data, and there are simpler workflows to execute. OS2 and OS4 agencies may also have more of a preference for third-party hosted solutions; OS2 agencies because of the distribution of technology staff resources across a smaller number of transactions, and OS4 agencies because of the need for better technology service levels to support carriers who are buying their permit right before starting travel. Meanwhile, OS1 agencies generally do not have sufficient volumes to make automation relevant, but they should certainly feel free to do so if they are comfortable with a solution.

3.6.9   Consistency in Functional Requirements for Permit System Technologies

With the level of investment required to implement permit system technologies it is critical that technical requirements are developed around desired system functionality as opposed to a specific workflow or method of action. Implementing new permit system technology is often an opportune time to streamline existing workflows to improve both customer and employee efficiency. Developing technical requirements with this in mind allows an agency to maximize the benefits realized as part of their investment. This approach applies to agencies of all service levels but is especially important for agencies with more complex workflows that are in place due to previous limitations in supporting technology.

In addition to general technical requirements which will generally be jurisdiction-specific, there are eight (8) functional areas to consider. They are as follows:

- **User access and accessibility –** Requirements in this category are related to how users are going to access the system. This can include operating system requirements, browser requirements, disabled user accessibility compliance requirements, etc. Where possible these requirements should be focused not only on current trends, but expected future trends as well. For example, users are increasingly moving towards tablets as their device of choice for accessing the internet. As a result it is important that a system function effectively on these types of devices.

- **Permit application submission –** Requirements in this category are those related to how a user submits a permit application. This typically includes requirements that support entering customer, vehicle, load, and route information. Common examples includes the requirement that a system include fleet management functionality to streamline the adding of vehicle data to a permit application or the requirement to provide automated routing.

- **Permit application review-** Requirements in this category are related to how incoming permit applications are reviewed by the system or, when necessary, agency employees. These requirements typically focus on minimizing the amount of manual application review while making sure there is an interface to allow for manual review where data limitations prevent automation.

- **Engineering review-** Requirements in this category are related to how the system evaluates the routes of applications with weights above those deemed acceptable for standard travel by the agency engineering group. Larger agencies frequently have specialized systems that handle detailed engineering analysis of bridges for heavier loads. For these agencies this category of requirements typically outlines how the permit system will interface with this system to facilitate necessary engineering reviews and how the results of these reviews will be communicated back into the system and applied to a permit application.

- **Permit Payment –** Requirements in this category are related to how users pay for their permits. In most cases this involves interfacing with another agency system to facilitate electronic payments "on-demand" or integrating with account balances stored within the system. For example a system can be required to integrate with an agency's credit card vendor to pay for a permit or the system can be required to store payment methods for use at a later date.

- **Permit delivery-** Requirements in this category are related to how users can access their approved or rejected permits. Generally these requirements specify the format permits are required to be saved in and how approved or rejected permit applications are returned to the customers. Automated e-mails are a common approach to delivering the end result of a reviewed permit application. E-mails can be sent from a configurable address within the system or an interface can be developed with an agency e-mail server.

- **User and account management-** Requirements in this category are related to managing users and accounts within the system. Most permit systems include functionality that allows trucking companies to set up accounts to which they can associate users authorized to order permits and manage their account funds. For companies that specialize in ordering permits on behalf of the trucking industry additional functionality is often provided that allows them to create accounts for their trucking industry customers, without the ability to manage the funds of their customers.

- **Restriction management-** Requirements in this category are related to how route restrictions are managed, and applied to routes, within the system. A permit system with any level of automated or envelop routing will need information on road closures, construction, geometrical limitations, bridge heights, and bridge weight limits to be up to date. Methods for keeping this information up to date will vary by agency but can include automated integration with existing agency data sources, or a user interface to allow for manual management.

- **Reporting –** Requirements in this category outline the types of information an agency would like to be able to extract from the system and how it should be extracted. Permit systems contains a vast amount

of data that is needed to make legislative and operating decisions. Reports agencies typically request are related to permit volumes and revenue, broken into various categories. In addition to that, agencies often need to be able to query the system data to answer specific inquiries from the public, often related to legislative requests. For example, a bill could be proposed that raises the legal weight for a specific permit type. In order to calculate the potential impact to the highway network the agency would need to know how many permits of that type it issues.

While these 8 functional areas represent the vast majority of the workflow scenarios in place at permit issuing agencies, not all of them are possible, or even necessary, for all types of agencies. For example, a smaller agency that issues a couple permits a month, and lacking comprehensive roadway network data, will not realize many benefits from reporting or restriction management. As such it is important for agencies to carefully consider the costs and benefits of the functionality present in a given permit system. Table 3.2 outlines how the functional areas outlined above relate to the service level scenarios outlined in Section 3.6.1. Jurisdictions have the option to include additional requirements from other scenarios at their discretion.

Table 3.2   Functionality Groups by Service Level Scenario

Functionality Type	OS1	OS2	OS3	OS4
User Access and Accessibility	X	X	X	X
Permit Application Submission	X	X	X	X
Permit Application Review	X	X	X	X
Engineering Review			X	
Permit Payment		X	X	X
Permit Delivery	X	X	X	X
User and Account Management			X	
Restriction Management			X	X
Reporting		X	X	

The development of sound functional requirements is the foundation for a successful permit system deployment. The most effective method for putting together a list of requirements is to involve stakeholders representing all potential user types. This will ensure that all user needs are met within the requirements.

Based on our experience over the years we have put together a small set of sample functional requirements an agency can use as a starting point for developing a set of requirements specific to their needs. This is by no means a complete list, merely a sample to be used as a starting point for discussion. They are provided in Table 3.3.

Table 3.3   Sample Permit System Functional Requirements

Requirement Name	Requirement Description	Optional or Required
	User Access and Accessibility	
Device Support	The system shall be responsive and optimized for the following devices: desktop computers, tablets, smart phones.	R
Hosting	The system shall either be hosted on by the vendor, hosted by a third party such as Amazon Web Services, or be able to be hosted by the jurisdiction using commonly available server technology	R
Browser Support	The system shall support the following browsers: Internet Explorer (current and 1 version previous), Firefox (current and 1 version previous), Google Chrome (current and 1 version previous), and Safari (current and 1 version previous).	R
Web Access	The system shall be accessible through a web page	R
Application Access	The system shall be accessible through Android and iOS mobile applications	O
Log-in	The system will require a log-in for all users.	R
	General Technical Requirements	
Dashboard	Upon logging in users will be taken to a dashboard. The dashboard will be the home page for all users and allow for the following: submittal of permit applications, search for permit applications, account management	R
Search	The system shall provide extensive search capabilities for both agency employees and customers by, but not limited to, the following: permit type, load type, district, vehicle type, timeframe, origin, destination, and customer	R
Business Rules Engine	The system shall have a configurable business rules engine that will drive system workflow.	R
Configurable Error Messages	The system shall have a configurable set of error messages to provide the user in the event an error occurs while using the system	R
	Permit Application Submission	
Required Fields	When submitting a new permit application it will have the following fields available: (specific list to be developed by each jurisdiction)	R
Fleet Manager	(For jurisdictions which ask for specific vehicle information.) The system will have a fleet manager built in that allows users to save vehicles to their account. These vehicles can be selected during the permit application process in lieu of entering individual vehicle information.	O
Field Validation	The user interface will notify users when a required field is incomplete, or incorrect	R
Permit Types	The system will have a configurable list of permit types that a user can choose from	R
Sum Axle Weight	The system will automatically sum individual axles weights and populate the overall gross vehicle weight with this value	R
Auto Routing	The system will provide up to 3 route options for individual trip permits based on the vehicles width, height, length, and weights	O
	Permit Application Review	
Automated Review	The system will automatically process permits that are not flagged as needing manual review by the business rules engine	R

Manual Review Queue	The system will direct any application requiring manual review into an agent queue accessible to permit office employees	R
Manual Rejection	An internal user shall have the ability to reject a permit	R
Rejection Reason	Permit office staff will have the ability to provide an required explanation, within an application, to customers when a permit is rejected	R
Redirect to Engineering	Permit office staff will have the ability to send a permit application to engineering staff (either in their own organization or externally) for review.	OS3 only
Engineering Review		
Send to Engineering Software	The permit system will be able to interface with the jurisdiction's preferred engineering software such that data from the application is sent into the system for review by engineering staff	OS3 only
Receive from Engineering Software	The permit system will be able to interface with the jurisdiction's preferred engineering software such that the results of the engineering analysis are able to be connected to a permit application	OS3 only
Special Provisions	The permit system shall automatically add any special provisions to a permit application that are required by the engineering staff to safely move the load	OS3 only
Permit Payment		
Check	Users will be able to pay for a permit via electronic check.	O
Credit Card	Users will be able to pay for a permit via credit card	R
Wire Transfer	Users will be able to pay for a permit via electronic transfer of funds from their bank account	O
Payment integration	The permit system shall capture all relevant payment information and interface with the agency accounting systems to record transactions	R
Permit Delivery		
PDF	All approved permits will be generated in PDF format	R
Approval E-mail	All approved permits will be automatically sent to the customer e-mail address on file as a PDF attachment	R
Rejection E-mail	All rejected permit applications will trigger an automated e-mail to the customer address containing the rejection reason	R
User and Account Management		
Company Application	New users may submit a company application from the log-in page	R
User Management	Existing companies will have the ability to add new users to their accounts as well as de-activate, and modify users associated with their account	O
User Roles	The system will allow the configuration of permissions associated with users.	R
Account Funding	Users with the appropriate permissions will have the ability to add, remove, and edit payment sources associated with their account	R
Restriction Management		
Add Restriction	Authorized users will have the ability to add one of the following restriction types to the routing network: construction, bridge weight, bridge height, width, and length	R
Remove Restriction	Authorized users will have the ability to remove a restriction from the routing network	R

Modify Restriction	Authorized users will have the ability to modify any of the following restriction types on the routing network: construction, bridge weight, bridge height, width, and length	R
Restriction Data	Users will be required to enter the following information for every restriction: maximum width, height, length, weight, start date, end date, beginning location, and ending location.	R
Reporting		
Permit Counts	The system shall be able to provide permit counts, by type for a configurable time period	R
Revenue	The system shall be able to provide revenue counts, by permit type, for a configurable time period	R
Customizable Reports	The system shall allow the user to select from a configurable set of data fields and run customized reports for a desired period of time	R

3.6.10   Scenario-Driven Bridge and Pavement Engineering Analysis

Most routine loads should be able to be approved on most highway segments. For OS1 and OS2 agencies that own with smaller road networks, there may be no bridges at all to evaluate and very small numbers of routine loads are unlikely to generate substantially unique pavement issues. When there are bridges or substandard pavement sections, analysis can be done in advance for a range of vehicle configurations, and thus most routine permit applications can be quickly checked. For larger loads crossing a bridge or a substandard pavement section, more analysis may be needed, and that analysis may be beyond the capabilities of full-time staff. In these situations, some municipalities may request that the carrier perform the analysis at the carrier's cost, or that another route be found.

OS3 agencies are more likely to have structures which require engineering analysis of load rating or pavement capacity. These agencies may need real-time access to bridge load rating tools such as the AASHTOware suite[11], and depending on network complexity may need to either flag bridges as requiring additional analysis or integrate bridge load rating technology into their customer-facing solutions.

OS4 agencies may have a few bridges and pavement sections to analyze, but the loads are relatively routine and consistent, and thus the analysis can generally be done in advance and most decisions could be automated.

3.6.11   Fee Structures Correlated to Infrastructure and Administration

One of the challenges is to identify an appropriate fee which corresponds to infrastructure damage. Design standards for local roads are often lesser than for state roads, and thus it is possible that damage and thus fees will be higher. But local permits often cost far more per mile than state permits, either those in Illinois or other states. In many states, a 90,000 pound vehicle might have a cost of $0.25/mile plus a small fixed fee. In some suburbs, a similar permit may cost $5-6/mile, if not higher.

The engineering analysis of various infrastructure sections to identify fees is beyond the scope of this project. IDOT is currently sponsoring research on a similar topic for state-owned highways. We recommend similar

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[11] http://www.aashtoware.org/Pages/About-AASHTOWare.aspx

research be conducted on county and municipal highways to establish some additional data on where fees might best be set.

For OS1 agencies, the cost of setting up fee collection and invoicing may end up being disproportionately high compared to any revenue generated. Each jurisdiction should make its own decisions about the choice to charge fees in these situations.

3.6.12   Integration with Municipal Planning and Zoning

One of the topics which arose in the outreach process was that in many municipalities a series of OS/OW loads are generated due to a specific project. Whether it is a self-storage facility needing concrete beams as it is being constructed, a factory requiring raw agricultural products or an apartment building requiring a crane, OS/OW loads at the municipal level can be tied back to specific planning and zoning decisions or the issuance of building permits. As a result, part of the recommended vision is that planning and zoning decisions be associated with corresponding permitting functions. Tighter integration of the two functions will help reduce the costs for project developers by ensuring that the workflow around the project is more efficient when it comes to the permitted loads.

4.0 Recommended Action Items

4.1 Stakeholders with Respect to Action Items

Obtaining the articulated vision for local permitting in Northeastern Illinois will require a series of action steps to be taken by relevant stakeholders. We envision that multiple groups of stakeholders will be involved in these activities. Some activities will be taken by individual stakeholders, while others will be coordinated efforts within groups of stakeholders with a champion agency.

- **Local permitting agencies**, including county and municipal governments, will need to take on many of these action items at an individual level. Depending on which of the four operating scenarios agencies find themselves, they may need to take more or fewer of the recommendations;

- **The Metropolitan Mayor's Caucus (MMC) and the various Councils of Governments (COGs)** in Northeastern Illinois are identified as leading some of the activities which cross governmental boundaries, such as data management activities;

- **IDOT** is identified in taking the lead on several items which involve improvements to our integration with the state's permit system; and

- **CMAP** is identified in supporting or sponsoring activities for which Local Technical Assistance grants may be appropriate, or which fit into the broader framework of the upcoming ON TO 2050 long range plan.

4.2 Action Timeframes

We recommend establishing three ranges of timeframes for the actions listed below, as shown in Table 4.1.

- Short-term actions are primarily administrative in nature, and we believe they can be accomplished in six months;

- Medium-term actions should be accomplished in eighteen months; and

- Long-term actions should be accomplished in thirty-six months.

Table 4.1: Action Items by Timeframe

Short Term (6 months)	Medium Term (18 months)	Long Term (36 months)
• Setting Baseline Customer Communications Protocols • Establish Response Time Service Levels for Routine Permits	• Reviewing and Updating Permit Related Ordinances • Exploring Single Permits Spanning Multiple Jurisdictions	• Collecting and Publishing Road Closure Information • Municipal Infrastructure Costs Study • Regional OS/OW Commodity Flow Study

	• Collecting and Publishing Jurisdictional Maintenance Agreements • Investing in Online Permitting Technology	

4.3   Action Item Summary

For each recommended action item, we have indicated whether individual permitting agencies have actions to take, and whether there is an agency or group which should champion the effort.

4.3.1   Reviewing and Updating Permit-related Ordinances

Individual Agency Activity: Yes

Coordination Champion: Metropolitan Mayors Caucus (MMC) and the Illinois Truck Enforcement Association (ITEA).

Most agencies contacted or interviewed had not updated or reviewed their ordinances regarding permits in many years. A recent exception was the City of Joliet, which was in the process of an ordinance update when their permit leader was interviewed. There was a desire expressed by many stakeholders for a review of ordinances regarding truck permitting and developing model ordinance language which can be used to start to standardize language across the region. As this is primarily a municipal issue, the Metropolitan Mayors Caucus would be an appropriate champion for this effort, with support from the Illinois Truck Enforcement Association. The ITEA has already been compiling model ordinances from its member communities, and can provide a jump-start for this process.

4.3.2   Setting Baseline Customer Communications Protocols

Individual Agency Activity: Yes

Coordination Champion: IDOT, support from individual COGs.

IDOT's Permit Office manager has indicated an interest in including local permit contact information on the IDOT permitting web site. We recommend that individual COGs take the lead in helping educate municipalities as to the benefits of a standardized initial communications approach (as per Section 4.3.5) and provide technical assistance in setting up email processes, updating agency web sites, and notifying IDOT of changes of contact information for member municipalities.

4.3.3   Establish Response Time Service Levels for Routine Permits

Individual Agency Activity: Yes

Coordination Champion: No

As per the discussion in Section 4.2.4, we recommend establishing a maximum response time for initial response to customer requests for a new permit for a routine load. We recommend the following service levels:

- OS1 agencies: two business days;

- OS2 agencies: one business day;

- OS3 agencies: one half business day during off-peak seasons, one day during peak seasons; and

- OS4 agencies: preferably automated online self-issuance, but otherwise two hours.

We recommend that the OS3 and OS4 agencies report on their ability to meet this level on an annual basis.

4.3.4   Collecting and Publishing Road Closure Information

Individual Agency Activity: OS3 agencies to start

Coordination Champion: Individual COGs, support from CMAP and IDOT

Temporary restrictions to the road network are one of the major causes of rework in the permitting process. A closure in one location can cause multiple permits to be issued, often reaching across states. One key way where Northeastern Illinois agencies can take a leading position for local permitting is to develop an approach to collect and publish road closure information. These would include planned construction and maintenance closures, as well as shorter-duration incidents and planned events.

We recommend that the approach be piloted primarily with OS3 agencies to start, and as the process is streamlined and the benefits identified, rolled out to include the other agencies. The various COGs in the region have ongoing data management efforts to compile and share municipal information, and we believe that the COGs will be an appropriate home for piloting the process. Technical assistance may be needed from both CMAP and IDOT.

4.3.5   Collecting and Publishing Jurisdictional Ownership and Maintenance Agreements

Individual Agency Activity: Yes

Coordination Champion: IDOT, support from MMC and COGs

Today, IDOT notifies counties if permits are issued where travel will occur on local roads in the county. IDOT's permit office has solid, accurate information on what county each highway is located off of the state network. It does not, however, have timely and accurate information about the latest annexations across the state. It also does not have information about maintenance agreements where permitting authority may differ from road ownership, especially between county and township or county and municipality.

At first blush, this might seem easy to the reader. But the nuances of data regarding location and ownership are extremely complex. There are likely to be a substantial amount of inaccuracies between what IDOT currently believes are the ownership and maintenance agreements versus what individual jurisdictions maintain. This gap causes potential issues for carriers, and poses both a safety (no review of a road segment) and enforcement (being ticketed for not having the proper credential) issue for them.

With such accurate information, IDOT would be able to notify all relevant agencies if a permit request was approved where there was travel off of the state highway network, not just the county agency in question. We recommend that the MMC spearhead the effort and pilot a coordination effort with one of the COGs to review and test the processes needed to ensure that IDOT's permit office starts to get this information in a timely manner.

Without such accurate information, IDOT becomes much more limited in how it can help carriers and local jurisdictions. For example, can carriers realistically expect that IDOT can provide road by road ownership information if the underlying data is problematic?

4.3.6   Exploring Single Permits Spanning Multiple Jurisdictions

Individual Agency Activity: As desired

Coordination Champion: One or more COGs, Private sector

One interesting idea that came up in interviews was the idea of a multi-jurisdictional 'regional' permit. This permit would be primarily for OS1 and OS2 communities, and would be an automatically approved permit for a set of pre-specified routes in a set of municipalities, for a defined maximum vehicle dimension and weight, on either 4 or 5 axles. Carriers could check off the communities in which they were going to use the permit, and the fee would be available via simple arithmetic. A small processing fee might need to be charged for the convenience and for hosting. The permit would be simultaneously delivered to the carrier and to each participating municipality via email.

This may be a low cost way for OS1 communities to get into automation, and ties into the recommendation 4.2.3. If a group of municipalities in a single COG would be interested in piloting such an approach, there may be benefits to the broader region.

4.3.7   Investing in Online Permitting Technology

Individual Agency Activity: OS3 and OS4 agencies, perhaps some OS1 and OS2 agencies

Coordination Champion: None

OS3 and OS4 agencies are in a position where it is appropriate that they invest in technology for online permit workflows. We believe that the other recommendation in this study will give agencies a better idea of how to position their technology investments to integrate with the regional objectives and vision for local permitting, and how to better integrate their processes with advancements planned by IDOT and scheduled for the 2017-2018 timeframe.

As described in Section 3.6.8, we recommend that the City of Chicago investigate approaches to incorporate elements of technologies typically found in statewide permit systems, such as integrated bridge load rating and restriction management modules, to address its unique needs.

4.3.8   Municipal Infrastructure Costs Study

Individual Agency Activity: No

Coordination Champion: IDOT

As mentioned previously, IDOT is currently conducting a study to consider the infrastructure impacts of permitted vehicles on state highways. We recommend that a parallel study be commissioned to consider impacts on a variety of county and municipal roads, not only in Northeastern Illinois, but in a representative sample of the state. Such a study would provide stakeholders real data in terms of the relative differences in potential infrastructure damage at different design levels, and provide a baseline for understanding how county and municipal fee structures should differ from IDOT fee structures.

4.3.9   Regional OSOW Commodity Flow Study

Individual Agency Activity: No

Coordination Champion: CGRI, CMAP

One of the challenges in understand the underlying processes in the OS/OW industry is that the data on commodity flow is rather scarce. OS/OW is a relatively small but important portion of total freight flows, and thus is not well captured in traditional commodity flow studies. [Under one common framework for identifying commodities, a 90 foot long concrete bridge beam would be categorized in the same grouping as a concrete burial vault.] The situation is compounded by the presence of annual permits, for which individual trip information can only be broadly estimated.

As a result, quantifying some of the economic benefits of the OS/OW industry can be difficult to achieve with a desired level of precision. CGRI and CMAP can assist this process by focusing on the data side of this issue. One of the challenges is the smaller number of manufacturers, construction companies, and other shippers, and the ability to maintain confidentiality. But the ability to leveraged the increasingly harmonized environment for OS/OW in Northeastern Illinois can help shift the conversation from *permits* to *trips*, and enable the region's leaders to identify additional techniques to leverage the region's freight economy.

Appendix A.   Draft Uniform Local Permit Application

Text/Figure to be added in final report after discussion on October 31.

Appendix B.   Workshop Results

Session Name: Truck Permitting 1-26-2016 2-21 PM

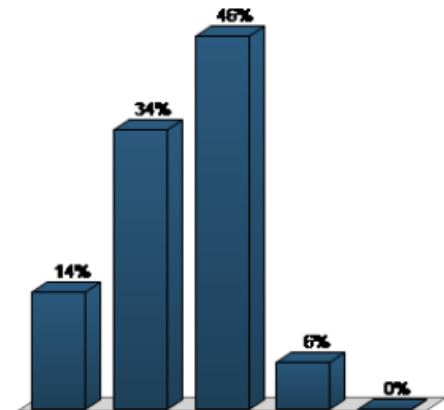**Date Created:**   1/26/2016 11:45:17 AM   **Active Participants:** 38 of 38

**Average Score:** 0.00%   **Questions:**   25

Results by Question

1. Warm Up Question: Pizza… what is your preference (pick 1)? (Multiple Choice)

	Responses	
	Percent	**Count**
Stuffed	14.29%	5
Deep Dish	34.29%	12
Thin	45.71%	16
New York Style	5.71%	2
Don't like pizza	0%	0
Totals	**100%**	**35**

2. What is your involvement with permitting? (Demographic Assignment)

	Responses	
	Percent	**Count**
County official	26.47%	9
Municipal official (over 50k residents)	5.88%	2
Municipal official (15k-50k)	14.71%	5
Municipal official (0-50k)	8.82%	3
Industry	14.71%	5
Liaison or Association	29.41%	10
Totals	**100%**	**34**
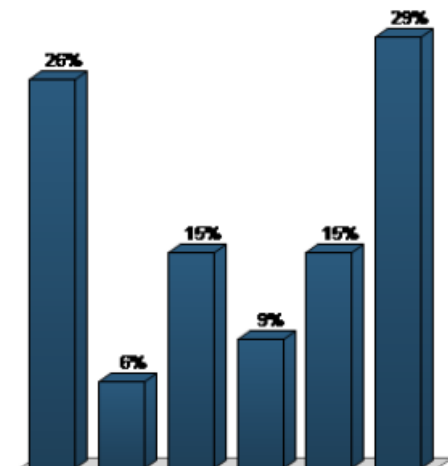
3. How complicated do you think OSOW permitting is in Northeastern Illinois? (Multiple Choice)

	Responses	
	Percent	Count
Very complicated	37.14%	13
Somewhat complicated	42.86%	15
About what should be expected	14.29%	5
Easier than expected	5.71%	2
Totals	100%	35
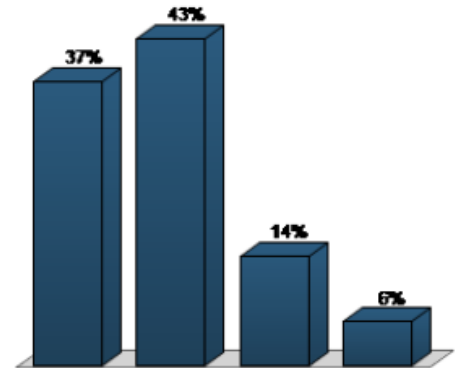
4. Of the following assertions, which represents the most pressing challenge? (Multiple Choice)

	Responses	
	Percent	Count
Carriers do not know who to contact	42.86%	15
Variations in each jurisdiction's laws and requirements are confusing	20%	7
Fees are not tied to infrastructure and safety	8.57%	3
Access to data to make informed decisions	20%	7
Permit turnaround time	8.57%	3
Violations of permit laws	0%	0
Totals	100%	35
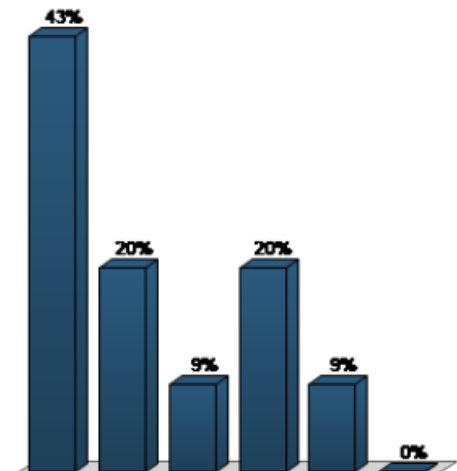
5. Carriers are able to easily contact a local agency for a permit... (Multiple Choice)

	Responses	
	Percent	**Count**
Almost Always	2.86%	1
Usually	37.14%	13
Sometimes	54.29%	19
Rarely	5.71%	2
Totals	**100%**	**35**
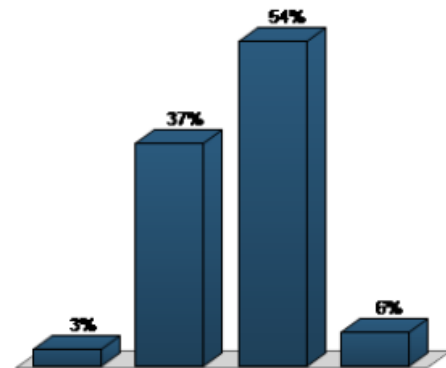
6. Prioritize these issues that were heard at various small group meetings (pick 2) (Priority Ranking)

	Responses	
	Percent	**Weighted Count**
Many agencies do not have a dedicated person to review permits	13.24%	9
Carriers do not know which jurisdiction(s) own various road segments	45.59%	31
Too many agencies review and issue permits	26.47%	18
Road closure information is difficult to find	14.71%	10
Totals	**100%**	**68**
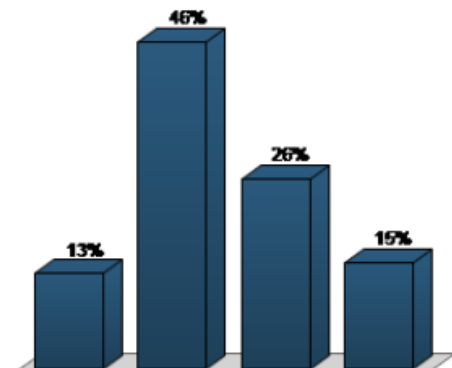
7. Prioritize these issues that were heard at various small group meetings (pick 2) (Priority Ranking)

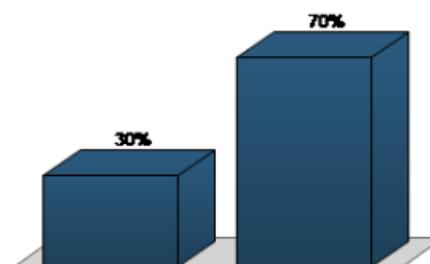|	Responses	
	Percent	**Weighted Count**
Not enough agencies have online systems	19.4%	13
Reviews take too long, even when there are no bridges	8.96%	6
Permit forms are all slightly different	14.93%	10
Agencies don't coordinate with each other	26.87%	18
Integration with IDOT permit	29.85%	20
Totals	**100%**	**67**
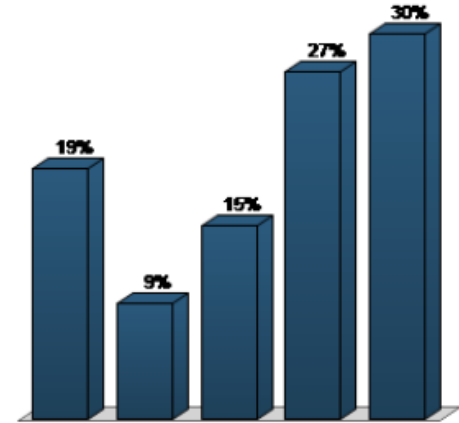
8. Which one of these assertions do you feel most strongly about? (Multiple Choice)

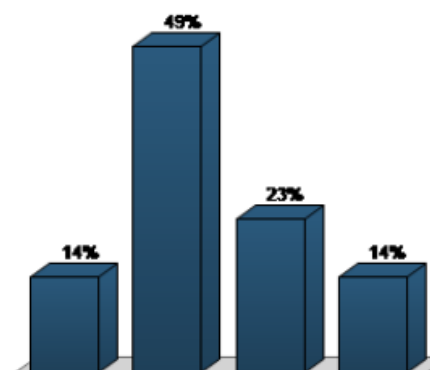|	Responses	
	Percent	**Count**
Permits take too long to be approved	17.14%	6
Permit approval time is not consistent enough	25.71%	9
Permit approval time should depend on agency size	11.43%	4
I don't know enough to answer	45.71%	16
Totals	**100%**	**35**
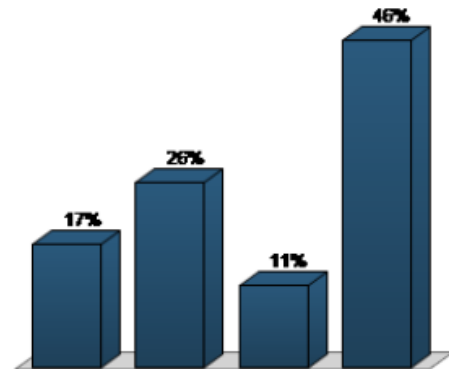
9. "Agencies understand the costs which carriers and/or their customers incur when permit issuance is delayed." (True / False)

Responses		
	Percent	**Count**
True	30.3%	10
False	69.7%	23
Totals	**100%**	**33**

10. I believe that permit fees in NE Illinois are reasonable… (Multiple Choice)

Responses		
	Percent	**Count**
Almost always	14.29%	5
Usually	48.57%	17
Sometimes	22.86%	8
Rarely	14.29%	5
Totals	**100%**	**35**

11. Routes that carriers request from local agencies in NE Illinois are (Multiple Choice)

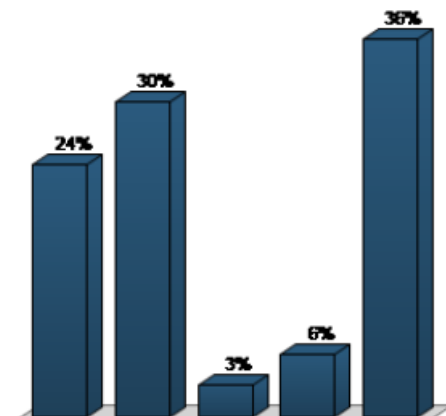| Responses		
	Percent	**Count**
Generally approved	53.85%	14
Generally approved for smaller loads	15.38%	4
Often in need of being modified	26.92%	7
Usually in need of being modified	3.85%	1
Totals	**100%**	**26**
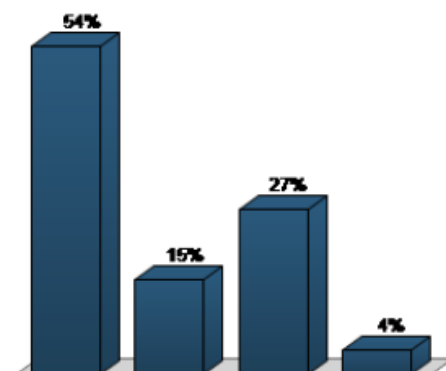
12. Fill in the blank: "I am \<blank\> confident that drivers are aware of all route closures when they begin moving their loads in NE Illinois." (Multiple Choice)

	Responses	
	Percent	**Count**
Generally	14.71%	5
Usually	29.41%	10
Rarely	55.88%	19
Totals	**100%**	**34**
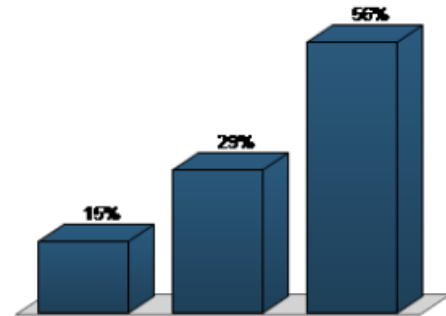
13. The regional vision should… (pick your top 2) (Priority Ranking)

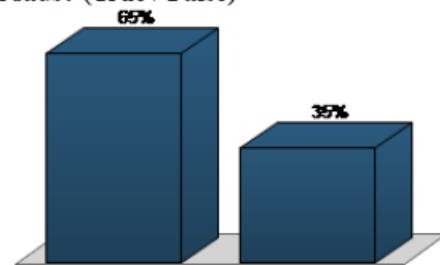|	Responses	
	Percent	**Weighted Count**
Identify ways to reduce the time carriers spend on obtaining permits	24.24%	16
Define a standard way for carriers to communicate with permitting agencies in NE Illinois	30.3%	20
Define a minimum response time from agencies, based on their permit volume	3.03%	2
Encourage agencies to designate specific staff for permit reviews	6.06%	4
Define a uniform permit application for the region	36.36%	24
Totals	**100%**	**66**

14. Select the statement which most closely reflects your attitude towards local permitting vision (Multiple Choice)

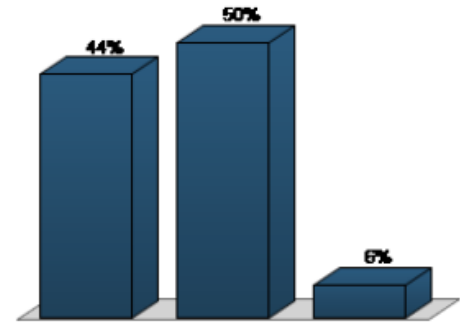|	Responses	
	Percent	**Count**
Each agency can act on its own to improve its permitting process	17.14%	6
There should be different service level standards for agencies, that are based on permit volumes	20%	7
All agencies should follow a uniform process	42.86%	15
Fewer agencies should issue permits	20%	7
Totals	**100%**	**35**
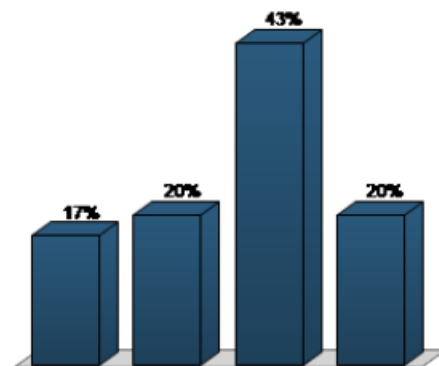
15. Should Counties issue permits for travel on all township-owned roads? (True / False)

	Responses	
	Percent	**Count**
True	64.71%	22
False	35.29%	12
Totals	**100%**	**34**

**16. Select the one statement which most closely reflects your attitude towards local permitting vision (Multiple Choice)**

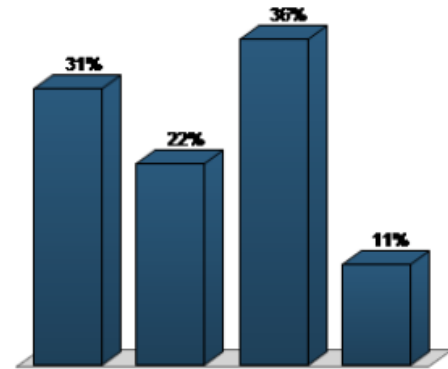|	Responses	
	Percent	**Count**
All permitting agencies should have an online system	44.12%	15
Agencies without an online system should have a uniform application form and contact method	50%	17
Permitting agencies are unique and should be allowed to set their own processes	5.88%	2
Totals	**100%**	**34**

17. What investment could IDOT make which would help local permitting the most? (Multiple Choice)

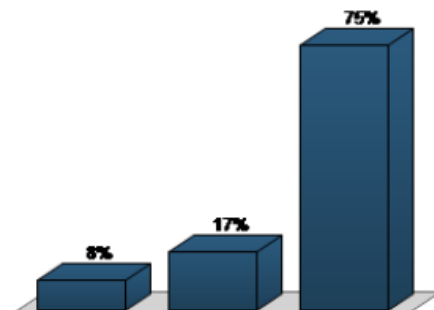|	Responses	
	Percent	**Count**
Maintaining detailed jurisdiction ownership maps	32.43%	12
Clearer language about what local permits are needed	10.81%	4
Integration with local systems	54.05%	20
Funding research on local infrastructure damage	2.7%	1
Totals	**100%**	**37**
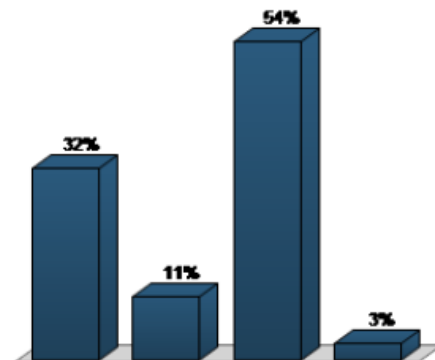
18. Permit fees should… (Multiple Choice)

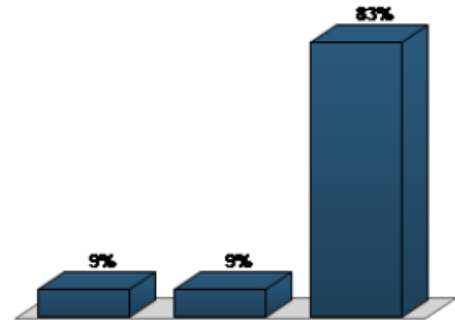|	Responses	
	Percent	**Count**
Be at the discretion of the agency	30.56%	11
Cover all infrastructure damage	22.22%	8
Cover marginal infrastructure damage	36.11%	13
Cover only administrative costs	11.11%	4
Totals	**100%**	**36**

19. A Permitting Jurisdictional Map for NE Illinois Should Be (Multiple Choice)

	Responses	
	Percent	**Count**
Maintained by the Region's Councils of Government	8.33%	3
Maintained by the Counties	16.67%	6
Maintained by IDOT	75%	27
Totals	**100%**	**36**

20. A Permitting Contact List for NE Illinois Should Be (Multiple Choice)

	Responses	
	Percent	**Count**
Maintained by the Region's Councils of Government	8.57%	3
Maintained by the Counties	8.57%	3
Maintained by IDOT	82.86%	29
Totals	**100%**	**35**

**21. Should Counties offer to manage the permitting process for smaller incorporated municipalities? (Multiple Choice)**

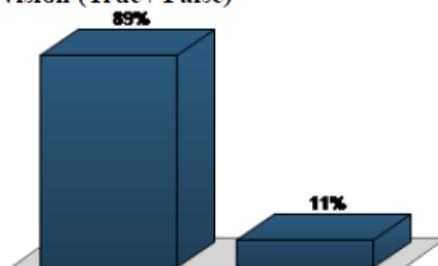|	Responses	
	Percent	**Count**
It should be required	15.62%	5
It should be optional	59.38%	19
It will make it too complicated to determine who to contact	25%	8
Totals	**100%**	**32**
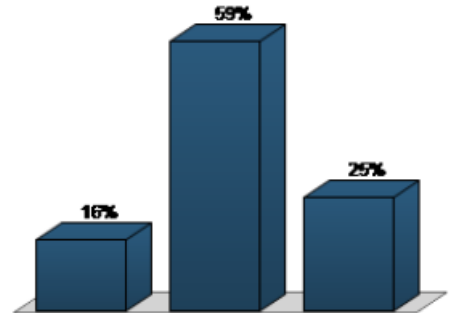
22. Which area of the review process requires the most technical assistance for smaller agencies? (Multiple Choice)

	Responses	
	Percent	**Count**
Managing vertical clearances	5.88%	2
Managing bridges with poor load ratings	55.88%	19
Tracking construction	20.59%	7
Setting travel restrictions	0%	0
Selecting a route for the carrier	17.65%	6
Totals	**100%**	**34**
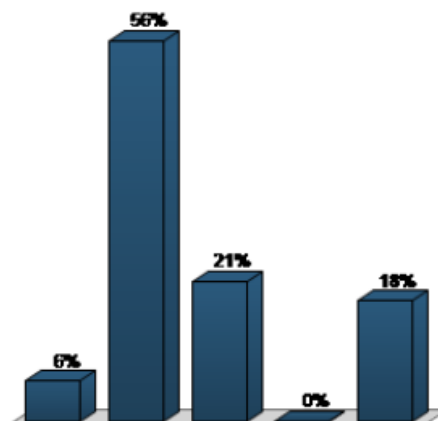
23. A process for identifying model ordinances should be part of the vision (True / False)

	Responses	
	Percent	**Count**
True	88.57%	31
False	11.43%	4
Totals	**100%**	**35**

24. A set of 20-30 standard requirements for an online system (for those agencies who wish to implement) should be part of the vision (True / False)

	Responses	
	Percent	**Count**
True	89.66%	26
False	10.34%	3
Totals	**100%**	**29**
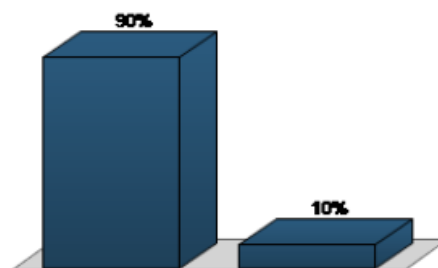
25. Pre-approved local permit routes for a standard vehicle size and weight would (Multiple Choice)

	Responses	
	Percent	**Count**
Greatly help	45.71%	16
Help in certain parts of the region	51.43%	18
Make things more complicated	2.86%	1
Totals	**100%**	**35**