CONNECTING COOK COUNTY FREIGHT PLAN

HONORABLE TONI PRECKWINKLE

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PRESIDENT, COOK COUNTY BOARD OF COMMISSIONERS

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> ACKNOWLEDGEMENTS

Cook County would like to thank the following organizations that served on the Freight Advisory Committee:

- > Chicago Cook Workforce Partnership
- > Chicago Department of Aviation
- Chicago Department of Planning and Development
- > Chicago Department of Transportation
- > Chicago Metropolitan Agency for Planning
- Civic Consulting Alliance
- Cook County Bureau of Economic Development
- Cook County Department of Environment and Sustainability
- Cook County Department of Transportation and Highways
- > Federal Highway Administration

- > Illinois Department of Transportation
- > Illinois International Port District
- > Illinois State Toll Highway Authority
- > Illinois Trucking Association
- > Northwest Municipal Conference
- South Suburban Mayors and Managers Association
- > Southwest Conference of Mayors
- > Union Pacific Railroad
- University of Illinois at Chicago Urban Transportation Center
- Village of Riverdale
- > West Central Municipal Conference

Cook County would also like to thank the numerous businesses, agencies and organizations that provided input into this Plan.



MESSAGE FROM THE PRESIDENT



To the Residents and Businesses of Cook County:

In 2016, the Board of Commissioners adopted the first Long Range Transportation Plan for Cook County since 1940. This Plan, *Connecting Cook County*, was a call to action. It laid out a vision for the future of transportation in the County, and defined a framework for the strategic partnerships and investments that strengthen both our economy and quality of life.

One of the five priorities of the Plan was to **"Support the region's role as North America's freight capital."** Freight impacts all of our daily lives as it brings

us goods from across our nation and around the world. Its economic impact extends beyond physical infrastructure and transportation providers to include the many manufacturers, wholesalers and retailers that depend upon the transportation sector. Nearly 27 percent of jobs in the County are in the freight sector which also indirectly supports many more jobs. However, the high volumes of freight activity in Cook County impose challenges on our communities, such as safety concerns, traffic congestion and the cost of maintaining infrastructure.

In fall 2016, the Department of Transportation and Highways (DOTH) embarked on the development of the *Cook County Freight Plan*. This process underscored the vital role that Cook County can play in partnership with our municipalities to advance critical transportation improvements as well as the County's opportunity to provide leadership on a national and state level for key freight policy issues that impact our region.

This *Freight Plan* makes the case for investment in a robust, multimodal freight system and for freight policies that will ensure the safe and efficient movement of goods within the County. It takes an in-depth look at the current performance of the freight system, identifies capital investment needs and provides a framework to guide the future work of County agencies and their federal, state and municipal partners.

By implementing the actions in this *Freight Plan*, we can prepare the County's freight system for the future and assure our predominant position as the economic hub of the Midwest.

Sincerely,

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Toni Preckwinkle

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> INTRODUCTION

Cook County embarked on the development of this *Freight Plan* in order to gain a deeper understanding of the economic context of goods movement, the physical condition of the freight transportation system, the extent of industrial land uses and challenges to their redevelopment and the institutional governance of the freight system across multiple public and private entities.

Building on *Connecting Cook County*, the County's Long Range Transportation Plan (LRTP), this *Freight Plan* is a data-backed assessment of the freight topics captured in that plan, supplemented with research and analysis of other relevant studies and data. This *Freight Plan* makes the case for investments in infrastructure and enactment of policies that will ensure the safe and efficient movement of goods within the County. These strategic transportation investments are integral to drive long-term economic growth in North America's busiest freight hub. In addition, freight-specific programs and policies can play an especially critical role in improving quality of life for the County's residents.

The County's freight system is complex; jurisdictional responsibility spans federal, state and local levels and crosses public and private sectors. At the same time, municipalities, which often have the fewest resources, are disproportionately affected by freight traffic on local roads even though the highest volumes are found on the Interstate system. Effective solutions will require addressing freight issues from multiple angles and perspectives.



Connecting Cook County was adopted on August 3, 2016 by the Cook County Board of Commissioners. It is the County's first long range transportation plan in over 75 years and was developed to guide where and how the County invests in transportation to more fully realize its opportunities to attract and retain residents, businesses and capital. Five priorities were developed to shape the County's transportation policies and capital improvement program: prioritize transit and other transportation alternatives, support the region's role as North America's freight capital, promote equal

access to opportunities, maintain and modernize what already exists and increase investments in transportation. The completion of this *Freight Plan* marks one of the first major milestones in realizing *Connecting Cook County*'s recommendations.

ConnectingCookCounty.org

To ensure that critical voices were heard, this *Freight Plan* included a broad and multi-pronged outreach effort (see below). Ultimately, vital stakeholder knowledge and perspectives were combined with technical research to identify key issues, challenges and opportunities, as well as actions that will improve the movement of freight within the County and maximize its benefit to County residents and businesses.

The scope of this Plan is broad. From infrastructure investment to policy opportunities, the actions laid out here are meant to provide a framework for Cook County to be a leader on freight issues at the national, regional and local levels.

Even as the planning process was underway, Cook County took steps to support the region's freight system. In 2017, the County launched the *Invest in Cook* grant program with \$8.5 million available for projects that address the LRTP priority areas including freight. Cook County funded seven freight-related projects through the first round of the program. In 2018, the County funded six freightrelated projects totaling \$1.8 million.

Additionally, Cook County launched the *Lincoln HighwayLogisticsCorridorStrategicPlan*, a targeted analysis of transportation, land use, and economic and community development in three South Cook County municipalities. This plan prioritizes 10 sites within the corridor for redevelopment and lays out an integrated set of steps to be taken by economic development, environment and transportation implementers to ensure their reactivation at the highest and best use.

In 2018, Cook County's \$78 million contribution to the CREATE Program partnership was critical to obtaining a \$132 million federal grant to fund the 75th Street Corridor Improvement Project.

This *Freight Plan* builds upon the momentum of these early actions and identifies the next set of priorities, policies and investments to improve freight movement and grow Cook County's economy.



Freight affects everyone. The movement of freight makes the region's economy hum. Both directly and indirectly, freight movements impact travelers and business operators. For this reason, stakeholder input was a key element in the development of Cook County's *Freight Plan*. The study included:

- Convening an Advisory Committee representing key federal, state, regional and local agencies, along with freight industry experts.
- Conducting interviews and holding workgroups with representatives from key institutions, manufacturing and logistics firms, freight operators and industrial real estate developers.

The engagement of these stakeholders resulted in a more informed plan and key policy and project recommendations that will benefit the County's residents and businesses alike.

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FREIGHT: COOK COUNTY'S ECONOMIC ENGINE

Cook County is at the center of North America's largest multimodal freight hub, facilitating the movement of goods nationally and globally. The County realizes enormous economic benefits as a result of this freight transportation access and is positioned to capitalize on untapped and emerging development opportunities. At the same time, the County must address existing challenges posed by the high volumes of freight as well as changing economic, geographic and demographic trends, to ensure an improved quality of life for local communities. Freight is a cornerstone of the Cook County economy, yet the nature of freight in the County has changed over time. While the region's industries were historically centered in Chicago and adjacent suburbs, freightgenerating activity moved to suburban locations or surrounding counties as populations grew and shifted over time. Yet, there are still efficiencies and advantages to locating businesses that create and ship goods in the heart of Cook County. Cook County must work towards maintaining and modernizing its freight facilities to retain existing industries and attract new businesses.

Freight Drives Cook County's Economy

Serving as the top freight gateway in North America with connections worldwide, Cook County's roadways, rail lines, airports, pipelines and waterways annually handle over \$1.5 trillion in goods (see figure below). About 25 percent of the nation's freight trains and 50 percent of all intermodal trains move through the greater Chicago region, amounting to over a quarterbillion tons of freight per year on the rail system alone. Nearly half a billion tons of freight move on the County's highways. Employment in freight-related industries accounts for a significant portion of all jobs in Cook County, while almost everything essential to our daily lives, from groceries to medicine, depends on an efficient freight system.

With Cook County's advantage as an access point to national and global markets via two major airports, six of the seven Class I railroads, 16 intermodal facilities, six major Interstate highways and the Port of Chicago, targeted improvements and policies could help draw new investment in local industries. Investing in economically disadvantaged communities with freight transportation assets and freight cluster strongholds is essential to achieving the equal access to opportunities prioritized in *Connecting Cook County*.

Despite the County's vast and heavily trafficked multimodal freight network, the system today faces numerous capital and operational challenges, including aging infrastructure, increasing demand and limited resources to address these needs. It will be critical to maximize efficiencies by modernizing freight facilities and preserving existing assets. Thoughtful and strategic land use planning around freight facilities can promote improvements such as connected supply chains and reduced distances between shippers and transportation service providers.

FREIGHT TONNAGE AND VALUE BY MODE IN COOK COUNTY

Almost 60 percent of freight in Cook County travels by truck and almost 40 percent travels by rail. Smaller volumes of specialized or time-sensitive goods such as electronics travel by air, while waterways and pipelines transport bulk and liquid goods such as sand or natural gas.



Source: IHS Markit Transearch Freight Flow Data for 2015. Note: Rail data is for the Illinois portion of the Metropolitan Chicago Bureau of Economic Analysis Economic Area.

Economic Trends

As the most populous county in Illinois—and the second most populous in the nation—Cook County accounts for 40 percent of the state's residents and 43 percent of all state jobs. Overall, employment trends in the County mirror regional and national trends in the growth of service-sector jobs and decline of manufacturing and industrial jobs.

While 27 percent of jobs in the County are in freightdependent industries such as agriculture, natural resources, manufacturing, trade and transportation, these same industries produce more than 56 percent of the County's economic output (see figure below). Despite an increase in employment in some industries over the last decade, manufacturing jobs are still declining in the County and nationwide. This is in part due to trends in technological innovation, automation and efficiency which have resulted in higher economic outputs with lower employment in many industries. Some employment loss is also due to production moving to less expensive regions of the nation or world.

Yet, freight-dependent industries remain a core component of the County's economy. Manufacturing jobs often have wages that are higher than comparable service-sector jobs, especially for positions that do not require a college degree. And while a high proportion of the County's residents have a college degree, it is important to retain and cultivate a mix of employment opportunities for all of the County's residents.

Furthermore, due to its concentrations of freight-generating business and transportation infrastructure, the County retains a comparative advantage for many manufacturing sectors, including fabricated metal products, electrical

OUTPUT OF FREIGHT-DEPENDENT INDUSTRIES IN COOK COUNTY

When measured by economic output, freight-dependent industries are growing and currently account for more than 56 percent of the County's economy. Advances in technology, automation and efficiency, however, have led to slow or declining employment growth in some of these industries.



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equipment and appliances, among others. Transportation and logistics sector jobs are also increasing in Cook County, filling the gap in employment opportunities left by declining manufacturing sectors. Illinois Department of Employment Security projections indicate that transportation and materials-moving occupations are anticipated to grow an estimated 8.5 percent between 2012 and 2022, adding nearly 17,000 jobs while production occupations in Cook County are expected to add 3,600 jobs. As employment patterns shift in the region, aligning skills with job opportunities will be important. Workforce development strategies aligned with the needs of growing industries are a key component of a strong economy (see figure below). In Cook County, priority industries include fabricated metals, food processing and packaging and transportation and logistics as identified in *Planning for Progress*, the County's Consolidated Plan and Comprehensive Economic Development Strategy.

CHANGES IN SELECT COOK COUNTY MANUFACTURING AND TRANSPORTATION INDUSTRIES 2005-2015

National and local trends have led to decreases in manufacturing employment, while employment in many transportation-related industries and select manufacturing industries (e.g., apparel, transportation equipment and metals) has grown. There are a number of industries (e.g., warehousing and storage, electrical equipment and appliance manufacturing and transit and ground transportation), in which Cook County's industry concentration, or competitive advantage, is high.



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2005-2015.

According to the U.S. Bureau of Labor Statistics, Cook County's businesses employ more people than 32 U.S. states. Almost 27 percent of these employees work in businesses that generate or move freight.

Reinvestment and Revitalization

Cook County is home to an extensive collection of industrial land—over 33,000 acres. Historically, industrial land and transportation facilities have been co-located within the County. Almost all current industrial sites are within one mile of a truck route and/or Interstate highway. About 77 percent are within one mile of a freight rail line.

However, 28 percent of the industrial land in Cook County is vacant or underutilized, as shown on the map on the following page. While this figure constitutes a challenge for the County, it also represents a tremendous opportunity to leverage access to the freight system and workforce to support economic development. Approximately half the vacant or underutilized industrial land in the County consists of 80 sites of 25 or more contiguous acres. Approximately 20 of these sites have excellent access to multiple freight facilities and the strongest potential for freight-supportive development. Although vacant and underutilized industrial land exists throughout the County, some businesses, particularly manufacturers and distribution centers, choose to locate outside of the county where open greenfield sites exist. While greenfield sites often have fewer encumbrances that allow for faster development, they are located further away from existing freight infrastructure and workforce.

The County, with its public and private partners, must address barriers to redeveloping underutilized land including assembling suitable properties, rebuilding or removing buildings and infrastructure in poor condition and addressing tax and title issues. Revitalization of land for industrial purposes will be undertaken to ensure that freight is a "good neighbor" to local residents and communities.

Community economic health depends on access to jobs. Freight, which accounts for 27 percent of employment within Cook County, is a critical component of community health.



INDUSTRIAL LAND AND EXISTING TRUCK ROUTES

The 28 percent of currently vacant or underutilized industrial land represents an opportunity for Cook County to promote growth within the freight cluster. While the current truck route system provides broad connectivity throughout the County, there is a need for additional routes on arterials and connectors to improve freight mobility and access to industrial areas, local businesses and freight facilities.



Source: Illinois Department of Transportation, Chicago Metropolitan Agency for Planning. Analysis by Center for Neighborhood Technology, 2018.

Freight Moves in Cook County

Cook County is the nation's pre-eminent freight hub. The goods that move to, from and through the County are vital to the economies of the region and nation. Cook County's pre-eminence is the result of the region's central location and historical development as the gateway between the eastern and western United States.

Almost 55 percent of goods in the County move by truck-about 400 million tons of freight valued at an estimated \$854 billion in 2015 (see figure below). An additional 37 percent of goods move by rail, totaling 277 million tons valued at \$557 billion annually. Together, truck and rail carry 92.3 percent of freight by weight and 95 percent of freight by value.

About half of the total County freight when measured by volume is pass-through traffic-i.e., trucks and trains that move through the County without stopping to load or unload goods. This through traffic is both a reflection of the County's competitive advantage as a central freight hub as well as a challenge which requires that the County's infrastructure be capable of handling large volumes of traffic while minimizing negative impacts on residents and local businesses.

Another half of the region's freight travels to and from businesses and customers in the County and directly contributes to the region's economy. Much of this freight is consumer goods (mixed product shipments, often referred to as "secondary traffic") moving to and from distribution centers and stores.



DIRECTIONAL MOVEMENT OF FREIGHT IN COOK COUNTY

About half of Cook County's total freight travels to or from businesses, suppliers and customers in the region. This freight has a direct impact on the County's economy. The remainder is pass-through traffic that does not stop within the County, yet contributes to wear and tear on the County's infrastructure.

Transearch data only reports the domestic mode of an international shipment. Source: IHS Markit Transearch Freight Flow Data for 2015.

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FREIGHT MOVES IN COOK COUNTY

Freight moves through Cook County via trucks, railcars, intermodal containers, airplanes and barges. Each of these modes has unique characteristics and plays a pivotal role in moving goods efficiently. Consumer goods, such as food, home supplies, clothing or jewelry, typically move by truck and rail. Trucks and rail also move the large quantities of transportation equipment, machinery, chemicals, fuels, minerals and metal products that sustain the County's economy. Air cargo is used to move specialized, highly valuable or time-sensitive freight, such as packages and mail, machinery or optical equipment. Finally, barges move bulk goods, especially fuels, metal products and raw materials such as sand or clay to and from County businesses. The figure below lists the top commodities moved in Cook County by mode, weight and value.



Source: IHS Markit Transearch Freight Flow Data for 2015.

FREIGHT AT A GLANCE

In 2015...

- Trucks move more than half of the County's freight—over \$854 billion annually. Rail moves almost 40 percent of the County's freight—about \$557 billion annually.
- Air cargo shipments moving in and out of O'Hare Airport constitute about four percent by value of the total freight in the County.
- Just over half of freight in Cook County is pass-through traffic which does not stop to load/unload goods.
- Consumer goods moving to/from freight facilities, distribution centers and retail stores is the single largest type of freight moving in the County.

By 2040...

- Truck freight is projected to grow annually by
 1.7 percent in volume and 2.5 percent in value.
- Higher-value and lower-weight commodities will grow faster than bulk commodities. Imported and exported air cargo will grow the fastest at about five percent per year.
- Most of the growth in freight will be due to increases in inbound traffic to serve consumer markets. Imports and exports, while a small percentage of overall freight, are projected to grow much faster than domestic freight.
- By 2040, trucks alone will move 614 million tons of freight valued at over \$1.5 trillion each year.

Truck Trade within the County

Just under \$80 billion of truck trade in Cook County remains within the City of Chicago. About another \$70 billion of truck trade moves between the City of Chicago and the suburbs.

The remainder of the \$271 billion in internal truck trade is between various suburbs. The table below shows truck trade within and among five sub-regions in Cook County.

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	Sub-Region	Central	Chicago	Northwest	South	Southwest	Total
	Central	\$4.5B	\$21.3B	\$2.1B	\$3.8B	\$7.5B	\$39.1B
	Chicago	\$15.5B	\$79.0B	\$7.6B	\$14.3B	\$27.7B	\$144.1B
TO	Northwest	\$5.8B	\$28.7B	\$4.0B	\$5.2B	\$9.7B	\$53.4B
	South	\$2.0B	\$10.0B	\$1.0B	\$1.9B	\$3.4B	\$18.2B
	Southwest	\$1.8B	\$9.0B	\$0.9B	\$1.7B	\$3.2B	\$16.6B
	Total	\$29.5B	\$148.0B	\$15.6B	\$26.9B	\$51.4B	\$271.5B

Source: IHS Markit Transearch Freight Flow Data for year 2015.

TRUCK TRADE BY COOK COUNTY SUB-REGION

When factoring in both domestic and international trade, the story of Cook County's truck trade is impressive. Almost 55 percent of goods in Cook County move by truck. Chicago has the lion's share of truck trade, with \$303 billion of freight moving to or from the City's businesses, annually, as well as \$89 billion in pass-through traffic. Northwest Cook has the second highest truck trade value at \$112 billion annually. South Cook has the least truck trade, at \$57 billion, annually, and the most pass-through truck traffic. The map below shows all truck trade within the County, broken down into trade originating or destined within the County and that which simply passes through.



Source: IHS Markit Transearch Freight Flow Data for 2015.



COOK COUNTY'S FREIGHT SYSTEM AT WORK

Freight moves to, from, within and through Cook County via roads, rails, air and water. Examining the performance of the existing transportation infrastructure is essential to understanding the most critical needs and how Cook County investments can ensure the future of the freight system.

Roadway Infrastructure

An effective, efficient and well-maintained roadway network is critical for freight movement. Trucks move goods across long distances and provide first and last mile delivery for goods moved via other modes.

Millions of users depend on the County's expressway system and dense network of arterial roadways for their daily travel. Not surprisingly, the expressway system carries the highest traffic volumes, with many sections carrying more than 100,000 vehicles per day, with truck traffic representing a significant percentage of daily traffic. The highest truck volumes are seen on the expressways surrounding the urban core or "collar" expressways of I-80 and I-294 which provide national and regional connectivity.

While truck volumes are generally concentrated on the expressway system, major corridors such as IL 50/Cicero Avenue, IL 64/North Avenue and IL 72/Higgins Road also experience significant truck traffic, carrying up to 6,800 trucks per day. That is equal to almost five trucks every minute (see map on page 16).

Truck Routes

A complicated set of statutes and regulations govern truck access to roadways. Truck routes roads designated as allowable for large trucks can be under state, county or municipal agency jurisdiction. There are two primary classes of designated truck routes in Illinois: Class I (limited access highway) and Class II (generally major arterials as well as some local roads).

In Cook County, only a relatively small number of major arterial corridors are designated as Class II truck routes. This means there are gaps in the system, and trucks often must take less desirable or simply non-identified routes.

Historically, the region has had an irregular approach to truck route designation, restriction and enforcement. Coordination across agencies is critical to addressing roadway infrastructure issues and making sure public officials and planners obtain the information they need to make sound investments.



Truck Congestion

Bottlenecks are locations of reoccurring congestion which can be caused by inadequate infrastructure, conflicts between modes or insufficient capacity. Bottlenecks disrupt the efficient movement of goods, thus significantly increasing the cost of transporting goods, which is often passed along in the form of higher prices to customers. Many major thoroughfares in Cook County are impacted by bottlenecks. Nine of the top 20 highway bottlenecks in the Upper Midwest are located in the County, all on the Interstate system.

Many arterials and local highways also experience congestion and truck delay in the County. The top ten non-Interstate locations for truck delay are shown in the table below. Reducing truck delay at these locations is essential to providing for the efficient movement of goods and, in many cases, benefits the general public as motorists, pedestrians and transit riders experience these delays as well.

Pavement Conditions

Pavement condition is a key infrastructure issue for freight. Poor pavement creates delays as vehicles

slow down in an attempt to avoid potholes, which can damage sensitive cargo. Potholes also can cause additional wear and tear on trucks, increasing costs to consumers over the long term.



Poor pavement conditions on Stony Island Avenue between 122nd Street and the Calumet River/Lake Calumet in the City of Chicago.

Pavement conditions on truck routes and state nondesignated routes are in slightly better condition than the entire road network. By mileage, roads rated as "Poor" or "Fair" account for 28.7 percent of truck routes and 35.6 percent of state non-designated truck routes versus 37.7 percent of all roads. Data for local roads accessing key intermodal freight facilities and industrial clusters is less available and needs to be assessed separately.

Route	From	То	Daily Hours of Delay (max)
Harlem Ave. (IL 43)	I-55	95th St. (US 12-20)	14.7
Cicero Ave. (IL 50)	Ogden Ave.	I-55	13.4
Pulaski Rd.	26th St.	47th St.	12.0
Cicero Ave. (IL 50)	115th St.	I-294	11.6
Sayre Ave.	71st St.	73rd St.	11.4
Cicero Ave. (IL 50)	67th St.	73rd St.	11.4
Kedzie Ave.	I-55	Pershing Rd.	10.7
Western Ave.	55th St.	63rd St.	10.6
Mannheim Rd. (US 12-45)	Lake St. (US 20)	I-290	10.3
79th St.	Kedzie Ave.	Western Ave.	10.2

TOP LOCATIONS OF TRUCK CONGESTION IN COOK COUNTY

Note: Locations identified in this table are limited to non-Interstate locations on the National Highway System (NHS). Source: Federal Highway Administration National Performance Management Research Data Set. Analysis by Chicago Metropolitan Agency for Planning, 2017.

TRUCK VOLUMES, CONGESTION AND MULTIMODAL FREIGHT FACILITIES

The County's heaviest vehicle volumes and congestion are located on Interstates. However, arterials such as Cicero and Harlem Avenue also carry very high volumes of truck traffic. Waterway traffic moves through the region via the Calumet and Chicago Rivers, the Sanitary and Ship Canal, and the Cal-Sag Channel, which collectively link the Illinois and Mississippi River system to Lake Michigan.



Source: Illinois Department of Transportation, Chicago Metropolitan Agency for Planning and Federal Highway Administration.

Vertical Clearance and Bridge Limitations

Cook County's 2,274 bridge structures are a major component of its transportation network and freight system. Bridges constructed over other road or rail infrastructure can cause issues for traffic moving underneath. Legal height for trucks is 13 feet 6 inches, and the current Illinois Department of Transportation (IDOT) policy is for vertical clearances to be 14 feet 9 inches when possible to accommodate oversized loads. Low vertical clearances impact efficient movement of goods and overall accessibility, as trucks need to take circuitous routes to avoid these structures. Railroad viaducts pose particular challenges for clearance, as many were constructed before modern vehicles were designed and cannot accommodate taller trucks. There are numerous locations throughout the County where vertical clearance is an issue. The table below shows the locations of structures with less than 14 feet vertical clearance on non-Interstate routes with high truck volumes. The low clearance structures in this table, as well as many more throughout the County, are due to the high numbers of railroad overpasses built at various times when vehicles were smaller and lower vertical clearances did not impede truck traffic flow.

LOCATIONS OF LOW VERTICAL CLEARANCE STRUCTURES ON CORRIDORS WITH HIGH TRUCK VOLUMES IN COOK COUNTY

Street Crossing	Railroad	Minimum Vertical Clearance	Average Annual Daily Traffic	Truck Volume
Cicero Ave. (IL 50)	BNSF	13'-11"	44,300	6,202
Harlem Ave. (IL 43)	C&IW (CN)	13'-09"	37,800	4,914
Harlem Ave. (IL 43)	AT&SF (BNSF)	13'-09"	37,800	4,914
Cicero Ave. (IL 50)	GM&O (CN)	13'-10"	59,500	4,760
Stony Island Ave.	NYC & STL (NS)	13'-04"	56,100	4,488
Stony Island Ave.	C&WI (CN)	13'-04''	56,100	4,488
Irving Park Rd. (IL 19)	WC (CN)	13'-11"	35,100	3,510
Archer Ave. (IL 171)	B&OCT (CSX)	13'-11"	26,300	3,419
87th St.	CRIE&P (UP)	13'-00"	33,400	3,340
North Ave. (IL 64)	C&NW (UP)	12'-10"	37,000	3,330
Western Ave.	IHB	13'-06"	29,300	3,223
Ashland Ave.	C&NW (South) (UP)	12'-06"	30,100	3,010
Ashland Ave.	C&NW (North) (UP)	12'-08"	30,100	3,010
Ashland Ave.	CMSTP&P (CP)	13'-00"	30,100	3,010

Source: Illinois Department of Transportation.

TRUCK SAFETY HOTSPOTS

The County's top truck safety hotspots are found on major arterials such as Cicero Avenue, as well as near interchanges between the Interstate system and major arterials. Truck safety is measured by examining crashes in which a truck was involved, regardless of fault.



Source: Illinois Department of Transportation, Chicago Metropolitan Agency for Planning. Analysis by AECOM, 2017.

Bridges can also have weight limitations due to design or condition that restricts the movement of trucks. Thirty bridges, many of which are older structures, have posted weight restrictions in Cook County, according to data from IDOT. These include Indiana Avenue over the Little Calumet River between Chicago and Riverdale, which is a weightlimited bridge near the Village of Riverdale's industrial area. Alternative routes are located over a mile to the east or west. Another weight-limited bridge, Webster Avenue over the North Branch of the Chicago River, is one of several obstacles in the neighborhood for trucks, increasing congestion as trucks need to take circuitous routes between I-90/94 and local businesses.

Safety

Safety for all users of the County's transportation system is always a priority. Many of the truckinvolved crash fatalities and serious injuries in recent years were located in or near Chicago's central business district. In addition, severe crashes were concentrated in the areas surrounding O'Hare and Midway International Airports and along major Class I truck route facilities (see map on page 18).

In addition to the potential loss of life or injury and high financial costs associated with crashes, incidents involving trucks or trains add extra complications. Crashes involving a truck can impact multiple lanes of traffic, and those involving a train create delays for the rail network as well as for the road network and can damage valuable commodities being transported by either mode.

NON-INTERSTATE TROOK SALETT HOTSPOTS IN COOR COUNTY				
Rank	Route	Location (To/From or Intersection)		
4	Cicero Ave. (IL 50)	31st St. to 47th St.		
5	North Ave. (IL 64)	I-294 to Wolf Rd.		
6	Cicero Ave. (IL 50)	North Ave. (IL 64) to Fifth Ave.		
8	95th St. (US 12-20)	Roberts Rd. to Harlem Ave. (IL 43)		
11	Western Ave.	Grand Ave. to I-290		
12	Mannheim Rd. (US 12-45)	Lake St. (US 20) to I-290		
13	Mannheim Rd. (US 12-45)	Irving Park Rd. (IL 19) to Belmont Ave.		
15	Cicero Ave. (IL 50)	At 99th St.		

NON-INTERSTATE TRUCK SAFETY HOTSPOTS IN COOK COUNTY

Note: Locations identified in this table are limited to non-Interstate locations on the National Highway System (NHS). Source: Illinois Department of Transportation, Chicago Metropolitan Agency for Planning. Analysis by AECOM, 2017.



City of Northlake and the Village of Melrose Park.



The routing of oversize trucks is heavily restricted in Illinois.

Rail crash fatalities involving vehicles were located throughout the County with a slight concentration in south Cook County. Identification of crash locations and causes helps to determine where potential issues such as traffic mixing and poor access management may impact safety.

IDOT crash data covering the most recent five-year period of 2010 to 2014 was analyzed to highlight areas of safety concerns in the County. Of the top 15 locations, about half were on the Interstate system. The remaining locations, found throughout the County, are listed in the table on page 19 and shown on the map on page 18.

Truck Parking

Recent federal regulations requiring truck drivers to take longer and more frequent breaks underscore the need for adequate, safe truck parking. However, there is a national shortage of truck parking and the problem is expected to increase as freight traffic grows.

According to the Federal Highway Administration, 26 truck parking locations are located within Cook County. Most truck parking is clustered in a few areas of the County such as the I-55 corridor, the I-80 corridor and near O'Hare Airport. The lack of adequate truck parking forces drivers to take actions that are unsafe and/or reduce their

overall efficiency. In 2017, 75 percent of truck thefts nationwide occurred within unsecured parking areas.

Oversize/Overweight Trucks

The size, weight and load of trucks are governed by the Illinois Vehicle Code. Travel is most restricted for vehicles over 65 feet in length, which include a typical over-the-road tractor-trailer combination with a trailer 48 feet or 53 feet in length. Municipalities and counties may prohibit or limit the weight of trucks or commercial vehicles for highways under their jurisdiction. These limitations must be clearly marked by signs near the roadway. In general, under Illinois law, large trucks can travel up to one mile from expressways on any roadway or five miles on state highways or locally designated truck routes in order to reach their destinations.

In addition, while trucks are typically restricted to a maximum weight of 80,000 pounds without a permit, more restrictive weight limitations can be established. In Cook County, 30 bridge structures have posted weight restrictions.

Oversize or overweight trucks (OS/OW) are larger and heavier than typical legal standards, as they move heavy equipment, machinery and other items needed or produced by the region's industry. These moves require special permits for legal travel. Each agency with jurisdiction over a roadway segment may impose its own rules and regulations for OS/OW travel, leading to a complex patchwork of processes and requirements across the County.

Due to these conditions, multiple permits are often needed for a single trip. This creates a burden for industries relying on or transporting OS/OW goods, as well as local jurisdictions that must enforce regulations. IDOT has made progress in upgrading its Illinois Transportation Automated Permit (ITAP) system and many local governments have automated their permitting processes.

In 2016, the Chicago Metropolitan Agency for Planning (CMAP), in partnership with Cook County and other jurisdictions in the region, published а study on OS/OW truck permitting issues. Nine recommendations were identified, including reviewing and updating permit-related ordinances, investing in additional data collection and technology solutions and streamlining permitting processes throughout the region.

Rail Infrastructure

As North America's primary rail interchange point, approximately one-quarter of all freight trains and one-half of all intermodal trains in the nation pass through the Chicago region. Six of the seven Class I railroads operate in the Chicago region along with three switching railroads, five short-line railroads and three passenger services. The majority of the region's rail lines and yards are located in Cook County.

This network hosts over 1,300 trains each day, including 760 passenger trains and 500 freight trains hauling 37,500 railcars. The region contains an estimated 3,865 track-miles of rail—greater mileage than nearly 40 other states—as well as both passenger and freight rail facilities, including more than 50 freight rail yards. This rail activity directly impacts 12,000 jobs and indirectly 26,000 jobs within the region.

Intermodal traffic (i.e., containerized freight moving on a combination of trucks and railcars) in Cook County and the region has rapidly increased over the past 16 years. From 2000 to 2016, the number of annual intermodal lifts in the region has increased from roughly 5.7 million lifts to more than 7.8 million lifts. In 2015, top intermodal facilities in Cook County were Bedford Park (CSX), Corwith (BNSF), Willow Springs (BNSF), Gateway (CN), and 47th Street (NS) yards (see map on page 22).



Intermodal, or containerized freight that is transferred between trucks and trains, is one of the fastest growing means of transportation. The region's rail lines and intermodal facilities handle about one-half of all intermodal traffic nationwide.

The CREATE Program

In 2003, the Chicago Region Environmental and Transportation Efficiency (CREATE) Program was established to bring critical rail improvements to the region and reduce travel time and bottlenecks on the region's rail system which can disrupt freight movements across the United States and thus, national commerce. In addition to congestion on the rail system, major bottlenecks often occur on roadways around intermodal yards as trucks are required to move containers from one yard to another. The CREATE Program was developed in part to address these bottlenecks by improving connections via rail and minimizing the need for containers to move by truck.

The multijurisdictional program identified 70 projects as critically important rail improvements. With 65 of these located in Cook County, the County

RAIL FACILITIES AND INTERMODAL VOLUMES IN COOK COUNTY

Six of the seven Class I freight railroads, numerous short-lines, and three passenger carriers together operate over 1,300 trains per day in Cook County. The County has more rail miles than most states, 16 active intermodal yards and numerous other rail yards. Many are located in Chicago, but major facilities are also located in the suburbs of Bedford Park, Blue Island, Dolton, Franklin Park, Harvey, Northlake and Willow Springs.



Source: Illinois Department of Transportation, Chicago Metropolitan Agency for Planning, Surface Transportation Board.

became a full partner in the CREATE Program in 2015. Projects include new roadway and rail overpasses or underpasses, freight rail efficiency projects, viaduct improvements, grade crossing safety enhancements and integration of dispatch information. As of July 2018, 29 of these projects have been completed.

At-Grade Rail Crossings

At-grade rail crossings are a significant cause of delay for goods movement, the traveling public and public transit services. Within the Chicago region, there are an estimated 1,360 at-grade rail crossings, of which 53 percent are located within Cook County. Of the 7,790 hours of delays to motorists at grade crossings in the region, Cook County has a disproportionate share with 78 percent (see figure below).



Source: Illinois Commerce Commission.



GRADE CROSSINGS IN THE DOLTON/RIVERDALE AREA



Source: CREATE Program, Illinois Department of Transportation, Illinois Commerce Commission.

At-grade highway-rail crossings disproportionately impact South Cook County. The communities of Dolton and Riverdale alone have 10 such crossings with high amounts of train delay located in close proximity to each other. The Dolton Interlocking Upgrade, a project of the CREATE Program, will increase train speeds and reduce the gate down time in the area.





137th Street in the Village of Riverdale.



Source: Chicago Department of Aviation.

Air Infrastructure

Cook County's robust business and trade economy is served by two major airport facilities: Chicago O'Hare International Airport and Chicago Midway International Airport. Much of the cargo trade is international, traveling either nonstop or via domestic stops to worldwide destinations. As the fastest way of transporting goods with direct connections to global markets, airports serve as domestic and international gateways for passengers and goods alike.

Chicago O'Hare International Airport (O'Hare)

Spanning 7,000 acres in northwestern Chicago, O'Hare houses air cargo facilities for FedEx, UPS, United Airlines, American Airlines and more. Over four million square feet are dedicated to air cargo operations, with 80 percent of designated cargo flights serviced by the south cargo area. The recent construction of a new \$200 million cargo center on the northeast side of the airport nearly doubled cargo operations at O'Hare when it was completed in 2016.

Because of these facilities, O'Hare now ranks fourth nationally in cargo tonnage, moving goods such as small packaged freight shipments, electrical equipment, transportation equipment and other high-value, time-sensitive goods.

The high volume of cargo processed at O'Hare has a direct impact on the surrounding community and the roadways used by trucks for last-mile deliveries. Landside access will continue to be a challenge in the future. To address one part of this issue, CMAP undertook the 2016 O'Hare Sub-region Truck Route Plan, which identified key corridors and chokepoints for trucks moving in the O'Hare area.

Water Infrastructure

Cook County is located at the junction of the Mississippi River and Great Lakes systems. These waterways support economic activity and provide connections to global markets via the Gulf of Mexico and Saint Lawrence Seaway. Historically, coal was a key waterway commodity traveling to the region but has declined due to coal power plant closures. Despite this, regional industries depend on the waterways to transport gravel, sand, scrap metal and other bulk materials. Bulk goods move very efficiently on waterways: a single barge can carry as much cargo as up to 70 trucks or 16 railcars.

A significant number of facilities are located in Calumet Harbor, with others located along the Chicago River, Sanitary and Ship Canal, Lake Michigan and Cal-Sag Channel. While most facilities are privately owned and operated, the Port of Chicago is a public facility operated by the Illinois International Port District (IIPD) (see map on page 16).

Nationally, there is an increasing crisis on the inland waterway system as locks, dams and other infrastructure are not receiving timely investments. The United States Army Corps of Engineers, which is responsible for maintenance of waterway infrastructure, has lacked funding to address critical maintenance issues. This means that shippers who use this mode of transportation face continued risks and an uncertain future. Without the waterway system, significant bulk goods would be forced to move on the County's rail and roadway systems.

BARGE, RAIL AND TRUCK COMPARISON

Bulk goods, raw materials and heavy equipment move more efficiently via waterways and reduce congestion on roads and rails. A single barge can carry as much freight as up to 70 trucks or 16 railcars.



Source: The National Waterways Foundation, 2008.



> INVESTING FOR SUCCESS: FREIGHT ACTION PLAN

Cook County's freight system is at the heart of local, regional and national economies. Yet the continued aging of the County's infrastructure, lack of coordinated operations and regulations across jurisdictions and underutilized industrial land present significant obstacles to supporting an effective and efficient freight system. These and other challenges such as limited funding—faced not by the County alone but by transportation agencies and governments across the nation—can be overcome with targeted and effective actions designed to achieve specific goals. This chapter—Cook County's Freight Action Plan presents the actions that have been identified to have the highest, most cost-effective or greatest impacts on the County's freight system. This Action Plan identifies policy, programming and investment-based strategies to further Cook County's goal of a robust freight system that underpins its economy and operates as a good neighbor to businesses and residents.

The actions fall into four strategic categories:

- > Leadership
- Truck Routing, Infrastructure, Parking and Permitting
- > Rail Improvements
- Coordinated Community and Economic
 Development

This Action Plan establishes an implementation framework that will focus Cook County's resources on the freight system for years to come. The actions consist of infrastructure investment, support of freight-related development and freight-related policy advancement to promote efficient and effective movement of freight within the County. Each action, considered in conjunction with the full spectrum of Cook County's activities over the next few years, ultimately serves to support coordinated and community-conscious economic growth in the nation's busiest freight hub.

Action Plan Summary



Leadership

The County will take a leadership role in advocating for freight policy priorities by coordinating and leading freight issues that cross municipal and County borders. This is especially important for municipalities that shoulder much of the burden for the freight network.



Truck Routing, Infrastructure, Permitting and Parking

The County will advance a connected truck route network, streamlined permitting for oversize /overweight trucks and truck parking initiatives. Furthermore, the County will invest in roadway infrastructure to support efficient freight movement.



Rail Improvements

The County will support freight rail improvements including completion of the CREATE Program, freight facility improvements and grade separations.

Coordinated Community and Economic Development

The Department of Transportation and Highways will actively coordinate with other County agencies and municipal, state and federal governments to ensure that its investments advance economic development and workforce initiatives that support the freight cluster and community development.

Exercise Leadership

Cook County has a tremendous opportunity to be a leader in freight. As the second largest county in the nation and an international hub for freight traffic across all modes, Cook County is poised to have a voice in freight issues at the regional and national scale. At the same time, the County can serve as the implementer or coordinator of policies and projects that impact freight at the local level.

In coordination with federal, state, regional and local stakeholder agencies, this Action Plan identifies several ways in which the County's leadership could add significant value.

Advocate at Federal and State Levels

At the national level, Cook County will advocate for freight issues with its congressional delegation and take a larger role in the national freight discussion by communicating the importance of regional projects in legislation, promoting reliable freight funding and securing support for competitive grant applications. In addition to these efforts, the County will strengthen relationships with the U.S. Department of Transportation (USDOT) and its agencies such as the Federal Highway Administration (FRA) and the Federal Transit Administration (FTA) to advance freight policies and funding that benefit the County.

As a member of the National Association of Counties (NACo), the County can convene counties from across the nation to speak with one voice about their common issues. To this end, the County has spearheaded the establishment of a Freight Subcommittee to the current NACo Transportation Steering Committee. This effort will bring other freight-centric counties together to move national policy items forward that have regional and national impacts.



Coordinate at Regional and Local Levels

At the regional level, in addition to CREATE Program support, the County will continue to partner with state, regional and local agencies such as IDOT and CMAP to support the region's freight economy and lead regionally significant projects.

Support at the Municipal Level

At the municipal level, the County is in a unique position to be a voice for suburban municipalities on freight issues. Where municipalities may lack staff and capital resources, the County can offer to fill gaps—for example, by providing technical engineering expertise, funding initial phases of a larger project and assembling funding packages as well as coordinating improvements across jurisdictional boundaries.

The County will partner with suburban municipalities to align resources to implement priority projects, often acting as the lead in making the improvement. The County will work to communicate the benefits of freight, including economic and employment opportunities, with municipal leadership as well as the general public.

Specifically, the County will focus on these freight activities at the municipal level:

- Lead truck route improvements and highwayrail grade separation projects where suburban municipalities may lack the capacity or resources to address.
- Support municipal freight investments through the Invest in Cook program.
- Coordinate improvements across Priority Trucking Corridors that provide a regional benefit.
- Work with agencies, partners, municipalities and stakeholders to support policies that promote the freight economy and provide community benefits.
- Identify and coordinate expressway access efforts that have a positive benefit for freight and communities.

The 75th Street CIP, the largest rail bottleneck in the nation, received a \$132 million INFRA grant in June 2018 to disentangle freight and passenger traffic.



Source: CREATE Program/Metra

Advance Funding Opportunities

Cook County's freight transportation system is in need of greater investment to improve its mobility, reliability and asset condition. Investment is also needed in private rail infrastructure, including large rail projects such as those in the CREATE Program.

Predictable, adequate levels of funding are needed to make the infrastructure investments identified in this Plan. Competitive funding programs like Better Utilizing Investments to Leverage Development (BUILD) and Infrastructure For Rebuilding America (INFRA) represent opportunities to advance the priorities of this Plan. Although competition for limited federal and state dollars for freight projects is intense, Cook County has every advantage to be competitive in these grant programs. In addition, aligning County resources with federal, state, regional and local revenues can leverage funds in support of shared priorities.

The County is committed to advocating for sustainable, robust revenues to support freight investments across all modes at all levels of government. Specifically, Cook County will:

- Actively pursue federal, state and regional competitive freight grants.
- Continue to align local investment with regional and County priorities via programs like Invest in Cook.

While competitive freight funding programs will play a critical role in supporting the capital projects identified in this Plan, additional funding will still be needed. The County will explore additional funding opportunities to address growing freight-related needs.

ECONOMIC BENEFITS OF FREIGHT INVESTMENTS

Investing in the freight system creates positive benefits for the whole community by reducing congestion, improving mobility and making the region more attractive to employers. Cook County modeled the economic benefits of making freight investments using three different geographic scenarios. Low-cost infrastructure, technology and freight-related policy changes were modeled for each scenario. The effects of these investments lead to reduced congestion and increased mobility for freight and passenger traffic. In turn, these improvements lead to millions of dollars added to the regional economy and make the region more attractive to businesses and residents.

FREIGHT TRANSPORTATION INVESTMENT MODELING PROCESS



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Implement the Truck Routing, Infrastructure, Permitting and Parking (TRIPP) Program

Just over half of all freight in the County moves by truck. More goods move by truck to, from, through or within Cook County than by rail, air and barge combined. To support this traffic and the growth that will occur over the coming decades, the County's roadways need investment. Truck-related roadway needs include pavement rehabilitation and reconstruction, improvements or separation of road-rail crossings, addressing vertical clearance issues, operational and infrastructure improvements to ease congestion such as signal optimization, improved roadway geometry and safety-related improvements to intersections and corridors.

The County has identified a number of actions to support the truck freight system. Collectively, these activities are known as the Cook County Truck Routing, Infrastructure, Permitting and Parking (TRIPP) Program.

Facilitate a Connected Truck Route Network

The movement of goods is critical to a vibrant and growing economy, yet wear and tear on roadways caused by the trucks moving those goods requires special consideration in roadway and intersection design and maintenance. Comprehensive truck route systems help ensure that trucks travel on facilities that are designed and maintained to handle high levels of truck traffic.

To meet this goal, the County will facilitate a cohesive and connected truck route network that links intermodal terminals and industrial districts in suburban Cook County, Chicago and adjoining counties with the expressway system.

A comprehensive truck route study is one step to fully



understand the extent of needs and develop suitable solutions. An initial review of major arterial truck routes serving intermodal facilities and manufacturing districts was conducted as a part of this Plan. What is particularly needed now is a more detailed look at first and last mile connections to and from major facilities and industrial areas. A comprehensive study should include the following activities:

- Review truck travel patterns on local roadways and arterial streets to determine where trucks are traveling today, where they should be traveling and any gaps or misalignments of these patterns.
- Conduct a sign inventory for truck routes and truck restrictions with a focus on Priority Trucking Corridors under municipal jurisdiction. This will help identify and resolve conflicts where local restrictions are signed on County or IDOT roads.
- Work with IDOT and local agencies to formally designate truck routes per state law.
Coordinate with partner agencies such as CMAP and IDOT to obtain and update data, including land use data such as planned new construction as well as condition and performance of truck routes.

Additionally, the County will work with IDOT to explore opportunities for enhanced asset management programs on truck routes to proactively monitor and manage the additional stress caused by heavy traffic loads.

Focus on Priority Trucking Corridors

Cook County is committed to investing in its roadway system as well as supporting investment in roadways owned by other jurisdictions within the County. These improvements will prioritize facilities deemed most critical to the County's economy and freight system.

Truck corridors throughout the County provide important connections, access and continuity to the freight system. Yet truck traffic, congestion and safety issues are often concentrated on a few major routes and near key facilities.

Ten corridors, shown in the table on this page and on the map on page 35, were identified through this study as the most critical truck routes in the County. These Priority Trucking Corridors, in the following table, carry the most traffic, connect to major facilities or highways and have existing issues of congestion, safety, geometry and clearances.

PRIORITY TRUCKING CORRIDORS

Corridor	Limits
Archer Ave. (IL 171)	Willow Springs Rd. to Ashland Ave.
Cicero Ave. (IL 50)	North Ave. (IL 64) to I-294
Franklin Ave.	County Line Rd. to Mannheim Rd. (US 12-45)
Halsted St. (IL 1)	Cal Sag Channel to I-80
Harlem Ave. (IL 43)	I-290 to 95th St. (US 12-20)
Mannheim Rd. (US 45)	I-90 to I-290
North Ave. (IL 64)	I-290/294 to Harlem Ave. (IL 43)
Touhy Ave. (IL 72)	Elmhurst Rd. to Mt. Prospect Rd.
95th St. (US 12-20)	Roberts Rd. to Chicago Skyway (I-90)
159th St. (US 6)	Cicero Ave. (IL 50) to Halsted St. (IL 1)

Source: Cook County Department of Transportation and Highways. Analysis by Cambridge Systematics.

In most cases, the Priority Trucking Corridors are state jurisdiction highways that cross multiple municipalities and townships. Cook County will take a leadership role to study and improve these corridors to achieve the following goals:

- Mitigate truck congestion. Congestion has a number of negative impacts, including safety, noise, air pollution, potential for missed shipments and increased costs for the trucking industry which often must operate on tight schedules.
- Address viaducts or bridges that are obstacles to truck movement. Low vertical clearances cause major truck bottlenecks and require more circuitous routing. Furthermore, low vertical clearances can create potential safety concerns if truck drivers are unaware of the restrictions.



- Improve truck-related safety. In addition to the potential loss of life and high personal financial costs associated with crashes, incidents create delay for all road users.
- Prioritize data collection and reporting on Priority Trucking Corridors. IDOT is the owner and major source of data for most of these corridors. Cook County will coordinate with IDOT to identify data needs and/or streamline collection processes for data on truck volumes, performance, safety, roadway characteristics and maintenance.

Some of the Priority Trucking Corridors are subject to ongoing projects (see page 40). For others, additional study is needed. Four corridors have been identified as having the highest existing need:

- > Cicero Avenue
- > Harlem Avenue
- Mannheim Road
- > 95th Street

Each of these corridors is heavily used for goods movement as well as passenger traffic. Over the next few years, the County will systematically assess these corridors to prioritize projects that have both immediate and lasting freight impacts as well as mobility and safety benefits for surrounding communities and the traveling public. The potential actions to be taken on these corridors are explained in greater detail on the following pages.

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PRIORITY FREIGHT NEEDS AND PROJECTS

Cook County's TRIPP program of freight-focused improvements will increase the efficiency of the region's roadways. This program includes corridor and first and last mile needs, priority grade crossings, expressway access projects and other freight-focused projects and policies.



Source: Cook County Department of Transportation and Highways, Illinois Department of Transportation, Chicago Metropolitan Agency for Planning. Analysis by Cambridge Systematics, 2018.

CICERO AVENUE



The "Workhorse" of Trucking Corridors Links Intermodal Facilities, Interstates, Industrial Areas and Midway Airport

Located near the western border of Chicago and traveling through Alsip, Stickney and other suburban municipalities, Cicero Avenue is the workhorse of the Cook County freight system. It provides regional connections from manufacturing and industrial areas and intermodal yards to I-55, I-290 and I-294. While the entirety of Cicero Avenue provides regional mobility to cars, buses and trucks, this Freight Plan designates the section between North Avenue and I-294 as a Priority Trucking Corridor. This 17-mile segment faces significant challenges due to high freight and passenger volumes, variety of land use and access points and proximity to three large intermodal facilities. Midway Airport, one of the nation's busiest airports, is located directly on Cicero Avenue.

There are a number of challenges along this corridor. Near I-55 and I-294, Cicero Avenue is heavily congested for trucks. Safety hotspots, low vertical clearances and roadway improvement projects have also been identified as part of this Plan. Improvements along this corridor could result in regional mobility benefits and economic benefits up to \$321 million. The County will also investigate the potential of advanced transportation operations including access management and safety improvements, e.g., advance-warning flashers or turn-only lanes, comprehensive intersection redesign, signal prioritization and utilizing fiberoptic cable to create a "Smart Corridor". Low-cost infrastructure and technological solutions can improve travel on Cicero Avenue not only for freight but also for all users.

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HARLEM AVENUE

4-6 LANES



Most Heavily Congested Corridor

Provides Key Connections to Industrial Areas and Interstates

Harlem Avenue is a major north-south artery in Cook County. Traveling through communities including Bedford Park, Berwyn, Lyons, Riverside and Summit, Harlem Avenue connects historic downtown districts, Interstates and freight facilities, providing mobility to trucks, transit and passenger cars. The 13-mile section of Harlem Avenue between I-290 and 95th Street is designated as a Priority Trucking Corridor, serving an immense and diverse number of freightgenerating businesses.

Harlem Avenue is one of the most heavily congested roadways in the County for trucks. South of I-55 to 95th Street, high amounts of truck traffic create congestion not only for trucks but also automobiles and buses. A number of low clearance bridges and road-rail crossings also impede truck movements.

Harlem Avenue needs to be improved as a multiuse corridor, including freight but also passenger and transit infrastructure. Cook County will coordinate with existing studies, including ongoing studies of Harlem Avenue's transit ridership and infrastructure, to determine the best approaches for investing in this corridor. Similar to Cicero Avenue, a variety of strategies and projects will be considered to address these challenges, including technological and low-cost infrastructure "Smart Corridor" solutions. The County will also work with local municipalities to advance projects that address congestion and other issues that may impede economic growth in this area.



Key Suburban Corridor Linking to O'Hare

Serves Highest Concentration of Industrial Businesses

Mannheim Road, from I-90 to I-290, is the westernmost Priority Trucking Corridor. It is a vital connector to O'Hare International Airport for cargo and passenger traffic. It provides access both to the northeast cargo facility and to the south cargo facility via Irving Park Road and connects businesses in communities including Des Plaines, Franklin Park, Melrose Park and Northlake. Mannheim Road is situated among the greatest concentration of industrial businesses and jobs in Cook County and thus handles very large amounts of traffic connecting these businesses to the airport, intermodal yards and expressways.

Mannheim Road sees some of the highest levels of truck congestion on the network, both near the I-290 expressway interchange and the intersection with Irving Park Road, which also handles heavy truck traffic just south of O'Hare. While Mannheim Road currently has more advanced access management than the other listed corridors and is grade separated from some crossroads to reduce congestion points, the increasing traffic in the growing O'Hare sub-region means that there is a need to revisit this corridor. Technological solutions such as cargo access management or queuing programs at O'Hare can be implemented to help relieve congestion. For example, a program to provide real-time traffic information and pickup "slots" to local freight forwarders can minimize the amount of time that they spend waiting in traffic to retrieve or deliver cargo to O'Hare.

Freight investments in the O'Hare area, including improvements on Mannheim Road, would lead to \$287 million in economic benefits.

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Vital East-West Corridor With At-Grade **Crossing Challenges**

Links Interstates, Port, and Industrial Areas

In addition to the three north-south routes described above, Cook County has prioritized the 95th Street corridor, which is a major eastwest arterial and freight corridor that runs from suburban Bridgeview, Chicago Ridge, Evergreen Park, Hickory Hills and Oak Lawn through a major portion of southern Chicago all the way to the I-90 Skyway. The eastern portion of this corridor serves industrial areas at the Port of Chicago. A number of major freight-generating businesses are located along this corridor, as well as several hospitals and distribution centers. The entire corridor is a major component of eastwest mobility for Cook County's industries.

Mobility on 95th Street is impacted by the many at-grade road rail crossings which impede traffic flow for trucks, buses and cars. Additionally, the western portion of the corridor is a safety and congestion hotspot. The County will examine the potential to mitigate these hotspots in alignment with upcoming work on I-294.

Ensuring safe and efficient freight mobility ties into the County's strategy to invest and leverage industrial opportunities in South Cook County. Improving mobility in this region will lead to \$332 million in mobility benefits and will better position it to attract businesses and economic arowth.

PRIORITY TRUCKING CORRIDORS IN ACTION: FRANKLIN, NORTH, TOUHY AVENUE PROJECTS ACCELERATE AHEAD

The Cook County Department of Transportation and Highways is already undertaking major investments on three Priority Trucking Corridors.



Franklin Avenue serves as a critical route for trucks, providing access to the Canadian Pacific (CP) Railway's Bensenville Intermodal Facility and major industrial areas in the Village of Franklin Park, but it is currently congested due to insufficient capacity and inadequate design standards for trucks. The ongoing Elgin O'Hare Western Access (EOWA) project led by DOTH will impact the route by adding ramps from I-294 that will increase traffic on Franklin Avenue. With the help of Cook County and IDOT, the Village of Franklin Park will reconstruct 1.8 miles and expand the existing 2-lane road into a 5-lane road as well as provide a multi-use path and a closed drainage system at a cost of \$31 million.

DOTH is leading design and construction of a 1.5-mile section of **Touhy Avenue** between Elmhurst Road and Mt. Prospect Road. This six-lane section is an important transportation link in the Chicago metropolitan area serving industrial developments in Elk Grove Village as well as the industrial and commercial areas north and east of O'Hare International Airport. The \$100 million project includes a variety of intersection, grade separation and pavement reconstruction improvements.





DOTH is working with IDOT, Tollway and municipalities on improvements to **North Avenue** as part of the Tollway's EOWA project. This \$28 million project includes reconfiguration of the complex Lake Street-North Avenue interchange with I-290/I-294, bridge improvements and congestion mitigation.

Address First and Last Mile Connectors

Many of the roadways connecting arterials and highways to freight facilities and businesses are in poor condition, which can cause safety concerns and create inefficiencies in freight movement. The County will focus on improving pavement conditions on high priority first and last mile connectors. These will include the following actions:

- Continue pavement survey and data collection to evaluate and prioritize needs. Possible targets include roads providing first and last mile access to intermodal facilities, existing industrial areas or new freight-generating facilities.
- Lead and facilitate discussions with suburban communities about municipally owned intermodal connectors that serve a regional economic benefit. Many local communities shoulder the

high costs of maintaining these important connectors, yet lack the resources to make the necessary infrastructure investments. The County will explore all options for funding and maintaining facility improvement projects including jurisdictional transfers.

Cook County commits to helping complete the eleven first and last mile projects already started with *Invest in Cook* funding. Moreover, in January 2018, Cook County conducted a robust online and field pavement survey and analysis covering 50 miles of roadway, which identified additional high-priority locations for improving conditions along roads that provide access to industrial or intermodal facilities. These locations are shown in the table below. Fixing these truck routes will help retain and grow existing Cook County freightdependent businesses.

Route	Limits	Length (mi)	Municipality
116th St.	Avenue O to Burley Ave.	0.24	Chicago
126th Pl.	Torrence Ave. to Avenue O	1.0	Chicago
47th Ave.	Lake St. to UP Global II	0.29	Northlake
47th St.	Cicero Ave. (IL 50) to Pulaski Rd.	1.0	Chicago
78th Ave.	79th St. to W 71st St.	1.0	Bridgeview
Buffalo Ave./Burley Ave.	E 106th St. to E 108th St.	0.31	Chicago
Commercial Ave./104th St.	100th St. to Torrence Ave. (IL 83)	0.78	Chicago
Dolton Rd/State St.	I-94 to State Line Ave.	2.97	Burnham/Calumet City
Doty Ave.	S Stony Island Ave. to E 130th St.	3.95	Chicago
Howard St.	Oak Park Ave. to Lehigh Ave.	0.86	Skokie
Kedzie Ave.	47th St. to 51st St.	0.5	Chicago
Langley Ave.	E 106th St. to E 111th St.	0.64	Chicago
Seymour Ave.	Irving Park Rd. (IL 19) to Mannheim Rd. (US 12-45)	0.61	Franklin Park
Stony Island Ave.	E 122nd St. to Calumet River	0.52	Chicago
Torrence Ave.	E 95th St. (US 12-20) to E 130th St.	4.50	Chicago
Vincennes Rd.	Halsted St. to Armory Dr.	2.0	Phoenix/South Holland

COOK COUNTY PRIORITY FIRST AND LAST MILE PAVEMENT NEEDS

Source: Cook County Department of Transportation and Highways, 2018.

Improve Expressway Freight Access

Identifying new or improved expressway access in high freight volume locations was one of the top freight needs indicated by municipal stakeholders. The County is uniquely positioned to think both regionally and locally, connecting smaller municipalities to IDOT and the Tollway and serving as a voice for the region.

The County will work with the Tollway and IDOT, in partnership with and on behalf of suburban municipalities, to evaluate improved freight access to the expressway network. Recent examples include Cook County's leadership in constructing a new on-ramp to I-90 from Central Road as well as the upcoming construction of a new off-ramp from I-294 to County Line Road.

Truck Permitting

When moving goods that are larger or heavier than the limits set by IDOT or other roadway jurisdictions, truckers must apply for OS/OW permits to ensure their shipment moves safely and legally. However, there is a lack of a clear, consistent process for truck permitting across the multiple jurisdictions charged with issuing permits. This situation,



combined with sometimes complex administrative processes, can lead to excessive delay and cost for the trucking industry.

The County will move forward with several recommendations from a recent CMAP study on truck permitting, including setting baseline customer communication protocols (e.g., collecting contact information or developing a standard email address format across jurisdictions for permitting requests). In addition, DOTH will explore increasing staff capacity to manage permitting responsibilities.

Truck Parking

Lack of adequate truck parking is both a capacity and safety issue. A shortage of truck parking leads to drivers parking on expressway on-ramps, closed inspection stations or rest areas, retail parking lots or even along local streets. These options create safety concerns for truck drivers as well as for motorists who must maneuver around the parked vehicles. Sometimes, truck drivers travel out of their way to find parking which puts unnecessary pressure on the transportation network and drivers' hours of service requirements.

With truck traffic expected to increase to serve growing consumer and industrial markets both locally and nationally, truck parking needs are expected to increase. To address this, Cook County will work with the Tollway, IDOT, municipalities and trucking companies to evaluate the issue and identify strategies and potential investments to reduce the burden of insufficient truck parking on businesses and residents.

Focus on Rail Improvements

As North America's primary rail interchange point with approximately one-quarter of all freight trains and one-half of all intermodal trains in the nation passing through this region, investment in rail infrastructure is vital. In addition to supporting the CREATE Program as a full partner, the County will focus on rail improvements that have a significant impact on local communities and businesses.

Support the CREATE Program

In 2015, Cook County became a CREATE Program partner, joining IDOT, the City of Chicago Department of Transportation (CDOT), the region's freight railroads, Metra and Amtrak. Since becoming a partner, the County has supported the CREATE Program by committing \$78 million toward the 75th Street Corridor Improvement Project (CIP). The County's financial contribution was crucial in the award of a \$132 million federal INFRA grant for the project in June 2018. The County's participation in CREATE will continue by focusing on two areas:

Support the completion of the 75th Street CIP, the single largest project to be undertaken through CREATE. The project addresses the multiple railrail and rail-roadway crossings in the Chicago neighborhoods of Ashburn, Auburn, Englewood, Gresham and West Chatham, which currently cause significant freight rail, commuter rail and road traffic delays. The goal of the project is to separate the rail lines from each other and from the roadways they intersect. The 75th Street CIP will reduce rail and highway delays and expand freight, commuter and passenger railroad capacity in Chicago and the nation.



Continue to be an active CREATE Program partner and support activities that lead to completion of the full CREATE Program. After the 75th Street CIP is completed, the County's top priorities will be securing funding and implementing improvements on the passenger corridors and grade separation projects with strong public benefits, such as those in the table on page 44.

Of the 70 projects in the CREATE Program, 29 are completed, 22 are underway and 19 are awaiting funding. Funds committed in 2018 will allow the partners to move another four projects currently underway into completion.

Support Business Access to Rail

The County will support activities that maintain or increase access to rail facilities by local businesses. In addition to its role in national commerce, the County's rail system provides a cost-effective and congestion-reducing method for local businesses to receive supplies and ship products. However, businesses and small operators often must bear the burden of building and maintaining connections to the national rail network. The Cook County Bureau of Economic Development (BED) has the capacity to make low interest loans for the construction or improvement of local rail connections to ease this burden.

Improve At-Grade Crossings

At-grade crossing improvements often result in benefits for all transportation modes, including freight and transit as well as pedestrians, bicyclists and motorists. These improvements increase safety, ease congestion and enhance quality of life by removing barriers and implementing needed upgrades.

In partnership, Cook County, CMAP, IDOT, CDOT and the Illinois Commerce Commission developed a regional priority list of highway-rail grade crossings. Criteria such as safety, car and truck volumes, transit and emergency vehicle crossings, and other factors were considered to develop this list. Cook County

Roadway Crossing	At-Grade Railroad Crossing	Municipality	Priority Trucking Corridor	CREATE Projects
115th St.	IHB (CSX)	Alsip		GS22
31st St.	IHB	La Grange Park		GS13
63rd/65th St.*	BELT/IHB	Bedford Park		GS1
95th St. (US 12-20)	IHB (CSX)	Evergreen Park	Х	
95th St. (US 12-20)	GTW (CSX)	Evergreen Park	Х	
First Ave. (IL 171)	CNW (UP)	Maywood		GS12
Grand Ave.*	Metra	Elmwood Park		
Harlem Ave. (IL 43)	BNSF	Riverside/ Berwyn	Х	GS18
Touhy Ave. (IL 72)*	CNW (UP)	Des Plaines	Х	
Multiple	Multiple	Dolton/ Riverdale		WA11 GS23a
Burnham Ave.	Multiple	Burnham		

COOK COUNTY PRIORITY AT-GRADE ROAD/RAIL CROSSING LOCATIONS FOR INVESTMENT

Source: Cook County Department of Transportation and Highways, Illinois Department of Transportation, Chicago Metropolitan Agency for Planning, Illinois Commerce Commission, CREATE Program, 2018.

*The following projects are in progress: 63rd/65th St., Grand Ave. and Touhy Ave. (IL 72).

narrowed the regional list further to identify County priorities (see table on page 44). Improvements needed on these corridors range from safety and technical upgrades, to fully separating the crossings by creating an under or overpass.

Action has already begun at three priority grade crossing locations: 63rd/65th Street in Bedford Park (as part of the IL 43 Phase I Study), Grand Avenue in Elmwood Park and Touhy Avenue in Des Plaines. The others on this list will need additional study and coordination with local agencies. The Dolton/Riverdale area is of particular concern due to its high concentration of crossings which cause significant delays (see page 24). Although no single crossing emerged as a top candidate, an *Invest in Cook* planning grant was made because the needs in this area are still great due to the number of crossings located in such close proximity to each other.



Coordinate Community and Economic Development

Cook County's robust freight infrastructure makes it a prime location for transportation, distribution and logistics (TDL) firms as well as manufacturers and other industrial firms that rely on frequent, dependable freight shipments. These industries contribute to the overall economic vitality of the County by creating jobs for residents and investing in communities. At the same time, it is vital that employment centers are located in places proximate to the workforce and are accessible by public transit.

Cook County's strategy of infill development is advantageous as it can capitalize on a larger population base and existing infrastructure that is not available for greenfield development at the fringes of the region. Additionally, infill development has environmental advantages over greenfield development. Yet it continues to be important to understand and mitigate impacts of freight such as noise and air pollution on surrounding communities. As it undertakes these activities, the County will consider environmental impacts and impacts on communities.

The County will coordinate and collaborate with other County agencies and external partners on freight-related transportation improvements, industrial land redevelopment initiatives and economic development and workforce opportunities. These opportunities are described below.

Align Pre-Development Activities

Cook County is in a unique position to promote redevelopment at vacant or underutilized sites near freight transportation infrastructure

COMMUNITY AND ECONOMIC DEVELOPMENT

Align Pre-Development Activities Address environmental, site assembly, infrastructure and financial hurdles with partner agencies.

Coordinate Economic Development Efforts Plan, design and implement freight projects and related developments.

Support Workforce Training and Screening Initiatives Partner with agencies to create opportunities for job-seekers and employers.

and workforce. However, there are obstacles to overcome in redeveloping many of these potential sites.

The County has several tools available to address common barriers to redevelopment such as fragmented ownership of small parcels, overdue property taxes, encumbered property titles and environmental assessment and remediation needs. The County can assist with the coordination of predevelopment activities to prepare sites for potential freight use. These efforts will help streamline the process and make sites within the County more attractive to buyers and developers. DOTH, working with partner departments and agencies, will play an integral role in these efforts. Specifically, Cook County will take the following actions to position sites for industrial or logistics development:

Coordinating environmental clearance, permits and remediation. Many potential redevelopment sites require environmental clean-up, permits, or documentation and clearance in accordance with the National Environmental Policy Act (NEPA). Prior to development, DOTH will work with the Department of Environment and Sustainability (DES) to identify and support these efforts.

Develop funding, financing and tax incentive packages to support redevelopment efforts. The County will align tax incentives and lowinterest financing to make operating costs here competitive with those in nearby counties and states. In some cases, particularly for properties located in economically disadvantaged areas, the County may need to seek state support to relieve high tax rates to attract investors and developers. DOTH and BED will coordinate these efforts.

Invest in transportation, utility and stormwater infrastructure. DOTH will work with BED and the Department of Planning and Development (DPD) as well as extrenal implementers to coordinate these efforts.

Cross-Agency Collaboration in Action: Lincoln Highway Logistics Corridor Strategic Plan

The Lincoln Highway Logistics Corridor Strategic Plan is a prime example of successful cross-agency collaboration to maximize limited resources for needed freight improvements and economic development. The Lincoln Highway Logistics Corridor study analyzed whether and how rail-adjacent, industrially zoned sites could be developed for businesses that are dependent on rail service for delivery of materials and goods in Chicago Heights, Ford Heights and Sauk Village. Through this process, DOTH worked with municipalities, the South Suburban Mayors and Managers Association, Cook County DES, Cook County BED and its DPD, Cook County Land Bank Authority, Cook County Forest Preserve, Metropolitan Water Reclamation District and other stakeholders to identify and evaluate sites for improvement. DOTH and

its partners identified six priority redevelopment sites and produced a strategic plan describing the types of industries best suited for the Lincoln Highway Logistics Corridor and how stakeholders can position the sites to attract these industries.



Coordinate Economic Development Efforts that Leverage Freight System Assets

As part of its leadership role, the County will explore opportunities to support existing economic development efforts. These initiatives include the Chicago Regional Growth Corporation, the Chicago Metro Metal Consortium and the South Suburban Economic Growth Initiative. They seek to coordinate economic development across jurisdictions in support of key industries within the region, and all hinge on leveraging the County's and region's—freight system for growth.

Support Workforce Training and Screening Initiatives

With over 30,000 new jobs projected for the TDL sector in the next five years, the County is working to support freight businesses in meeting their workforce needs. Prioritizing employers that benefit from infrastructure investments, Cook County will investigate how to connect freight businesses to existing workforce screening and training programs through the Chicago Cook Workforce Partnership. The County also works with educational institutions and community based organizations such as Opportunity Advancement

County Support Leads to New Employment Opportunities

The County's commitment to economic development and workforce efforts paid off in a recently completed project on 151st Street in the Village of Phoenix. The reconstruction of 151st Street, which received financial support from Cook County, supported the retention and expansion of Sterling Lumber from 112 employees to 240 at its Phoenix headquarters. Sterling Lumber utilized OAI to screen and train candidates for employment opportunities, and hired 65 new employees in its first year in Phoenix, 36 of whom had been unemployed at the time of hire.

Innovation in Workforce Development (OAI) to support career pathway development and training efforts that connect job seekers to positions with businesses in the freight industry.



Sterling Lumber employees celebrate the company's relocation and the recently completed project on 151st Street in the Village of Phoenix.



> CONCLUSION

One of Cook County's strongest economic assets is its freight transportation system. This Plan makes the case for investment in a robust, multimodal freight system and for freight policies that will ensure the safe and efficient movement of goods. It is an important step towards preparing our freight system for the future and making the investments needed to retain our predominant position as the economic hub of the Midwest.



This *Freight Plan* provides a strategic framework to tackle some of the key challenges related to Cook County's freight transportation system in a way that supports economic and community growth. The Action Plan establishes a defined leadership role for the County to facilitate planning and investment across jurisdictions, and to prioritize freight-related improvements and policies at the local, state and federal levels.

Cook County cannot grow its economy by converting greenfields into new freight facilities. Instead, the County must focus on capitalizing on its existing assets by modernizing freight infrastructure and operations and reactivating properties that have potential for future growth. Cook County is committed to making infrastructure investments that will support businesses and communities, maintain existing jobs and generate

new ones. While these efforts will not have the outsized impact of greenfield megadeals, the cumulative effect of infrastructure improvements will help the County capture its share of the national growth forecasted for the freight cluster through 2040.

The County has already taken action to improve the freight system, making safety and mobility improvements, identifying partnership opportunities with local and national agencies, giving local agencies the means to address infrastructure challenges and identifying ways to enhance the quality of life for County residents. These actions are already yielding strong returns. The Invest in Cook grant program, now in its second year, is positioning regionally significant projects for additional funding from federal and state sources. Cook County's seed investment of \$820,000 for preliminary engineering on three freight projects in 2017 has already yielded federal and state commitments of almost \$40 million to advance these projects through design and construction.

The strategies and actions put forth in this Plan will build upon this momentum and are geared towards reaping multiple benefits including congestion reduction, safety benefits, more efficient freight movements and redevelopment opportunities. The projects identified in this Plan address some of the priority issues and locations in the County and represent a pragmatic approach to implement viable projects with substantial impacts. Coordinating and aligning federal, state and regional funding will be a core element of the County's overall strategy to advance freight projects and programming during a time of limited available resources.

In order to maximize the economic potential of Cook County and modernize a world class freight transportation system, a commitment to action is needed. Cook County is ready to meet the challenges laid out in this Plan. The Action Plan is the foundation upon which the County will grow its leadership role, renew its freight assets, further economic development and enhance the quality of life of its residents.



Trucks line up near a concrete plant in the Village of Summit. Concrete products are widely used in construction of buildings and infrastructure and require large amounts of gravel, cement and other raw materials. Congestion and delays cause particular concern for products like concrete or other perishables which must be delivered within a strict time window.



FOR MORE INFORMATION ABOUT THIS FREIGHT PLAN AND COOK COUNTY'S LONG RANGE TRANSPORTATION PLAN, VISIT

CONNECTINGCOOKCOUNTY.ORG

HONORABLE TONI PRECKWINKLE, PRESIDENT, COOK COUNTY BOARD OF COMMISSIONERS JOHN YONAN, P.E., SUPERINTENDENT, COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS