

Municipal Guide for Freight Planning



An Informational Publication of the
Morris County Division of Transportation



About the MCDOT

The Morris County Division of Transportation (MCDOT) is part of the Morris County Department of Planning & Development.

MCDOT serves the county through regional transportation planning, implementation, and coordination of various modes of transportation. The division secures federal and state funds for road, bridge, railroad, bicycle, and pedestrian projects. The division conducts studies and coordinates planning efforts with state agencies, municipalities, county departments, and the North Jersey Transportation Planning Authority. Two Freeholder appointed boards, the Morris County Board of Transportation and the Morris County Freight Rail Advisory Committee, advise the division on its activities. MCDOT directs efforts toward the best use of transportation resources to benefit the region.

For Transportation information in Morris County and beyond, visit www.MorrisDOT.org.

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About this Publication

This publication presents information to local governing bodies, planning boards, and boards of adjustment for their consideration in land use planning and infrastructure projects for goods movement activity within their municipality. It is intended to provide (1) information on the purpose and need for freight-focused planning, (2) a review of "best practices" in freight planning and its application to municipalities, (3) freight-specific issues for Morris County and its municipalities, (4) planning considerations on the municipal level, and (5) general guidance on the development application review process for freight-oriented development proposals.



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Why Is Planning for Freight Important?

Morris County lies in the heart of northern New Jersey and is an integral part of the regional economy. Rooted in a long and storied history that dates back before the founding of the nation, the development of the county has been a story of economic vitality, innovation, and progress. The county has an extensive roadway system, active freight and passenger railroads, and many former



industrial sites that afford promising opportunities for economic development and employment growth that are compatible with the high quality of life enjoyed by the county's residents.

Over the years the county has seen changing trends in transportation and land use that

parallel the experience of the nation as a whole. Patterns of suburban development and industrial decline in the county are consistent with the development of a more service-oriented economy, and these trends have placed a growing strain on the county's transportation infrastructure. Even though there have been reductions in manufacturing, mining and agricultural activities, freight transportation needs have grown as a result of increased residential and retail development.

The last century and a half has seen a progression from canals to railroads and then to highways as the primary form of freight transportation in Morris County. Globalization and the general economic growth in the larger metropolitan region have resulted in a dramatic increase in through truck traffic on the county's major highways (I-80 and I-287). The movement of freight into and through the county is influenced by the growth of the Port of New York and New Jersey and the growth of warehousing and distribution facilities in strategic locations far outside the New York metropolitan area.



Freight Considerations in Municipal Planning

Most land use and zoning regulations are developed by local government and are designed to address the needs of a single community. This presents a number of challenges when municipal governments attempt to address multi-jurisdictional/regional needs and local issues related to land use and infrastructure.

Freight transportation is one area where this is an issue. Freight transportation is usually carried out over long distances involving many different jurisdictions. Trip lengths range from international trade across the entire globe down to a local delivery within a single municipality. Sound municipal planning that addresses both freight infrastructure needs and zoning and local quality-of-life issues requires an understanding of the complexities of the freight transportation process and the various public and private sector organizations that make it all possible.

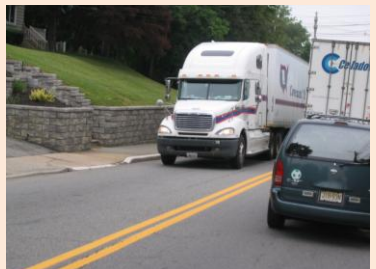
Key Issues for Local Communities

The production and transport of freight is a complex process that usually involves many steps. These include the extraction and development of raw materials, the delivery of raw materials to manufacturing facilities, the shipment of parts and components to other manufacturing facilities for final assembly, delivery of finished products to regional warehouses and distribution centers, and final delivery to retail stores, business establishments and private homes.

As our standard of living has improved over the years, the array of products we purchase has grown considerably, and the processes involved in producing and distributing them have become ever more complex. In a globalized economy where domestic and international borders have become increasingly less relevant in the production and movement of freight, more and more of these processes take place in locations that are far removed from the places where we live and work. This physical separation between the points of production and consumption makes it increasingly difficult for local governments to include freight considerations in their planning activities for land use, zoning and infrastructure.

In a mature, well-developed region such as Morris County, located in one of the largest and wealthiest consumer markets in the world, there are a number of issues that are often faced by many of the county's local governments. Some issues include:

- Characteristics of various freight transportation modes, many of which involve trips that have origins or destinations (or both) outside the municipality.
- Noise, air quality, congestion, vibration and safety impacts associated with industrial development, especially in local neighborhoods where the transportation system was designed in a previous era when trucks were smaller and freight railroads operated differently.
- The growing challenge of accommodating both passenger and freight activity on the same transportation system, including issues related to congestion and public safety concerns.
- Local community impacts of different types of industrial and commercial development – including heavy truck activity at warehousing and distribution sites, opportunities for rail use by manufacturing companies, and local truck activity at retail sites.
- Redevelopment potential and environmental issues associated with vacant, abandoned and obsolete industrial sites and railroad rights-of-way.
- Heightened concern about potential impacts from industrial activity adjacent to sensitive land uses such as schools, hospitals and child care facilities.
- Limited local control over railroad operations through zoning and other local ordinances. Federal preemption, which give regulatory control of railroads to the Federal Surface Transportation Board (STB), superseding state and local laws.



Obstacles to Efficient Freight Operations

The private sector, which includes industries that produce the things we use in our everyday lives (“shippers”) and industries that carry these goods to the retail stores or our homes (“carriers”), faces a number of obstacles to efficient freight operations. Some of these issues relate to physical constraints in the transportation system, and some relate to the local regulatory environment. Some common barriers for the private sector include the following:

- Height and weight limits (highway and rail)
- Local restrictions on business operating hours
- Traffic congestion
- Inconsistency between jurisdictions regarding truck routes and restrictions
- Loss of properties zoned for industrial use over time
- Loss of freight infrastructure or services (e.g., railroad abandonments)
- Lack of funding for proper planning efforts
- Inadequate road and rail corridor design for freight users
- Lack of shipper control over carrier scheduling and routing
- Difficulty of long-term planning in rapidly changing industries
- Changes for shippers and carriers related to environmental regulations
- Freight service disruptions



Current Municipal Practices in Morris County

Municipalities in Morris County currently address industrial development and freight transportation issues through local land use controls, zoning regulations and other regulatory measures. A review of applicable codes for a number of municipalities with extensive commercial development provides insight into some measures that serve as benchmarks of current practices for municipal practices related to freight issues. Some of the practices include:

- Encouraging site design techniques that are sensitive to the natural environment, including landscaping and circulation.
- Prohibiting new office, commercial or industrial driveways on residential streets.
- 500-foot buffer zone requirement between industrial land uses and nearest residential area.
- Restrictions related to certain industrial operations and loading/unloading activity during overnight hours.

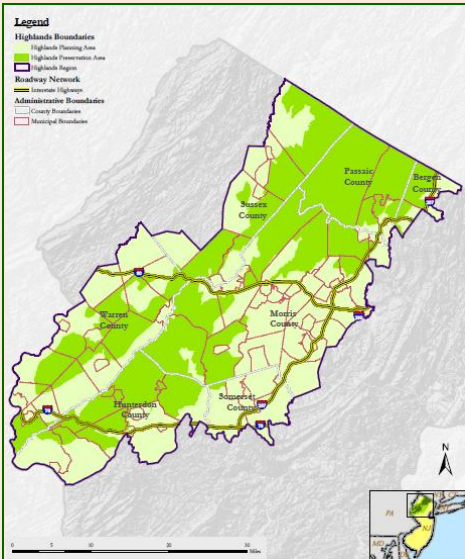


- Truck restrictions (by size) on defined set of streets.
- Designated truck network for vehicles over 4 tons gross vehicle weight.
- Designated on-street loading zones for certain street segments and industrial areas.
- Truck restrictions by roadway segment for vehicles over 4 tons gross vehicle weight and those over 6 tons.
- Idling restrictions between the hours of 8:00 PM and 8:00 AM for vehicles and associated equipment, except for emergency construction.
- Minimum length, width and apron length requirement for off-street loading areas.



Regional Regulatory Environment

While a substantial amount of legal authority is given to municipal governments under New Jersey’s “home rule” system, there are a number of state regulations that override local authority in certain areas related to public health and safety. Some examples of this include the New Jersey Uniform Construction Code (UCC), the Open Public Meetings Act and various statutes related to municipal budgets, bonding and other fiscal matters.



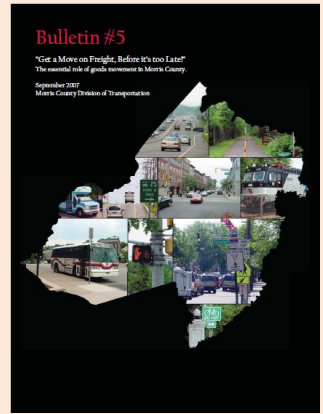
One important regulatory consideration for Morris County is that the County lies within the extensive New Jersey Highlands Region. Much of the County is designated “Preservation Area” under the New Jersey Highlands Water Protection and Planning Act (the Act) the Highlands Regional Master Plan (RMP) and is subject to related restrictions on land use and infrastructure development.

The Highlands Regional Master Plan (RMP), developed in accordance with the Act, includes several important elements

associated with freight-related land use and transportation infrastructure. These include: (1) a preference for shifting long-haul freight from truck to rail in the interests of efficiency and safety; (2) a directive to county and local agencies to evaluate potential reactivation of abandoned rail lines for freight service; and (3) encouragement for brownfield and other redevelopment projects, which may include waivers from some Highlands-related regulations in certain circumstances.

Enhancing Municipal Planning for Freight

Both the County and its municipalities have a variety of avenues for improving the planning process for infrastructure and land use related to freight. The Morris County Division of Transportation has already outlined a number of recommendations along these lines in its September 2007 publication, *“Get a Move on Freight, Before it’s too Late!”: The Essential Role of Goods Movement in Morris County* (Bulletin #5). Recommendations from that document include:



1. Managing truck traffic through documentation of local truck routes, clearly posting height and weight limits for heavy vehicles throughout the County, incorporating Intelligent Transportation System (ITS) technology in the County’s transportation network to manage capacity and demand, and exploring business incentives for off-peak freight operations.
2. Supporting freight through sound land use planning, by locating freight-intensive land uses close to major highways and freight rail routes, promoting concentrated industrial development in suitable locations through a “freight village” concept or similar type of industrial development, and encouraging development of industrial sites that provide an array of services for the trucking sector and other freight industries in close proximity to each other.
3. Expand and enhance the freight rail system in the County, through the acquisition of additional alignments and the upgrade of existing infrastructure to support new industrial development and better serve existing businesses.
4. Expand public knowledge of freight issues through public information campaigns, outreach to the business community, and targeted measures aimed at reducing freight impacts in local communities – including potential grade crossing elimination projects and “Quiet Zone” designations.



Local Planning and Zoning

While many of the recommendations outlined in Bulletin #5 are best implemented at a County or regional level, municipal governments have many tools that can be used to support sound freight-related infrastructure and land use planning efforts at the local level. Land use policy and zoning legislation are the primary local mechanisms for promoting development and protecting public health and safety. Many Morris County municipalities already include some of these considerations in their local ordinances to some degree.

For municipal officials, it is important to address the community concerns and quality-of-life issues associated with freight while recognizing the needs of the business community in light of the important role it plays in the economic viability of the region. Some of the tools commonly used by municipalities to minimize one type of community impact of freight activity are often at odds with measures that could help address other impacts of freight. A zoning provision that restricts industrial operations during overnight hours, for example, makes it difficult for businesses to minimize truck traffic during peak periods by moving to off-peak operations. This is one example where the needs of local residents and industries must be balanced in the municipal planning process as it relates to freight.

Possible tools for municipal freight planning include:

- Incorporate minimum buffers and setbacks between industrial sites and nearby sensitive land uses, along with minimum horizontal clearance between road and rail freight corridors and non-industrial land uses.



- Include truck operations and peak traffic analysis parameters outside commuter-oriented peak periods for traffic impact assessments for industrial sites using trip generation estimates from non-traditional

Industrial Land Use	Daily Truck Trip Rates per 1,000 ft ²
Manufacturing	0.385
Heavy Industrial	0.280
Light Industrial	0.300
Industrial Park	0.180
Truck Transportation	2.363
Warehouse/Distribution	0.185
Wholesale Trade	0.224

resources such as *NCHRP Synthesis 298: Truck Trip Generation Data*. Work with Morris County staff to correlate truck trip generation characteristics for various types of industrial sites with the Morris County Transportation Model.

- Require the analysis of highway-railroad grade crossing operations in development approval processes for rail-served industrial as well as non-industrial land uses located near existing grade crossings.



- Consider grade crossing elimination projects or “Quiet Zone” designations in areas where noise and congestion at grade crossings have adverse community impacts. All communities can apply for “Quiet Zone” designation at their crossings, but may require additional safety measures. For more information, the North Jersey Transportation Planning Authority (NJTPA) has published an informational guide on this subject, titled *Quiet Zone Designation in New Jersey*.
- Account for truck access and circulation for site plan approvals for non-industrial sites with anticipated truck activity, such as retail centers. Include provisions for on-street and off-street loading zones in commercial districts. Even local businesses that produce and attract very little freight have growing needs for small truck access related to overnight deliveries and parcel shipments.

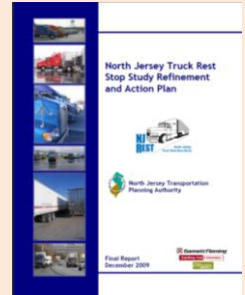
- Address potential problems with trucks parking on public streets and highway shoulders by incorporating on-site truck parking requirements for industrial sites, particularly those with staging needs associated with warehousing and distribution. Implement innovative approaches for meeting off-street truck needs while reducing impervious lot coverage. In cases where the concentration of industrial development can be modeled along a Freight Village or Freight Planned Unit Development concept, one such measure might include a “pooled truck parking” strategy described in the NJTPA’s *North Jersey Truck Rest Stop Study Refinement and Action Plan* (2009). Under this approach,



multiple industrial sites in close proximity to each other may reduce their on-site parking and staging requirements on site by contributing to a centralized shared truck parking site that could be operated as a private truck stop/travel center establishment.



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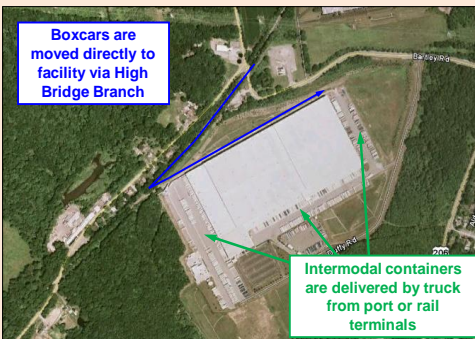


- Communication can also be an effective means of ensuring that freight operations and facilities act as good neighbors within the community. Having a common understanding of the issues, educating and building awareness, keeping an open dialogue, and organizing and working together to craft solutions can help to avoid misconceptions and foster mutual cooperation. Examples of successful efforts can be found in *NCHRP Synthesis 320: Integrating Freight Facilities and Operations with Community Goals*.

Case Study I: Toys R Us Distribution Center in Mount Olive

In 1995, Toys R Us completed development of a major regional distribution center in the Flanders section of Mount Olive Township. The site of this facility, located just west of Route US-206, was selected based on a number of factors. The distribution center required: 1) a large parcel of land, 2) highway access to Interstate 80 to serve as a distribution hub for the company's retail stores throughout the Northeast, and 3) freight rail access since the company receives imported products from Asia through West Coast ports, and domestic freight from locations throughout the Midwestern and Southwestern United States.

Morris County served as an important partner in the development of this distribution center. As the owner of the adjacent High Bridge Branch railroad line, the county supported the freight rail access requirement of Toys R Us by working with the NJTPA to successfully secure a \$1M Federal grant under the Federal Congestion Mitigation Air Quality (CMAQ) Improvement Program to upgrade the High Bridge Branch, the first time CMAQ funds have been used on a freight rail project.



Toys R Us was an important customer for the M&E for more than a decade after the facility was completed. In recent years, boxcar deliveries to the Mount Olive distribution center have declined substantially because of changes to the supply chain. The underlying factors that drive the shipping decisions of Toys R Us

relate to freight service pricing, infrastructure constraints, and changes in the operating characteristics of the national rail system that have occurred since 1995.

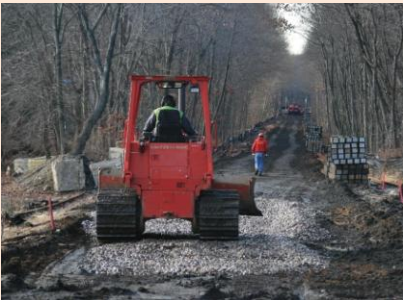
The Morristown & Erie (M&E) Railway has been serving freight customers on the High Bridge Branch since the Consolidated Rail Corporation (Conrail) sold it off in the 1980s. In this way, the government of Morris County has been a model of public-private cooperation in building strategic partnerships with the local business community and promoting economic development in the County, while at the same time protecting the public interest and addressing quality-of-life concerns in its communities.

Case Study II: Morris County Freight Railroad Advisory Committee

As owners of three freight railroads, Morris County government finds itself in a unique position in balancing the goals of providing a high quality of life for its residents with the need to retain and attract industrial businesses to the county. These railroads provide a unique tool to support increased job growth, strengthen the local economy and maintain a stable tax base. But these goals do not always align with one another and it can become a source of conflict.

In 2009, the Morris County Board of Chosen Freeholders established the Freight Railroad Advisory Committee (FRAC) to create an open forum between affected communities, the operating railroad, and the business community that relies on rail service for their operations. The committee is comprised of nine members, who meet quarterly, represented by two Freeholders, elected officials from three municipalities, the Morris and Erie Railway—the county’s operating railroad, two local business owners that receive rail service, and a representative from the Morris County Board of Transportation.

Since its inception, the FRAC has been a success. The county has gained resolutions of support from host communities required for state funding of rail projects designed to help to improve the railroads’ operations, as well as addressing safety, environmental, and congestion issues, while at the same time considering the concerns of its local residents. Meetings have included discussions and presentations designed to inform and build awareness of railroad



operations, current trends and matters that affect freight rail in Morris County, and to generate new ideas for making these operations more efficient while enhancing the community’s well-being.

By encouraging a frank and honest dialogue between its members, the FRAC helps avoid misunderstandings and ensures that concerns are promptly and properly addressed. These meetings permit a constant exchange of ideas which allows the county to address these complex issues, monitor freight activities and plan for the future of the county-owned freight rail lines, keeping the need for economic development and residential quality of life in harmony.

More information on the Morris County Freight Railroad Advisory Committee can be found at www.MorrisDOT.org.

Morris County Freight Infrastructure & Land Use Analysis



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