



Indianapolis Intermodal Freight System Plan

Airport Deployment Study

executive summary

submitted to

**Indianapolis Department of Metropolitan
Development**

submitted by

Cambridge Systematics, Inc.

with

**Dyer Environmental Services
The Tioga Group**

February 2002

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Executive Summary

■ Objectives

The area in the vicinity of the Indianapolis International Airport has been an engine of the regional economy during the past decade. The area includes a unique combination of transportation resources in three major modes. Over the past decade, the Airport area has become one of the largest employment centers in the Indianapolis region. Activities located in the area employ more than 10,000 workers today. Over the next 20 years, it is expected that nearly \$2 billion in public and private investment will be made in the Airport area, generating approximately 16,000 new jobs.

The exceptionally good air, rail, and truck transportation service provided in the Airport area is a strong advantage for companies doing business in Indianapolis. However, the rapid growth of this area is creating new challenges, including congestion, safety, and access problems. If not addressed, these transportation challenges will limit future growth of the Airport, the Avon Rail Yard, the regional distribution industry, and the businesses that these facilities serve.

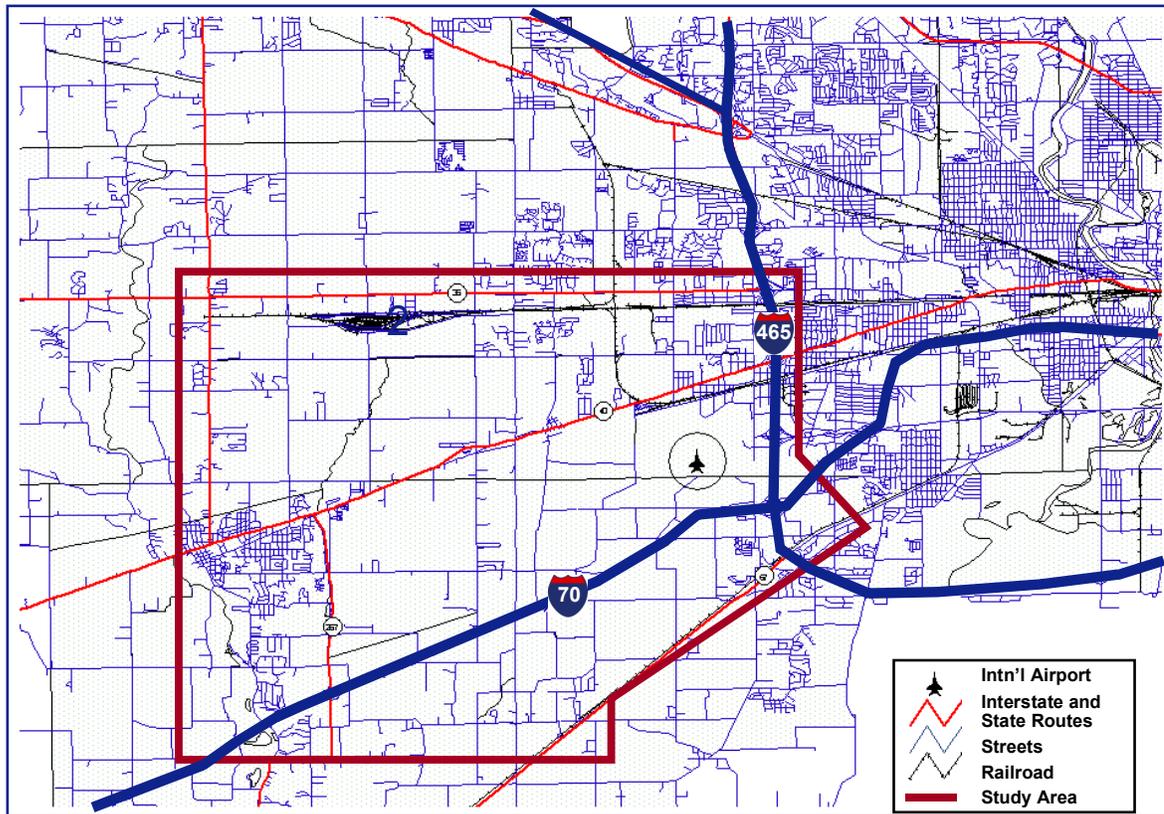
The objectives of this study are to:

- Prepare an intermodal freight transportation strategy for the Airport area that sets priorities among key infrastructure projects for funding and development and defines complementary operations and traffic management initiatives; and
- Coordinate transportation improvements among agencies, laying the groundwork for improved overall development planning in the region.

The study area is bounded on the east by Lynhurst Drive (just east of Interstate 465), on the west by State Route (S.R.) 267, on the north by U.S. 36 (Rockville Road), and on the south by S.R. 67 (Kentucky Avenue) and Camby Road (see Figure ES.1). The study area encompasses a large portion of Hendricks County, including the towns of Avon and Plainfield.

The study assessed the strengths and weaknesses of the freight system in the Airport area, organized in five categories: economic structure, logistics patterns and modal options, operations and freight flows, infrastructure, and organization and public policy. Potential strategies were developed based on this assessment and an action plan was developed in conjunction with the Indianapolis Metropolitan Planning Organization (MPO) and the Study Review Committee, comprised of representatives of key public and private sector organizations.

Figure ES.1 Airport Development Area



■ Regional Assets

The Airport development area enjoys four major competitive advantages that have stimulated growth in freight and distribution activity:

- **Economic Structure** - Indianapolis is one of the fastest-growing major metropolitan areas in the Midwest. Its industry mix historically has been concentrated in manufacturing and state government, but the region has transitioned into a major regional center for distribution, finance, services, and tourism. This role creates demand for a wide variety of types of goods movement, and supports the operations of a wide range of freight carriers. The combination of a large consumer population and a large industrial base produces a fairly good balance of inbound and outbound shipments in the region, although there are opportunities for improvement.
- **Logistics and Modal Options** - Indianapolis is centrally located in the large Midwest market area, which remains the nation's industrial heartland and supports a major concentration of population. Indianapolis' one-day distribution area (defined as about a 250-mile radius) includes Chicago, St. Louis, Milwaukee, Detroit, Cleveland,

Columbus, Cincinnati, and nearly all of Kentucky. In addition, Indianapolis is centrally located for serving national markets by air, truck, or rail. The region's central location is the reason most frequently cited by Airport area shippers and carriers for siting their businesses in this area.

- **Freight Operations and Flows** - Indianapolis is one of the few locations in the United States that can offer a combination of trucking, air freight, and rail/intermodal operations in close proximity to one another and to developable land. The Airport is the site of Federal Express' (FedEx) second largest hub operation, as well as the location of one of five U.S. Postal Service (USPS) ground hubs included in the USPS Hub and Spoke Program (HASP).¹ The region offers unique capabilities in small package movement, the fastest growing segment of the freight industry. Although traffic congestion and safety problems are growing in significance in the region, Indianapolis still escapes the severe traffic problems that plague larger metropolitan areas such as New York, Chicago, and Los Angeles.
- **Transportation Infrastructure** - Indianapolis' transportation infrastructure has long supported its role as a crossroads of America. Key transportation assets of the Airport area include the following:
 - *Air* - The Airport is the nation's eighth largest air cargo hub and the 16th largest worldwide. Freight and mail traffic more than tripled over the past decade to over 1.2 million tons in 2000. The Airport's Foreign Trade Zone is one of the largest in the nation. The Airport's Master Plan includes the construction of a third runway and the development of a new midfield terminal to accommodate projected increases in air freight and passenger activity.
 - *Rail* - Avon Yard, located to the northwest of the Airport, is a major system classification yard on the CSX mainline between St. Louis and Cleveland. CSX assumed operation of Avon Yard after completion of the Conrail merger in mid-1999. Under CSX ownership, Avon Yard could become a major classification yard for eastbound and westbound rail freight. It also could serve as a receiving yard for freight trains from the mid-south region through Cincinnati and destined for St. Louis. Avon Yard also includes a small intermodal truck/rail facility.
 - *Highway* - Two interstate highways intersect just outside the Airport: Interstate 70, which provides access to the city of Indianapolis and Columbus, Ohio, to the east and to St. Louis to the west; and Interstate 465, which forms a beltway around Indianapolis and connects to Interstates 65, 69, and 74. This extensive network provides easy access from the Airport to locations throughout the central United States. Proposals to extend I-69 from Indianapolis to the Texas/Mexico border, under the auspices of the Congressionally designated "Corridor 18" project, could place the Airport on one of the nation's largest corridors for international trade.

¹FedEx and USPS entered into a joint operating agreement in 2001 under which FedEx now handles air delivery for USPS. While traffic volume at the USPS facility has been greatly reduced, the hub still generates roughly 100 to 150 truck trips per day. Shipments coming through the Indianapolis hub are in transit between USPS' ground service region, which covers the eastern U.S. from Boston to Minneapolis, and Chicago to Little Rock.

■ Challenges and Priorities

The Airport area faces several challenges to ensuring continued mobility of both freight and passengers in this growing part of the region. Key challenges and impediments were identified through an assessment of existing conditions in the study area; a comparison of Indianapolis with other major inland distribution centers in the United States; and discussions with regional shippers, carriers, and public agencies.

High priority is given to addressing the challenges in two areas under the primary responsibility of the MPO:

- **Infrastructure** – *Will the capacity of the region’s highway, rail, and air systems support current and future freight flows?* Highway issues are related to the physical capacity and geometric constraints of the Airport area’s major truck routes. Rail issues are related to the size and condition of the Indianapolis Intermodal Terminal at Avon Yard. Air issues are related to the terminal and groundside capacity of Indianapolis International Airport for both passengers and freight. These issues are most significant where individual modes connect – such as at the Airport or Avon Yard – or where freight and passenger trips share facilities – such as at the Airport, on the Interstates and major arterials, or along the joint use CSX/ Amtrak line.
- **Freight Operations and Flows** – *Can the Airport area intermodal freight system function as an efficient unit, providing reliable, predictable service to its customers?* The primary issue is periodic and episodic congestion on key truck routes and at intersections, particularly the access points to the Airport and Avon Yard. This congestion is aggravated by conflicts between freight and passenger traffic along these facilities, and is likely to worsen in the near-term due to planned major construction projects at the Airport and along I-465 and I-70. Other operational issues include recurring safety problems due to intersection controls, visibility limitations, and congestion; inadequate signage, particularly along key truck routes; and the time associated with truck permitting, enforcement, and clearance processes.

Secondary priority is assigned to logistics and economic development activities that will support continued growth of the Airport area. These are the primary responsibility of other public and private organizations in the region:

- **Logistics and Modal Options** – *Can the Airport area provide high-quality, reliable service in all key transportation modes to meet the dynamic needs of its shippers and receivers?* Key issues include the limited competition in the rail industry; the limited existing intermodal rail service; and the imbalance of inbound and outbound freight tonnage, particularly in the trucking industry.
- **Economic Structure** – *Can the Airport area attract and retain the necessary businesses and labor force to realize its expansion goals?* Key issues include a tight labor market, with apparent shortages of skilled transportation and logistics workers; an uncoordinated mix of land uses that may not give priority to distribution-related activity; and an underestimation of the importance of freight and logistics to the regional economy.

In addition, it is recommended that the MPO address organizational and policy issues related to how the region's public and private institutions plan, finance, implement, and manage infrastructure and operational improvements in the Airport area:

- **Organization and Policy** - *Can the region's public and private institutions work together to plan, finance, and manage an efficient freight transportation system?* Key issues include the fragmentation of freight planning and operations responsibilities among multiple agencies and between the public and private sectors; and the difficulty delivering new infrastructure and services on a schedule consistent with private sector growth, in large part due to the lack of dedicated funding for freight improvement projects.

■ Strategies

The study identified a portfolio of strategies for addressing these challenges, with emphasis on infrastructure and operational solutions. The strategies include investments or policy initiatives planned or proposed by the public and private sectors in Indianapolis, as well as the best practices from similar intermodal freight planning efforts nationwide. The priority, timing, and key partners for each strategy were identified based on input from the Study Review Committee and consultation with MPO staff.

Infrastructure Strategies and Projects

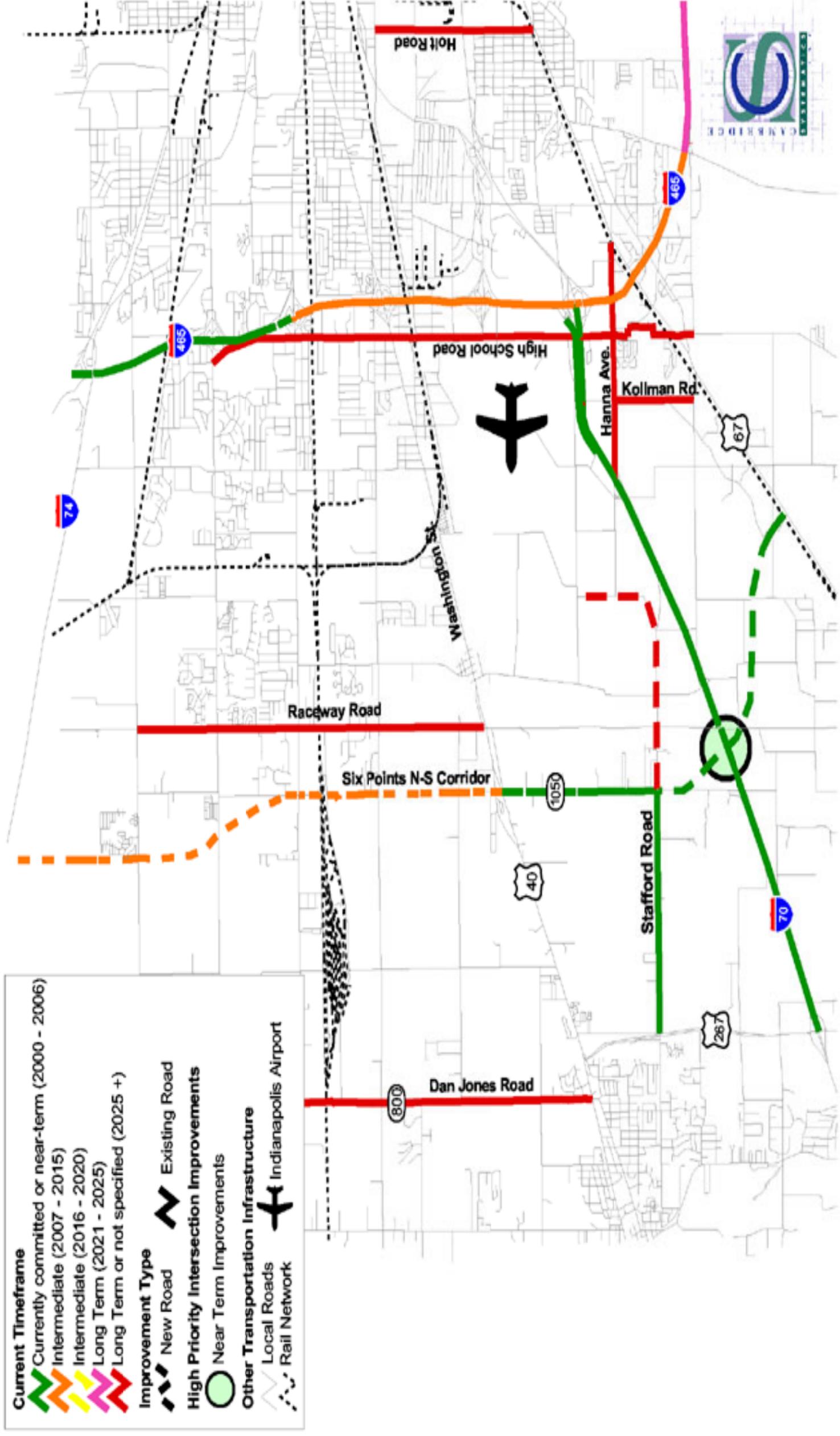
Figure ES.2 shows high-priority highway infrastructure projects planned or programmed in the Airport area in the year 2025 Indianapolis Regional Transportation Plan (IRTP). Table ES.1 lists high-priority infrastructure projects in the Airport area. The major infrastructure investments that will support continued growth of the Airport area include the following:

- **I-465 Widening and Interchange Upgrades** - The Indiana Department of Transportation (INDOT) is undertaking a major program to add capacity on the I-465 loop around Indianapolis. This initiative includes replacing and regrading the pavement, adding a travel lane in each direction and eliminating tight curvatures on older cloverleaf-style interchanges. Parallel collector/distributor lanes at closely spaced interchanges in the Airport area will help alleviate safety problems caused by excessive weaving. This project is of great importance to the Airport area because I-465 serves as a vital north-south connector.
- **I-70 Realignment and Midfield Terminal** - As part of the plan to construct a midfield terminal, INDOT is working with the Indianapolis Airport Authority (IAA) to realign the section of I-70 that borders the Airport. This project will accommodate a new passenger entrance to the Airport near the Six Points Road interchange, and facilitate the construction of a taxiway over the highway to connect the current runways to Airport property south of I-70. From the freight perspective, this initiative offers three benefits: it will separate the passenger and freight entrances to the Airport, reducing traffic conflicts and local congestion; it will allow FedEx to expand its current facility north of I-70; and it will open the land around the existing Airport terminal for cargo or other Airport-related development.

Table ES.1 High-Priority Infrastructure Projects

Facility	Location	Improvement	Current Timeframe	Recommended Priority	Agency
Interstates					
I-465	34th Street to I-65	Widen to 10 lanes, mod. Interch.	2007-2015	1	INDOT
I-465	10th Street to 34th Street	Widen to 10 lanes, mod. Interch.	2000-2006	1	INDOT
I-465	U.S. 36 to 10th Street	Widen to 10 lanes, mod. Interch.	2000-2006	1	INDOT
I-465	Washington St. (U.S. 40) to I-70	6-lane to 10-lane divided	2007-2015	1	INDOT
I-465	0.56 mi. N of U.S. 40 to U.S. 36	Widen to 10 lanes, mod. Interch.	2007-2015	1	INDOT
I-465	I-70 to S of Mann Rd. + 2 Interch.	6-lane to 10-lane divided	2007-2015	1	INDOT
I-465	Mann Rd to I-65	6-lane to 8-lane divided	2021-2025	1	INDOT
I-70	S.R. 267 to Six Points Rd.	6-lane div. to 8-lane div.	2000-2006	1	INDOT
I-70	Six Points Rd. to I-465 (realign)	6-lane div. to 8-lane div.	2000-2006	1	INDOT
Six Points Interchange	I-70 and Six Points Road	New Interch. (INDOT component)	2000-2006	1	INDOT
Arterials					
Hanna Avenue	Perimeter Rd. to Kentucky Ave.	2-lane to 4-lane divided	2025+	1	DPW
High School Road	10th St. to Washington St.	2-lane to 4-lane divided	2025+	1	DPW
High School Road	Washington St. to Minnesota	2-lane to 4-lane divided	2025+	1	DPW
High School Road	Perimeter Rd. to Thompson Road	2-lane to 4-lane divided	2025+	1	DPW
Holt Road	Morris St. to Kentucky Avenue	2-lane to 4-lane divided	2025+	1	DPW
Raceway Road	21st St. to Washington St.	2-lane to 4-lane divided	2025+	1	DPW
Six Points/Camby Rd.	S.R. 67 to I-70	New 4-lane divided	2000-2006	1	DPW
Six Points (N-S) Corridor	I-70 to U.S. 40	New 4-lane divided	2000-2006	1	HEN
Six Points (N-S) Corridor	U.S. 40 to Morris Street	New 2-lane	2007-2015	1	HEN
Six Points (N-S) Corridor	Morris St. to CR 300N	New 2-lane	2007-2015	1	HEN
Stafford Road	Six Points Rd. to S.R. 267	2-lane to 4-lane divided	under const.	1	HEN
Stafford Road Connector	Six Points Rd. to Airport Perimeter Rd.	2-lane to 4-lane divided	not programmed	1	DPW/ IAA
Local Roads & Collectors					
Dan Jones Road	Rockville Rd. to U.S. 40	widen, add shoulders	None	1	HEN
Kollman Road	Thompson Rd. to Hanna Ave.	Reconstruction	None	1	DPW

Figure ES.2 Map of Proposed Infrastructure Projects



- **Six Points Road/North-South Corridor** - In another initiative aimed at increasing north-south mobility in the Airport district, Hendricks County is planning to construct a new corridor, running roughly on the right-of-way of the current county roads 1050 East and 1000 East. This new infrastructure will provide more direct service to shippers and distributors in the Airport district. It will provide truckers with a bypass of the congested High School Road and I-465 corridors and enable better use of the region's east-west corridors (I-74, I-70, U.S. 40, and U.S. 36). The corridor also will include a grade-separated crossing of the CSX tracks at Avon Yard, reducing delays and allowing for the expansion of rail operations at the Yard. Finally, the corridor will be coordinated with the entrance to the relocated Airport terminal. All told, the north-south corridor could develop into the freight "main street" for the Indianapolis Airport/Avon Yard district.

Other infrastructure projects identified as high-priority for the Airport area and recommended for consideration in the next IRTP update include the following:

Arterials

- **Hanna Avenue.** Hanna Avenue has experienced significant increases in freight and commuter traffic in recent years serving both Federal Express and the Ameriplex distribution center to the south and west of the Airport. The IRTP recommends the upgrading of Hanna Avenue from a two-lane to four-lane divided facility between Perimeter Road and Kentucky Avenue (S.R. 67) after the year 2025. Because the use of this road has changed from rural to industrial, it may be beneficial to accelerate this widening or to implement interim improvements such as a widened two-lane roadway with shoulders and improved geometrics. In addition, the Hanna Avenue bridge over I-465 is narrow for large trucks, and should be considered for upgrading.
- **High School Road.** High School Road provides access to the main Airport facility and Federal Express, as well as to other businesses and Airport support facilities. This road has been identified as a major bottleneck by area businesses. The road currently has six 90-degree jogs between the Airport entrance and S.R. 67. A low one-lane railroad overpass is located just north of S.R. 67, which backs up traffic especially during rush hour. The IRTP recommends the upgrading of High School Road from a two-lane to four-lane divided facility after the year 2025 between 10th Street and Minnesota and between Perimeter Road and Thompson Road. It is recommended that these improvements be accelerated to occur in conjunction with the realignment of I-70, which will likely require the reconstruction of a portion of High School Road.
- **Holt Road.** Holt Road is a major north-south primary arterial serving the industrial complex on the southwest side of Indianapolis and eastern edge of the Airport district. The IRTP recommends the upgrading of Holt Road from Morris Street to Kentucky Avenue from a two-lane to four-lane divided facility after the year 2025. This section should receive further study and consideration for accelerated improvements.
- **Raceway Road.** Raceway Road is the north-south roadway that provides access to the eastern entrance of Avon Yard. This road is a narrow two-lane roadway with no shoulders. A low (10-feet, 6-inches) railroad overpass is located near the entrance to Avon Yard. No improvements are scheduled for Raceway Road until after the year

2025. Raceway Road from Rockville Road to U.S. 40 should be considered for improvements at an earlier date to improve access to Avon Yard and coordinate with the planned new Six Points Road/North-South Corridor.

- **Stafford Road.** Stafford Road provides access from the burgeoning distribution businesses in Plainfield to the Airport. Stafford Road recently was reconstructed to provide a four-lane divided roadway between S.R. 267 and Six Points Road, and area businesses have expressed a need for similar improvements between Six Points Road and the Airport Perimeter Road. This route was raised as a priority improvement by the Study Review Committee. At this time there are no plans for a Stafford Road connection in the IRTP, although there has been discussion of a road curving north of the midfield terminal from the new Six Points Road and connecting to the northern leg of the Airport Perimeter Road. IAA and the MPO should consider a Stafford Road connection that can be incorporated into the design of the new midfield terminal.

Local Roads and Connectors

- **Dan Jones Road.** Dan Jones Road is a north-south roadway that provides access to the western entrance of Avon Yard in Hendricks County. The existing road between U.S. 40 and Rockville Road is narrow with no shoulders and weight restrictions near the entrance to Avon Yard. There are currently no plans to improve this roadway, although consideration is being given to the need for wider lanes and shoulders.
- **Kollman Road.** Kollman Road is a north-south local road that serves traffic between Thompson Road and Hanna Avenue. It is a narrow two-lane road with poor pavement and no shoulders. The Ameriplex development has greatly increased traffic on this road. There are currently no plans to improve this roadway. This section of roadway should be resurfaced or reconstructed with widened lanes and shoulders, and improved geometrics at intersections.

Operations Strategies

The infrastructure investments should be accompanied by operational strategies to reduce congestion, enhance safety, and improve the reliability and mobility of freight movement. Recommended strategies include the following:

- **Develop plan to manage traffic operations in workzones** – The upcoming major construction projects along I-465 and I-70 and at the Airport will add to the near-term traffic problems facing freight and passenger traffic in the Airport area. Maintenance and construction operations practices and technologies should be applied to manage traffic flow around workzones; provide travelers with up-to-date construction information; enhance safety for maintenance and construction personnel; and improve the utilization of construction and maintenance vehicle fleets.
- **Upgrade truck route signs** – Existing truck routes are often difficult to follow due to inadequate signage. Upgrading the fixed signage offers a relatively inexpensive approach to managing freight flows.

- **Manage traffic flow at “hot spots”** - There are instances in the current network where specific truck maneuvers are simply not practical given the roadway limitations, even though they are allowed by law. In such instances, altering traffic flow controls to prevent these movements could help reduce delays for the overall system. One example of this is the proposal to prevent eastbound trucks on Washington Street from making right turns onto High School Road.
- **Accelerate and expand regional Intelligent Transportation Systems (ITS) deployment** - INDOT has begun deploying ITS technologies in the Indianapolis region through its TrafficWise program. These services are concentrated in the heavily traveled corridors in the downtown and northeastern corner of Indianapolis. In conjunction with the planned infrastructure improvements in the Airport area, regional stakeholders should coordinate with INDOT’s ongoing ITS deployment efforts to suggest specific services or additional coverage locations that would benefit the overall transportation system. Possible Airport applications include the following:
 - *Airport area corridor management system*, including closed-circuit television cameras, dynamic message signs, and signal coordination, to manage traffic along critical freight corridors, such as U.S. 40, U.S. 36, or the proposed Six Points Road corridor.
 - *Airport area incident management program* to deal with specific emergency situations relevant to an area with a higher percentage of freight and industrial traffic and time-sensitive Airport schedules. This program could focus on unique needs such as improving hazmat incident response or maintaining the flow of goods and people to the Airport in response to major incidents and road closures.
 - *Highway-rail intersection monitoring program* to improve safety and reduce delays at the at-grade railroad crossings along CSX’s lines that parallel U.S. 36.
- **Develop ITS services targeted at commercial vehicle operations (CVO)** - The Airport area also should support regional and statewide efforts to develop freight-targeted ITS deployments that expedite a variety of common and time-consuming processes that private carriers, terminal operators, and government regulators must undertake. Possible freight applications include the following:
 - *Automated roadside inspection and enforcement programs*, which provide significant cost and time savings to both private truckers and state regulatory agencies by helping to automate common roadside processes.
 - *Electronic credentialing systems*, which improve efficiency for pre-trip functions, such as application for registrations and permits and payment of fees and taxes.
 - *Trucking information-enhanced dispatch*, which uses real-time traffic information to enable carriers to route traffic around accidents or areas of congestion.

The MPO should play a convening role to bring together state and local agencies to explore these potential strategies and their application in the Airport area, and provide support for the financing and implementation of the most promising strategies. Table ES.2 suggests the priority and timing of operations strategies.

Table ES.2 Priority and Timing of Operations Strategies

Strategy	Priority ¹	Timing ²	Key Partners
Develop plan to manage traffic operations in I-465, I-70, midfield terminal workzones	H	S	MPO, INDOT
Update truck route signage	M	M	MPO, INDOT, county governments
Manage traffic flow at hot spots	M	M	MPO, INDOT, county governments
Coordinate with regional ITS efforts; develop Airport-area-specific ITS systems	M	M	MPO, INDOT
Deploy ITS systems for CVO	M	M	MPO, INDOT, State Police

¹Priority: H = high; M = medium; L = low.

²Timing: S = Short-term (within one year); M = Medium-term (between one and three years); L = Long-term (beyond three years).

Logistics and Modal Options Strategies

These infrastructure and operations strategies should be supplemented with efforts to expand rail service and to reduce logistics and distribution costs for area businesses.

The rail market is primarily served by CSX, with limited trackage rights and operations for Norfolk Southern. The current cost and level of rail service does not attract some commodities or shipments that could travel by rail under more favorable circumstances. As a result, the region relies disproportionately on trucks to move freight. In the case of intermodal traffic, this situation is further exacerbated by the Indianapolis region’s proximity to the major east-west railway interchange cities of Chicago and St. Louis. Because of the additional time and cost associated with transferring goods from one rail carrier to another, it is often more efficient to truck westbound intermodal goods directly to one of these “gateway” cities and make the intermodal transfer there. Recommended strategies include the following:

- **Expand rail/truck intermodal options** - In the near term, there is limited opportunity to expand rail service to the region, except to build the largest possible market for rail intermodal traffic. In the immediate future, the region should focus its rail development efforts on shippers with substantial businesses in Eastern markets such as Boston, New York, Philadelphia, and Baltimore/Washington, which could be served effectively by rail from Indianapolis. In addition, the Indianapolis region should market Avon Yard directly to potential developers and site selection specialists looking for easy access to intermodal facilities. The Indianapolis region also can promote rail system changes that result in better service to regional shippers and receivers. Over the long-term, an east-west railroad merger would remove the “gateway” barrier that currently discourages westbound goods from leaving Indianapolis by rail. If the current “gateway” limit is removed in a future east-west

merger, the size of Indianapolis's rail market will become the single most significant determinant of the level of service provided. Current indicators suggest that the size of the Avon intermodal terminal is significantly smaller than the potential area market if the gateway limit is removed. A comprehensive study of the Avon Yard intermodal terminal's operational strengths and weaknesses, infrastructure needs, and potential markets should be conducted to help identify priority improvements and develop a proactive strategy to position the region for future rail industry mergers.

- **Explore rail/air intermodal options** - A proposed Midwest high-speed rail system would connect Chicago to Cincinnati and Louisville through Indianapolis. The proposed alignment brings the rail corridor along the northern boundary of the Indianapolis Airport, making it an additional asset of the Airport district. Rail express service has the potential to compete with air service for mid-value, time-sensitive parcel service within specific high-volume corridors. However, FedEx, USPS, and other small package carriers are likely to use this service only if it is shown to be reliable and cost-effective. A particular issue would be the priority given the Amtrak trains along the primarily freight routes owned by CSX. The MPO should monitor high-speed rail planning and ensure that Airport access and freight mobility needs are addressed by the multi-state initiative.

In addition, the public and private sectors in Indianapolis can work together to reduce logistics costs, particularly for international and long-distance shipments. Suggested strategies include the following:

- **Achieve better balance of inbound and outbound freight flows** - In 1997, the volume of inbound goods shipments to Indianapolis exceeded that of outbound shipments by 20 percent. This imbalance costs carriers more, due to non-revenue "deadhead" trips, and this increased cost is passed on to shippers and receivers in the form of higher shipping rates. Although a 20 percent freight imbalance is not particularly high by national standards, it does indicate room for improvement and cost reduction. Strategies that might assist in balancing freight loads include development of shipper councils that work collaboratively to consolidate smaller shipments into larger aggregated shipments, and creation of automated information clearinghouses to advertise and match loads for return trips.
- **Improve processing of international freight** - The Indianapolis region is well positioned to capture a share of the increasing international freight market, particularly given the proposed extension of I-69 to the Mexican border. The region can prepare for the anticipated growth in international trade by expanding U.S. Customs and related support services; expanding the Foreign Trade Zone designation; developing international trade information clearinghouses; and exploring the potential for shifting some trade-processing functions from international border crossings to inland facilities near the Airport.

The MPO should play a supporting role in implementation of these strategies, working with other regional organizations including the Indianapolis Regional Economic Development Partnership (IREDP) [formerly the Indianapolis Economic Development Corporation] and the Indiana Technology Partnership (ITP). Table ES.3 suggests the priority and timing of logistics strategies.

Table ES.3 Priority and Timing of Logistics and Modal Options Strategies

Strategy	Priority ¹	Timing ²	Key Partners
Develop eastbound rail market and encourage expanded use of rail	M	S	MPO, INDOT, IREDP
Conduct terminal study for Avon Yard	H	S	MPO, INDOT, IREDP
Expand Avon Yard capacity	TBD	L	TBD
Explore feasibility of rail/air intermodal options	M	L	MPO, INDOT, Midwest High-Speed Rail Initiative
Achieve better balance of inbound and outbound loads (shippers councils, clearinghouses)	M	M	IREDP
Improve processing of international freight	M	L	IREDP, ITP

¹Priority: H = high; M = medium; L = low.

²Timing: S = Short-term (within one year); M = Medium-term (between one and three years); L = Long-term (beyond three years).

Economic Development Strategies

The Airport area has an opportunity to become one of the nation’s largest centers for freight and distribution, drawing upon two sources of growth: continued gains in distribution, logistics, and warehousing activities; and accelerated gains in manufacturing and service industries that are dependent on reliable, time-sensitive freight movement. This growth would produce additional jobs and income for Indianapolis and the central Indiana region. For this reason, it is recommended that transportation strategies be coupled with economic development initiatives under the leadership of the private sector. Recommended strategies include the following:

- **Target economic development and marketing efforts** – Economic development efforts in the Airport area should focus on businesses that are dependent on reliable, efficient freight transportation, particularly via truck and air. Programs also should target the following types of businesses for recruitment or expansion in the area:
 - *Heavy manufacturers and large distributors* that are potential customers for rail service (particularly intermodal) and therefore could help grow the market at Avon Yard;
 - *E-logistics and freight technology companies* that can generate higher-value added jobs and also offer technology and services to help regional carriers and shippers become more efficient; and
 - *Logistics, finance, insurance, and related support services* that can serve regional shippers and carriers and encourage them to remain and expand in the Airport area.

The efforts of various county and city economic development organizations should be coordinated under a common umbrella to avoid duplication of efforts and minimize intraregional competition. A common marketing image for the Airport zone (e.g., as the “Crossroads of America”) should be developed to support recruitment efforts. Particular attention should be given to developing a consistent approach to economic development incentives (e.g., tax abatements and training grants) across the various jurisdictions in the Airport area. The IREDP has expanded its mission to market the nine-county region and could lead this effort, with support from the new statewide ITP.

- **Develop coordinated plan for land use** – The Airport development area includes a mix of different land uses subject to the variation in zoning and development approaches of the various municipal and county jurisdictions in the area. Although opportunities to rezone existing development are limited, future development should be zoned with an eye toward focusing freight-oriented development in parts of the region that can easily be accessed by trucks, and by separating freight- and passenger-oriented development. In particular, the land use plan for the proposed north-south corridor along Six Points Road should be oriented toward light industrial activity. Figure ES.3 presents a suggested land use framework for the Airport region.
- **Focus workforce training, recruitment, and retention efforts** – Hendricks County and much of the central Indiana region has struggled with an extremely tight labor market for the past several years, with unemployment hovering around two percent. Major employers express concerns about their long-term ability to recruit and retain workers, particularly truck drivers, mechanics, and logisticians. The IREDP and its partners in the Airport development zone should build upon existing workforce development efforts in central Indiana to ensure that the needs of the freight and logistics industry are incorporated in future workforce development efforts.
- **Expand employee transportation-to-work options** – The major Airport area employers such as FedEx, USPS, and United Airlines draw workers from many of the surrounding counties, bringing additional passenger car trips onto the few east-west and north-south corridors that also serve the major freight generators. The IAA, the MPO, and major employers should explore the potential for longer-distance, cooperative worker shuttles to transport workers from park and ride lots and other remote sites. In addition, the MPO and the IAA should explore the potential for increasing transit service to the Airport area, either under the auspices of the IndyGo bus service or as part of any potential light rail line from the downtown to the new midfield terminal.

The MPO should play a coordinating role in implementation of these strategies, which would be led by economic development organizations and the private sector. Table ES.4 suggests the priority and timing of economic development strategies.

Figure ES.3 Planned Land Use in Airport Area

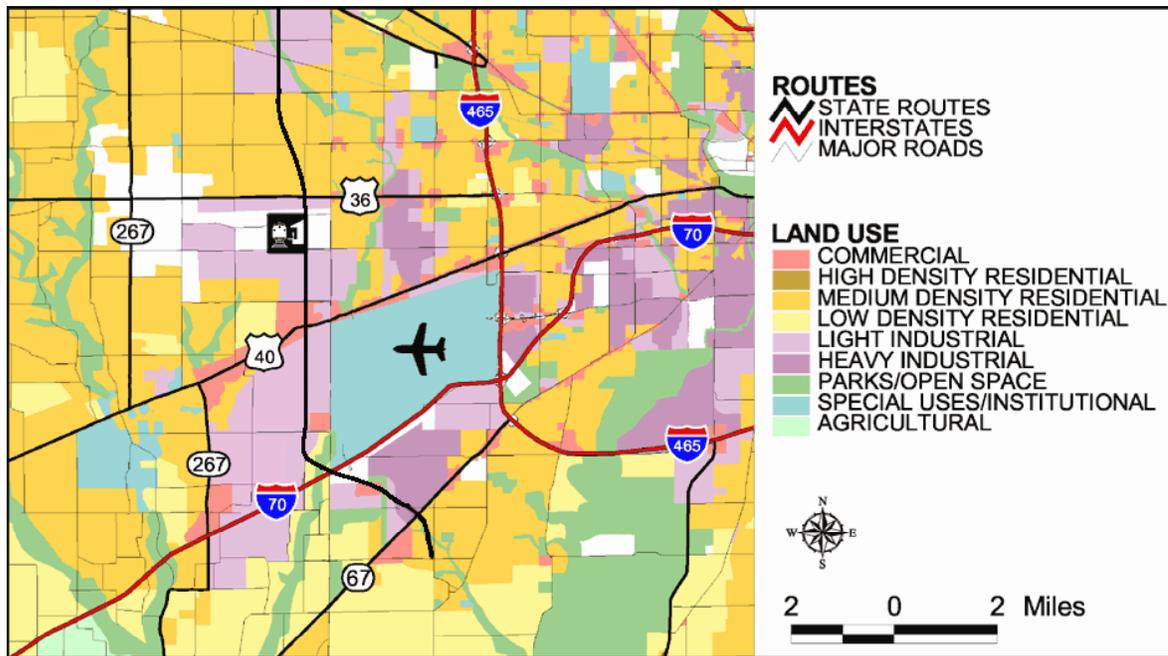


Table ES.4 Priority and Timing of Economic Development Strategies

Strategy	Priority ¹	Timing ²	Key Partners
Target economic development and marketing efforts	H	S	IREDP, ITP
Develop coordinated land use plan for Airport area	H	M	MPO, county and town governments
Focus workforce training, retention, and recruitment efforts	M	M	Indiana Workforce Development Board, IREDP, ITP
Expand transportation to work options	M	M	INDOT, MPO, IAA

¹Priority: H = high; M = medium; L = low.

²Timing: S = Short-term (within one year); M = Medium-term (between one and three years); L = Long-term (beyond three years).

Organization and Policy Strategies

The final set of strategies relate to how the public and private organizations involved in the Airport area plan, manage, and finance the intermodal transportation improvements and related initiatives described in this report. The core strategy is to set up an institutional structure for coordinated planning, operations, and investment in the area. This strategy would have three major elements:

1. **Create an interagency task force within the MPO to coordinate capital and operations planning and activities in the Airport area.** This task force should include key federal, state, county, and municipal agencies, as well as representatives of major shippers and carriers in the region. The task force's primary function would be to share information on infrastructure performance, needs, and projects; report on the results of ongoing work; and rank projects for inclusion in the state and metropolitan transportation plans. The task force also should include representatives of key economic development organizations such as the IREDP and the ITP, so that transportation, land use, and economic development (including workforce and technology development) activities are pursued in an integrated manner.
2. **Leverage available federal, state, local, and private sector financing sources to accelerate freight-related projects.** The MPO, along with the other agencies, should develop a long-term financing strategy to develop, maintain, and operate the transportation system in the Airport area as envisioned in this study and further specified by the interagency task force. This will require leveraging the modest public sector investment in new highways, road improvements, and other public facilities against the much larger investments of private firms. Potential funding strategies that might be considered include: the state and metropolitan transportation improvement programs; discretionary Federal-aid funding through the National Corridor Planning and Development Program or new programs in the reauthorization of the Transportation Equity Act for the 21st Century (TEA-21); bonding through possible amendment to the Indiana Transportation Finance Authority law; the Indiana Department of Commerce's Industrial Development Grant Fund to finance small-scale transportation improvements; and tax increment financing that could use some of the additional tax revenues generated by new development for debt service on bonds issued for the construction of infrastructure.
3. **Consider establishing a special-purpose port authority to provide accelerated financing opportunities in the Airport area.** The MPO as currently structured would not have the ability to address the financing and management issues critical to implementation of capital and operational programs. Therefore, the Indianapolis region should consider empowering a special-purpose authority to accelerate capital projects and operational activities in the Airport area. This authority could be empowered to collect taxes or fees; issue debt; and receive state or federal funding for financing transportation and other infrastructure improvements.

The MPO should play a coordinating role to bring together the region's public and private stakeholders to address these issues. Table ES.5 suggests the priority and timing of organization and policy strategies.

Table ES.5 Priority and Timing of Organization and Policy Strategies

Strategy	Priority ¹	Timing ²	Key Partners
Create Interagency Task Force to coordinate capital and operations planning	H	S	MPO, INDOT, IAA, Indiana State Police, county and local governments, IREDP, ITP
Leverage available federal, state, local, private sector resources to accelerate freight-related investments	H	M	MPO, Interagency Task Force
Consider establishing special-purpose port authority to provide expanded financing and management capabilities	M	M	MPO, Interagency Task Force

¹Priority: H = high; M = medium; L = low.

²Timing: S = Short-term (within one year); M = Medium-term (between one and three years); L = Long-term (beyond three years).

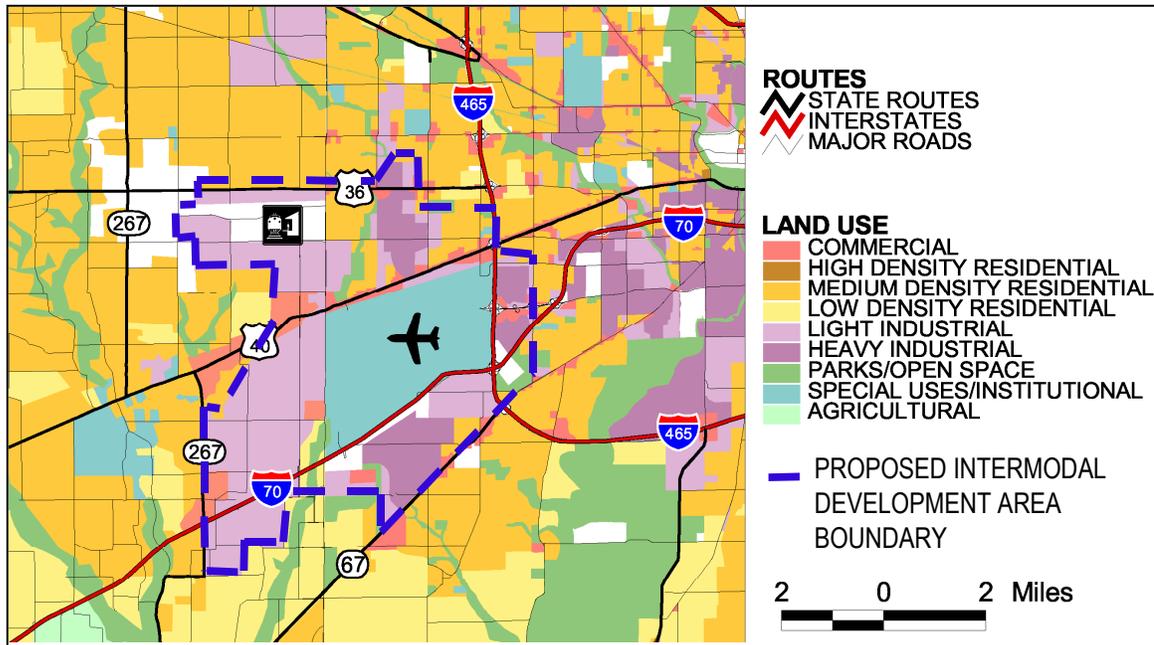
■ Action Plan

The MPO and its partners should commit to the following five immediate actions to implement the strategies recommended in this study:

1. **Establish Interagency Task Force** – The MPO should establish an interagency task force within the structure of the Indianapolis Regional Transportation Council. The task force would be charged with coordinating transportation and other infrastructure capital and operations planning activities in the Airport area. The task force should comprise representatives from the city of Indianapolis; Hendricks, Marion, and Morgan counties; the towns of Avon and Plainfield; INDOT; IAA, IREDP; ITP; Indiana State Police; the Federal Highway Administration; and the Federal Aviation Administration. In addition, the task force should include representatives of major carriers and shippers in the Airport area. The Indianapolis MPO should serve as secretariat for, and provide staff support to, this task force. The task force should be regarded as a special planning effort and funded as a recurring part of the MPO’s Unified Planning Work Program activities.

The Task Force’s planning area should correspond to the study area for this project. It should include the Airport, Avon Yard, the existing and planned highway connectors between these facilities and the Interstate system (including the proposed Six Points Road corridor), and the areas primarily zoned for industrial development in this district. A proposed definition is shown in Figure ES.4, and a potential long-run vision for this area is described in Figure ES.5. The objectives of designating this planning area are to provide a focus for future planning activity as well as to enhance the marketing image of the region.

Figure ES.4 Proposed Intermodal Planning Area Boundaries



Source: Marion and Hendricks Counties,
 Town of Plainfield, Cambridge Systematics.

The designation would not carry any specific administrative significance unless it were aligned with the boundaries of a particular jurisdiction or special authority, or with the boundaries of the Foreign Trade Zone or tax increment finance district. The designation should be reflected in the IRTP, relevant county and city comprehensive plans, and INDOT’s long-range plan.

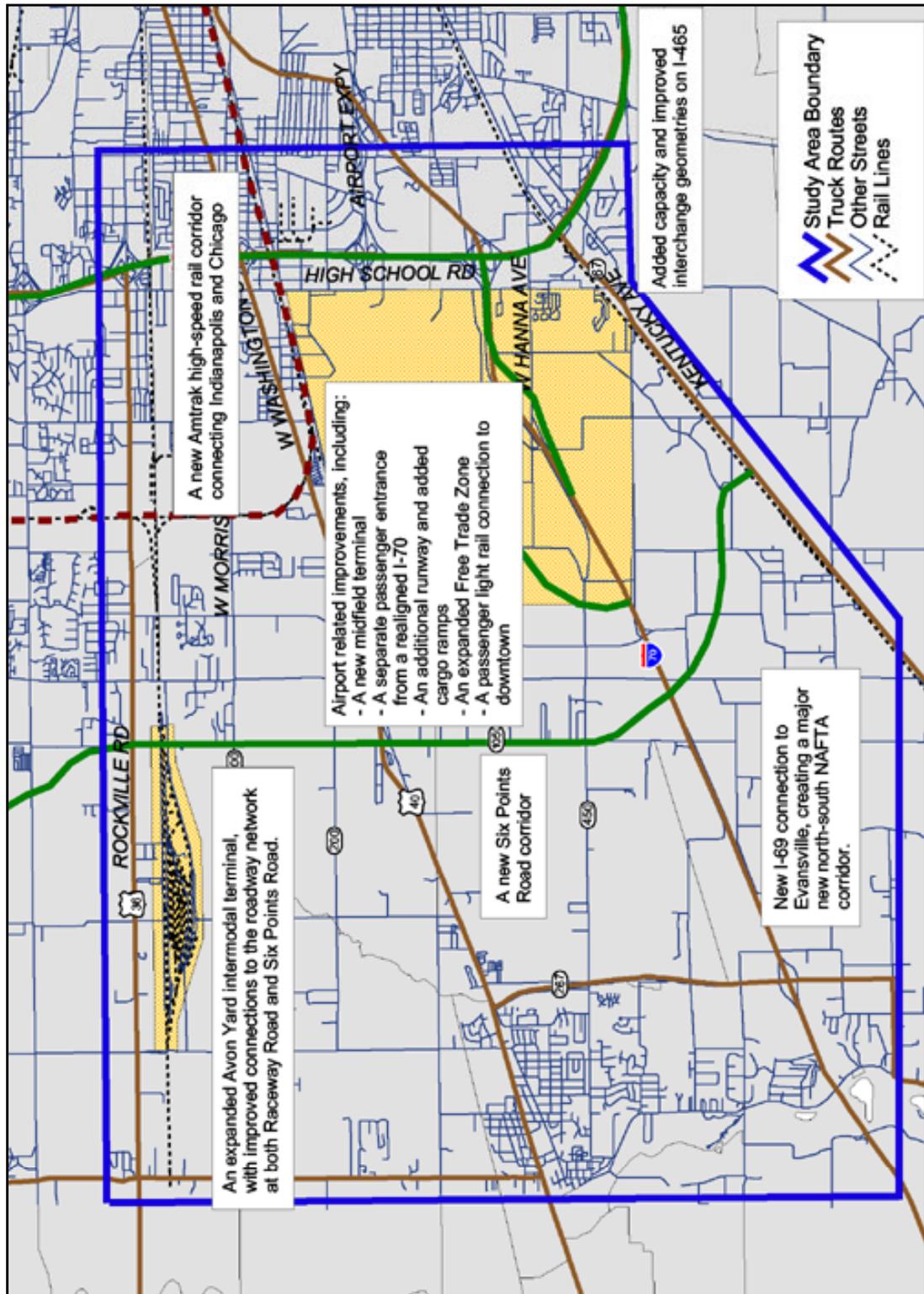
2. **Create Operations Working Group** - An early priority of the task force should be to establish an operations working group charged with coordinating, planning, and implementing traffic operations strategies in the vicinity of the Airport. The initial emphasis of the operations working group should include coordination of traffic operations during the upcoming I-70, I-465, and midfield terminal projects, as well as input to INDOT’s regional ITS architecture and traffic management center development effort. The working group also should address topics including signage, law enforcement, incident management, freeway and arterial traffic management, multimodal traveler information, traffic diversion, and special event and emergency response management.

Figure ES.5 Airport Area Vision

The Indianapolis region is uniquely positioned to emerge as one of North America's critical freight transportation and distribution centers. Continued investment in the Indianapolis International Airport, Avon Yard, and the regional highway system can enable the region to expand its role as a world-class distribution center, creating new jobs and income for central Indiana. The area might include the following assets (see map on next page):

- An expanded Indianapolis International Airport, with a new midfield terminal, ground transportation center, and third runway;
- Expanded air cargo and small package operations at the Airport, through continued support of FedEx and the USPS ground hub and the location of new air cargo carriers and related facilities at the site of the existing Airport terminal;
- Expanded aircraft maintenance facilities, through continued growth of United Airlines, American TransAir, or other carriers;
- A redeveloped Avon Yard with a state-of-the-art rail/truck intermodal terminal serving critical customer markets in the Northeast and Southwest United States;
- High-speed rail service connecting the Airport district with Chicago, Cincinnati, Louisville, and other Midwest cities and carrying both passengers and small package freight;
- Regional transit service connecting the Airport district with downtown Indianapolis and the Northeast corridor, with service to both the midfield terminal and major employers in the district;
- Reconstructed segments of I-465 and I-70 that carry larger volumes of cars and trucks more efficiently through the district;
- Extension of Interstate 69 as a North American Free Trade Agreement (NAFTA) superhighway linking Indianapolis and the Airport district to both Canada and Mexico; and
- Development of the Six Points Road corridor as the Airport area's freight "main street," linking the Airport, Avon Yard, and major distribution centers to I-70, I-74, and I-69.

Figure ES.5 Airport Area Vision (continued)



3. Expand Airport Ground Transportation Plan – IAA, in partnership with the MPO and the task force, should expand and refine the ground transportation plan for the Airport, building upon the analysis already conducted for the midfield terminal. The ground transportation plan should address passenger and freight transportation needs for the Airport and adjacent businesses. The plan should clarify the access roads to the midfield terminal and other key Airport facilities, including how these access roads connect to the Interstate highways, principal arterials, and key secondary routes in the Airport area. The plan also should explore the potential for enhanced access via other modes such as bus, light rail/transit, or high-speed rail service. Finally, the plan should address the role of ITS in managing the Airport ground transportation system, and recommend whether a separate Airport traffic management center should be developed.
4. Develop Intermodal Rail Initiative – The MPO should work in cooperation with INDOT’s Rail Section to explore options for expanded intermodal rail service in Indianapolis. Initial steps should include outreach to CSX to explore market opportunities and constraints in the region, to be followed by a study of the costs and potential benefits of expanding the intermodal terminal at Avon Yard. These activities should focus on Indianapolis’ role following a likely additional round of rail mergers, and develop proactive strategies to ensure the region’s competitiveness in an environment of transcontinental rail carriers.
5. Develop Partnership with IREDP and ITP – The MPO should establish an ongoing partnership with the IREDP and ITP to coordinate transportation and economic development planning and policy in the Airport area. The IREDP should heighten the attention given to logistics, distribution, and freight technology as target industries, as well as ensure that the individual jurisdictions in the Airport area develop a consistent approach to incentives for attracting these types of industries. The ITP can assist from a technology perspective.

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