
Appendix C: DeKalb Sycamore Area Transportation Study (DSATS) Federal Planning Priorities

Technical Memorandum

Submitted by:

**PARSONS
BRINCKERHOFF**

April 13, 2015

Table of Contents

1. Introduction	1
1.1 Scope of Planning Process	2
1.2 Performance Targets	2
2. Metropolitan Transportation Plan Development	4
3. Coordination and Consultation	6
3.1 MPO Consultation	6
3.2 Coordinated Public Transit - HSTP	6
3.3 Public Participation Plan	8
4. Transportation System Management/Operations, Security, and Safety	10
5. Environmental Mitigation	13
5.1 Overview	13
5.2 Water Resources	13
5.3 Stormwater Mitigation	14
5.4 Wetland Mitigation	15
5.5 Floodplains	15
5.6 Section 4(F) Impacts to Public Lands	17
5.7 Section 6(F) Impacts to Land Conservation Resources	18
5.8 Historical & Cultural Resources Mitigation	18
5.9 Threatened & Endangered Species	19
5.10 Noise Mitigation	20
6. Provisions not Applicable to DSATS	21
6.1 Air Quality Conformity	21
6.2 Congestion Management Process in TMA's	21
6.3 Major Capital Investment Projects (NEW STARTS)	21

List of Tables

Table 1. DSATS Planning Activities Timeline 1

1. Introduction

The DeKalb-Sycamore Area Transportation Study (DSATS) is the federally recognized Metropolitan Planning Organization (MPO) for the urbanized area consisting of DeKalb, Sycamore, Cortland, and the surrounding area. DSATS was formed in 2003 following the US Census Bureau's designation of DeKalb as an "urbanized area" with a combined population exceeding 50,000. The City of DeKalb Building / Engineering / Transportation Division of the Public Works Department houses and provides staff for the DSATS program.

DSATS serves as a forum for discussing regional transportation issues, provides transportation planning assistance, and coordinates state and federal transportation investments in the area. DSATS is responsible for the following planning activities, which occur at regular intervals:

Table 1. DSATS Planning Activities Timeline

Planning Document	Update Schedule	Time Horizon
Unified Planning Work Program	Annually	1 year
Transportation Improvement Program (TIP)	Annually	5 years
Long Range Transportation Plan (LRTP)	Every 5 years	20 years
Human Services Transportation Plan (HSTP)	Every 5 years	5 years
Public Participation Plan (PPP)	Annually	1 year
Supporting Plans (recommended frequencies)		
Bike & Pedestrian Plan	Every 5 years	20 years
ITS Architecture Plan	As Needed	5years
Transit Needs Analysis Plan	Every 5 years	2 years
Annual Report	Annually	1 year

In developing the DSATS 2040 LRTP Update, the federally required transportation planning process was followed, with a focus on making decisions and project recommendations in a transparent and logical manner. The DSATS transportation planning process was last certified by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on April, 23, 2013.

On July 6, 2012, the Moving Ahead for Progress in the 21st Century (MAP-21) federal surface transportation bill was signed into law. This legislation replaced the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), which was the governing federal legislation for the previous DSATS 2035 LRTP, which was adopted on July 28, 2010. The MAP-21 legislation, originally set to expire on September 30, 2014, has been extended through May 31, 2015.

1.1 Scope of Planning Process

The metropolitan transportation planning section of MAP-21 states that the scope of the LRTP planning process shall contain an identification of transportation facilities (including major roadways, transit, multimodal, and intermodal facilities, and intermodal connectors) that function as an integrated transportation system, giving emphasis to national and regional transportation facilities. In developing the LRTP, eight planning factors must be considered as part of the transportation planning process. These factors are listed below.

- a. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- b. Increase the safety of the transportation system for motorized and non- motorized users;
- c. Increase the security of the transportation system for motorized and non- motorized users;
- d. Increase accessibility and mobility of people and for freight;
- e. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- f. Enhance the integration and connectivity of the transportation system, across and between modes for people and freight;
- g. Promote efficient system management and operation; and
- h. Emphasize the preservation of the existing transportation system.

1.2 Performance Targets

MAP-21 also states that surface transportation performance targets shall be set, where applicable, in coordination with the State and other transportation providers to the maximum extent practicable to ensure consistency. These performance targets shall address the following performance measures described in 23 USC 150: National Goals and Performance Management Measures.

1. Safety – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
2. Infrastructure condition – To maintain the highway infrastructure asset system in a state of good repair.
3. Congestion reduction – To achieve a significant reduction in congestion on the National Highway System.
4. System reliability – To improve the efficiency of the surface transportation system.

5. Freight movement and economic vitality – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. Environmental sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. Reduced project delivery delays – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

MAP-21 also states that MPOs shall integrate into their planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other State transportation plans and transportation processes, as well as any plans developed under Chapter 53 of Title 49 by providers of public transportation, required as part of a performance-based program.

2. Metropolitan Transportation Plan Development

As per the MAP-21 legislation, as well as previous federal transportation bills, each metropolitan planning organization shall prepare and update a transportation plan for its metropolitan planning area in accordance with the requirements outlined below. In general, the metropolitan planning organization shall prepare and update such plan every 4 years (or more frequently, if the metropolitan planning organization elects to update more frequently).

A transportation plan shall include the following:

- a. An identification of transportation facilities (including major roadways, transit, multimodal and intermodal facilities, non-motorized transportation facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions. The metropolitan planning organization shall develop the LRTP according to a 20-year forecast period.
- b. Performance measures and targets including a description of the performance measures and performance targets used in assessing the performance of the transportation system.
- c. A System performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets as outlined in Section 1.2 above.
- d. Mitigation activities shall be discussed in the LRTP including the types of potential environmental mitigation activities and areas where these activities may be carried out, including activities that may have the greatest potential to restore and maintain the environmental functions that may be affected by projects in the plan.
- e. A financial plan that demonstrates how the adopted transportation plan can be implemented. The financial plan should indicate resources from public and private sources that are reasonably expected to be made available to carry out the plan; and recommend any additional financing strategies for needed projects and programs. The financial plan may also describe additional projects that would be included in the adopted transportation plan if reasonable additional resources beyond those identified in the financial plan were to become available. For the purpose of developing the transportation plan, the metropolitan planning organization, transit operators, and State shall cooperatively develop estimates of funds that will be available to support plan implementation.
- f. Operational and management strategies that improve the performance of transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.

- g. Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs.
- e. Transportation and transit enhancement activities.

3. Coordination and Consultation

3.1 MPO Consultation

MAP-21 Provisions: 23 U.S.C. 134/23 504 (g)(2) and (3) and 505 (2)(B)(II)(ii) and 508
Metropolitan Planning Organizations must develop a process for incorporating the following agencies into the transportation planning process:

- Environmental protection (e.g., Illinois Environmental Protection Agency)
- Wildlife management (e.g., Illinois Department of Natural Resources)
- Land management (e.g., IDNR, Illinois Department of Agriculture)
- Historic preservation (e.g., Illinois Historic Preservation Agency)

In developing policy, transportation improvement programs, and project plans, DSATS will consult with state and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation. DSATS will also consult or coordinate planning activities with officials responsible for other types of planning activities that are affected by transportation in the area. These other planning activities include State and local planned growth, economic development, environmental protection, airport operations, and the movement of freight. . This will occur as appropriate throughout the project cycle from planning through permitting to implementation. As also discussed in the Environmental Mitigation Section, DSATS member agencies will utilize EcoCAT, the Environmental Compliance Assessment Tool, as a means of engaging the Illinois Department of Natural Resources.

DSATS will ensure that its various efforts are informed by appropriate agency and technical resources. Standing and ad hoc committee membership will reflect this. Furthermore, DSATS will maintain appropriate distribution lists for meeting agendas and minutes as well as project plan sets.

3.2 Coordinated Public Transit - HSTP

Map-21 Provision: 5310 Part 49

Numerous local programs supported by state and federal agencies provide separate transportation services, including services for the elderly, hospital access for low-income individuals, services for the physically and mentally handicapped, rural transportation, and transportation for job training or job access. In Illinois, there are 62 different programs administered by nine different federal departments that provide human service transportation funding. Without coordination among providers, this can lead to duplication and/or inefficiency.

Federal transit law, as amended by MAP-21 requires that projects funded from the Section 5310 (Elderly and Disabled), Section 5311 (Rural and Small Urban), Section 5316 (Job Access and Reverse Commute, or JARC), and Section 5317 (New Freedom) programs be derived from a locally developed, coordinated public transit-human service transportation plan (HSTP).

The DeKalb-Sycamore Area Transportation Study (DSATS) adopted its HSTP plan in December 2007. The DeKalb-Sycamore Urbanized Area consists of two transit systems. The Veolia Huskie Line is a student-run transit system focused on serving the NIU student population. TransVAC is a countywide transportation service provided by the Voluntary Action Center (VAC) of DeKalb County. VAC is a private non-profit organization, which provides the following services, as outlined in their September 2010 Route Options Report and Facility Report.

- Green Line, a deviated route serving DeKalb;
- Blue Line, a deviated route serving Sycamore that loops through the City of Sycamore, with common stops with the Green Line at commercial and medical facilities along IL-23;
- Kishwaukee Line, a fixed-route shuttle service between locations in the City of DeKalb and Kishwaukee College in Malta available for students, faculty, and staff of the college;
- Demand response services and subscription services;
- Paratransit;
- Med-VAC, a specialized door-to-door service that provides registered users with transportation for out-of-town medical appointments
- TransVAC, a public dial-a-ride service for registered users

These services are available to the general public on a countywide basis; however, the majority of customers come from within the DSATS metropolitan area.

DSATS will continue to coordinate planning to meet both general and specialized transit needs. A transit study for the DeKalb area, the Transit Development Plan (TDP), was completed in July 2010.. This detailed Transit Study analyzes existing transit operations within DeKalb and makes recommendations for improving and/or expanding transit.

In Illinois, the local Metropolitan Planning Organization (MPO) is responsible for ensuring that the new federal coordination requirements are met for urbanized areas while IDOT is responsible for other areas. IDOT has created a framework for developing the plan and project submission process for human services transportation funding. IDOT has created eleven planning regions supported by IDOT Regional Coordinators and a local review committee. The non-urbanized portion of DeKalb County is within Region 3. A key responsibility of the IDOT Regional Coordinator will be to work with the DSATS to integrate

HSTP activities of Region 3 with that of the DeKalb-Sycamore Urbanized Area. DSATS staff is a member on the Region 3 HSTP board and attends Region 3 meetings when possible.

The HSTP addresses the following issues:

- Inventory of transportation facilities and services;
- Assessment of human service transportation needs;
- Analysis of gaps in or inefficient provision of human service transportation services; and
- Recommended short and long-term transportation strategies to address gaps and improve coordination.

3.3 Public Participation Plan

*Map-21 Provisions: 23 U.S.C. 134/23 508 (6)(a) and 509 (6)(b(c), (7) and (8))*Map-21 states that MPOs should, to the maximum extent practicable, hold public meetings at accessible locations and times, employ visualization techniques to describe plans; publish or otherwise make available for public review transportation plans and TIPs in electronically-accessible formats and means, such as the “World Wide Web.” These publication requirements must be in place prior to adoption of transportation plans and TIPs addressing MAP-21 provisions.

The DSATS Policy Board maintains a stand-alone Public Participation Plan. The intent of the plan is reflected in the plan’s mission statement:

The DeKalb-Sycamore Area Transportation Study will provide opportunities for meaningful public and stakeholder involvement in transportation related decision-making processes. DSATS will accomplish this by making information accessible to all citizens through multiple venues and techniques. Actual and meaningful discussion and input is the key to effective public involvement. This Policy outlines the strategies that DSATS will employ to accomplish this goal.

The objectives of the DSATS Public Participation Plan are

- Notify the public in a timely manner of policies, progress of specific projects, and issues related to the planning process.
- Engage all stakeholders with opportunities for participating in the decision-making process.
- Listen to citizen concerns and ideas and address them in a prompt manner.
- Learn from collected information and stakeholders’ ideas to develop consensus and resolve conflicts, to generate better planning decisions.

- Expand an effective outreach process that includes an integrated feedback process for evaluation and improvement.
- Evaluate regularly the measured effectiveness of participation strategies.

Achievements of DSATS public participation outreach include:

- DSATS maintains a website (<http://www.dsats.org> and <http://www.dekalbilmpo.org>) which includes:
 - Calendar of Events and announcement of all meetings;
 - Archives of all meeting Agendas, Minutes, and meeting documents;
 - Electronic copies of all DSATS Plans and Studies and TIPs;
 - Identification of all public transit options in the regions;
 - Other useful transportation information
- Outreach to various Human Service agencies, Economic Development organizations, and others to identify what DSATS is and seek input on how we can improve the area transportation system
- Implementation of public surveys.

4. Transportation System Management/Operations, Security, and Safety

Under MAP-21, the term 'transportation systems management and operations' means integrated strategies to optimize the performance of existing infrastructure through the implementation of multimodal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety and the reliability of the transportation system.

A goal of DSATS is to “develop a safe and secure multi-modal transportation system that provides for the efficient movement of people and goods.” As part of that goal, one objective is to coordinate with local and national law enforcement agencies to incorporate emergency response and homeland security in the regional transportation planning process.”

Coordination and information sharing between local transportation officials, providers and emergency responders is part of ongoing development of the areas ITS infrastructure.

DSATS also looks to IDOT and its work with Illinois Terrorism Task Force (ITTF) for leadership, support, and direction related to appropriate measures for the DeKalb-Sycamore Urbanized Area.

The mission of the Transportation Committee of the ITTF is to “...maximize the security of the Illinois transportation system for the movement of people and goods by ensuring that transportation professionals have available and utilize the tools, training, and methods jointly considered most effective to protect our citizens and the State’s infrastructure investment.” DSATS supports this mission.

The Transportation Committee of ITTF has four work groups to address the highest priority topics. They include: Evacuation Implementation, Vulnerability Assessment, Training/Users Outreach, and the Inland Waterways & Port Security Workgroup. The most likely issues for DSATS relate to evacuation followed by training and vulnerability assessment. While the DSATS MPA is a lower priority target of terrorism, its proximity to both the Chicago metropolitan area and a likely evacuation route (I-88) mean that the DSATS MPA could be impacted by an emergency situation in the Chicago metropolitan area. DSATS is committed to participating in all aspects of response planning as appropriate.

Below is a list of ongoing and future planning activities that DSATS has identified as important tasks in addressing the security planning factor in the DeKalb-Sycamore Urbanized Area:

- **Appropriate Transportation Security Plan Component**
 - Identify any emerging security targets within and near the urbanized area.

- Identify critical transportation routes, including those needed for evacuation.
- Identify alternative routes in the event of bottlenecks or other hazards such as train derailment.
- Identify hazardous material transport routes and actions to take in case of spillage or theft.
- Identify key locations to communicate about routing and other mobilization and evacuation information (i.e., where to go, when, and why).
- **Inter-Agency Coordination**
 - Consultation with Region 3 offices of the Illinois Emergency Management Agency (IEMA), which is responsible for coordinating mitigation, preparation, response and recovery operations.
 - Identify emergency routes and evacuation procedures for the urbanized area.
 - Include in the planning process security related stakeholders such as local law enforcement agencies, fire departments and rescue squads, federal response agencies, the regional office of the Department of Homeland Security (DHS), and NIU.
- **Public Information and Education**
 - Educate the public about how they should use the area transportation system in case of an emergency and/or disaster.
 - Maintain and update the area's Intelligent Transportation Systems (ITS) architecture plan as a tool to coordinate and implement security strategies for the area's transportation system.

The DSATS' LRTP also supports the objectives of the State of Illinois' Comprehensive Highway Safety Plan (CHSP). The CHSP is a statewide, coordinated, integrated, safety plan that focuses on the types of improvements outlined in Section 148 of Title 23 of United States Code.

Many of these programs are statewide and are the responsibility of state officials and agencies. They are listed in the Illinois Transportation Plan. However, many programs and strategies may be particularly relevant to the DeKalb-Sycamore area, and would involve participation by local officials. These may include, but are not necessarily limited to the following programs:

- Highway Safety Improvement Program (HSIP)
 - HSIP Road Program
 - Highway-Railway Crossing Program
 - High Risk Rural Roads Program
- Motorcycle/Pedestrian/Pedal Cycle Program

- Partner with local, state and federal agencies on pedestrian and pedal cycle safety programs
- Provide technical assistance with the Safe Routes to School Initiative
- Occupant Protection Program
 - Identify and focus on part-time seat belt users (males ages 16-34)
 - Coordination between local officials and Regional Occupancy Protection Resource Center in Rockford
- Impaired Driving Program
 - Underage Drinking Prevention Program
- Work Zone Safety Program

5. Environmental Mitigation

MAP-21 Provisions: 23 U.S.C. 119) and 49 U.S.C. 5303(i)(2)(B) and 49 U.S.C. 5304(f)(4)

A discussion of potential environmental mitigation activities in Metropolitan Transportation plans is a requirement of MAP-21. This legislation also emphasizes consultation, as applicable, with federal and state land management, and wildlife and regulatory agencies.

5.1 Overview

Environmental mitigation activities are strategies, policies, and programs that serve to minimize or compensate for the disruption of the built and natural environment that would be associated with implementation of recommended transportation projects. As the projects included in the Transportation Improvement Plan (TIP) have been defined in only very general terms (i.e. expansion from a two-lane to a three-lane route, a new corridor along an identified general alignment, etc.), the discussion of potential mitigation measures are restricted to general elements of the built and natural environment.

DSATS and its member units of government must consult with Illinois DNR before authorizing, performing, or funding any action that disturbs the land, water, or air. DSATS can begin this process by utilizing EcoCAT, the Ecological Compliance Assessment Tool. This tool was created to help local governments as well as state agencies initiate consultation under related environmental legislation. EcoCAT utilizes geographic information system (GIS) databases to flag potential adverse impacts of construction projects on the natural environment. EcoCAT does not, however, replace more detailed analysis that may be required as part of Environmental Assessments or Environmental Impact Statements.

Illinois DOT's Bureau of Design and Environment maintains a manual ("BDE Manual") that presents most of the information normally required for location, design and environmental evaluation of state highway construction projects. Of greater interest to local units of government is the Bureau of Local Roads and Streets Manual, which addresses current design and environment policies and procedures for use in developing local agency highway projects. Its contents are updated on an ongoing basis.

5.2 Water Resources

The DeKalb-Sycamore Urbanized Area includes water resources including streams and wetlands. Transportation projects may cross or run alongside a stream or river or touch a wetland area. In these cases, it is a goal to avoid, to the fullest extent practicable, any activity that adversely affects streams or wetlands during the design, construction, or maintenance of the transportation facility. Appropriate action throughout the project development steps is needed to avoid, minimize, and mitigate impacts as required by federal, state, and local law. Impact analysis and mitigation are integral parts of the project development process. Early review and analysis of project alternatives by regulatory and resource agencies combined

with effective inter-office coordination are required to develop successful transportation projects.

As it relates to water resources, DeKalb County plays a significant environmental policy and regulatory role for the entire DSATS urbanized area. Relevant efforts include a planned Phase 2 Stormwater Management Plan, a countywide groundwater study and floodplain regulation ordinance. In the event that impacts to streams and wetlands are unavoidable, a wide variety of mitigation strategies are available, which always begins with evaluation of on-site opportunities (e.g., natural channel design techniques, bank full culverts, wetland creation, etc.) within the project work area. Once the on-site (within the project area) resources are exhausted, the search can begin for mitigation opportunities off-site. Mitigation opportunities may include mitigation banking, stream and wetland creation, restoration, and/or preservation, and possibly even preservation of upland buffers adjacent to stream and wetland resources.

5.3 Stormwater Mitigation

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces such as driveways, sidewalks, and streets prevent stormwater runoff from naturally soaking into the ground. Stormwater can pick up debris, chemicals, and other pollutants as it flows the storm sewer system or directly to a lake, stream, river, or wetland.

Stormwater runoff can pollute water bodies and also cause them to overflow and flood. There are multiple mitigation techniques that can be used to curb storm water runoff. These techniques can include bio-retention, detention ponds, grass swales, and filter strips.

Grass swales are planted areas that line a ditch or channel near impervious surfaces, are designed to capture stormwater run off, and filter it into the ground. For post-construction stormwater management in new development and redevelopment, the use of grass swales, where feasible, should be used in median and drainage ditches. These are low cost Stormwater conveyances.

Vegetative filter strips and buffers are areas of land with vegetative cover that are designed to accept stormwater runoff from upstream development. They can be constructed, or existing vegetated buffer areas can be used. Dense vegetative cover facilitates water filtering into the ground. Unlike grass swales, vegetative filter strips are effective only for areas with no defined channels.

Bio-retention is a practice that manages and treats storm water runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression. The method combines physical filtering and adsorption with biological processes to retain and treat surface runoff before it leaves a site. Detention ponds are used to capture large amounts of water and slowly filter it back into the ground. Detention ponds are usually used in large residential or commercial developments.

Whenever an acre or more of ground is disturbed for roadwork, it is IDOT's responsibility to implement measures to control the discharge of sediment and other pollutants into nearby rivers, streams, and wetlands. Highway construction projects must comply with the National Pollutant Discharge Elimination System (NPDES). This requires an Erosion Control and Sediment control Plan, which implements both temporary measures during construction (e.g., silt fences) and permanent measures (e.g., stormwater ponds) following completion of a project.

5.4 Wetland Mitigation

Wetlands are areas where the water table stands near, at, or above the land surface for at least part of the year and are described according to the degree of wetness and the type of vegetation that the site supports. Wetlands are important elements of a watershed because they serve as the link between land and water resources. Wetlands help to curb flooding by slowing down the flow of excess rainwater and absorbing it. Wetlands also cleanse water as it filters back into the water table, and provides natural habitats for a number of plant and animal species. Often times, transportation projects can negatively affect wetland areas. Mitigation measures strive to avoid, minimize, and mitigate impacts to streams and wetlands throughout the project development process as required by federal, state, and local law.

The Illinois Interagency Wetland Policy Act (IWPA) includes the identification and delineation of regulated wetlands. Under the Clean Water Act (CWA) and IWPA, the responsible unit of government must demonstrate that all measures were taken to first avoid and then minimize impacts to wetlands to the fullest extent practicable. Unavoidable impacts are mitigated by either restoring the wetland or creating new wetlands. Wetland Compensation Plans must adhere to a schedule of increasing compensation ratios based upon the amount of adverse wetland impact and the location of compensation projects. Guidance for wetland restoration and creation is maintained in the *Illinois Wetlands Restoration and Creation Guide*. Procedures for ensuring compliance with the CWA and IWPA are detailed in the *IDOT Wetlands Action Plan*. Although there are five government agencies in Illinois with primary wetland regulatory authority, the United States Army Corp of Engineers (USACE) is considered the lead agency.

Section 404 of the Clean Water Act "prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers." The DeKalb-Sycamore Urbanized Area falls within the Rock Island District.

5.5 Floodplains

Use of the land adjacent to a stream has a major impact on protecting water quality, avoiding flood damage, maintaining fish and wildlife habitat, and accessing water-related recreation. Also known as the floodplain, the area adjacent to the stream channel serves as a natural reservoir for storing excess water during a flood. When the main stream channel cannot

accommodate the level of runoff from precipitation, the spreading of floodwaters into the floodplain helps reduce the amount of damage incurred by flooding. The “floodway” is an area that includes the stream channel area plus an immediate area of floodplain. It is an area of greater regulatory concern as it where floodwater currents are strongest. It is distinguished from the “flood fringe.” The floodway can often be found on the local flood insurance map.

Construction in the floodway of the rivers, lakes, and streams of the state requires a permit from the IDNR’s Division of Water Resource Management. Federal funded projects require special requirements imposed by Executive Order 11988 when the project will entail significant flood plain encroachment. These requirements are in addition to the special hydraulic analyses associated with determining bridge and culvert heights and widths. A project that will have significant floodplain encroachment will require the preparation of an Environmental Assessment or Environmental Impact Statement (EIS). Both the BDE Manual and IDOT Water Quality Manual provide additional information and procedures for projects involving floodplains.

Possible impacts to floodplains require consideration in the planning, design, construction, and maintenance of transportation projects. Construction includes such activities as building structures, channel modifications, bridges, culverts, dams, levees, grading, and other similar activities. Floodplains are considered impacted if fill is added, vegetation is removed, or heavy equipment is placed in the floodplain.

The following are general planning and design guidelines/objectives for transportation projects:

- Avoid or minimize impacts to floodplains.
- Coordinate with watershed management plan.
- Seek out community input and local requirements regarding flood prone areas.
- Maintain natural drainage patterns and runoff rates to the extent practicable.

The following are general construction and maintenance guidelines:

- Establish special requirements into plans, specifications, and estimates provided to contractors.
- Confine construction staging area to the smallest area needed.
- Implement erosion control best management practice.
- Maintain riparian vegetation or replace as soon as possible.
- Properly handle, store, and dispose of hazardous materials.
- Implement spill control and clean up practices.

- Conduct on-site monitoring during construction to ensure floodplains are protected as planned.

5.6 Section 4(F) Impacts to Public Lands

Section 4(f) of the Department of Transportation Act requires that special effort be made to preserve public parks and recreation lands, wildlife and waterfowl refuges, and historic sites.

Section 4(f) specifies that federally funded transportation projects requiring the use of land from a public park, recreation area, wildlife, and waterfowl refuge or land of significant historic site can only occur if there is no feasible and prudent alternative. Using Section 4(f) land requires all possible planning to minimize harm.

IDOT's BDE Manual includes procedures for completing 4(f) evaluations. As projects are advanced through the project development process, Section 4(f) properties may be identified as impacted areas. If Section 4(f) resources are impacted, it is required that specific measures to minimize harm or mitigate the impacts be identified and evaluated. These activities involve close coordination with the officials that have jurisdiction of the specific resources.

In cases where projects have Section 4(f) impacts and there is no feasible and prudent alternative to avoid use of the resource, it is required that project sponsors consider "all possible planning to minimize harm." Minimization of harm may entail both alternative design modifications that lessen the impact on 4(f) resources and mitigation measures that compensate for residual impacts.

Minimization and mitigation measures should be determined through consultation with the official or the agency owning or administering the resource. Neither the Section 4(f) statute nor regulation requires the replacement of 4(f) resources used for transportation projects, but this option is appropriate as a mitigation measure for direct project impacts.

Mitigation measures involving public parks, recreation areas, or wildlife and waterfowl refuges may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation, which could be used to enhance the remaining land. Mitigation of historic sites usually consists of those measures necessary to preserve the historic integrity of the site and agreement by FHWA. In any case, the cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource in accordance with federal requirements.

Reasonable mitigation for impacts to Section 4(f) resource impacts may be:

- Modify the transportation facility design
- Minimizing construction noise or limiting construction to specific times
- Landscape or screening of resource
- Installation of enhancements such as park benches, trash receptacles, signage, etc.

- Improving access or expansion/ pavement of parking areas
- Rerouting of traffic
- Direct compensation for improvements to on-site resources

5.7 Section 6(F) Impacts to Land Conservation Resources

Section 6(f) of the Land and Water Conservation Fund Act of 1965 applies to any USDOT funded projects, which involve the use of lands, which have Land and Water Conservation (LAWCON) or Open Space Land Acquisition and Development (OSLAD) funds involved in their purchase or development. IDOT, as part of its BDE Manual has procedures in place for handling 6(f) lands when developing highway projects. These procedures focus on early and ongoing coordination with local officials as well as the Illinois Department of Natural Resources.

DeKalb County's growth management policies address the inappropriate or premature conversion of farmland to urbanized uses. In the development of a project, consideration is given to the impacts that the action will cause in conversion of farmland to non-farm uses. Under certain circumstances, coordination must be initiated with the U.S. Department of Agriculture, Natural Resources Conservation Service, and/or the Illinois Department of Agriculture to evaluate the impacts on farmland and obtain the views of those agencies on alternatives to the proposed action. As practical, any proposed actions involving farmland will be implemented in ways that are compatible with programs and policies developed to protect farmland. The BDE Manual outlines coordination procedures and defines those lands subject to these provisions.

5.8 Historical & Cultural Resources Mitigation

Appropriate measures must be taken to avoid and/or minimize impacts on properties that are included or eligible for the National Register of Historic Places. Where such properties will be affected, the Advisory Council on Historic Preservation shall be afforded a reasonable opportunity to comment prior to project approval. Special efforts shall be made to minimize harm to any National Historic Landmark. The BDE Manual contains specific procedures for minimizing harm to historic resources in cooperation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer.

Mitigation measures may involve a variety of methods including, but not limited to aesthetic treatments, avoidance, archaeological data recovery, salvage and re-use of historic materials, informing/ educating the public and documentation per the Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER). Approaches may vary widely depending on the type of historic property, the qualities that enable the property to meet the National Register Criteria of Eligibility, the location of the historic property with respect to the project, etc. Mitigation plans are should be developed in consultation with IDOT, the Illinois State Historic Preservation Agency, FHWA, consulting parties (i.e., local

officials, organizations, public), federally recognized Native American Indian tribes, as applicable.

5.9 Threatened & Endangered Species

Throughout Illinois, land use change has been one of the largest causes for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat. In the development of a transportation project, special studies and coordination are required when the action may affect federal or state-listed threatened and endangered species.

The Illinois Endangered Species Protection Board determines which plant and animal species are threatened or endangered in the state and advises Illinois DNR on means of conserving those species. IDOT also conducts studies and coordination activities on actions that may adversely affect areas included in or eligible for the Illinois Natural Areas Inventory. Federal designations in DeKalb County include two species of animal and two species of plant. State designations in DeKalb County include two species of plant and five species of animal. Two Natural Areas have been identified just outside the jurisdiction of DSATS: the Wilkinson/Renwick Marsh, located adjacent to the west side of Annie Glidden Road, north of Illinois Route 64; and a natural area referred to as DeKalb Geological Area, which is located west of Nelson Road and south of Twombly Road.

It is IDOT's policy that in the development of a project, an assessment shall be made of the likely impacts on threatened or endangered species of plants or animals listed in the federal or state level as threatened or endangered and on state-designated Natural Areas. Every effort is made to minimize the likelihood of jeopardizing the continued existence of listed threatened or endangered species or the destruction or adverse modification of a Natural Area. Efforts are also made to avoid negative impacts on areas of habitat designed as critical habitat or essential habitat.

The BDE Manual specifies procedures for avoiding and/or mitigated impacts on endangered or threatened species and Natural Areas including consultation with the U.S. Fish and Wildlife Service and the Illinois Department of Natural Resources. If there is the potential for impacting a designated species, a number of potential mitigation could include the following:

- Restricting the clearing of trees during sensitive roosting periods;
- Relocation of listed plant species out of construction areas;
- Restricting blasting activities during sensitive roosting periods;
- Timely removal of carcasses from roadways to minimize the potential of vehicles striking scavenging bald eagles;
- Inclusion of "critter crossings" to allow species to pass across roadways; and

- Measures to ensure that all equipment is in proper working order to minimize construction noise and reduce the risk of equipment spills and leaks.

5.10 Noise Mitigation

Roadway projects that add lanes or replace pavement may require an investigation of noise levels. The level of roadway noise depends upon the volume of traffic, the speed of traffic and the number of trucks in the flow of traffic. Noise is produced by the engine, exhaust, and tires; and it is exacerbated by such conditions as defective or faulty equipment or conditions that cause laboring of the vehicle (e.g., trucks on steep inclines).

Federal laws and regulations require that it may be necessary to undertake special technical analyses to identify and evaluate the potential noise impacts a project will involve. Once a noise impact is identified, IDOT will evaluate feasible and reasonable noise abatement methods to reduce traffic noise impacts. Traffic noise can potentially be reduced by addressing the noise source, noise path or noise receiver. The BDE manual includes specific guidance and procedures for determining the need for noise abatement evaluations and the types of mitigation strategies that are appropriate for a variety of situations. The manual also specifies coordination requirements with local government and public participation procedures.

Noise mitigation involves one or a combination of measures that create physical distance or which block or filter the noise. They include:

- Creating buffer or setback zones;
- Planting dense vegetative strips;
- Constructing barriers;
- Restricting truck traffic along certain routes or in certain periods of the day; and
- Enforcement of muffler restrictions

Physical solutions to noise mitigation have both positive and negative characteristics. Buffers or setbacks require large amounts of land, as do measures such as vegetative strips or earthen berms.

Vegetative strips, though aesthetically more pleasing, must be sufficiently dense to achieve noise attenuation. Noise barriers such as walls take less space and can be built of a variety of materials suitable to their context. They do require maintenance, however, and negative reactions can result from restriction views, a sense of confinement, and a reduction in air circulation, sunlight, etc. Noise mitigation can also be aggravated by conditions such as grade changes between source and receiver.

6. Provisions not Applicable to DSATS

6.1 Air Quality Conformity

Map-21 Provision: §1113; 23 USC 149

This revised provision does not apply to the DeKalb-Sycamore area. In air quality nonattainment areas, an MPO must demonstrate a program for attaining air quality conformity through the end of the planning period. In these areas, long-range transportation plans and air quality analysis must be revised every four years. The US EPA is looking at lowering the level of acceptable ground level ozone and other pollution factors that affect human health. DSATS staff continues its outreach with other Illinois MPOs, IDOT, and Illinois EPA staff to keep abreast on how such changes could affect the DSATS region, and the impacts for transportation planning should the DSATS region lose its attainment status.

6.2 Congestion Management Process in TMAs

Map-21 Provision: 23 CFR 450.320

Transportation Management Areas (TMA's) are generally those metropolitan areas in excess of 200,000 where additional planning is required and where there are additional resources available for congestion management, such as ITS and travel demand management (TDM). This provision does not apply to the DeKalb-Sycamore urbanized area.

6.3 Major Capital Investment Projects (NEW STARTS)

Map-21 Provision: 49 CFR Part 611

Map-21 New Starts funding is intended for major investments in fixed-guideway transitways, such as light rail transit. New federal legislation emphasizes economic development as a criterion for selection of these types of projects. The DSATS LRTP is not proposing major transit capital investments, so this change is not applicable to the DeKalb-Sycamore urbanized area. There continues to be discussions about ultimately extending the Chicago Metra system from the Elburn Train Station out to DeKalb and possibly beyond. While this extension is not feasible in the short term, it is a long-term goal for the communities in the region, and should this extension move forward in the future, the FTA New Starts program will likely be a major funding source.