



*"Improving the Quality of Life
by Enhancing Mobility"*

University Transportation Center for Mobility

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Examining Challenges, Opportunities and Best Practices for Addressing Rural Mobility and Economic Development under SAFETEA-LU's Coordinated Planning and Human Services Framework

Final Report

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16. Abstract In response to changes in federal requirements for rural transit planning, the Texas State Legislature and the Texas Department of Transportation have recently developed coordinated transit and human services plans for the 24 planning regions in the state of Texas. This study evaluates both the processes that have been adopted throughout the state as well as the types of outcomes that have emerged. Having engaged in perhaps the most comprehensive approach to meeting the revised federal requirements in the United States, the Texas experience in developing coordinated transit and human service plans is particularly useful for identifying opportunities, barriers, and best practices for coordinated rural transit planning, and thus for filling a major gap in the available professional guidance.					
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PLANNING AND HUMAN SERVICES FRAMEWORK**

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EXECUTIVE SUMMARY

Rural population groups without reliable personal transportation, especially the elderly, disabled and economically disadvantaged, heavily depend on public transit to access jobs, retail, and health and human services. Moreover, the economic vitality of rural communities is also dependent on having reliable public transit. However, rural mobility systems are often unreliable, uncoordinated, and inefficient, with service gaps, service duplication, and problematic connectivity between jurisdictions. Serving the mobility needs of rural populations adequately and efficiently is a continuously challenging prospect for public and private transit providers and various health and human service agencies.

In order to improve transit services and increase public accountability for the efficient use of public monies, the federal and state governments have been encouraging the increased coordination of public transportation services. Recent efforts include the changes in federal requirements for transit planning under the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which requires interagency coordination of transit services in several transit funding programs. In 2003, the Texas State Legislature also passed House Bill 3588, which tasked the 24 planning regions in the state of Texas to develop coordinated transit and human services plans to reduce waste and maximize transportation resources and service coverage.

The purpose of this study was to evaluate both the processes that have been adopted throughout the state as well as the outcomes that emerged as a result of the planning effort. Having engaged in perhaps the most comprehensive approach to meeting the revised federal requirements in the United States, the Texas experience in developing coordinated transit and human service plans should prove particularly useful for identifying opportunities, barriers, and best practices for coordinated rural transit planning.

This study involved three distinctive phases: first, a review of the literature on successful interagency collaboration practices and transportation coordinating strategies was conducted, providing guidance in identifying the planning processes and outcomes that have proven most successful at coordinating service and fostering innovation across transit programs, as well as those that have proven less successful; second, a detailed review and analysis of the 24 Texas regional service plans, along with numerous related documents that resulted from the regional planning process, was completed; and third, a telephone survey was conducted with key representatives from each of the 24 planning regions to obtain detailed information about issues identified in the plan review phase.

This study reveals that while there are existing transportation coordination efforts in many regions, the recent state and federal legislation has provided further impetus for a more strategic approach to transportation coordination based on significant data collection and analysis to identify needs, barriers, and constraints; recruit non-traditional partners for coordination efforts; and identify additional opportunities for coordination. Significant challenges to coordination still remain, however, including inadequate funding, regulatory constraints, and the need to build trust and sustain coordination efforts over the long run.

1. INTRODUCTION

Mobility in many communities in rural Texas, and indeed elsewhere in the nation, is often problematic, particularly for elderly, disabled, and economically disadvantaged residents who often lack access to reliable personal transportation. For these groups, basic mobility needs are often met through federal-aid transit programs, including the 5310 (Elderly Individuals and Individuals with Disabilities), 5311 (Rural Transit), 5316 (Job Access and Reverse Commute), and 5317 (New Freedom) programs, among other sources. These transit programs are provided by a variety of public and private transit providers, including health and human service agencies that are typically faced with geographically scattered populations and limited transit resources. Moreover, transit services are often stratified along lines of different funding streams, jurisdictional boundaries, and agency clientele. The result is an unreliable, uncoordinated, and inefficient transit system with service gaps, service duplication, and problematic connectivity between jurisdictions.

Recognizing these issues, recent Texas state and federal legislation has been passed to encourage cooperative systems-level planning across transit programs. In 2003, the Texas State Legislature and the Texas Department of Transportation established requirements for public transit coordination for 24 planning regions in the state of Texas. In 2005, public transit coordination was given further impetus by the passage of federal legislation, specifically the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which required locally developed, coordinated transit and human services plans for many federal-aid transit programs.

Both the state and federal legislation emphasized that developing coordinated transit plans would be a locally driven process, with little formal guidance on how such plans were to be developed. While the Texas Legislature identified and designated 24 state planning regions, local regions were given the freedom to plan as each region saw fit to address its needs. Similarly, the Federal Transit Administration (FTA), which administers federal transit grant programs, left guidelines for meeting the requirements for coordinated plans deliberately vague, noting only that “plans must be developed in good faith in coordination with appropriate planning partners” in order to “permit as much flexibility as possible at the local level in implementing these programs” (Federal Register, 17:162, Sept. 6, 2006). The absence of federal guidance has left many key questions unanswered, including who is to develop these plans, how their activities are to be meaningfully coordinated, and how to identify and take advantage of the benefits and opportunities that a coordinated planning framework might produce.

This project was undertaken to fill a major gap in the available professional guidance for the development of coordinated transit plans. Having engaged in perhaps the most comprehensive approach to meeting the revised federal requirements in the United States, the Texas experience in developing coordinated transit and human service plans was examined to identify organizational frameworks, planning processes, and project outcomes that have proven most successful at coordinating service and fostering innovation across transit programs, as well as those that have proven less successful. Additionally, the research team sought to identify best practices for both taking advantage of opportunities for coordination and service innovation as well as expanding project benefits beyond conventional transportation issues to include

opportunities for rural job creation and economic development. This final report summarizes the findings of this study.

This report is organized into five sections. The first section provides a brief description of federal and state legislation regarding coordinated transportation planning requirements as well as a review of the current literature on interagency collaboration. The second section presents an overview of the approach and methodology to the study. The findings of the study are covered in the third and fourth sections. The fifth section presents our conclusions and recommendations for best practices in coordinated transportation planning.

1.1. Federal and State Legislation on Coordinated Transportation Planning

Federal Coordination Legislation: Executive Order 13330 and SAFETEA-LU

On February 24, 2004, President George W. Bush signed Executive Order 13330 on Human Services Transportation Coordination, which directed multiple federal departments and agencies to work together to ensure that transportation services are seamless, comprehensive, and accessible. The goal is to reduce duplication among federally funded human service transportation services, increase the efficient delivery of such services, and expand transportation access for older individuals, persons with disabilities, persons with low income, children, and other disadvantaged populations within their own communities.

In August 2005, President Bush signed into law the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (Pub. L. 109-59). This federal transportation law, commonly referred to as SAFETEA-LU, authorizes federal expenditures for a wide range of transportation programs, including public transportation. Consistent with Executive Order 13330, SAFETEA-LU requires the establishment of a locally developed, coordinated public transit-human services transportation plan for human service transportation programs funded through the FTA. Projects selected for funding under these programs are required to be derived from a region's locally developed, coordinated public transit-human services transportation plan. The plan is to be developed for each region through a process that includes public, private, and nonprofit transportation representatives, human service providers, and public participants.

Specifically, federal transit laws (i.e., the Federal Transit Act, codified at Chapter 53 of Title 49 of the United States Code) require coordination between public transportation and human services in statewide and metropolitan transportation planning, in the provision of urban and rural public transportation, and in the provision of specialized transportation services to elderly individuals, persons with disabilities, and persons from low-income households accessing jobs or job-related activities.

The following sections contain citations directly from federal transit laws that spell out the statutory requirements to coordinate public transportation and human services.

Coordination Is Required in Metropolitan Transportation Planning, 49 USC 5303(g)(3)

“Under the metropolitan planning process, transportation plans and [transportation improvement program] TIPs shall be developed with due consideration of other related planning activities

within the metropolitan area, and the process shall provide for the design and delivery of transportation services within the metropolitan that are provided by—(A) recipients [of federal transit assistance]; (B) governmental agencies and nonprofit organizations (including representatives of the agencies and organizations) that receive federal assistance from a source other than the Department of Transportation [DOT] to provide nonemergency transportation services; and (C) recipients of assistance under section 204 of title 23 [i.e., the Federal Lands Highway Program].”

Coordination Is Required in Statewide Transportation Planning, 49 USC 5304(e)

“In carrying out [statewide transportation] planning under this section, each State shall consider, at a minimum...coordination of transportation plans, the transportation improvement program, and planning activities with related planning activities being carried out outside of metropolitan planning areas and between States.”

Coordination Is Required for Urban Public Transit, 49 USC 5307(c)(5)

“[Each recipient of a grant under this section shall] ensure that the proposed program of projects provides for the coordination of public transportation services assisted under section 5336 of this title [i.e., formula-based grants for public transportation in urbanized areas] with transportation services assisted from other United States Government sources.”

Coordination Is Required in Designing and Providing Transportation for Elderly Individuals and Persons with Disabilities, 49 USC 5310(d)(2) and 49 USC 5310(e)(2)

“[Each] grant recipient under this section shall certify that_(i) the projects selected were derived from a locally developed, coordinated public transit-human services transportation plan; and (ii) the plan was developed through a process that included representatives of public, private and nonprofit transportation and human services providers and participation by the public.”

“A State shall submit annually to the Secretary [of Transportation] for approval a program of projects [to be supported with funds apportioned to the State under this section]. The program shall contain an assurance that the program provides for maximum feasible coordination of transportation services assisted under this section with transportation services assisted by other Government sources.”

Coordination Is Required for Rural Public Transit, 49 USC 5311(b)(2)(C)

“The Secretary [of Transportation] may not approve [a State’s] program [of projects to be supported with funds apportioned to the State under this section] unless the Secretary determines that...the program provides the maximum feasible coordination of public transportation service assisted under this section with transportation services assisted by other Federal sources.”

Coordination Is Required in Designing and Providing Job Access and Reverse Commute Transportation Services, 49 USC 5316(g)

“The Secretary [of Transportation] shall coordinate activities under this section with related activities under programs of other Federal departments and agencies...A recipient of funds under this section shall certify to the Secretary that...the projects selected were derived from a locally developed, coordinated public transit-human services transportation plan...and the plan was

developed through a process that included representatives of public, private and nonprofit transportation and human services providers and participation by the public.”

Coordination Is Required in Designing and Providing New Freedom Transportation Services for Persons with Disabilities, 49 USC 5317(f)

“The Secretary [of Transportation] shall coordinate activities under this section with related activities under programs of other Federal departments and agencies...A recipient of funds under this section shall certify to the Secretary that...the projects selected were derived from a locally developed, coordinated public transit-human services transportation plan...and the plan was developed through a process that included representatives of public, private and nonprofit transportation and human services providers and participation by the public.”

Non-DOT Program Requirements to Coordinate Public Transportation

Although federal spending on transportation in human services, workforce development, and health care is on par with spending through programs of the FTA, none of these non-DOT programs has a statutory mandate to provide transportation. Therefore, it is not possible to point out non-DOT legal language that has as much statutory clarity as the provisions of the Federal Transit Act cited above. Nevertheless, in 2003, the U.S. Government Accountability Office (GAO) identified 62 programs outside the DOT that are authorized to spend federal funds on transportation. In quite a few cases, federal agencies have issued regulations or guidance documents that spell out how program resources can be used for transportation. From a practical perspective, it is difficult for most of these programs to succeed in the transportation aspect of their mission without coordinating services with the activities of state or local transit agencies, but this coordination is not specifically required of non-DOT programs.

Statutory requirements in federal transit law have the best chance of being successfully implemented when there is genuine cooperation from funding and programmatic partners. The federal departments of Transportation, Health and Human Services, Labor, Education, and others have been working together since the 1980s in the Interagency Coordinating Council on Access and Mobility. The Coordinating Council’s “United We Ride” initiative has been promoting partnerships since 2004.

State of Texas Coordination Requirements

The Texas Legislature established requirements for public transportation coordination prior to the mandates from the federal executive order and SAFETEA-LU legislation. The legislature passed House Bill 3588 in May 2003, and the statute took effect on September 1, 2003.

Article 13 of House Bill (HB) 3588 amended Subtitle K, Title 6, Transportation Code by adding Chapter 461, titled “Statewide Coordination of Public Transportation”. This chapter detailed the state’s legislative intent and construction. The rationale for the creation and passage of this chapter was that “public transportation services are provided in this state by many different entities, both public and private. The multiplicity of public transportation providers and services, coupled with a lack of coordination between state oversight agencies, has generated inefficiencies, overlaps in service, and confusion for consumers.” The intent of the legislation is to achieve the following goals for coordinated public transportation:

- To eliminate waste in the provision of public transportation services.
- To generate efficiencies that will permit increased levels of service.
- To further the state's efforts to reduce air pollution.

Texas Department of Transportation Responsibility, Chapter 461

The responsibility for implementing the provisions of Article 13 of HB 3588 falls to the Texas Department of Transportation (TxDOT). According to Section 461.004, Chapter 461, TxDOT is responsible for identifying:

- Overlaps and gaps in the provision of public transportation services, including services that could be more effectively provided by existing, privately funded transportation resources.
- Underused equipment owned by public transportation providers.
- Inefficiencies in the provision of public transportation services by any public transportation provider.

To eliminate waste and maximize efficiency, TxDOT is required to encourage public transportation providers to agree on the allocation of specific services and service areas among the providers in an area. The department may incorporate these discussions in planning processes such as the development of the statewide transportation improvement program or a local transportation improvement plan. If public transportation providers do not reach an agreement on a service plan, the department may develop an interim service plan for that area.

Section 461.006 of the Transportation Code states the duties of public transportation providers and requires them to cooperate with the department to achieve the chapter's intent. The remaining sections of Chapter 461 state that funding for public transportation providers is dependent upon compliance with the coordinated planning process.

Regional Coordination Planning

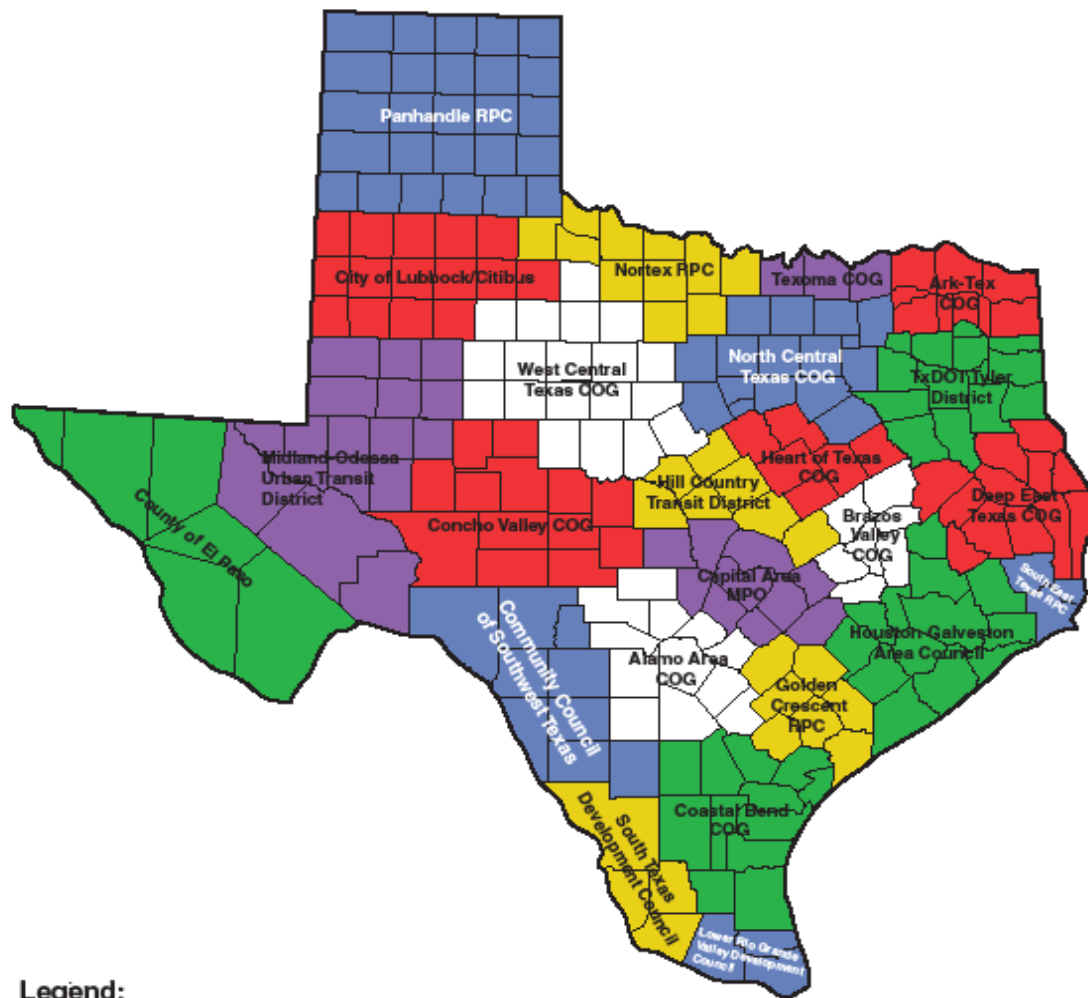
The Texas Transportation Commission believed that to achieve meaningful outcomes, regional service planning should be a locally driven process. Accordingly, TxDOT Commissioner Hope Andrade formed the Regional Planning and Public Transportation study group in 2004, comprised of members with diverse areas of experience and expertise. The study group recommended that the state be divided into 24 regions and each of the regions create a local steering committee to help drive the service planning process. Council of Government (COG) boundaries define the regions. The COG boundaries and lead agencies for the transportation planning regions are shown in Figure 1.1.

The mission of each regional steering committee is to enhance service delivery, customer satisfaction, efficiency, and effectiveness and to integrate systems-based and client-based approaches in public transportation. Each region developed and produced a regional public transportation coordination plan (sometimes referred to as a regional service plan for coordination of public transportation) by December 2006. Each of the regional steering committees is responsible for implementation of the plans to ensure coordination.

Federal requirements served to reinforce the state's efforts and increase the credibility of the planning effort and resulting regional service plans for coordination. TxDOT continues to

support the process for regional coordination of each of the 24 regions with funding and planning oversight consistent with federal coordination requirements.

Lead Agencies for Regional Public Transportation Planning



Legend:

COG-Council of Governments
MPO-Metropolitan Planning Organization
RPC-Regional Planning Commission

August 2007



Figure 1.1: Map of COG Boundaries and Lead Agencies for Regional Public Transportation Planning

1.2. Research on Interagency Collaboration and Transportation Coordination Strategies

In order to frame the discussion on best practices, this next section presents a review of the public administration and management literature on interagency collaboration to identify practices needed to form successful collaborations. Research on successful transportation coordinating strategies is also reviewed.

Collaboration History

Coordination is a term that is sometimes used interchangeably with collaboration. For this study, we use the term “interagency collaboration,” defined as “any joint activity by two or more agencies that is intended to increase public value by their working together rather than separately” (Bardach, 1998, p. 8). Essentially, it involves combining the efforts of leaders, public and private institutions, and citizens to solve problems. Public, private, and nonprofit agencies and organizations have a long history of collaborating to improve the delivery of public services in many policy areas, a practice that continues to grow in importance (Bingham, O’Leary and Carlson, 2008; U.S. Department of Transportation, 2003; McGuire, 2006; O’Toole, 1997).

There are various collaborative arrangements that agencies and organizations can enter to pursue their aims, from temporary short-term coordination between a few agencies to accomplish specific time-limited tasks or issues to more long-term sustained or indefinite networks among multiple agencies that address more complex long-term problems (McGuire, 2006). Regardless of the structural arrangement, the widely held view by both scholars and practitioners is that interagency collaboration is an imperative in addressing realities of modern societal problems. Kettl (2006), for example, states that the increasing complexity and interrelated nature of society’s problems calls for “a collaborative, net-worked based approach to bring public administration more in sync with the multiorganizational, multisector operating realities of today’s government” (p. 8). Kettle further contends that in the absence of collaboration, poor performance is inevitable.

Increasing the efficiency and effectiveness of public services, increasing responsiveness to customer or client needs, and reducing costs are also key motivations for collaboration (DOT, 2004; McGuire, 2006; O’Toole, 1997). Interagency collaboration allows agencies to draw upon resources and expertise to achieve *greater* policy impacts than can be achieved by agencies working independently (Bardach, 1998; Kettl, 2006; Page, 2008). Collaboration, in effect, results in increased public value, defined as:

increasing efficiency, effectiveness, or fairness in currently defined missions[,] ...introducing programs that respond to a new political aspiration or meet a need in the organization’s task environment...[or] reducing the claims that government organizations make on taxpayers and reclaiming the resources now committed to the organizations for alternative public or private uses (Moore, cited in Bardach, 1998, 8–9).

Challenges to Interagency Collaboration

Despite the imperative and benefits of interagency collaboration, the political and bureaucratic realities of public sector agencies also pose significant challenges. The American public

administration structure is rooted in bureaucratic hierarchy and administrative boundaries that define an organization's mission, resources, capacity, responsibility, and accountability. Collaboration is inherently at cross-purposes with this structure, as it threatens agency missions, turf, autonomy, resources (money and people), political standing, and information (Bardach, 1998; DOT, 2003; Kettl, 2006). Additionally, agency managers may be reluctant to be held accountable for results over which they have no real authority, especially where the achievement of results often depends on voluntary cooperation of participating organizations (Page, 2008). Therefore, achieving interagency collaboration is inherently difficult and requires significant effort on the part of the participating actors. It entails a new way of thinking and doing business that "puts results ahead of procedures, capacity building above turf protection, trust ahead of suspicion, joint problem solving ahead of accepted, time-worn methods" (Bardach, 1998, vi).

Practices for Achieving Effective Collaboration

Despite these challenges, agencies have been able to identify the opportunities for effective collaboration, which Bardach (1998) refers to as "Interagency Collaborative Capacity" (ICC). The development and effectiveness of interagency collaborations has been the focus of management and public policy scholars at least since the 1960s (Provan, 2001), and the literature identifies many different generic activities and strategies for producing interagency collaborative capacity that apply to any policy setting. Page (2003) distills these strategies into the following six themes: establishing clear missions and goals, embracing accountability, redesigning production processes to enhance flexibility and responsiveness to customers, adjusting administrative systems to support the new production processes, establishing consequences to motivate staff performance, and building an inter-organizational culture. Bardach (1998) categorizes them into five key processes and identifies several "smart practices" within each. These categories include designing and managing an operating system, leveraging financial and personnel resources, building sufficient consensus, creating a culture of pragmatism and trust that facilitates joint problem solving, and securing implicit or explicit consent of elected officials. Agranoff and McGuire (2001) classify these strategies as activation, framing, mobilizing, and synthesizing. These strategies subsume those of Page and Bardach. To further elaborate, *activating* is the process of selecting the participants and stakeholders and assembling the needed resources to achieve the aims of the collaborative group. *Framing* involves articulating the aims, roles, rules, norms, shared purpose, identity, and culture of the collaborative group. *Mobilizing activities* are those used to build commitment and support from participants and external stakeholders. *Synthesizing* involves tactics used to foster exchange and build relations and trust among collaborators (Agranoff and McGuire, 2001; McGuire, 2002; Page, 2008).

Strategies for Transportation Coordination

In the area of transportation coordination, guidance on effective strategies for initiating and improving the coordination of transportation services can be found in the literature. For example, research conducted by the U.S. Department of Transportation (2003) and the Transit Cooperative Research Program (2004) offers examples of best practices gleaned from case studies and practitioners. These strategies include those noted previously, such as planning, coalition building, leadership, lead agencies, funding, and technology resources. Specific transportation

coordination strategies for improving the efficiency and effectiveness of transportation services and mobility are also identified. These strategies can be categorized as:

- *Centralized/shared operating functions*: contract service monitoring, reporting, and accounting; subsidy programs; dispatching services; data collection and reporting; information and referral; customer registration and eligibility determination; customer information and referral services; centralized dispatch systems; common communication systems and websites; accounting systems; and driver and staff training (the use of technology systems and software greatly assists with some of these functions).
- *Shared/co-location of services*: transfer stations, fueling stations, vehicle inspection and maintenance, vehicle storage, and rideshare.
- *Joint purchasing*: vehicles, equipment, insurance, fuel, hardware, software, and technology.
- *Purchase and contract for service*: operate fixed route or demand responsive services, vehicles, facilities management, vehicle maintenance, staff recruitment and training, fuel purchase and storage, fleet and passenger reporting.
- *Improved user flexibility and increased access to services*: vouchers and subsidies, standardized policies and requirements, consistent fare structures, route services, and travel training/mobility management (integrated scheduling and dispatch or single-point consumer access).
- *Mentoring and support*: advice, support, training, and even used/retired vehicles for smaller agencies.

2. APPROACH AND METHODOLOGY

This study involved five distinctive phases. The first phase was the compilation of all materials related to the regional public transportation plans in all counties in the state of Texas. The second phase involved a detailed analysis of all 24 regional plans based on available information, mainly from the Internet. The third phase consisted of a telephone survey in order to obtain new detailed information about key issues identified in the regional plan analysis. The fourth phase involved analysis of the telephone surveys. Finally, the fifth phase documented all our findings.

The methodology used for the plan evaluation and the phone survey is fully described in the remainder of this section. The following section, Section 3, provides the findings and discussion of the plan evaluation, and Section 4 documents the findings of the phone survey. The final section, Section 5, presents our conclusions and recommendations for best practices in coordinated transportation planning.

2.1. Regional Public Transportation Plans

Data for this study were obtained through the regional public transportation coordination (RPTC) plans developed by the 24 state planning regions. A copy of the RPTC plans was obtained from the Regional Service Planning (RSP) website (<http://www.regionalserviceplanning.org>). This website is sponsored by TxDOT to aid the public transportation coordination process. The RSP website maintains a clearinghouse of documents, materials, and links to other websites related to public transportation coordination. All except one of the RPTC plans and its associated

documents were available to be downloaded from the website. A copy of the Deep East Texas RPTC Plan was not posted on the Regional Service Planning website but was eventually obtained through other sources. The details regarding the plan evaluation process and the telephone survey recruitment methods are outlined below.

Plan Evaluation Criteria

To better identify the desired plan elements and to understand if they are addressing rural mobility and economic development, a structured review and evaluation of the RPTC plans submitted by the 24 planning regions was conducted. The study group agreed that each plan and associated documents should be reviewed and specific information recorded, and there should be an attempt to identify unique elements that were relevant to the research's goals. As part of the RPTC plan review, several components of each plan, if provided, were evaluated and compared to the intent of the coordinated transportation planning legislation. Topics chosen for review were discussed by the research team and picked based on their specific relevance to the research and the overall objectives of the legislation. This review resulted in the analysis of each plan on the following topics:

- Goals and Objectives
- Stakeholders
 - Public
 - Private
- Advisory Groups/Steering Committees
 - Number and variety of committee members and organizations
- Funding
 - Current sources
 - Major issues faced
 - Future needs and/or uses
- Coverage of the Plan
 - Geographic
 - Types of services
- Barriers and Constraints
 - Barriers identified in the formulation and implementation
 - Constraints identified by agencies and/or geographical areas
- Coordination
 - Existing coordination efforts
 - Proposed coordination actions
- Public Transit Services
 - Urban
 - Rural
 - Medicaid and other services
- Economic Development
 - Coordination benefiting the region's economy, identified as employment and business development
 - Coordination toward enhancing quality of life
- Public Involvement
 - Methods used to solicit public for input

- Level of actual public participation

The review of the plans resulted in the creation of a detailed spreadsheet with information extracted for each variable. Information regarding each topic was directly obtained from the plan and associated documents and placed in the spreadsheet. This spreadsheet was used as an abbreviated guide to each region's plan evaluation and served as a reference for investigators. Instead of thumbing through 24 plans that range in length from 30 to several hundred pages, the compiled spreadsheet allowed for faster recall of each plan's general information (copy of the spreadsheet is attached).

The data collected was examined to identify common themes, patterns, and techniques that were used in the planning process. These initial findings served to identify those techniques and actions that were unique to each region's process.

The plan evaluation conducted on the regional public transportation coordination plans used methods derived from plan quality analysis research by Brody (2008) and interagency collaboration research by Bardach (1998). Five core categories were defined, each containing several variables that represent what the research group determined as necessary for an optimal comprehensive coordination plan that addresses mobility and economic development. These five core categories, which are the bases of our evaluation, included:

1. Factual Basis
2. Goals and Objectives
3. Inter-organization Coordination
4. Policies, Tools, and Strategies
5. Implementation Mechanisms

The five categories and the selected elements to represent them are detailed below. The inclusion of these elements was deemed necessary for a plan to be of high quality. The plans were reviewed by searching their contents for each specific element. Since the planning process included several documents that were produced prior to the final plan, those were also reviewed for the presence of plan elements.

Each of these categories was given a value according to their specific components, as will be explained below. The scoring criteria were as follows: 0 = if the variable was not included; 1 = if the variable was only indirectly included; and 2 = if the variable was explicitly included in the plan.

1. Factual Basis

Facts ought to be the foundation for any planning effort and are critical to creating a comprehensive and implementable plan. Because of their importance, the following factual elements were chosen to determine if they were part of the coordinated planning process and if they were represented in the final plan:

- *Geographic data*: includes area, population centers, and major travel routes.
- *Demographic data*: current and projected data on population, age, sex, and race.
- *Economic data*: current and estimated household income, poverty levels, and major sources of employment and businesses.

- *Inventory of current services or transportation providers*: list of services provided and used throughout the region at the time of planning.
- *Existing coordination efforts*: coordination prior to and/or during the planning process.
- *Barriers and constraints*: issues detailed by each region that obstruct (barrier) or limit (constraint) coordination efforts.
- *Status of the transportation infrastructure*: current and estimated basic transportation and mobility road and rail network.

2. Goals and Objectives

Goals are defined in two ways: first, they are the general concepts that the plan aims to address; second, they should provide a guide or framework for the plan implementation. Objectives are more specific and typically state how a goal will be reached. Our study compared the goals and objectives (some plans only contained goals) to the three goals listed in HB 3588 (see below) to determine if they were compatible with those of the State of Texas. The scoring criteria were modified for this component to determine the level to which a goal was addressed. As a result, 0 = if the goal was not addressed, 1 = if the goal was indirectly addressed, 2 = if the goal was directly addressed by in the plan. The three goals identified in HB 3588 to be addressed are:

1. To eliminate waste in the provision of public transportation services.
2. To generate efficiencies that will permit increased levels of service.
3. To further the state's efforts to reduce air pollution.

Additionally, the research team included an economic development goal that included the support and enhancement of employment and business activity.

3. Inter-organizational Coordination and Capabilities

For a region's plan to achieve public transportation coordination, the various agencies and stakeholders within the region must be involved in the planning process and agree to coordinate their services. This entails a process of inclusiveness where the various stakeholder agencies, providers, and the public work together in a collaborative effort designed to address the region's shortcomings and overcome its barriers and constraints in an effort to reach the stated goals. Finally, a broad and diverse planning group that did not disband after the plan was finished was considered as a relevant factor as part of the coordination effort.

The participants in this effort are:

- *Transit stakeholders*: those in the region who provide or administer any form of public transportation services.
- *Health and human service stakeholders*: various state and local agencies, senior centers, mental health providers, medical transportation, etc.
- *Employment or economic/community development stakeholders*: local businesses, Workforce Development Board, chambers of commerce, and economic development officials.
- *General public/taxpayers*: members of the general public and taxpayers.
- *Customers/riders*: individuals who use services to be coordinated.
- *Other regions*: adjacent planning regions.

4. Policies, Tools, and Strategies

In this section, the intention was to identify the set of tools defined in the plan to achieve the goals previously determined. While the 24 plans presented a variety of policies, tools, and

strategies, the research team chose four main ones that—in our criteria—should represent the core of an “ideal” plan:

- *Increasing public awareness of services*: creates greater awareness of services available to the public and other potential users for all involved in the planning effort.
- *Improving regional mobility*: provides reliable transport for all those in the region to and/or from a destination by faster and multiple methods if possible.
- *Creating pilot projects*: allows for the real-world testing of a coordination idea or effort to determine if it is successful and implementable on a broader or long-term basis.
- *Establishing regional standards*: is representative of numerous policies and strategies that seek to improve coordination and collaboration through the standardization of systems, records, paperwork, and processes that when created allow for the improved flow of information, people, and services across the region.

5. Implementation Mechanisms

This refers to the ability of a plan to become an enduring instrument that is carried forth through regulations and collective action. For comprehensive plans to be effective, an implementation process must be clearly defined and laid out. This includes designating responsibility for actions, enforcement mechanisms of adopted standards, how activities will be monitored, and how evaluation will be conducted. Plans also need to be reviewed and revised at regular intervals in order to adapt to new information and developments within the region (Brody, 2008). RPTC plan implementation was evaluated by the presence and details of the following mechanisms:

- *Proposed future coordination efforts*: areas and items where future coordination is proposed.
- *Action plan*: specific activities, and the stakeholders involved, that the region will pursue to implement the goals and objectives through various policies, tools, and strategies already presented.
- *Prioritization of actions*: identification of actions to be taken and the sequence and hierarchy for their implementation.
- *Timeline for implementation*: identification of dates or time horizon under which the actions are to be taken and whether they are presented in a logical order to improve the outcomes.
- *Relationship of actions to achieving goals*: relationship of actions presented to achieving one of the four goals previously discussed (for this element 0 = no relationship, 1 = relationship to some goals, 2 = relationship to all goals).
- *Review of plan to determine effectiveness*: statements within the plan explaining when it will be reviewed to assess implementation, successes, and failures.
- *Scheduled plan updates*: identification of when the plan will be reviewed and modified to keep it current and reflect new regional activities or developments, as well as whether there is a timeline for further reviews.

Plan Scoring Criteria and Techniques

As stated above, an overall measure of the regional public transportation coordination plan quality was estimated. In doing so, the research team created indices for each plan component and then for the overall plan using the following scoring criteria (see Brody, 2008). First, the plans were reviewed to determine if they contained each element under each category. As

explained before, the presence or absence of specific elements were given a score of 0, 1, or 2 as presented in Table 2.1.

Table 2.1
Plan Scoring Details

Point Values	Scoring Criteria
0	Element not present in the plan
1	Element present in the plan but not detailed
2	Element present and detailed in plan

The following technique was then used to create the scores for each component or category and a total plan score:

1. The actual scores for each indicator were summed within each plan component.
2. The sum of the actual scores was divided by the total possible score for each plan component.
3. This fractional score was multiplied by 10, placing each plan component on a 0-10 scale. This means that each component had a maximum value of 10.
4. Adding the scores of each plan component resulted in a total plan quality score. In this case, for the overall planning evaluation, the maximum score for each plan was 50, as the score corresponded to the five categories discussed (factual basis, goals and objectives, inter-organization coordination, policies/tools/strategies, and implementation mechanisms).

The research team agreed on giving equal weight to each of the categories, regardless of the number of indicators each of them included. Some categories may have had more indicators than others, and this could potentially result in more weight being given to the categories with more indicators. To avoid this, the use of component indices was used and all categories had equal weight regardless of the number of indicators.

To further aid with the plan evaluation, four quartiles were defined for each component and for the overall plan. Scores were ordered from lowest to highest and assigned a rating of lowest, low, high, and highest.

Quartiles divided the values in relatively equal-sized data subsets. As not all components scored in a similar way, each of them showed a different range in the values defining each quartile. The objective was to find a way to divide all values in four similar-sized sub-groups. With only 24 values per component, it was possible to define each quartile according to total value and the range of variation of each value. In the case where two regions had exactly the same value for one component, we included all of them in the same quartile even if the size of the sub-groups were not exactly the same.

2.2. Telephone Surveys

After all data were collected from the plans and analyzed, the research team conducted telephone surveys to provide further insight on issues arising from the planning documents. The telephone

interviews were conducted with key representatives in each planning region. The survey questions were defined after all plans were scored and evaluated.¹ While the plans provided certain information, little is known about the actual process each of the regions went through to produce the regional coordination plans. Further, many details were addressed with the plan review, which allowed for the creation of more focused questions for the phone survey administered to officials in each region. The focus of the survey was public transportation coordination specifically as it affects the rural areas in the region.

Specifically, as can be observed in the Appendix, the survey consisted of 31 questions and took approximately one-half to one hour to complete. The survey was conducted after a set of five screening questions were asked to be sure the person who was answering them was involved in the process and/or was familiar with the transportation planning efforts related to SAFETY-LU. After these five screening questions, the first section of the survey consisted of nine questions related to the planning process. The next nine questions focused on the plan outcomes. The third section, with another set of nine questions, dealt with plan assessment process, and the final section, with four questions, focused on the planner's leadership style.

Survey Administration

The survey was targeted at the lead agency representatives in each of the 24 regions who were involved in spearheading the planning process. These individuals were identified through the lead agency contact list for each region and through consultation with a Texas Transportation Institute facilitator that provided the regions with assistance in the planning process. The recruitment effort consisted of a preliminary e-mail to each of the identified representatives describing the team effort and the research objectives. These procedures followed the Institutional Review Board (IRB) requirements as specified by the Texas A&M Office of Vice-President for Research. All researchers with access to the survey data obtained the IRB approval.

After the first e-mail contact, the research team scheduled the telephone survey in a period of about two weeks to give respondents time to gather the necessary information. While our goal was to interview at least one representative from all 24 planning regions, we successfully interviewed a representative from 23 of the 24 regions. This should be considered a very positive outcome. The only region that did not respond to our survey was Texoma.

The calls were conducted using Skype and were recorded with the respondents' authorization. The data were then downloaded on a database for analysis. There was only one qualitative section of the survey, where we aimed at getting a more insightful view of the coordination process. Results from this question were analyzed using a qualitative approach, searching for common themes and special outliers. The findings of the survey, both from quantitative and qualitative variables, are detailed in Section 4.

Limitations

Each planning region wrote and submitted an RPTC plan with no specific guidelines from the State of Texas or TxDOT. The lack of specific guidelines provided each region the freedom to

¹ Copy of the survey is found in the Appendix.

develop a plan that best fit each region's specific needs. This resulted in a wide range of plans with varying content and the inclusion or exclusion of plan components. Hence, not all plans contained specific information regarding every topic. Some plans lacked names of committee members, detailed lists of stakeholders, or actions to promote economic development, to provide a few examples. In some cases, examination of the other documents provided the missing documentation. For this evaluation, the plans were scored on their inclusion of components that were deemed representative of a higher-quality RPTC plan, as explained above. The natural tendency will be to rank the total scores, but even the lowest scoring plans provide benefit to their region. Lower scores should not count against a region, as plans were not written to meet the aforementioned evaluation criteria and high plan quality does not ensure implementation of effectiveness.

3. PLAN EVALUATION FINDINGS

3.1. Overall Plan Evaluation

Using the technique outlined in the previous section, an overall adjusted plan score for each planning region was calculated. As stated in the methodology section, scores were ordered from lowest to highest and placed into four rating quartiles. Those scores that were in the first subgroup were labeled "lowest," those in the second were "low," the third were "high," and the fourth were "highest." Table 3.1 shows the rating of the plans based on the system; this same information is graphically presented in Figure 3.1.

As indicated, no plan received a perfect score, and the range of scores varied from the lowest value of 23.10 (Ark-Tex) to the highest at 46.90 (Heart of Texas), with a spread of approximately 23 points between the highest and lowest values. The mean score for overall plan quality was 34.83 on a scale of 0-50 (see Table 3.2). This reinforces earlier statements regarding the variability in the planning process and freedom to plan as each region saw fit to address its needs.

Table 3.1
Plan Evaluation Total Scores

Rating Quartile	Planning Region	Adjusted Score (Max. 50)
Lowest	Ark-Tex	23.10
	Alamo Area	26.13
	Lower Rio Grande	26.55
	Coastal Bend	28.15
	Middle Rio Grande	28.57
	South Texas	28.63
	South Plains	28.99
Low	Texoma	31.37
	Nortex	32.20
	Central Texas	34.29
	West Central	34.52
	Golden Crescent	35.83
	East Texas	35.89
High	North Central	36.01
	Panhandle	36.43
	Upper Rio Grande	37.44
	Deep East Texas	37.56
	Gulf Coast	37.62
	South East	37.86
Highest	Concho Valley	41.37
	Permian Basin	42.44
	Brazos Valley	43.27
	Capital Area	44.82
	Heart of Texas	46.90

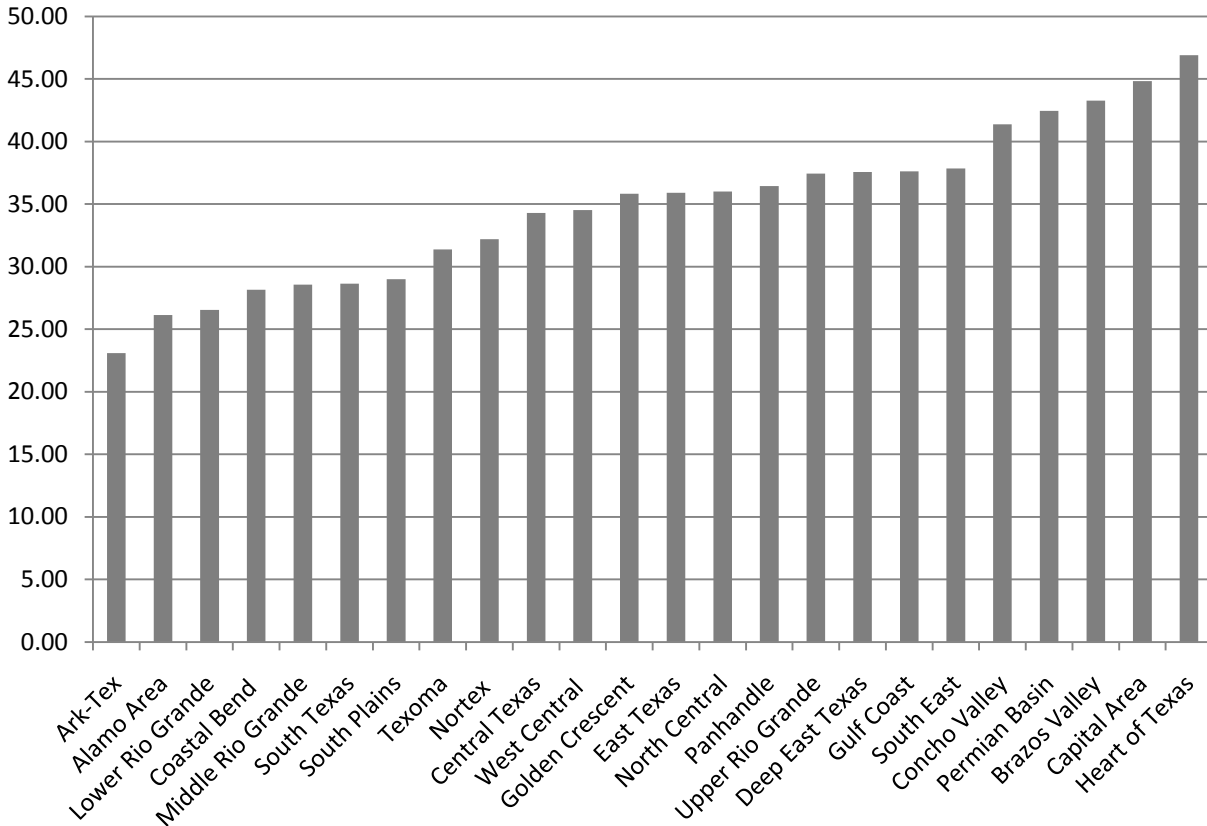


Figure 3.1: Total Plan Quality Scores by Region

Table 3.2
Overall Plan Score Statistics

Mean	34.83
Standard Deviation	6.30
Range of Values	23.10-46.90

Next, we will present in more detail each of the plan evaluation components. It is relevant to mention that among the five components, the highest value is for the factual basis as it related to presenting actual data to support the plan making; the lowest score was for component 2 related to goals and objectives, as is presented in Table 3.3.

Table 3.3
Components of the Plan Score Statistics

Component 1: Factual Basis	9.20
Component 2: Goals and Objectives	5.56
Component 3: Inter-organizational Coordination	6.98
Component 4: Policies, Tools, Strategies	7.29
Component 5: Implementation Mechanism	5.80

3.2. Component #1: Factual Basis

As stated previously, the factual basis includes data on geographic, demographic, and economic characteristics; current transportation services; existing coordination efforts; and barriers and constraints. This factual basis forms the foundation of any planning effort.

The review of the RPTC plans showed that all regions collected and analyzed the necessary facts and data to determine how to proceed with coordinated transportation planning. All plans provided background geographic and demographic information on the region ranging from a brief overview to extensive data for the region or for each county. Only four planning regions did not provide economic data. As would be expected, all plans provided an inventory of existing transportation services and providers, most of which was relatively detailed information on where the service was provided (urban, rural), the type of service provided (fixed route, commuter/express route, carpool/vanpool, flex route, demand response), and the various service providers.

All but one region mentioned existing coordination efforts, although what this entailed was not always explained. Where details were provided, the more common coordination efforts (noted by three or more regions) included joint vehicle maintenance, joint vehicle purchases, integration of services, and joint provision of transit information to riders/customers.

Identification of barriers and constraints was a critical component to the planning process and very influential in determining the steps toward coordination. Many regions included a brief overview of the “biggest” barriers and constraints in their plan while some went even further with the addition of an appendix containing all those identified. The following is a list of barriers and constraints and the number of regions identifying them in the plans:

- Funding adequacy, including local-match requirement: 24.
- Funding restrictions preventing pooling of resources: 14.
- Program eligibility requirements and restrictions: 24.
- Lack of standardized costs/data/reporting systems: 15.
- Service boundary issues: 15.
- TxDOT alternative fuel requirement: 13.
- Hours of operation/service expansion: 10.

- Trip chaining restrictions: 9.
- Institutional turfism and lack of trust: 9.
- Insurance requirements and costs: 7.
- Inconsistent driver qualification and training requirements: 6.

The factual basis of the plan was the highest scoring component with a mean score of 9.20 on a scale of 0-10 (Table 3.4). This was expected, as plans should be based on actual data, and this was, in reality, the case in this planning effort.

Table 3.4
Factual Basis Score Statistics

Mean	9.20
Standard Deviation	1.29
Range of Values	5.83-10.00

As indicated in Table 3.5, all but six regions received a rating of high or highest, with 15 of the 24 regions receiving a score of 10 (also see Figure 3.2). The high scores indicate the inclusion of a strong factual base by each planning region that should imply an overall understanding of current conditions within the region that relate to coordinated public transportation planning. The collection of facts and data about the region was one of the easier steps in the planning process and may be the reason for this high value. Nevertheless, it is relevant to also point out that three regions, Alamo, Lower Rio Grande, and North Central, showed the lowest scores.

Table 3.5
Factual Basis Region Rating

Quartile	Scores	Regions
Lowest	5.83-7.49	Alamo Area, Lower Rio Grande, North Central
Low	7:50-8:33	Ark-Tex, Texoma, Coastal Bend
High	9.17	South Texas, South Plains, Permian Basin
Highest	10.00	Middle Rio Grande, Nortex, Central Texas, West Central, Golden Crescent, East Texas, North Central, Upper Rio Grande, Deep East, Gulf Coast, South East, Concho Valley, Brazos Valley, Capital Area, Heart of Texas

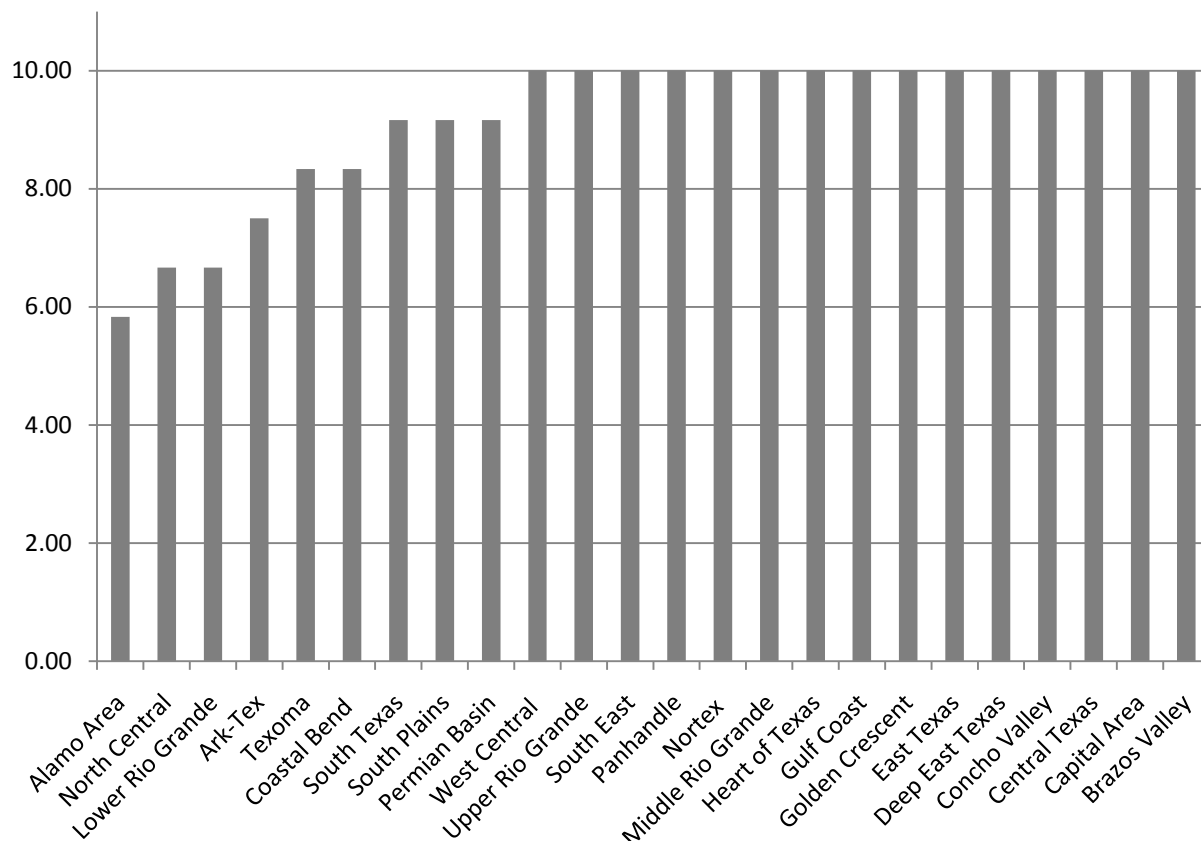


Figure 3.2: Factual Basis Score by Region

3.3. Component #2: Goals and Objectives

The RPTC plans were reviewed for consistency with the three state goals: 1) To eliminate waste in the provision of public transportation services; 2) to generate efficiencies that will permit increased levels of service; and 3) to further the state’s efforts to reduce air pollution.

All but one RPTC plan (or associated documents) contained stated goals for the region, and eight plans (Alamo Area, Brazos Valley, Capital Area, Golden Crescent, Heart of Texas, Nortex, Panhandle, and Upper Rio Grande) contained objectives in addition to these goals. Almost all of the plans’ goals included statements intended to meet the state’s first and second goals of eliminating waste in the provision of public transportation services and generating efficiencies that will permit increased levels of service. However, the state’s third goal was often not addressed, as only five plans contained goals related to air quality: Capital Area, Central Texas, Gulf Coast, Permian Basin, and Upper Rio Grande. With the exception of the Permian Basin, these are regions with highly urbanized areas where air quality would be expected to be a more pertinent issue. Other common goals stated in the plans included developing partnerships, improving customer service, and finding ways to finance or obtain financial support for new projects.

This component of the plan resulted in the lowest score of all five, with a mean of 5.56, and values ranging from 1.67 to 10 (see Table 3.6). The lower score indicates that many regions did not completely address all three of the state’s goals.

Table 3.6
Goals and Objectives Score Statistics

Mean	5.56
Standard Deviation	2.34
Range of Values	1.67-10.00

As indicated in Table 3.7, only seven regions rated high or highest, with the four highest-rated regions scoring 10 points on this factor (also see Figure 3.3). In each case, all three goals were addressed in some detail. For example, the Capital Area plan contained eight goals with accompanying objectives for how the goals would be achieved, of which all but one addressed the state goals in some fashion. It is important to remember that this score indicates how well each plan’s goals and objectives addressed the three goals listed in the evaluation, not how well they were addressed by coordination efforts, actions, or operational tasks in the plan. It is relevant to emphasize that some of the more rural planning regions do not currently face immediate air quality problems and may have deemed it a non-issue for the region.

Table 3.7
Goals and Objectives Region Rating

Quartile	Scores	Regions
Lowest	1.67-3.33	Middle Rio Grande, Concho Valley, Costal Bend, East Texas, Lower Rio Grande, South East
Low	5.00	Alamo Area, Ark-Tex, Deep East Texas, Golden Crescent, Gulf Coast, Nortex, North Central, Panhandle, South Plains, South Texas, Texoma
High	6.67	Brazos Valley, Upper Rio Grande, West Central
Highest	10.00	Capital Area, Central Texas, Heart of Texas, Permian Basin

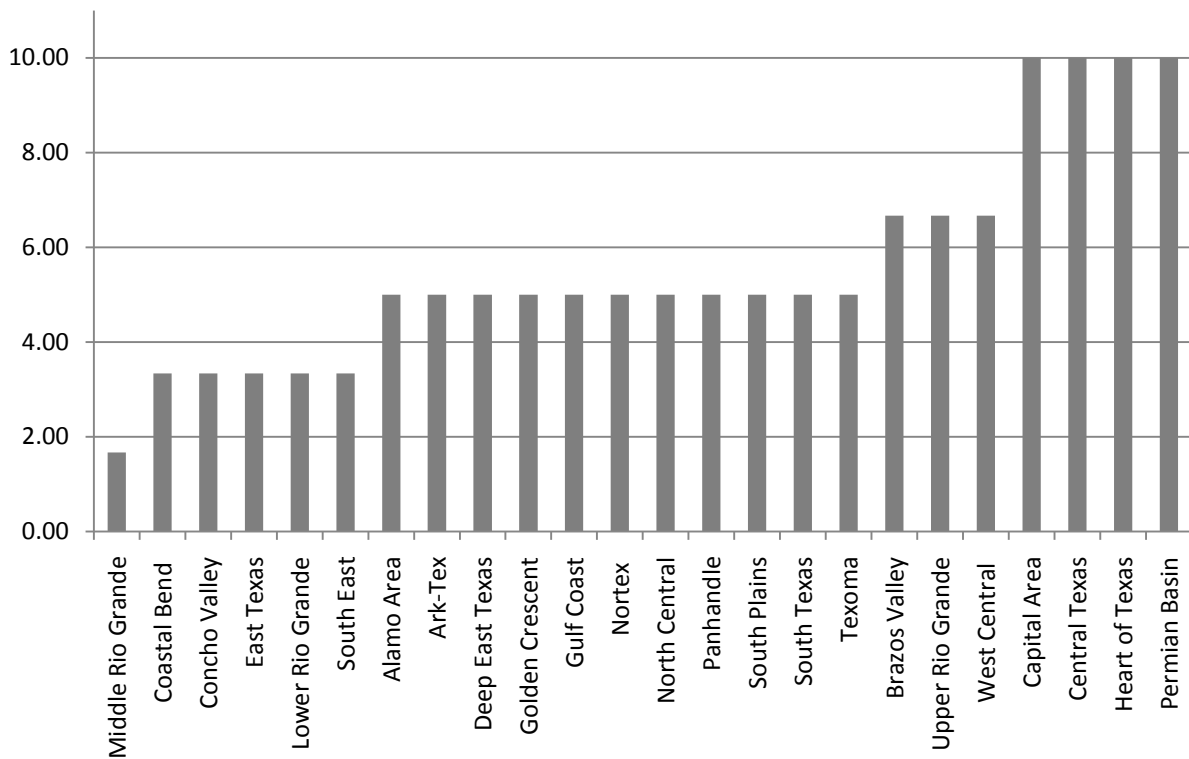


Figure 3.3: Goals and Objectives Scores by Region

3.4. Component #3: Inter-organizational Coordination

The evaluation considered the region’s plan-specific details as to how to achieve public transportation coordination among the various agencies and stakeholders; in particular, the concern was to what extent there was coordination and how it was implemented. Ideally, such coordination would allow the various agencies, providers, and the public in general to work together in a collaborative effort to address the region’s shortcomings, overcome its barriers and constraints, and reach the stated goals. More specifically, the evaluation considered some identifiable information including whether the group was assembled, how many agencies were involved, how many times they met, and if the group continued to exist beyond the formulating of the plan. While a variety of participants were identified in all plans, for the purpose of this analysis, we identified the following for the evaluation criteria:

- *Transit stakeholders:* any agency in the region that provides or administers any form of public transportation services.
- *Health and human service stakeholders:* various state and local agencies, senior centers, mental health providers, medical transportation, etc.
- *Employment or community development stakeholders:* although not required in the strict sense of local transit providers, our evaluation considered mobility to and from local businesses, and we included in our evaluation the Workforce Development Board, chambers of commerce, and economic development officials.
- *Public involvement:* opportunities for the general public to provide input.

- *Proposed future coordination efforts:* areas and items where future coordination is proposed.
- *Coordination with other regions:* any efforts to communicate and plan with adjacent planning regions.

This component of the plan received a mean score of 6.98. The scores ranged from a low of 2.50 to a high of 10.00 (Table 3.8). This category had one of the largest ranges in values (2.50 to 10.00), which could indicate that stakeholder involvement in some regions may have proved more difficult than others, and the scores do not seem biased toward urban or rural regions. Most lacking was coordination with other planning regions and involvement of the public (customers and riders); 14 planning regions did not state any coordination with other planning regions, including adjacent ones, and 10 did not involve customers or riders in the planning process.

Table 3.8
Inter-organizational Coordination Score Statistics

Mean	6.98
Standard Deviation	2.17
Range of Values	2.50-10.00

Table 3.9 and Figure 3.4 show how the various regions ranked on our rating system.

Table 3.9
Inter-organizational Coordination Region Rating

Quartile	Scores	Regions
Lowest	2.50-5.00	Alamo Area, Ark-Tex, Central Texas, Lower Rio Grande, South Texas
Low	5.83-6.67	Golden Crescent, Middle Rio Grande, Coastal Bend, Deep East Texas, East Texas, South Texas, Upper Rio Grande
High	7.50-8.33	Capital Area, Panhandle, South Plains, West Central, Gulf Coast, Heart of Texas
Highest	9.19-10.00	Nortex, North Central, Permian Basin, Brazos Valley, Concho Valley, Texoma

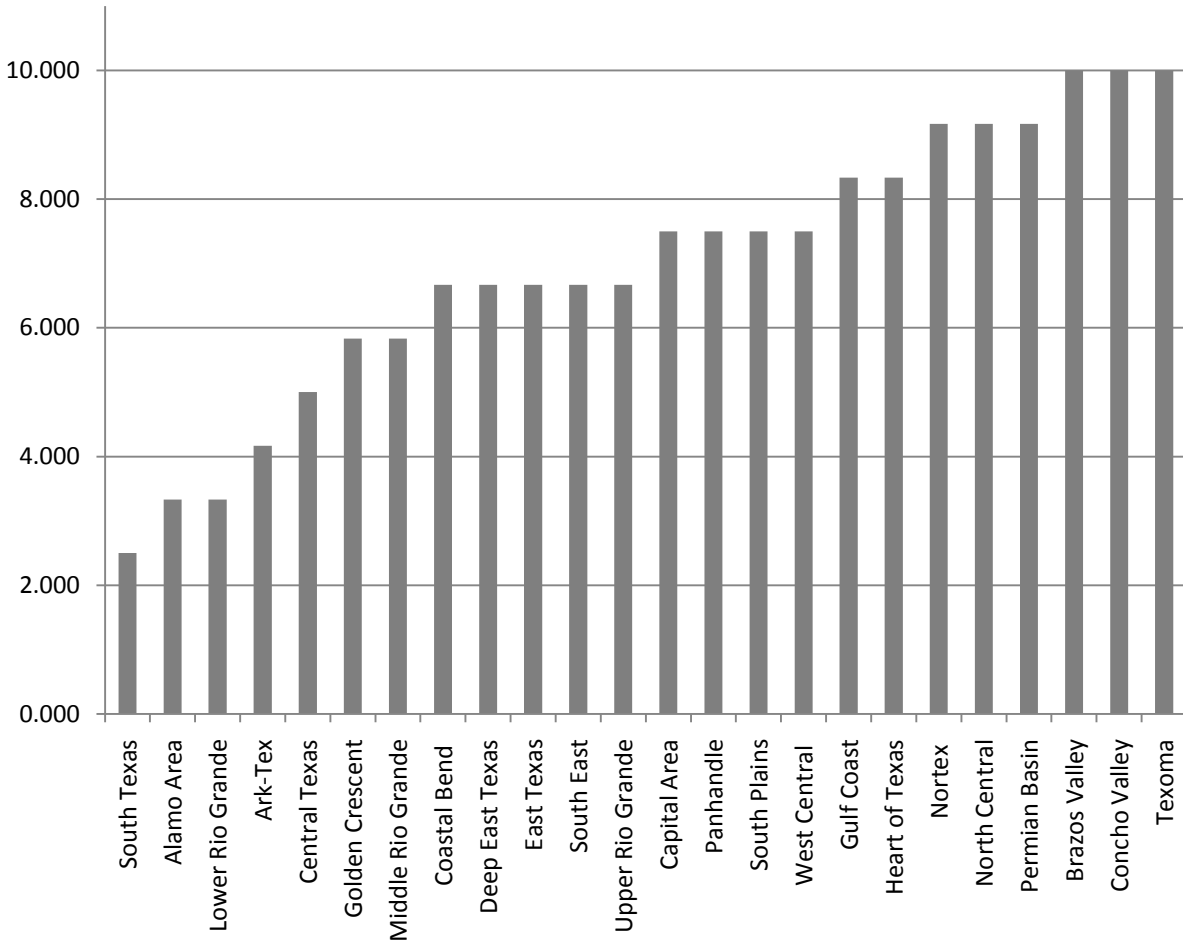


Figure 3.4: Inter-organizational Coordination Scores by Region

3.5. Component #4: Policies, Tools, and Strategies

The plans presented a variety of policies, tools, and strategies. After a detailed reading and a discussion among the research team, a set of criteria was defined. A sample of policies, tools, and strategies was chosen as the most representative of those defined in all 24 regional plans:

- *Increasing public awareness of services:* creates greater awareness of services available to the public and other potential users for all involved in the planning effort.
- *Improving regional mobility:* provides reliable transport for all those in the region to and/or from a destination by faster and multiple methods if possible.
- *Creating pilot projects:* allows for the real-world testing of a coordination idea or effort to determine if it is successful and implementable on a broader or long-term basis.
- *Establishing regional standards:* is representative of numerous policies and strategies that seek to improve coordination and collaboration through the standardization of systems, records, paperwork, and processes that when created allow for the improved flow of information, people, and services across the region.

As shown in Table 3.10, the values for this category ranged from a low of 3.75 to a high of 10.00, with a mean score 7.29. This high mean score indicates that most plans contained some policies, tools, and strategies for implementing the plan and achieving coordination of public transit, including the creation of pilot projects, which were proposed by one-half of the regions.

Table 3.10
Policies, Tools, and Strategies Score Statistics

Mean	7.29
Standard Deviation	2.04
Range of Values	3.75-10.00

As indicated in Table 3.11 and Figure 3.5, 10 regions were rated as either high or highest: four regions received 10 points while six regions scored 8.75.

Table 3.11
Policies, Tools, and Strategies Region Rating

Quartile	Scores	Regions
Lowest	3.75-5.00	Nortex, South Plains, Texoma, Ark-Tex, Central Texas
Low	6.25-7.5	Alamo Area, Coastal Bend, Permian Basin, South Texas, Upper Rio Grande, Lower Rio Grande, Middle Rio Grande, Panhandle, West Central
High	8.75	Brazos Valley, Capital Area, Concho Valley, Deep East Texas, East Texas, North Central
Highest	10.00	Golden Crescent, Gulf Coast, Heart of Texas, South East

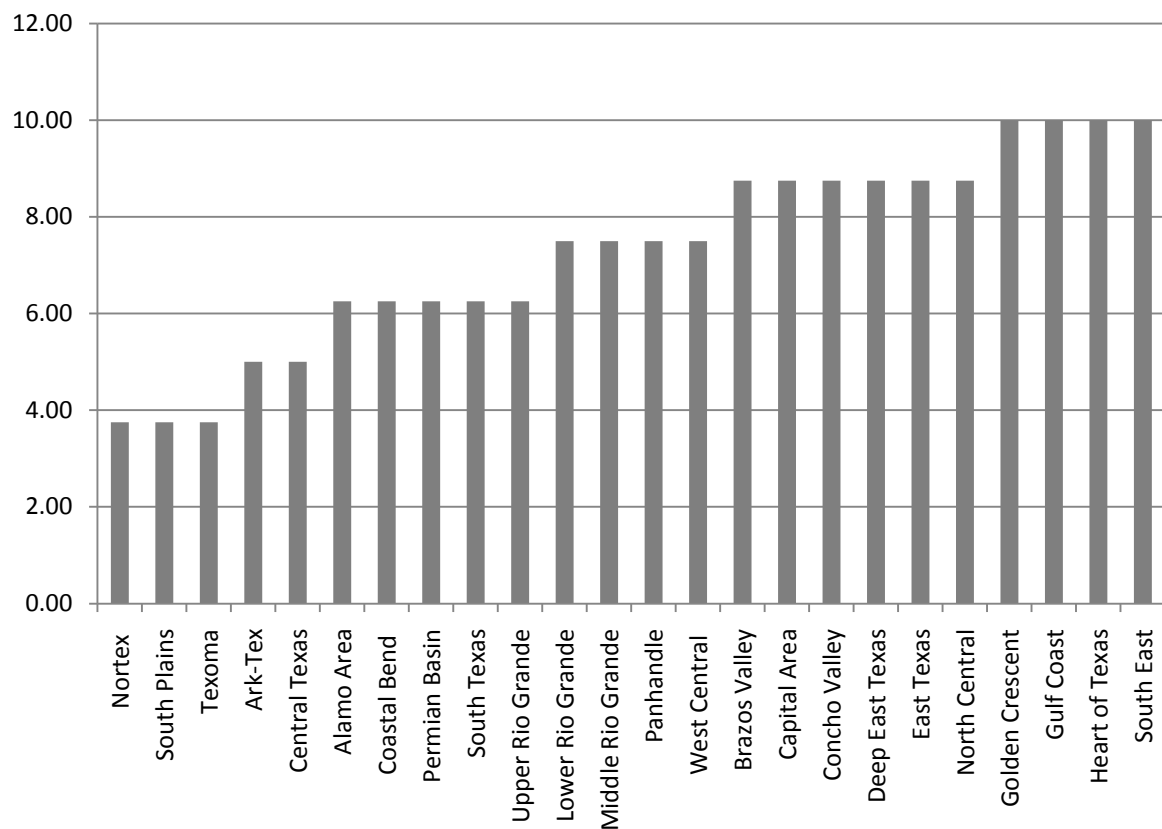


Figure 3.5: Policies, Tools, and Strategies Scores by Region

3.6. Component #5: Implementation Mechanisms

In this case, the research team argued the relevance of having certain instruments or methods to put the plan into practice as a vital requirement for its success. However, it was not as simple as just defining an implementation mechanism. In order to realize this concept, the team outlined some specific quantifiable dimensions that aimed at representing ways of identifying the capacity of the plans to succeed:

- *Action plan*: does the plan include specific activities, and actors involved, that the region will pursue to implement the goals and objectives through various policies, tools, and strategies already presented.
- *Relationship of actions to achieving goals*: what is the relationship between actions presented and achievement of one of the four goals previously discussed (for this element 0 = no relationship, 1 = relationship to some goals, 2 = relationship to all goals).
- *Prioritization of actions*: of the actions to be taken, does the plan establish a ranking or priority of those listed.
- *Timeline for implementation*: at what point in time will the actions be taken and are actions in a logical order to improve the outcome.
- *Review of plan to determine effectiveness*: are there statements within the plan explaining when it will be reviewed to assess implementation, successes, and failures.

- *Scheduled plan updates*: when will the plan be reviewed and modified to keep it current and reflect new regional activities or developments.

This component of the plan had the lowest mean value of 5.80, with scores ranging from a low of 1.43 to a high of 9.29 (Table 3.12).

Table 3.12
Implementation Mechanisms Score Statistics

Mean	5.80
Standard Deviation	2.10
Range of Values	1.43-9.29

The score ratings on this factor are displayed in Table 3.13 and Figure 3.6 and show that the regions were almost equally distributed along the lowest to highest rating. This indicates that while most regions included some implementation mechanisms, there was considerable variation in the degree to which the plans met any criteria specified above. For example, every plan addressed to some extent an action plan and future coordination efforts. Additionally, all but one plan also addressed the relationship of actions to goals. However, one-half of the plans did not include prioritization of actions and scheduled updates to the plan.

Table 3.13
Implementation Mechanisms Region Rating

Quartile	Scores	Regions
Lowest	1.43-3.57	Ark-Tex, West Central, Coastal Bend, Middle Rio Grande, South Plains
Low	4.29-5.00	Central Texas, Gulf Coast, Nortex, Texoma, Golden Crescent
High	5.71-7.14	Alamo Area, Lower Rio Grande, South Texas, North Central, Panhandle, Deep East Texas, East Texas
Highest	7.86-9.29	Brazos Valley, Permian Basin, South East, Upper Rio Grande, Capital Area, Heart of Texas, Concho Valley

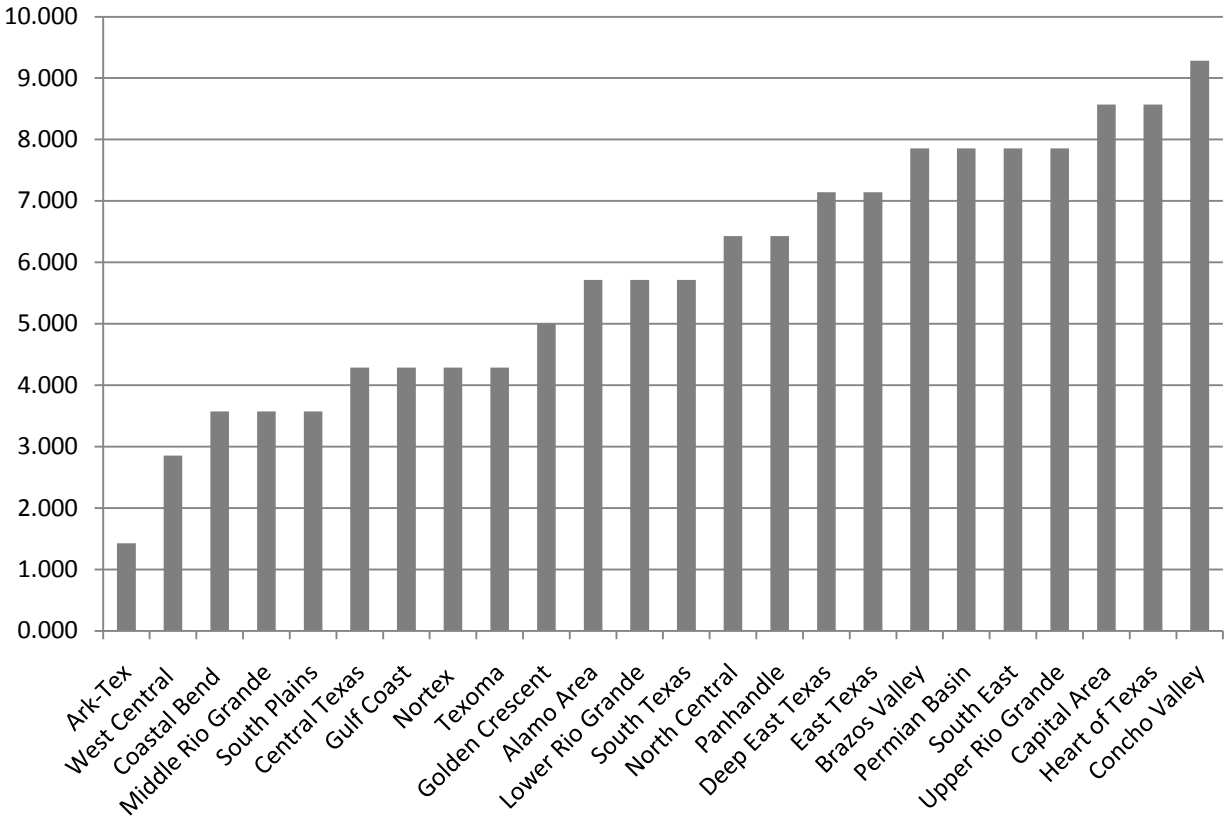


Figure 3.6: Implementation Mechanisms Scores by Region

4. SURVEY FINDINGS

As previously stated, the survey was targeted at lead agency representatives who spearheaded the planning process. To ensure that the survey included the appropriate individuals, respondents were first asked a set of five screening questions to determine whether they were familiar with the contents of the plan and whether they were personally involved in the plan development process. The survey was conducted over a three-month period, from April 2009 to June 2009. The sections below summarize the major findings from the survey effort; full details on the survey, including the survey instrument itself and the quantitative results of the survey, can be found in the Appendix.

The survey was comprised of 31 closed and open-ended questions and was broken into four major sections. The first section of the survey, containing nine questions, sought to understand the nature of the planning process itself, including the identification of major participants in the development of coordinated plans, the relative levels of involvement by each of these stakeholders, as well as the methods used in the plan development process. The second section, containing nine questions, sought to understand the outcomes emerging from the planning effort, including the types and levels of interagency coordination that emerged and the types of strategies or innovations emerging from this coordination. The third section, also containing nine

questions, was aimed at obtaining the respondents’ assessment of the planning process, including the identification of possible barriers to enhanced coordination, strengths and weaknesses of the resulting plans, areas that could be improved upon, and also any service innovations or best practices that had resulted from the planning process. The fourth and last section, containing four questions, dealt with each planner’s leadership style.

4.1. Part 1: Planning Process

The planning process involves a variety of activities including the identification of major stakeholders in the development of coordinated plans, their involvement level, as well as the methods used in the plan development process. First, we will discuss the identification of the stakeholders involved in the coordinated regional transit planning process, as well as the types of activities used to involve them. There was a wide range of organizations, public and private, that were active participants in the planning process, such as public transportation providers, the Workforce Development Board, state and district-level representatives from the state Department of Transportation, and representatives from the Departments of Aging and Disability and Health and Human Services; finally, the public at large was also mentioned as a participant. Partners that were generally not involved in these efforts but that provide transportation-related services include intercity and private transportation providers, school transportation providers, and faith-based transportation providers. Table 4.1 shows the agencies involved and their level of involvement as indicated in the plans.

Table 4.1
Group and Agency Involvement in the Development of Coordinated Transit Plans

Agency	Very Involved	Somewhat Involved	Not Involved	No Opinion
TxDOT Austin	57%	43%	0%	0%
TxDOT District	74%	26%	0%	0%
Council of governments (COG) or regional planning commission (RPC)	78%	13%	9%	0%
Metropolitan planning organization (MPO)	57%	26%	4%	13%
County governments	22%	65%	13%	0%
City governments	22%	61%	17%	0%
Economic development agencies	22%	43%	35%	0%
Public safety agencies	0%	26%	74%	0%
Health and Human Services Commission (HHSC)	43%	43%	9%	4%
Department of Aging and Disability Services (DADS)	57%	35%	9%	0%
Department of Assistive and Rehabilitative Services (DARS)	22%	61%	13%	4%
Department of Family and Protective Services (DFPS)	9%	43%	43%	4%
Department of State Health Services (DSHS)	22%	43%	30%	4%
Workforce Development Board	74%	22%	4%	0%
Medical Transportation Program (MTP)	52%	35%	13%	0%

(Table 4.1 Continues)

(Table 4.1 Continued)

Agency	Very Involved	Somewhat Involved	Not Involved	No Opinion
Public transportation providers	91%	9%	0%	0%
Client transportation providers	35%	35%	17%	13%
City-to-city bus companies	13%	17%	61%	9%
Private transportation companies	22%	22%	52%	4%
Faith-based transportation programs	9%	35%	43%	13%
School district transportation departments	4%	22%	70%	4%
Human service or social service agencies	13%	70%	13%	4%
Veterans' affairs organizations	4%	48%	39%	9%
Community advocates	13%	61%	26%	0%
Business community	9%	52%	35%	4%
General public	22%	65%	13%	0%
Other	9%	4%	4%	83%

Note: Row totals may not all add up to 100% due to rounding.

A variety of methods were used to solicit input from these groups and agencies. All of the coordinated planning efforts included formal meetings, and most also included surveys. Focus groups and public workshops were also used in a large majority of the regions (see Table 4.2).

Table 4.2
Methods for Involving Agency Partners

Involvement Methods	Responses
Meetings	23 (100%)
Surveys	20 (87%)
Focus Groups	15 (65%)
Workshops	13 (57%)
Other	13 (57%)

Of interest was the degree of public involvement in developing the plan, in particular persons who are dependent on public transportation services. All respondents indicated that they made efforts to solicit public input through a variety of approaches, including advertisements (radio, TV, posters), word-of-mouth, newsletters, surveys, and public meetings. As noted in Table 4.1 above, while the general public was not considered very involved in the planning process, two-thirds of the respondents indicated that the public was somewhat involved.

In addition to the agencies and partners included in the planning effort, respondents were further asked about the relevance of various inputs into the planning process. Table 4.3 shows the identified issues or concerns that were relevant in the planning efforts. Nearly all of the respondents reported that the identification of gaps in service and identification of stakeholders were very relevant to their planning processes; further, the majority reported that data, public involvement, and funding sources were also relevant.

Table 4.3
Relevance of Inputs into the Planning Process

	Very Relevant	Somewhat Relevant	Not Relevant	No Opinion
Demographic and Geographic Data	83%	17%	0%	0%
Identifying Stakeholders	96%	1%	0%	3%
Inventory of Transit Providers	74%	26%	0%	0%
Public Involvement	78%	17%	1%	4%
Identifying Barriers and Constraints	91%	2%	0%	7%
Established Goals and Objectives	65%	35%	0%	0%
Identifying Gaps in Service	96%	4%	0%	0%
Action Plans	87%	13%	0%	0%
Funding Sources	74%	26%	0%	0%
Other:	0%	4%	0%	96%

Note: Row totals may not all add up to 100% due to rounding.

While not specifically identified as a goal in either HB 3588 or SAFETEA-LU, an indirect effect of improved service coordination is the stimulation of economic development in rural areas. Not only does improved mobility increase access to employment and employment-related services (especially for poorer rural residents), but also more efficient mobility improves the ability of rural communities to attract people, businesses, and industry. We sought to determine whether promoting economic development was identified as a specific objective in the planning process.

The importance of improved mobility in promoting economic development resonated with a majority of the respondents; two-thirds (65%) stated that their region’s plan included objectives related to economic development. Of the agencies typically involved in this aspect of the planning process, the Texas Workforce Agency and city economic development officials were identified as being very or somewhat involved by 94% and 80% of the respondents, respectively (see Table 4.4).

Table 4.4
Agencies Involved in Economic Development Planning

	Very Involved	Somewhat Involved	Not Involved	No Opinion
Texas Workforce Agency	74%	20%	4%	0%
Chamber(s) of Commerce	6%	34%	54%	6%
City Economic Development Officials	6%	74%	20%	0%
County Economic Development Officials	14%	46%	34%	6%
Small Business Development Corporation	14%	6%	66%	14%
Other	34%	14%	6%	0%

We further probed the respondents as to the specific actions included in their plans to promote economic development. As shown in Table 4.5, almost all respondents identified transportation

to area employers as the most important issue (96%), followed by transportation to transit providers (91%). Access to job training centers and post-secondary education centers was also important (87%), as well as access to business centers (83%). Improved transportation to local government and to childcare centers was also identified by over one-half of the respondents. It is evident that the main purpose of improving transportation and transit in general is very much related to the need to have access to employment opportunities and businesses.

Table 4.5
Improving Transit to Employment-Related Centers

Locations	Yes	No	Don't Know	N/A
Daycare/childcare centers	57%	39%	4%	0%
Area employers	96%	4%	0%	0%
Job training centers/post-secondary education centers	87%	9%	4%	0%
Transit providers	91%	9%	0%	0%
Commercial corridors	48%	39%	13%	0%
Business centers	83%	17%	0%	0%
Local government	70%	30%	0%	0%
Other:	0%	0%	0%	100%

Besides increasing access to employment-related centers, we also inquired as to the type of actions included in the plan aimed at promoting local business. Over 80% of the respondents reported including the placing of transit stops, stations, or transfer points in their plans. Approximately one-half of the respondents also included better signage, while just over one-third included pedestrian improvements (see Table 4.6).

Table 4.6
Actions to Promote Local Business

Activity	Yes	No	Don't Know	N/A
Pedestrian improvements	35%	65%	0%	0%
Bicycle routes	9%	87%	4%	0%
Better local signage	48%	48%	4%	0%
Plaza/public spaces	13%	83%	4%	0%
Placing transit stops, stations, or transfer points	83%	17%	0%	0%
Other:	0%	0%	0%	100%

4.2. Part 2: Plan Outcomes

In addition to questions about the planning process, respondents were further asked about the types of outcomes that emerged from the coordinated planning effort. A major goal of the coordination effort is to encourage efforts aimed at enhancing efficiency in the provision of services. To understand the areas in which the coordinated planning effort may have encouraged such an outcome, respondents were asked whether the planning efforts led to interagency agreements in several key areas where coordination may lead to greater efficiencies.

Specifically, an objective of the coordinated transit and human services requirement is to foster interagency coordination on efforts that may jointly benefit multiple partners and stakeholders. Respondents were asked about the types of coordination recommended in the plan. As shown in Table 4.7, all (100%) of the respondents indicated that the pooling of agency resources and improved service quality were desired outcomes of coordination. Most respondents indicated that interagency communication (96%), service marketing (91%), seamless transit services (91%), and customer information (91%) were included as objectives in their plans. Fewer respondents (35%) cited coordinated strategies for meeting insurance requirements.

Table 4.7
Coordination Efforts Included in the Plan

Coordination Efforts	Yes	No	Don't Know	N/A
Communication between agencies	96%	4%	0%	0%
Pooling of resources	100%	0%	0%	0%
Marketing of services	91%	0%	9%	0%
Increased level of service	100%	0%	0%	0%
Improved quality of service for users	100%	0%	0%	0%
Driver training	65%	30%	4%	0%
Increase funding	87%	9%	4%	0%
Insurance requirements	35%	52%	13%	0%
Creating seamless transit services	91%	4%	4%	0%
Improve customer information	91%	0%	9%	0%
Other:	9%	0%	0%	91%

Beyond detailing the types of coordination recommended within the plan, respondents were also asked whether the planning effort resulted in formal interagency agreements for the pooling or coordination of services. There are specific areas in which the planning efforts have results on interagency agreements. As shown in Table 4.8, such agreements were most common for vehicle purchases, service delivery, driver training, and website development. A majority of agencies indicated that they were currently in the process of developing agreements related to fuel purchasing, dispatching, health and fleet insurance, and advertising. For example, in the area of vehicle purchasing, there had already been a 43% success on agreements, and the agencies were

still working on this area (30%), while in terms of health insurance, there was no agreement yet, so agencies reported 96% effort in this regard. A subsequent follow-up effort will be necessary to determine whether these agencies are successful in putting these agreements in place.

Table 4.8
Interagency Coordination Agreements

Areas of Coordination	Yes	In Progress	No	N/A
Vehicle Purchases	43%	30%	26%	0%
Fuel Purchases	17%	52%	30%	0%
Delivery of Service	39%	17%	43%	0%
Vehicle Maintenance	22%	43%	35%	0%
Dispatching	9%	61%	30%	0%
Fleet Insurance	9%	78%	13%	0%
Health Insurance	0%	96%	4%	0%
Advertising	17%	57%	26%	0%
Driver Training	39%	35%	26%	0%
Website	43%	30%	26%	0%
Printing	35%	35%	30%	0%

Similarly, respondents were asked whether the coordinated planning efforts led to any modifications to the transit services provided to the rural portions of their service areas. As shown in Table 4.9, 12 respondents—52% of the total—indicated that they had developed such an arrangement, primarily to the demand-response service. These new arrangements included combining/sharing of trips between providers, sharing scheduling, expanding service to new groups (from elderly to general public), combining call centers, and adding more vehicles.

Respondents were also asked whether they had established any new rural transit services as a result of the planning effort. Twelve respondents indicated that they had done so. Of these, 11 indicated that they had already implemented the newly created service. The new services included fixed route, demand response, and flexible route (see Table 4.9).

Table 4.9
Changes to Rural Transit Services

Type of Service	Existing	Modification	New
Changes in Services	NA	52%	52%
Fixed Route with ADA Paratransit	43%	4%	17%
Commuter/Express Bus Routes	13%	0%	9%
Demand Response for the General Public	78%	30%	17%
Flexible Routes	13%	0%	13%

(Table 4.9 Continues)

(Table 4.9 Continued)

Type of Service	Existing	Modification	New
Carpool/Vanpool	26%	0%	0%
Rail Transit	4%	0%	0%
Other	30%	17%	9%
Don't Know	4%	0%	0%
None	4%	48%	48%

Outreach to clients is another area in which coordination could result in increased efficiencies. Respondents were asked whether they had implemented any outreach efforts as a result of the planning process. As shown in Table 4.10, the agencies had implemented or were in the process of implementing various outreach strategies, particularly promoting the benefits of transit, advertising services, and website development. The most relevant area had been on promoting the benefits of transit (65%) and on advertising services (52%).

Table 4.10
Changes to Outreach Strategies

Outreach Strategies	Yes	In Progress	No	N/A
Market Research	39%	43%	17%	0%
Website Development	48%	35%	17%	0%
New Route Maps and Schedules	39%	17%	43%	0%
Advertising Services	52%	13%	35%	0%
Promoting Benefits of Transit	65%	17%	17%	0%
Ridership Campaigns	39%	39%	22%	0%
Other:	13%	0%	0%	87%

4.3. Part 3: Plan Assessment

Next, we sought to understand barriers and opportunities for implementing the coordinated transit and human services plans. The objective for this research was to determine the main problems planning agencies were encountering to successfully implement their proposals. Indeed, knowing the barriers is the only way to overcome them. To make planners better understand this, respondents were asked about the extent to which various factors were viewed as being a barrier to the implementation of these plans. As shown in Table 4.11, the amount of funding available and funding regulations were viewed as major barriers to the implementation of coordinated transit and human services plans, as were service restrictions embedded in the Medicaid Medical Transportation Program. It is relevant to point out that the most important barrier was lack of funding (96%), and the second most relevant was related to restrictions of Medicaid medical. While some of these barriers are more difficult to overcome, there are others that should be easier and are reachable in the short term, such as jurisdictional or service boundaries (43%), hours of operation (30%), or protection of turf (48%).

Table 4.11
Perceived Barriers to the Implementation of Coordinated Plans

Barriers	Strong Barrier	Weak Barrier	Not a Barrier	No Opinion
State and Federal Funding Regulations	61%	26%	13%	0%
Lack of Funding	96%	0%	4%	0%
Insurance Requirements	13%	52%	35%	0%
Medicaid Medical Transportation Restrictions	87%	4%	9%	0%
Jurisdictional or Service Boundaries	43%	30%	26%	0%
Standardizing Policies/Operations	26%	39%	30%	4%
Hours of Operation	30%	43%	22%	4%
Alternative Fuel Requirements	39%	35%	26%	0%
Protection of Turf	48%	35%	17%	0%
Lack of Trust among Agencies	39%	39%	17%	4%
Other:	30%	0%	0%	70%

To understand the funding issues in each of these districts, researchers asked respondents about the sources of operating funds in their jurisdictions. Because sources for operating revenues differ from what is used for the purchase and acquisition of capital investments, respondents were asked separately about both revenue sources. Table 4.12 shows sources of operating funds and Table 4.13 shows sources of capital funds.

As shown in Table 4.12, most jurisdictions indicated that income for operating funds came from a variety of sources, both local and external. The largest sources came from passenger fares (74%), contributed services—non cash (70%), contract revenues (61%), advertising or other generated transit income (61%), local governments (61%), donations (57%), and federal programs for local match (48%). While only 26% of respondents indicated that they had adopted a sales tax aimed at supporting transit operations, 65% nonetheless indicated that their jurisdictions were in the process of attempting to adopt this revenue stream. This is similar to funding from local sales taxes for economic development that is currently only 13% but is 65% in progress. These two sources of income are the highest ones reported as “in progress.”

Table 4.12
Sources of Operating Funds

Operating	Yes	In Progress	No	Don't Know	N/A
Passenger fares or fare equivalents	74%	9%	9%	8%	0%
Revenues earned from contracts to deliver service	61%	17%	9%	13%	0%
Advertising or other transit-generated income	61%	17%	13%	9%	0%
Local sales tax dedicated to transit	26%	65%	0%	9%	0%
Local sales tax for economic development used to fund transit	13%	65%	0%	22%	0%
Local government general fund revenues	61%	22%	9%	8%	0%
Contributed services (non-cash)	70%	17%	4%	9%	0%
Donations (cash)	57%	30%	4%	9%	0%
Funds from federal programs for local match (ex. Community Development Block Grants)	48%	35%	9%	8%	0%

Respondents indicated that funds for capital purchases came primarily from transportation development credits, which were derived from toll revenues (65%) as well as from the general funds of local governments (61%). The third largest source came from federal programs used for local match. Most, however, were seeking out additional sources of revenue, with the majority of respondents indicating that they were in the process of adopting a sales tax (70% and 78% dedicated to transit and economic development, respectively) or bonds (78%) to support capital acquisitions (see Table 4.13).

Table 4.13
Sources of Capital Funds

Source of Capital	Yes	In Progress	No	Don't Know	N/A
Local sales tax dedicated to transit	26%	70%	0%	4%	0%
Local sales tax for economic development used to fund transit (4A/4B)	13%	78%	0%	9%	0%
Local government general fund revenues	61%	30%	4%	5%	0%
Funds from federal programs used for local match	52%	39%	0%	9%	0%
Bond revenue	17%	78%	0%	5%	0%
Transportation development credits	65%	22%	4%	9%	0%
Other:	13%	0%	9%	0%	78%

In terms of the longer-term outcomes of the coordinated planning effort, the majority (83%) of respondents indicated that the coordinated planning effort resulted in more interaction between transit agencies and health and human services providers, while 17% reported that it had no change on the levels of interaction that occurred. None of the respondents indicated that the effort resulted in less interaction.

Respondents were further asked about the types of actions taken to ensure the implementation of the coordinated transit and human services plans. Twenty-two, or 96%, of the respondents indicated that they had developed an advisory group or steering committee that held ongoing meetings, and 65% indicated that they had developed a formal staff position tasked with the implementation of the plan. It is a positive observation that none of the respondents indicated that they had done nothing to ensure the implementation of the plan (see Table 4.14). Especially relevant is the creation of a position that is responsible for continuing coordination efforts and implementing the proposals.

Table 4.14
Actions Taken to Implement the Coordinated Plans

Type of Action	Regions Responding
Continued meetings of the advisory group or steering committee	96%
Created a new job position (ex. Mobility Manager)	65%
Formed a new agency	0%
Did nothing	0%
Other	48%

The final section of Part 3 consisted of four open-ended questions that were designed to solicit the respondents’ assessment of the strengths and weaknesses of the resulting plans and service innovations or best practices that emerged from the planning process.

When probed as to the most successful aspects of the plan, over one-half—13 respondents—stated that getting to know the various service providers and the services provided, including the gaps in service, was the most successful. Two reflective comments are:

- *“Bringing players together and getting dialogue from those that need and those who can provide.”*
- *“Got everyone in one room and brought in agencies that had not been involved before. Realized people were falling through the cracks with little or no service.”*

Other, albeit less noted, successful aspects included the development of a workgroup (three respondents), the development of pilot projects or new projects (two respondents), and alignment of the plan with other regional plans (one respondent).

With respect to the least successful aspects of the plan, five respondents lamented the lack of continuous involvement of stakeholders. Other concerns were that the plan was too long, the goals were too broad, there was no funding for implementation, responsibilities for implementation were not assigned, and there was a lack of trust building among the agencies.

When probed as to how they would improve the plan in the future, the most common responses included streamlining the goals and objectives, increasing participation of various agencies, and continuously updating the plan.

We next asked the respondents to identify innovative or best practices that resulted from the planning process. Twenty-one of the 23 respondents identified one or two best practices, and while the responses were varied, there were some common themes:

- Consolidation or coordination of some aspect of their services with other agencies, including transit services, scheduling, marketing, and websites (nine respondents).
- Expansion of services to previously un-served areas or to new clients (six respondents).
- Holding of regular meetings and sharing of information between agencies (four respondents).
- Creation of new services that had resulted, such as a vanpool for dialysis patients, a shuttle service, and a Retired Volunteer Service Program (RVSP) curb-to-curb service for seniors (three respondents).

4.4. Part 4: Respondent's Leadership Style

A final set of four questions was aimed at understanding how the respondents evaluated their role as a leader in the planning process, including their leadership style and their responsibility for the success or failure of the planning process. When asked to describe their leadership style, one-half (12) of the respondents stated that their role was to coordinate or facilitate the process and to keep the process moving. Eight respondents also stated that they served as the technical or information resource for the process. When probed as to whether they felt personally responsible for the success or failure of the planning process, again one-half (12) stated that they did not because the process was a team effort. Another three respondents stated that although it was a team effort, they still felt personally responsible. However, seven respondents stated that leading the effort was their job and so they were ultimately responsible for the success or failure of the planning process.

We also asked the respondents what problems they personally encountered while working on the plan. This question resulted in a variety of responses, although the most common responses included getting agencies to open up and trust each other (four respondents) and getting agencies to see the benefits of coordination (three respondents). Another three respondents also noted staffing and personnel issues, which included interpersonal relationships as well as having staff support at meetings or workshops to take notes in meetings, for example. Some telling comments include:

- *“Public involvement was a problem. At committee meetings, people show[ed] up but would not obligate themselves [their agency] to the coordination effort. Had communication difficulties with COG due to new director.”*
- *“Always had good cooperation in region, but not always able to get state agencies to participate in ‘open way.’ Come and say they want to participate, can’t afford to be seen as not playing, but sent lower-level official with no authority. ABC requirements for sunset did not include coordination (more concerned with self-preservation) and not graded on process anyway.”*
- *“Trying to work with different providers and TxDOT in beginning and getting committee of individuals not to think ‘what am I getting out of it’ and overcoming territorial nature and tendencies. We are now headed in correct direction with a mobility manager.”*
- *“Trust issues in the beginning and reluctant to share information especially on funding. Success of project has provided foundation for future cooperation and coordination.”*

Finally, the respondents were asked how important the success of the planning effort was to them personally, either to their career or to the improvement of the quality of life in their community. The overwhelming majority, 17 respondents (73%), stated that improving the quality of life in the community was most important to them. Nine respondents also stated that they felt a personal sense of gratification for improving the services in the community. Only three respondents stated that the success of the planning effort was important for their career. The following quotes provide a general sense of the respondents' answers:

- *“[The process] does not make or break me professionally, but is important to develop a better system for the region. No personal gain. Just doing my job.”*
- *“Very important since if I agree to do job I should do what I'm paid to do. I believe in the ultimate goal of providing service to those that need them and making public transit method of choice.”*
- *“I have spent the better part of two years entrenched in coordination and continue to oversee implementation. I have personal ownership but for betterment of region and reducing barriers, especially for those who are transit dependent across region.”*

5. BEST PRACTICES AND CHALLENGES IN TRANSPORTATION COORDINATION

The preceding sections analyzed the most recent planning efforts in Texas to coordinate transportation services for transit-dependent residents in the rural regions of Texas. For many transportation providers, this has been an ongoing effort; however, there are still many opportunities for improvement. The objective of this study was to identify planning processes and outcomes that have proven most successful at coordinating service and fostering innovation across transit programs, as well as those that have proven less successful. Additionally, the research team sought to identify practices for expanding project benefits beyond conventional transportation issues to include opportunities for rural job creation and economic development.

Guided by the research and literature on successful strategies for interagency collaboration and transportation coordination, this section compares whether these strategies were applied in the recent public transit coordination effort in Texas and documents other innovative strategies. The strategies for specifically addressing rural mobility and economic development are also identified. This section concludes with a discussion of the continuing challenges in planning for transit coordination.

5.1. Best Practices in Transportation Coordination Planning Efforts in Texas

Our previous review of the literature identified several generic strategies for successful interagency collaboration. Their applicability to the regional transit coordinating planning process recently undertaken in Texas is explored here using Agranoff and McGuire's (2001) classifications that were outlined in Section 1: Activating, framing, mobilizing and synthesizing. The plan review showed that many of these strategies were employed in the regional planning process.

Activating

Careful selection of participants and stakeholders and the needed resources is an important first step in collaboration. Participants bring the needed skills, expertise, knowledge, and resources to a collaboration effort. In their plans, all regions identified a coordination committee that included representatives from key agencies and other stakeholders (client groups, public officials) and that would spearhead the coordination effort. Many regions also identified the potential funding sources and other resources (e.g., use of technology, provision of staff, employment of a mobility manager) needed to implement their coordination strategies.

Framing

Framing helps establish an identity and culture for a collaborative effort and also agreement on the roles and rules for the participants. All but four regions adopted a vision statement indicating a shared understanding of what the collaborating partners wanted to accomplish. Several regions also planned for changes to existing institutional structures for service delivery as well as assignment of roles and responsibilities for carrying out various tasks.

Mobilizing

Mobilizing activities are those used to build commitment and support from participants and external stakeholders. Various strategies were identified in the plans for accomplishing this. Building a broad-based coalition to support the coordination effort is a first step. Most regions identified the formation of a formal committee (a steering or working group) that included service providers, clients (or client advocates), public officials, and civic leaders.

Goal setting and outlining a plan of action also help motivate participants in a collaborative effort, and sharing these plans with external stakeholders builds support for the effort. While all regions formulated goals, seven regions (Capital Area, Central Texas, Heart of Texas, Permian Basin, Brazos Valley, Upper Rio Grande, and West Central) developed very detailed plans that addressed the state's three goals of eliminating waste in the provision of public transportation services, generating efficiencies that will permit increased levels of service, and reducing air pollution. These regions further outlined detailed action plans with assignment of tasks and responsibilities for achieving coordinated transportation services.

Some regions also proposed an evaluation process (or stated they would develop one) for determining and sharing achievement of goals, for example, benchmarks and public report cards, which will provide both participants and external stakeholders a means of measuring the performance of the coordination effort. To build commitment from participants, some regions adopted formal agreements that laid out the ground rules for the collaborative effort to keep participating agencies committed to the collaboration.

Synthesizing

Synthesizing involves tactics used to foster exchange and build relations and trust among collaborators. Establishing schedules for ongoing meetings (e.g., monthly, quarterly) to facilitate interaction, discussion, and information sharing is one way of achieving this that was identified in many plans and also was echoed by respondents in the phone interviews.

The establishment of formal governance structures also develops the capacity to make joint decisions about setting priorities and meeting community needs (Page, 2008). A few regions identified the formal governance structures, such as the lead administrative agencies and supporting committees, that would be established to lead the coordination effort.

Coordination Outcomes

Research on transportation coordination efforts around the nation has also identified innovative and successful strategies for improving the efficiency and effectiveness of transportation services. Our plan review and telephone survey indicate that many of these strategies are currently being implemented or are under consideration for implementation in the regions. The more common strategies identified by one-half or more of the regions include the following:

- Employment of a mobility manager/broker to coordinate services and help customers navigate the various transportation options and service providers to find the most effective means for meeting their individual needs.
- Joint training of drivers or staff.
- Shared costs of vehicle maintenance and/or storage.
- Joint procurement of vehicles, equipment, fuel, or insurance.
- Centralization of functions, such as reservations, scheduling, dispatching, and consumer information/marketing (e.g., brochures, websites).
- Joint delivery of service.

Other less-noted strategies include:

- Standardization of requirements.
- Mentoring and support to smaller transportation providers (e.g., providing advice, training, replacement vehicles, vehicle maintenance, training, insurance).
- Contract or purchase of services.
- Consolidation of services.

Addressing Rural Transit Services and Economic Development

A specific intent of this study was to examine the planning for coordination of transit services in rural areas and to address rural job creation and economic development. The transit needs of the rural portions of the planning regions were identified in many plans, and two-thirds of the survey respondents indicated that promoting job creation and economic development was an important objective. The resulting strategies for coordinating transportation services identified in most region plans and the survey broadly addressed both the urban and rural areas of the planning regions. Nonetheless, a few planning regions outlined specific strategies for rural transit and economic development. Some examples of these strategies are described in Table 5.1.

Table 5.1
Rural and Economic Development Related Transit Coordination Strategies

Service/Project (Region)	Description	Collaborating Agencies	Anticipated Benefits
Create one regional service area that blurs county lines and proves one seamless service. Provide a “family of services” designed around meeting service needs. (Alamo Area)	Replace the predominant paratransit mode of service for rural areas with a variety of coordinated services based on specific needs and ridership potential for different areas based on more detailed needs analysis.	<ul style="list-style-type: none"> • Alamo Regional Transit (ART) • Capital Area Rural Transportation System (CARTS) • Human services agencies (e.g., Area Agency for Aging, WorkSource Board) • Paratransit providers 	<ul style="list-style-type: none"> • Respond to consumer needs and reduce inefficient and expensive services
Integrate scheduling for rural trips (Heart of Texas)	One-stop shop for requesting demand responsive transportation services. The regional scheduling project will utilize facilities and infrastructure currently in place. Individual public transportation provider within the region provides a scheduling person(s) to answer calls for trip requests, modification, or cancellation.	<ul style="list-style-type: none"> • Heart of Texas Council of Governments (HOTCOG) • Private paratransit providers • TxDOT 	<ul style="list-style-type: none"> • More efficient and effective trip scheduling • Improved customer service • Better utilization of facilities, equipment, and personnel • Increase in client trips
Create a rural transit/workforce voucher program (Heart of Texas)	Increase access to provide dependable transportation services for job seekers.	<ul style="list-style-type: none"> • Heart of Texas Workforce Board • Private paratransit service providers • Area employer 	<ul style="list-style-type: none"> • Reliable access for job seekers in rural areas • More reliable workforce • Better trained workforce • Increased ridership
Integrate dispatching for urban, rural, and MTP trips (Heart of Texas)	A centralized dispatch function to provide citizens a one-stop shop for checking vehicle arrival times, same-day trip requests, and current trip information.	<ul style="list-style-type: none"> • HOTCOG • Waco Transit • All private paratransit providers 	<ul style="list-style-type: none"> • Real-time trip modifications and/or additions • Improved customer service • Better utilization of equipment and personnel • Increase in client satisfaction
Create a Job Access Reverse Commute program (Lower Rio Grande)	Increase access to provide dependable transportation services for job seekers.	<ul style="list-style-type: none"> • Not identified 	<ul style="list-style-type: none"> • Reliable access for job seekers in rural areas

(Table 5.1 Continues)

(Table 5.1. Continued)

Service/Project (Region)	Description	Collaborating Agencies	Anticipated Benefits
Move to fixed-schedule paratransit	Replace one-on-one paratransit with a fixed-schedule system throughout the service area.	<ul style="list-style-type: none"> Not identified 	<ul style="list-style-type: none"> Reduced cost through grouping of trips Predictable service schedules
Coordinate transportation for senior center clients	Area Agency on Aging reimburses rural transportation providers for transportation of clients to senior centers.	<ul style="list-style-type: none"> Senior centers Rural public transportation providers Area Agency on Aging 	<ul style="list-style-type: none"> Increased riders Reduced cost to senior centers
Develop a mentoring program and increase coordination with small operators (South Texas)	A mentoring and support program to encourage small agencies to seek advice, support, training, or vehicles.	<ul style="list-style-type: none"> El Metro and El Aguila 	<ul style="list-style-type: none"> Improved service
Create a long-distance ride-sharing program (South Texas)	A ride to work and van pooling program will be initiated by identifying the potential demand with eventual transfer of the program to the mobility manager.	<ul style="list-style-type: none"> Not identified 	<ul style="list-style-type: none"> Improved service
Overcome boundary issues (West Texas)	Developing flexible inter-local agreements with respect to passengers and scheduling where the best groupings can occur.	<ul style="list-style-type: none"> Not identified 	<ul style="list-style-type: none"> Improved access to services
Provide a “family of services” designed around meeting service needs. (Alamo Area)	Replace the predominant paratransit mode of service for rural areas with a variety of coordinated services based on specific needs and ridership potential for different areas. Will include fixed-route, flex-route, rideshare, dial-a-ride, fixed-schedule, shuttles, and paratransit.	<ul style="list-style-type: none"> Not identified 	<ul style="list-style-type: none"> Respond to consumer needs and reduce inefficient and expensive services

As can be observed in this table, some regions that formulated strategies dealing with economic development did not identify the collaborating agency that would support such effort. While this is clearly a limitation, we propose that defining the strategy for the region is still a step in the right direction; there is some more work to be done, but this is planning in the making.

5.2. Challenges

Despite the laudable efforts to coordinate transit services in Texas, there still remain considerable challenges. Most notable are those related to funding and regulations, building trust among partners, and maintaining their commitment to the effort.

Funding and Regulations

As noted in the survey findings, the amount of funding available as well as regulations related to the use of the funds continues to be a major barrier in coordinating services. Providing additional services, especially in rural areas with gaps in services, requires additional funds, which in many rural areas is lacking. As indicated in the survey findings (Section 4), capital and operating funds for transit services come from a large variety of sources that may often come with restrictions in order to maintain accountability. This challenge is more difficult to overcome, as it requires changes in policies by external players and is beyond the control of service providers.

Building Trust

Another major challenge in this planning effort, and indeed any coordination effort, is building trust among partners. Building good relations and developing trust among participating agencies takes time and effort and can be achieved through ongoing communication, regular meetings, dissemination of information, and appeasement of the concerns of participants. While almost all region plans identified the formation of formal working groups that would meet on a regular basis to guide and implement the coordination effort, our telephone survey revealed that in some regions, building trust continues to be a challenge. As noted in the survey findings, close to two-fifths of the respondents noted a lack of trust among agencies and close to one-half noted protection over turf as strong barriers to coordination. However, as noted, developing trust takes time and effort, and it may still be too soon to judge.

Long-Term Commitment

A major challenge encountered by some regions was sustaining the coordination effort over the long term. Several respondents to the telephone survey noted that there was a lack of continuous involvement of partner agencies and that some participating agencies would not obligate themselves to take on responsibilities in the coordination effort, or would send lower-level officials with no authority to make decisions.

5.3. Concluding Remarks

This study examined the recent planning effort in Texas to increase cooperative, systems-level planning across transit programs to increase service efficiency and address local mobility needs. This was an effort spurred by state and federal legislation requiring coordination of transit services between transit providers and human service agencies. Formal guidance for developing these plans was deliberately vague to permit as much flexibility at the local level for developing and implementing the plans.

This study reveals that the 24 Texas transit planning regions employed many strategies identified in the literature for producing successful interagency collaboration. A joint planning effort was undertaken that included many non-traditional transit service partners that entailed an extensive assessment of transit needs in their respective regions and the identification of many areas of inefficiencies and unmet needs. The planning effort has also resulted in the identification of

existing and new areas of coordinated service delivery for improving the efficiency and effectiveness of transit services in the regions.

Significant challenges still need to be overcome, including funding limitations, regulatory restrictions, a lack of trust among some partnering agencies, and the need to maintain commitment to the coordination effort in some regions. At the time this study was conducted, the coordination effort was still a relatively new endeavor. Given sufficient time and effort, however, the last two of these challenges may be overcome.

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APPENDIX
TELEPHONE SURVEY INSTRUMENT

Telephone Survey for UTCM Regional Public Transportation Coordination Plan Study

Name of Person Interviewed: _____
Title/Position: _____
Region: _____
Organization: _____
Date and Time: _____
Telephone Number: _____
E-mail: _____

Hello, my name is _____ with Texas A&M University. We are conducting a survey to identify best practices in regional public transportation coordination planning ranging from conventional transportation issues to rural job creation and economic development. In particular we will be asking questions about the _____ *(insert name of region's plan)* .

Our primary focus is upon the rural areas of the region. The survey should take about _____ minutes to complete.

Read details of information form.

Do you agree to audio recording of the interview for accuracy? Y_____ N_____

Screening Questions:

1. Are you familiar with the details of your region's regional public transportation coordination plan?
 - a. Yes _____ (next question)
 - b. No _____ (ask for appropriate contact, discontinue survey)

2. Were you involved in the formulation of the current regional public transportation coordination plan?
 - a. Yes _____
 - b. No _____

3. What role did you play in the coordination planning process? (Check all that apply)
 - a. Steering Committee _____
 - b. Technical Committee _____
 - c. Public Presenter _____
 - d. Data Collector _____
 - e. Interviewer _____
 - f. Stakeholder _____
 - g. Planning Staffer _____
 - h. Other: _____

4. From the time of the state's mandate to develop a regional public transportation coordination plan in 2005, until the plan was submitted at the end of 2006, how many meetings did your region's steering or advisory committee hold? _____

5. How many of these meetings did you participate in? _____

Section I: Planning Process

1. How would you rank the level of involvement by each of the following agencies in the region’s planning effort?

	Very Involved	Somewhat Involved	Not Involved	No Opinion
TxDOT Austin				
TxDOT District				
Council of governments (COG) or regional planning commission (RPC)				
Metropolitan planning organization (MPO)				
County governments				
City governments				
Economic development agencies				
Public safety agencies				
Health and Human Services Commission (HHSC)				
Department of Aging and Disability Services (DADS)				
Department of Assistive and Rehabilitative Services (DARS)				
Department of Family and Protective Services (DFPS)				
Department of State Health Services (DSHS)				
Workforce Development Board				
Medical Transportation Program (MTP)				
Public transportation providers				
Client transportation providers				
City-to-City bus companies				
Private transportation companies				
Faith-based transportation programs				
School district transportation departments				
Human service or social service agencies				
Veterans’ affairs organizations				
Community advocates				
Business community				
General public				
Other				

2. Which methods were used to solicit input from the **groups or agencies** participating in the regional public transportation coordination planning process? (Check all that apply)

- a. Meetings _____
- b. Surveys _____
- c. Focus Groups _____
- d. Workshops _____
- e. Other _____

3. Of the methods listed in the previous question, which was the most effective?

- a. _____

4. When creating the plan, was the **public** notified so they could provide input?

_____ No (next question)

_____ Yes

i. Was increasing the public's awareness of transportation services identified as part of the regional coordination plan?

ii. Was any of this information provided in Spanish?

_____ No (proceed to iii)

_____ Yes

1. Which methods were in Spanish?

iii. In your opinion, which method for notifying the public was most effective? Why?

5. How relevant are the following elements towards developing the regional public transportation coordination plan for your region?

	Very Relevant	Somewhat Relevant	Not Relevant	No Opinion
Regional Demographic and Geographic Data				
Identifying Stakeholders				
Inventory of Transit Providers				
Public Involvement				
Identifying Barriers and Constraints				
Established Goals and Objectives				
Identifying Gaps in Service				
Action Plans				
Funding Sources				
Other:				

6. Did your region’s plan include objectives related to promoting economic development?

Yes _____ No _____ *(If No, Skip to question 8)*

a. Of the following agencies that promote economic development, how involved was each in including objectives to promote economic development?

	Very Involved	Somewhat Involved	Not Involved	No Opinion
Texas Workforce Agency				
Chamber(s) of Commerce				
City Economic Development Officials				
County Economic Development Officials				
Small Business Development Corporation				
Other:				

7. In your opinion, which agency was most relevant in making sure economic development objectives were included in the plan?

Agency: _____

Why: _____

8. Did the plan include specific activities to promote economic activity, such as providing improved transportation services for rural residents to the following:

Locations	Yes	No	Don't Know
Daycare/childcare centers			
Area employers			
Job training centers/post-secondary education centers			
Transit providers			
Commercial corridors			
Business centers			
Local government			
Other:			

9. Local economic development could also mean the promotion of local businesses attending to local customers. Did the plan envision creating better access within small urban centers with any of the following:

Activity	Yes	No	Don't Know
Pedestrian improvements			
Bicycle routes			
Better local signage			
Plaza / public spaces			
Placing transit stops, stations, or transfer points			
Other:			

Section II: Plan Outcomes

10. Did the regional public transportation coordination plan include any of the following coordination strategies?

	Yes	No	Don't Know
Communication between agencies			
Pooling of resources			
Marketing of services			
Increased level of service			
Improved quality of service for users			
Driver training			
Increase funding			
Insurance requirements			
Creating seamless transit services			
Improve customer information			
Other:			

11. As a result of the coordination plan, has your region implemented, begun the process of implementing, or not implemented any of the following **outreach components**?

	Yes	In Progress	No
Market Research			
Website Development			
New Route Maps and Schedules			
Advertising Services			
Promoting Benefits of Transit			
Ridership Campaigns			
Other:			

12. A goal of the state’s coordination effort is to maximize efficiencies and minimize waste in public transportation. Did the planning effort establish, begin the process of establishing, or not establish agency coordination agreements concerning any of the following?

	Yes	In Progress	No
Vehicle Purchases			
Fuel Purchases			
Delivery of Service			
Vehicle Maintenance			
Dispatching			
Fleet Insurance			
Health Insurance			
Advertising			
Driver Training			
Website			
Printing			
Other:			
Other:			

The following series of questions (13-18) seek to understand whether the development of a regional coordination plan led to the addition or modification of transportation services in your region.

13. What types of public transportation services were available in the RURAL areas in your region PRIOR to developing the regional public transportation coordination plan?

- _____ Fixed Route with ADA Paratransit
- _____ Commuter/Express Bus Routes
- _____ Demand Response for the General Public
- _____ Flexible Routes
- _____ Carpool/Vanpool
- _____ Rail Transit
- _____ Other: _____

i. What agencies were responsible for operating these services?

14. Were there any MODIFICATIONS to EXISTING RURAL public transportation services as a result of developing the regional public transportation coordination plan?

No (*proceed to question 16*)

Yes

i. What type of service was modified? (Only check one)

Fixed Route with ADA Paratransit

Commuter/Express Bus Routes

Demand Response for the General Public

Flexible Routes

Carpool/Vanpool

Rail Transit

Other: _____

ii. What modifications to the service were recommended in the plan?

iii. Have the recommended modifications been implemented?

Yes (*proceed to question 15*)

No

1. Do you think these recommended modifications are likely to be implemented in the foreseeable future?

Yes (*proceed to question 15*)

No

a. Why do you think this is unlikely? (Probe to understand)

15. Was there another MODIFICATION to EXISTING RURAL public transportation services as a result of developing the regional public transportation coordination plan?

No (*proceed to question 16*)

Yes

i. What type of service was modified? (Check all additional modified services)

Fixed Route with ADA Paratransit

Commuter/Express Bus Routes

Demand Response for the General Public

Flexible Routes

Carpool/Vanpool

Rail Transit

Other

ii. What modifications to the service were recommended in the plan?

iii. Have the recommended modifications been implemented?

Yes (*proceed to question 16*)

No

1. Do you think these recommended modifications are likely to be implemented in the foreseeable future?

Yes (*proceed to question 16*)

No

a. Why do you think this is unlikely? (Probe to understand)

16. Were there any NEW RURAL public transportation services added as a result of developing the regional public transportation coordination plan?

No (*proceed to question 18*)

Yes

i. What type of service was added?

Fixed Route with ADA Paratransit

Commuter/Express Bus Routes

Demand Response for the General Public

Flexible Routes

Carpool/Vanpool

Rail Transit

Other

ii. What agency or agencies are responsible for operating this new service?

iii. Has the recommended new service been implemented?

Yes (*proceed to question 17*)

No

1. Do you think these recommended modifications are likely to be implemented in the foreseeable future?

Yes (*proceed to question 17*)

No

a. Why do you think this is unlikely? (Probe to understand)

17. Was there another NEW RURAL public transportation service added as a result of developing the regional public transportation coordination plan?

No (*proceed to question 18*)

Yes

i. What type of service was added? (Check all additional new services)

Fixed Route with ADA Paratransit

Commuter/Express Bus Routes

Demand Response for the General Public

Flexible Routes

Carpool/Vanpool

Rail Transit

Other

ii. What agency or agencies are responsible for operating this new service?

iii. Has the recommended new service been implemented?

Yes (*proceed to question 18*)

No

1. Do you think these recommended modifications are likely to be implemented in the foreseeable future?

Yes (*proceed to question 18*)

No

a. Why do you think this is unlikely? (Probe to understand)

18. What kind of informational or promotional materials were used to inform passengers or stakeholders of transportation services **PRIOR** to developing the regional public transportation coordination plan?

Printed Brochures

Telephone Hotlines

Web Site

Billboards

Radio Advertising

Television Advertising

Information Mailings to Stakeholders

Other

None (*proceed to question 19*)

Don't Know (*proceed to question 19*)

- i. Was increasing the public's awareness of transportation services identified as part of the regional coordination plan?

No (*proceed to question 19*)

Yes

1. What types of information or marketing programs were proposed?

2. Have any of these information or marketing programs been implemented? (Ask for each program identified above)

No (*proceed to question 19*)

Yes

- a. In your opinion how effective was this promotional campaign? (Ask for each program identified as implemented above)

Very Effective

Somewhat Effective

Neither Effective nor Ineffective

Somewhat Ineffective

Very Ineffective

- b. (Ask for each program evaluated) Why do you think this information or promotional program was [Effective/Ineffective]? (Circle one)

Section III: Plan Assessment

19. A barrier is defined as something that obstructs or keeps one program separate from another. The following is a list of items that may create barriers to the development or implementation of the regional public transportation coordination plan. Where would you rank each item on the scale?

	Strong Barrier	Weak Barrier	Not a Barrier	No Opinion
State and Federal Funding Regulations				
Lack of Funding				
Insurance Requirements				
Restrictions of Medicaid Medical Transportation Program (MTP)				
Jurisdictional or Service Boundaries				
Standardizing policies/operations				
Hours of operation				
Alternative Fuel Requirements				
Protection of Turf				
Lack of Trust Among Agencies				
Other:				

20. Federal funding often requires a specified percentage of the total budget to be local-match funds. Has the region implemented, is implementing, or not implemented any of the following methods to generate local-match funds for **operating funding**?

	Yes	In Progress	No	Don't Know
Operating				
Passenger fares or fare equivalents				
Revenues earned from contracts to deliver service				
Advertising or other transit-generated income				
Local sales tax dedicated to transit				
Local sales tax for economic development used to fund transit (4A/4B)				
Local government general fund revenues				
Contributed services (non-cash)				
Donations (cash)				
Funds from federal programs for local match (ex. CDBG)				
Other:				

21. Has the region implemented, is implementing, or not implemented any of the following methods to generate local-match funds for capital funding?

	Yes	In Progress	No	Don't Know
Capital				
Local sales tax dedicated to transit				
Local sales tax for economic development used to fund transit (4A/4B)				
Local government general fund revenues				
Funds from federal programs used for local match				
Bond revenue				
Transportation Development Credits				
Other:				

22. How has the planning process affected interaction between transit and health and human service agencies in your region?

- a. More Interaction _____
- b. No Change _____
- c. Less Interaction _____

23. What has the region done to ensure the plan's coordination efforts are implemented? Has it:
- a. Continued meetings of the advisory group or steering committee _____
 - b. Created a new job position (ex. Mobility Manager) _____
 - c. Formed a new agency _____
 - d. Done nothing _____
 - e. Other: _____

24. How would you improve the plan in the future?

25. What do you think were the plan's most successful aspects?

26. What do you think were the plan's least successful aspects?

27. Every region is subject to unique demographics, needs, and geography. Such diversity often yields innovative solutions by each region. What best practices or service innovations has your region produced or implemented?

Section IV: Respondent's Leadership Style

28. How would you describe your role as a leader during the plan making and implementation process:

.....
.....
.....
.....

29. Do you think you are responsible for the successes or failures of the plan making? How and why?

.....
.....
.....
.....

30. What problems did you, personally, encounter while working on the coordination plan? Explain.

.....
.....
.....
.....

31. How important is the success of this effort for you, personally (an important step in my professional career; being able to improve quality of life in MY community; does not know)

.....
.....
.....
.....



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