



TRANSPORTATION MANAGEMENT & DESIGN, INC.

# North Central Regional Transit District and City of Santa Fe Transit System Consolidation Study

## Task 3D - Fixed Route and Paratransit Analysis of Consolidation Option Alternatives

The *Fixed Route and Paratransit Service Comparison* evaluates the impacts that a potential consolidation between NCRTD and Santa Fe Trails would have on fixed route transit and paratransit service in the City and County of Santa Fe as well as the region. More specifically, this document evaluates how a consolidation would affect agency operations and the passenger experience through changes in service planning and fare structure. Service planning impacts are evaluated using a no consolidation and consolidation scenario, while fare structure impacts are evaluated using a no consolidation scenario as well as three alternatives for consolidation: all routes charge a fare; all routes are fare free; and a mix where some routes charge a fare while others do not.

### Service Planning

Service planning shapes the design and delivery of the current and future transit network. Typical service planning tasks include analyzing service performance, updating the network, and optimizing resources on a recurring basis. However, the previous task work emphasized that NCRTD and Santa Fe Trails fulfill very different mobility roles in the City and County of Santa Fe: NCRTD provides infrequent regional, lifeline service while Santa Fe Trails operates more frequent, local service. Any consolidation option will need to understand how service planning activities will be affected given these distinct roles.

## Analyzing Service Performance

A critical aspect of service planning is the regular monitoring of service performance. This allows an agency to identify opportunities for transit through data-driven analysis and to employ processes to improve and optimize service.

### *Fixed Route Performance Evaluation*

NCRTD has previously released monthly Performance Measure reports to provide data for service evaluation. These measures help identify areas where system performance should be improved and what factors are at play. When applicable, the performance measures are compared to relevant peers and benchmarks. The reports include administrative, fleet, and customer relations measures, as detailed below.

<b>NCRTD Performance Measures for Fiscal Year 2016-2017</b>	
<b>Administrative Measures</b>	Ridership, All Funded Routes
	Ridership, NCRTD Operated Routes
	Monthly Expenditures
	Cost Per Mile
	Cost Per Trip
<b>Fleet Measures</b>	Vehicle Back Up Ratio
	Average Vehicle Age
	Percentage of “On-Time” Preventative Maintenance/Inspections
	Accidents, Major/Minor Tracking
<b>Customer Relations Measures</b>	Complaints
	Incidents

Santa Fe Trails does not post the same monthly updates on performance measures on their website as NCRTD does, but does provide monthly ridership and revenue hours by route as well as associated metrics in the meeting packet for their Transit Advisory Board (TAB) monthly meeting. Both agencies report annual performance measures as mandated by the FTA through the National Transit Database (NTD). This requires annual tracking of ridership, revenue hours, and expenditures for both agencies on a system-wide basis. SFT has recently indicated that they are now in the process of upgrading both data collection and performance monitoring to bring them in line with

industry best practices as a result of recent managerial initiatives. Consolidation would provide an additional opportunity for comparative transit performance evaluation.

*Paratransit Performance Evaluation*

Due to its trip-centric, demand-response nature, paratransit service typically performs much less efficiently and effectively than fixed-route service. The service does not lend itself to regular network updates, but instead, requires coordination with the fixed route network or any other local broader policy decisions relating to paratransit coverage. Both agencies collect paratransit performance data to determine capacity constraints, as well as service reliability and effectiveness as federally mandated. Specific criteria for determining capacity constraints are included in the following table:

<b>Paratransit Performance Data Collected for Determining Capacity Constraints</b>		
	<b>NCRTD</b>	<b>Santa Fe Trails</b>
Number of late pick-ups or drop-offs	A pick-up or drop-off is considered late when it is more than 20 minutes past the scheduled time.	90% of all pick-ups and drop-offs will be on time within the 30-minute scheduling window.
Number of trip denials or missed trips	Trip denials include rides accepted outside the hour scheduling window.	No more than 2% of requests will be denied. 98% of all trips will be provided as scheduled
Number of trips with excessive lengths	Excessive trip length is defined as a trip that takes longer than a reasonable time traveled on a fixed route.	99% of ride times will be one hour or less.
Number of missed calls on the trip reservation line	The percentage of reservation calls that roll over to voicemail.	N/A

There is considerable uniformity in the collection of performance data between the two agencies due to federal monitoring requirements. However, NCRTD does not outline specific percentage goals within its Paratransit policy document in the same manner as Santa Fe Trails. Additionally, Santa Fe Trails provides similar performance criteria for service that goes beyond the federal ADA requirements. The agency seeks 92-95 percent of all pick-ups and drop-offs to be on time and 99 percent of ride times

to be 45 minutes or less. In a consolidated arrangement, NCRTD should provide comparable goals for its paratransit service.

Paratransit performance monitoring between the two agencies is very similar, meaning that a consolidated scenario would not bring significant change in analyzing service performance. A consolidation would however, bring more significant changes in associated functions such as agency administration and scheduling/dispatching protocols for paratransit service, all with the goal of reducing the inherent high cost of this very specialized service.

### **Network Updates**

NCRTD and Santa Fe Trails employ varying processes for implementing service changes. These processes are guided by service planning documents that dictate near-term and long-term transportation planning efforts. The following sources offer guidance in service planning for both fixed-route and paratransit services:

- NCRTD Guiding Documents
  - NCRTD Short Range Transit Service Plan
  - NCRTD Long Range Strategic Plan
  - NCRTD ADA Complementary Paratransit Service, Policies & Procedures
  - NCRTD Demand Response & Dial A Ride Policies
- Santa Fe Trails Guiding Documents
  - Santa Fe Metropolitan Public Transit Master Plan (Santa Fe MPO)
  - Santa Fe Ride ADA Complementary Paratransit Policies & Procedures

While some of these documents were developed by the agencies themselves, additional guidance from the Santa Fe MPO provides some supplemental direction. Much of Santa Fe Trails' future service planning relies on the ideas outlined in Santa Fe MPO's Metropolitan Public Transit Master Plan. This report does not provide specific processes or phasing for service adjustments, but rather offers a regional vision for transit.

### ***Dedicated Planning Staff***

A significant difference between the planning efforts of both agencies is NCRTD's utilization of two full-time employees dedicated in part to service planning. This includes the positions of Regional Transit Planner and Transit Planning, Grants, and Projects Manager. The City of Santa Fe does not currently employ a full-time transit planner; their services have largely been unchanged for a number of years. However, SFT has a comprehensive service evaluation budgeted to start in the Fall/Winter of 2017. If a consolidation is pursued, it is recommended that a longer term integrated

service plan be prepared, and such a plan should fit into the framework of NCRTD's priorities outlined in their Long Range Strategic Plan.

Santa Fe Trails' Transit Advisory Board (TAB) is a group of volunteers tasked with advising on system improvements for the Santa Fe Trails network. Through its monthly meetings, members are expected to recommend reasonable performance standards, programs, and facilities for increased utilization and development of the system. Santa Fe Trails staff provides the TAB with information on agency issues such as facilities updates, system service performance and ridership, customer comments, and maintenance and operations.

While the TAB encourages transit-specific discussions among City stakeholders, it does not substitute for dedicated planning/service monitoring staff. Conversely, NCRTD has been more active in enacting service changes throughout its network while Santa Fe Trails' network and schedules has remained relatively unchanged for several years. SFT will be updating the transit network plan in a pending comprehensive service evaluation commencing later in 2017. It should also be noted that while NCRTD's future service and capital plan shows various levels of incremental growth, SFT service and capital plans at present show no service growth through 2035. This more proactive posture by NCRTD is a result of NCRTD's in-house planning staff and regularly updated strategic plans, and seeking to adjust and optimize service within available resources.

### *Paratransit Network Planning*

Paratransit service planning differs significantly from the traditional fixed route network update processes. Given the on-demand nature of the service, the paratransit "network" is continually updated through the reservation process. Both agencies employ full-time call center employees, schedulers, and dispatchers dedicated to managing paratransit service and operations.

Each agency currently uses differing call center systems, application processes, and reservation timeframes. In a consolidated option, the most significant paratransit component will involve reconciling the current differences between each agency's scheduling and dispatching processes to provide uniformity, effectiveness, and efficiency.

### **Optimizing Resources**

Both agencies have the opportunity to improve transit efficiency and effectiveness. However, given the distinctly different mobility role of each agency, with NCRTD providing fixed route, but infrequent, trip-based long distance service to a very large region, and SFT providing headway-based, relatively short distance service within a small urbanized area, resource savings from eliminating duplicative services are expected to be minimal at current service levels. In the instances within the City of Santa Fe where there is fixed route overlap between SFT and NCRTD, the combination

of lack of frequency, the very long distance nature, and lack of fare compatibility of the current NCRTD rural based service does not provide any customer service basis for service integration with SFT urban based services that are very significantly more frequent, with many more hours of service, and charge a fare. However, as a result of consolidation in the longer term, should NCRTD route specific services within Santa Fe increase in frequency and span in response to market conditions which is in part consistent with their Long Term Strategic Plan, and a common fare structure is established, a basis for service integration and associated effectiveness should be pursued. In the short term, there are other aspects of service planning and operations that can improve resource utilization and the quality of transit in the City and County of Santa Fe and the region that would be fostered by consolidation. These are identified in the following sections.

### *Coordinating Regional Service*

While fixed-route service duplication is minimal due to the current differing mobility roles of each agency, consolidating operations could result in better coordination of transit throughout the southern portion of the NCRTD region. Coordinated connections between currently separate NCRTD and SFT routes would result in more effective regional connectivity and mobility. The communication of service schedules on a single information platform would facilitate longer distance trips and connectivity between the currently two separate operations. The existence of a consolidated agency would streamline service coordination and facilitate a more integrated network of public mobility.

In addition, the ability to dispatch service from both maintenance facilities (current SFT facility and the proposed new NCRTD facility in Española) could result in some reduced non-revenue travel distance and cost even with separate or limited integrated maintenance efforts.

### *Modern Scheduling Software and Techniques*

Both NCRTD and SFT currently employ manual scheduling techniques that do not provide the opportunities for optimizing operating schedules that are currently available with modern enterprise scheduling software. A consolidation, in concert with a dedicated schedule/planning staff as contemplated in a preliminary consolidation staffing plan, would offer the opportunity to pursue the use of a modern scheduling program which would optimize work assignments to obtain the overall lowest service cost within contractual work rules. These programs optimize fixed-route bus operator and vehicle assignments, integrate NCRTD and SFT service schedules, and, very importantly, provide extensive management data on a common technology platform. Deployment of this software should be a key goal of consolidation.

## *Paratransit Resource Optimization*

Unlike fixed-route service, the agencies' current paratransit services have similar roles. This is largely due to federal regulations on providing minimum thresholds for paratransit service based upon the service territory of the fixed route network.

NCRTD's paratransit service has identified two specific service areas: the core Española-area and Taos. Furthermore flex routing is provided to address the provision of paratransit service in its expansive regional-area fixed-route territories. NCRTD provides complementary ADA paratransit service within the City of Española, its core service area. NCRTD paratransit service within the regional-area fixed-route territory extends to within  $\frac{3}{4}$  mile of regional fixed-route service, as mandated by the FTA's paratransit guidelines. This includes necessary road-to-driveway, curb-to-curb, and door-to-door service when roadway conditions do not meet NCRTD safety standards.

Santa Fe Trails currently offers paratransit service within City limits, regardless of distance from fixed-route service and  $\frac{3}{4}$  mile from fixed routes that extend into the County (Community College District and Village of Agua Fria). Given the overlapping nature of the agencies' current service areas within the City of Santa Fe, there is potential for cost-effective coordination of paratransit service (which is geographically based) with respect to these common areas.

One of the more significant differences between NCRTD and Santa Fe Trails is that NCRTD provides fare-free curb-to-curb service, while Santa Fe Trails charges \$2.00 per one-way trip and specialized service for registered seniors at \$5 per trip. This reflects each agency's existing fare policy and is discussed later in this report.

Another critical difference between the two agencies is the number of annual paratransit trips provided. NCRTD provides roughly 3,000 paratransit trips per year throughout its vast service area, while Santa Fe Trails provides approximately 40,000 annual paratransit trips within its denser service territory; more than 10 times the volume of NCRTD. The significant difference in number of paratransit trips is an important factor in considering the feasibility and associated benefits and disadvantages of implementing consolidated customer, service, and operating policies and procedures

### **Staffing**

Overall, federally-mandated performance monitoring creates uniformity amongst the two agencies' service performance analyses. However, Santa Fe Trails could benefit from greater attention to regular fixed route performance monitoring by utilizing some of the same processes currently used by NCRTD. If the two agencies were to consolidate, regular analysis of route-level performance would help ensure that the combined agency's service is more efficient, cost-effective, and responsive to travel market conditions within available resources.

NCRTD's allocation of full-time staff towards transit planning as contemplated in the preliminary staffing plan in addition to a policy that encourages system performance and review would help optimize the City of Santa Fe's transit service planning efforts, both in the short and longer term. Additionally, the combined agency would benefit from detailed short-term and longer-term transit plans to provide a thorough vision that is implementable for the entire north central region. This is deemed to be a critical attribute of a potential consolidation.

## **Fare Structure**

One potential challenge in consolidation is the current difference in fare structure between the two agencies. Almost all NCRTD routes are currently fare-free while SFT charges a base fare of \$1.00, and the availability of discounted daily, monthly, semi-annual, and annual passes, with reductions for seniors/disabled and students. While the amount of farebox revenue currently received is relatively small, the issue in terms of service policy for the customer in a consolidated system is noteworthy, particularly in the longer term if there is any effort to pursue integrated services.

### *Fare Structure Implications in a Consolidation Scenario*

Differing fare structures should be addressed as part of the potential consolidation, as it could influence the ability for future service integration which could include interlined scheduling, associated levels of service, system complexity, and potential funding sources. This does not have to happen at the commencement of any consolidation, but could be a longer term, phased-in effort. The main administrative processes associated with consolidating fixed route and paratransit services across the two agencies includes creating uniform application processes and regulations, streamlining reservation systems (paratransit) and technological support, and maintaining customer comprehension of services.

Recipients of federal funding must offer Americans with Disability Act (ADA) paratransit service equal to the span of fixed route service within at least a  $\frac{3}{4}$  mile zone of the fixed route service at a fare no higher than twice the regular full fare. This has significant funding implications for any transit district or agency, as the fixed-route fare dictates the appropriate paratransit fare. The current absence of fare charged by NCRTD results in a no fare situation for paratransit as well. However, on paratransit the issue is more than just the revenue produced from a fare; it is the fact that there should be a goal to manage demand for this highly specialized, high cost service. The existence of a premium fare for paratransit provides some impediment for indiscriminate use of this high cost resource.

Accordingly, SFT has defended the need to have a fare on their small size urban bus system despite the low farebox recovery ratio as a way to manage demand for fixed route and paratransit services. It also discourages on-board vagrancy, an issue with an urban transit system. On an annual basis, Santa Fe Trails provides 40,000 paratransit

trips and generates \$70,000 in farebox revenue. This fare policy is consistent with most small urban systems that offer full day fixed route service.

## **Fare Policy Consolidation Options**

### *All Services Fare-Based*

In this consolidated option, the combined agency would adopt a universal fare policy, adding a fare to 22 of NCRTD's 24 routes (the remaining two routes already charge a fare). While Santa Fe Trails currently has a base fare of \$1.00, the consolidated agency would not necessarily be limited to this fare structure, although it would be presumed that any initial effort would in fact keep a low fare to minimize the change for current NCRTD customers.

Given NCRTD's vast service area, the revised agency may want to explore pricing based on fare zones and other similar policies. With such varying route roles between the two agencies, a "one-size-fits-all" fare may not be the most suitable. However, universal fare structures tend to benefit rider comprehension of the system, especially through major service changes.

It should be also noted that as a much larger consolidated system, the existence of a fare, albeit low fare, would be consistent with similar regional operations throughout the United States.

Benefits of an entirely fare-based system include ease of rider comprehension and managed demand for costly ADA paratransit service. In addition, the establishment of such a policy is necessary for any future consideration of integrated service opportunities.

Disadvantages of a universal fare-based system include increased transportation costs for area constituents. While there would likely be an adverse reaction to charging a fare on existing free services, this would be mitigated by keeping the fare low, as SFT has done.

One of the other disadvantages would be the need and cost to procure and install a basic fare collection system. NCRTD initiated an investigation of the cost of implementing a modern fare collection system in 2015. The estimated cost per NCRTD for procuring and installing a fare collection system for their entire fleet at that time was a one-time cost of approximately \$640,000. This capital cost could be offset significantly by an FTA grant which would typically pay 80% of the initial cost for such equipment. This would require that this item be added to the consolidated agency Capital Program.

In addition, NCRTD estimated an associated recurring administrative and maintenance cost of approximately \$38,000 annually. This would be offset by recurring fare revenue, which, based upon current NCRTD ridership levels and utilizing a common low fare policy with SFT, would be approximately \$200,000 annually. However, per

NMDOT current allocation policy, the allocation of FTA 5311 funds would then be reduced by a concomitant amount. Note that this is not a federal policy, but is rather an NMDOT policy. This NMDOT policy should be revisited as it selectively penalizes no fare operations in favor of existing operations that charge a fare.

It would also require the establishment of a service line (fueling, fare collection, washing) at the Española facility which does not presently exist, but could be a component of the planned new Espanola Maintenance Facility. Therefore, this could not be implemented in the short term upon initial consolidation, but would be consistent with a future phased-in approach as mentioned previously. While the consolidated agency would still provide low-cost transportation options, it may disadvantage the very low income transit-dependent population.

#### *All Services Fare-Free*

In this option, the combined agency would adopt a completely fare-free structure. This would make 10 of 12 SFT routes completely fare-free, as two Santa Fe Pick Up routes currently do not charge a fare.

Under a fare-free fixed-route policy, curb-to-curb paratransit would be fare-free as well as there could be no paratransit fare without a fixed route fare. In a consolidation scenario, NCRTD would absorb SFT, which would greatly increase the number of free paratransit trips per year by at least the current 40,000 annual SFT level of annual paratransit trips. The number of paratransit trips requested in Santa Fe would increase significantly above that if it were to become completely fare-free given the higher residential density within the City of Santa Fe and the demand elasticity associated with transitioning from a \$2 fare to no fare.

Disadvantages of a fare-free system include a potentially significant increase in demand within the City of Santa Fe for fixed route service and more critically for paratransit service, and associated financial sustainability concerns. This scenario would require a significant number of existing low fare routes to become fare-free, which is especially problematic due to the relatively frequent service these SFTs routes provide when compared to the existing NCRTD rural services. Given the frequency and regularity of SFT services associated with an urban system, the issue of vagrancy would also be exacerbated based upon other such urban transit experiences. Such an expansion of service may also place strain on efficient financial planning in the years leading up to the sunset of the Regional Transit Gross Receipts Tax. This would further compromise the ability to have balanced capital and operating budgets (discussed in Task 3A) and may negatively impact the level of service a consolidated agency is able to provide.

#### *Hybrid System with Both Fare-Free and Premium Services*

In a hybrid system, some “fare” routes would charge a fare while others are fare-free. NCRTD currently operates two premium routes—255 Mountain Trail and 305 Taos

Express—that charge \$2-\$5 fares, while the remainder of the system is fare-free.<sup>1</sup> A consolidated option would allow for a re-evaluation of the basis for which a route is designated as “fare” allowing some routes to charge a fare while others are free.

Benefits of this hybrid system include the ability to manage demand for costly ADA paratransit service and the utilization of farebox revenue to supplement funding mechanisms.

Disadvantages of this hybrid system include potentially decreased rider comprehension, adverse Title VI implications, and the need for added fare collection equipment. If riders are unsure what routes have an associated fare, it may create a barrier to transit use. However, this might be mitigated to a degree by an extensive information campaign. Additional time dedicated to fare comprehension while boarding the vehicle may add up over time as well, but this would likely be a short-term concern. Additionally, a thoughtful process for determining which routes charge a fare and which do not will need to provide the rationale behind why some areas will receive free service and others will not; and would need to conform with Title VI requirements.

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<sup>1</sup> 255 Mountain Trail charges \$5 each way in the winter, and \$5 eastbound only in the non-winter season. 305 Taos Express between Taos and Santa Fe is \$5 per trip, while Taos to Española or Santa Fe to Española is \$2 per trip.