



KEY PERFORMANCE INDICATORS SHEET

COMMUTER RAIL

Effective May 25, 2018 – Refresh in 2019

Good	Excellent	Outstanding
“Good stewards of taxpayer dollars”	“Excellent stewards of taxpayer dollars”	“Outstanding stewards of taxpayer dollars”
9-11	12-14	15-18

Master Formula	$Score = X1 + X2 + X3$	
Intermediate Outcome Category	(X1) = Contractual on-time performance over the last three years at all agencies for which the contractor provides services in commuter rail	Requirement: Weighted average of agency goals
	(X2) = Customer complaints, weighted against the number of revenue hours operated, over the last three years at all agencies for which the contractor provides services in commuter rail	Requirement: Weighted average of agency goals
	(X3) = Safety Incidents, weighted against the number of revenue hours operated, over the last three years at all agencies for which the contractor provides services in commuter rail	Requirement: Weighted average of agency goals
Data Sources	Variable	Public Source
	X1	Agency Performance Reports
	X2	Agency Performance Reports
	X3	Agency Performance Reports
Scoring Rules	Variable X1: -1 = Greater than (ten percent of difference from 100%) below category requirement in a year 0 = Less than category requirement in a year +1 = Meets requirement but does not exceed (ten percent of difference from 100%) above requirement in a year +2 = Greater than (ten percent of difference from 100%) above requirement in a year	

	<p>Variables X2 & X3:</p> <p>-1 = Greater than ten percent above category requirement in a year</p> <p>0 = Greater than category requirement in a year</p> <p>+1 = Meets requirement but does not fall below ten percent above requirement in a year</p> <p>+2 = Greater than ten percent below requirement in a year</p>
<p>Timing Rules</p>	<ol style="list-style-type: none"> 1. Data collected at the end of each full year of operations 2. Metrics revised every two years to reflect local trends

KEY PERFORMANCE INDICATORS FOR COMMUTER RAIL

May 2018

Commuter Rail: The National Transit Database defines commuter rail as “an electric or diesel propelled railway for urban passenger train service consisting of local travel which operates between a central city and outlying areas. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas. Commuter rail is generally characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices, relatively long distance between stops, and only 1-2 stations in the central business district.”

Background

SDCTA's Working Group on Metrics to Define Effective Performance in Commuter Rail

Transportation agencies in the County of San Diego spent close to \$384 million dollars to provide public transportation services in FY 2016-17.^{1,2} The San Diego County Taxpayers Association (SDCTA) established a public working group with regional and statewide transit agencies and commuter rail service providers as well as other transportation experts to develop metrics that accurately and meaningfully assess the performance of contractors who provide services in commuter rail. The working group's goal was to develop key performance indicators that would assist transit agencies, who receive substantial taxpayer subsidies, in finding the most effective contractors, and that would highlight good performing contractors in their search for securing contracts.

Measuring Performance for Commuter Rail

Urban Integrated National Transit Database

The National Transit Database (NTD) is the primary source for transit statistics and information in the United States, as recipients of Federal Transit Administration funds are required to report data to the NTD. Data from the NTD can help transit agencies analyze trends and performance over time with its extensive data on financials, assets, and operations of the nation's transit systems. This data includes vehicle inventories, agency funding sources, safety events, and service measurement information.

Transit districts are evaluated with different performance standards across the country. Trends emerge, however, through data reported by many major transit agencies. These agencies commonly focus on metrics that fall into a few categories described by the Florida Department of Transportation,

¹ “Adopted Fiscal Year 2018 Budget.” *Metropolitan Transit System*. May 2017.
www.sdmts.com/sites/default/files/attachments/fy18_budget_book_online.pdf.

² Adopted Fiscal Year 2018 Operating Budget and FY2018-FY2022 Capital Improvement Program.” *North County Transit District*. June 15, 2017.
[lfportal.nctd.org/WebLink/0/edoc/88598/FY2018%20Operating%20Budget%20and%20Capital%20Improvement%20Program.pdf](http://portal.nctd.org/WebLink/0/edoc/88598/FY2018%20Operating%20Budget%20and%20Capital%20Improvement%20Program.pdf).

who developed a database that would provide for easy peer comparisons and trend analysis of NTD data. The Urban Integrated National Transit Database (Urban iNTD) separates data into General Performance Indicators, Effectiveness Measures, and Efficiency Measures.

General Performance Indicators describe system information including the area and population served, service provided, number of employees, revenues, expenses, and taxpayer contributions. Effectiveness Measures evaluate service supply, service consumption, quality of service, and availability. Finally, Efficiency Measures evaluate cost efficiency, operating ratios, vehicle utilization, labor productivity, energy utilization, and customer fares.

Benchmarking Transit Agency Performance Metrics

In July 2014, the Florida Department of Transportation (FDOT) conducted a literature review and compiled a report titled *Best Practices in Evaluating Transit Performance*. As part of this report, the FDOT suggested possible benchmarks against which to evaluate performance standards. They include the following:

- “Comparison to the annual average: average value for each measure is determined annually, and the routes that fall into the lowest groups for each measure are identified for further action
- Comparison to a baseline: value for each measure is compared to the average value for the measure in the first year that the performance-measurement system was implemented
- Trend analysis: set the standard based on the previous year’s performance measure value
 - Self-identified standards: transit agency management in consultation with the agency’s governing body, sets targets based on a combination of current agency performance, professional judgment, and agency goals
 - Comparison to typical industry standards: standards are pulled out from other agencies
- Comparison to peer systems: agency identifies other agencies with similar conditions and determines how well those agencies are performing in the measurement categories.”³

San Diego County Taxpayers Association Key Performance Indicators

When developing performance metrics for commuter rail, SDCTA focused on those metrics that are, for the most part, influenced by the actions of the private contractor. Additionally, these metrics highlight issues important to taxpayers, who both subsidize transit agencies and purchase transit services. Based on the working group’s recommendation, SDCTA’s Key Performance Indicators for Commuter Rail are as follows:

1. **Contractual On-Time Performance** over the last three years at all agencies for which commuter rail service is provided: This metric captures the ability of a commuter rail service to adhere to its adopted schedule—a measure of the effectiveness of the system. On-time performance can be affected by factors that are at least in part under the contractor’s control,

³ *Best Practices in Evaluating Transit Performance*. Florida Department of Transportation, 2014. P. 50.
www.fdot.gov/transit/Pages/BestPracticesinEvaluatingTransitPerformanceFinalReport.pdf.

such as mechanical or other infrastructure failures. Delays in service can have a significant impact on cost to the transit agency. If an agency has lower on-time performance over several years, this could indicate a variety of issues with the contractor’s operations and maintenance of the trains.

2. **Customer Complaints**, weighted against the number of revenue hours operated, over the last three years at all agencies for which commuter rail service is provided: This metric captures customer satisfaction with the rail service. A consistently high number of complaints could indicate needed improvement in effectiveness and efficiency of the service.
3. **Safety Incidents**, weighted against the number of revenue hours operated, over the last three years at all agencies for which commuter rail service is provided: This metric captures incidents of collision, derailment, employee or passenger injuries, or other accidents reported by a rail agency each month. Contractors whose operations result in a trend of safety incidents may have room for improvement.

Data for the key performance indicators are collected from all agencies for which the contractor provided service in commuter rail over the last three years in order to capture performance as a whole. Each of these variables is benchmarked against the agency’s adopted goal for that variable. For each year that a contractor meets the agency goal, a point is earned. An extra point is earned if the contractor performed better the agency’s goal by greater than ten percent that year, and one point is deducted if the contractor performed greater than ten percent below the agency goal that year.

Example Agency Performance Evaluation

For example, suppose Rail Contractor provides commuter rail services for Agency A and Agency B throughout the United States. Rail Contractor’s performance over the last three years at these two agencies is summarized in Tables 1-3 below.

Table 1: Rail Contractor’s Agency Performance in 2015

	Agency A	Agency B	Weighted Average
Contractual On-Time Performance	95.7%	91.2%	92.8%
Customer Complaints per 100,000 revenue hours	5.8	5.0	5.3
Safety Incidents per 100,000 revenue hours	0.91	0.80	0.84
2015 Revenue Hours	1,101,043	2,083,246	

Table 2: Rail Contractor’s Agency Performance in 2016

	Agency A	Agency B	Weighted Average
Contractual On-Time Performance	94.1%	91.9%	92.6%
Customer Complaints per 100,000 revenue hours	8.6	4.4	5.8
Safety Incidents per 100,000 revenue hours	0.80	0.72	0.75
2016 Revenue Hours	1,079,782	2,148,906	

Table 3: Rail Contractor’s Agency Performance in 2017

	Agency A	Agency B	Weighted Average
Contractual On-Time Performance	96.3%	88.3%	91.0%
Customer Complaints per 100,000 revenue hours	7.9	4.9	5.9
Safety Incidents per 100,000 revenue hours	1.10	0.68	0.82
2017 Revenue Hours	1,095,394	2,105,913	

Agency A has the following stated annual goals: contractual on-time performance of 95%, 8 customer complaints per 100,000 revenue hours, and 1 safety incident per 100,000 revenue hours. Agency B has the following stated annual goals: contractual on-time performance of 90%, 5 customer complaints per 100,000 revenue hours, and 0.8 safety incidents per 100,000 revenue hours. As such, SDCTA’s performance requirements would be as follows:

Contractual On-Time Performance

Agency A total revenue hours over period: 3,276,219

Agency B total revenue hours over period: 6,338,065

Weighted average goal of **91.7% contractual on-time performance**

100% - 91.7% = 8.3%

10% of 8.3% = 0.83%

Customer Complaints

Weighted average goal of **6.0 per 100,000 revenue hours**

10% of 6.0 = 0.6 complaints per 100,000 revenue hours

Safety Incidents

Weighted average goal of **0.87 safety incidents per 100,000 revenue hours**

10% of 0.87 = 0.09 safety incidents per 100,000 revenue hours

Rail Contractor’s performance is then evaluated against SDCTA’s key performance indicator requirements as follows.

Table 4: Rail Contractor’s KPI Performance 2015

	2015	Requirement	Requirement Satisfied?	Points Earned
Contractual On-Time Performance	92.8%	91.7%	Yes, by greater than 10%	+2
Customer Complaints	5.3	6.0	Yes, by greater than 10%	+2
Safety Incidents	0.84	0.9	Yes	+1

Table 5: Rail Contractor’s KPI Performance 2016

	2016	Requirement	Requirement Satisfied?	Points Earned
Contractual On-Time Performance	92.6%	91.7%	Yes, by greater than 10%	+2
Customer Complaints	5.8	6.0	Yes	+1
Safety Incidents	0.75	0.9	Yes, by greater than 10%	+2

Table 6: Rail Contractor’s KPI Performance 2017

	2017	Requirement	Requirement Satisfied?	Points Earned
Contractual On-Time Performance	91.0%	91.7%	No	0
Customer Complaints	5.9	6.0	Yes	+1
Safety Incidents	0.82	0.9	Yes	+1

Rail Contractor’s performance earned 12 total points, as it met category requirements in almost every category every year, and at times exceeded category requirements. This would earn Rail Contractor recognition by the Association as an Excellent Steward of Taxpayer Dollars.