

WHAT IS RER?

(Regional Express Rail)



Regional rail service that operates more frequently and at lower fares than commuter rail but utilizes existing and conventional railroad infrastructure and equipment at a lower capital cost than new heavy or light rail metro routes

ESSENTIAL ELEMENTS:

- Frequent Service
- Low Fares & Proof Of Payment (POP)
- Run-Through Downtown Infrastructure
- Electrification
- Minimal Operating Personnel
- Level Platform Boarding

WHAT IT ISN'T



A trendsetting alternative rock band from Athens, Ga.



Rapid Eye Movement

Paris' Réseau Express Régional (RER) network developed in the late 1960s and expanded since defines the concept, although Berlin's S-Bahn operates using a similar structure, as do others around the world.



Frequent & Reliable Service

Bi-directional service every 15 minutes or better, at least 18 hours every day of the week. Operates often enough that a schedule isn't needed. Reliability is requisite. When possible, clockface schedules are preferred.

Barrier

Operating Cost & Rail Ownership - More service costs more money. It also produces positive societal outcomes, including economic development and activity, along with access to jobs and healthcare.

Low Fares & Proof of Payment

Equivalent of rail transit fares in the same market, usually no more than \$5 for a one-way trip, purchased off-vehicle at station vending machines or multiple-ride passes. Usually administered in fare zones using Proof of Payment (PoP) to limit fare evasion.

Barrier

Operating Budget (Perceptual) - Belief that fare revenue will be too minimal in relation to operating costs. RER proponents argue international examples demonstrate same or better revenue through substantially greater ridership volume.

Run-Through Downtown Infrastructure

Downtowns are not the best place to terminate trains. Changing directions takes up valuable time and space with additional tracks. Run-through infrastructure requires a tunnel or elevated structures.

Barrier

Capital Cost - New tunnels or elevation are expensive to install in city centers, although they become valuable long-term assets.

Electrification

Since the early 1900s, the most efficient and environmentally-friendly equipment for passenger rail is electric multiple units (EMUs). In addition to superior acceleration and braking over locomotive-hauled trainsets, they also offer greater passenger capacity, avoiding a locomotive that carries no paying customers.

Barrier

Capital Cost - Like tunnels and bridges, introducing overhead wires, catenary structures and power substations require up-front investment, although many industry observers note much of that expense is offset by long-term savings in operating expenses.

Minimal Operating Personnel

With PoP, conductors are not needed on every train to inspect or collect tickets. Additionally, level boarding avoids the need to toggle boarding areas between high- and low-floor entry equipment. Savings on labor costs improve operating budgets to make frequent service possible, although conductors on existing operations are often retained as train operators, avoiding job displacement.

Barrier

Political Opposition & Regulations - While substantial job losses can be avoided, labor unions have often opposed the shift from conductor-staffed trains to PoP inspectors. Accordingly, politicians supported by unions may resist these changes. Additionally, federal, state and/or local regulations (or interpretations thereof) may only permit operations using conductors in some cases.

Level Platform Boarding

Passengers - especially those with disabilities - board and alight from trains faster and easier when they don't need to navigate stairs to enter the railcar. This improves schedule adherence and quality of experience, making RER service more attractive to additional riders.

Barrier

Capital Cost, Freight Clearance & Sunk Costs - If high-platform vehicles are needed, station platforms often need to be raised, usually at significant cost. Also, most freight railroads prohibit high platforms on lines they own due to clearance concerns. Finally, systems that have recently purchased railcar fleets with steps will be hesitant to replace them.

ACHIEVING RER

NORTH AMERICAN RER STATUS REPORT



No elements in place



Some elements in place



All or nearly all elements in place

No region in North America currently operates a fully-realized Regional Express Rail (RER) network. This chart provide an overview of the comparative status of North American commuter rail systems that could establish a RER network that matches the best international examples.

ESSENTIAL ELEMENTS:

REGION	Frequent & Reliable Service	Low Fares & PoP	Run-Through Infrastructure	Electrification	Minimal Personnel	Level Platform Boarding
<p>Philadelphia</p>	High peak frequency but off-peak is hourly, at best. Reliability is decent as EMU fleet is refreshed with new stock. All lines publicly-owned.	Fares are set to North American commuter rail standards with inspection by conductors.	In 1984, the Center City Commuter Connection united the former Pennsylvania and Reading networks via a 4-track downtown tunnel.	The former Pennsylvania and Reading networks were electrified more than a century ago, and adequately maintained since.	Multiple conductors are assigned to every train, even those utilizing only two-car consists.	High-level platforms are featured through the downtown throat, but low-platforms are common elsewhere.
<p>NYC Metro</p>	There are a lot of trains operating in the region, but few routes achieve better than half-hourly service at any time. Many operate off-peak and weekends. Most are publicly-owned.	Fares are set to North American commuter rail standards with inspection by conductors.	Run-through service from Conn. & Long Island to N.J. is possible using some current rolling stock. Metro North and northern N.J. routes are poorly connected to the full network.	While portions of many lines are electrified, it varies between overhead catenary and third rail among the three systems. Some dual-power locomotives are in service.	All routes are operated using conductors to collect or inspect tickets.	A mix of high and low platform stations exist across the three systems.
<p>Boston</p>	High peak frequency but off-peak is hourly, at best. Reliability is substandard. Most lines are publicly-owned.	Fares are set to North American commuter rail standards with inspection by conductors.	Operationally separate systems operate out of North and South stations. The North-South Rail Link would unite the operations to form numerous run-through corridors.	Only Amtrak's Northeast Corridor line from Boston to Providence is electrified, but the MBTA operates diesel-hauled trains on the line, as it does elsewhere.	All routes are operated using conductors to collect or inspect tickets.	High-level platforms are featured in and near downtown, but low-platforms are common elsewhere.
<p>Baltimore/D.C.</p>	MARC's Penn Line (publicly-owned) offers limited off-peak and weekend service, but the 4 other (freight-owned) lines are primarily morning-inbound, evening-outbound service.	Fares are set to North American commuter rail standards with inspection by conductors.	The First Street Tunnel connects Union Station with the RF&P route heading south. MARC & VRE trains could run-through today using this valuable asset, but do not currently.	Only Amtrak's Northeast Corridor line from Perryville to Washington is electrified, but MARC operates diesel-hauled trains on the Penn Line, as it and VRE do elsewhere.	All routes are operated using conductors to collect or inspect tickets.	MARC's Penn Line uses high platforms while the remainder of the lines are low-platform. VRE operates gallery cars that are inefficient for easy boarding.
<p>Chicago</p>	Frequency varies significantly across Metra and the South Shore Line, but even the best lines only offer hourly non-peak service. Mix of public & freight ownership.	Fares are set to North American commuter rail standards with inspection by conductors.	Operating out of four independent Chicago terminals, unifying the network would be no small feat. Midwest HSR's CrossRail proposal has started the conversation, at least.	Metra's Electric Division and the South Shore Line were the only electric passenger railroads off the East Coast until Denver's recently. Other lines remain on wish lists.	All routes are operated using conductors to collect or inspect tickets, although Metra Electric service historically resembled RER frequency & staffing.	Metra's Electric Division and (less exclusively) the South Shore Line serve high-level platforms. The rest of the Metra network uses low-floor gallery coach cars.
<p>Denver</p>	RTD's A Line operates every 15 minutes from 3 am - 1 am. The short B Line operates less often. The coming G and N lines may eventually achieve 15-minute frequency. All publicly-owned.	RTD Regional Rail lines utilize PoP fares, but prices are higher than local bus and light-rail routes.	While Regional Rail lines share a common approach to Union Station, it's now stub-ended, preventing run-through expansion to communities to the south.	All Regional Rail lines in operation or under construction are electrified. Diesel-hauled trains may temporary serve Boulder & Longmont until the full corridor is completed.	PoP is used as the fare structure on RTD's regional and light-rail network. Fare inspectors help improve compliance.	All RTD Regional Rail trains and platforms are or will be high platform.

ACHIEVING RER

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<p>Toronto</p>	<p>Metrolinx – which oversees the GO Train network – is ramping up to all-day, bi-directional, 15-minute service on several lines: mix of public & freight ownership.</p>	<p>While current GO Train fares are similar to North American peers, upgrade efforts will likely introduce a new structure.</p>	<p>Toronto Union Station was constructed as a run-through facility and remains so today, although few riders will travel end-to-end.</p>	<p>To accommodate its planned frequency growth, Metrolinx is in the process of electrifying portions of 5/7 GO lines, which will be equipped with low-floor EMUs.</p>	<p>All routes are operated using conductors to collect or inspect tickets.</p>	<p>GO Train coaches and stations are all low-platform, while UPE trains and platforms are high level.</p>
<p>Bay Area</p>	<p>Caltrain's CalMod will increase frequency and reliability on the state-owned corridor. The ACE train route is also slated for more trips. Public & freight ownership.</p>	<p>Fares are set to North American commuter rail standards with inspection by conductors.</p>	<p>Although the East Bay corridor through Oakland and Fremont allows through-travel, regional rail tracks in a new transbay tube would be a game-changer.</p>	<p>Caltrain is currently electrifying its line from San Francisco to San Jose. Plans for other regional lines are less certain.</p>	<p>While Caltrain & ACE use PoP fares, several conductors are assigned to each train. SMART's fare structure is more transit-style.</p>	<p>All routes utilize low level platforms and vehicles. Compatibility with CAHSR rolling stock is yet to be determined.</p>
<p>Southern California</p>	<p>Metrolink's SCORE effort aims to introduce 15-minute service on three lines and half-hourly on three others. NCTD's Coaster is eyeing enhanced frequency, as well. Public & freight ownership.</p>	<p>Fares are set to North American commuter rail standards with inspection by conductors.</p>	<p>For CAHSR, L.A. Union Station is planned to add run-through capacity. It's uncertain whether slots will be available for Metrolink.</p>	<p>SCORE will add electrification on lines reaching to Ventura, Santa Clarita and Irvine.</p>	<p>Metrolink uses PoP fare structures, with minimal fare inspection personnel.</p>	<p>All routes utilize low level platforms and vehicles. Compatibility with CAHSR rolling stock is yet to be determined.</p>

POTENTIAL RER REGIONS

These regions currently have scant or non-existent commuter rail operations with assets or conditions favorable to hosting RER networks if the right political dynamics came together...

<p>Dallas-Ft. Worth</p>	<p>Quietly, the Dallas-Ft. Worth Metroplex already is assembling pieces of a regional rail network via the already-operating Dallas-Fort Worth Trinity Railway Express (TRE) and Denton-Carrollton A-Train, along with the soon-to-launch Ft. Worth-DFW Airport TEX Rail. The problem is they're all operated independently. Meanwhile, the North Central Texas COG has plans on the books for a half-dozen other regional rail lines. Some strategy to unite it is urgently needed.</p>	<p>Twin Cities</p>	<p>With the potential for routes radiating from two downtown stations (St. Paul's historic Union Depot and Minneapolis' modern Target Field Station), the Twin Cities could build on its existing Minneapolis-Big Lake North Star service on a mix of busy, lightly-used and abandoned rail corridors. The long-promised North Star extension to St. Cloud is a priority, as is intercity service to Duluth, and a connection to rapidly-growing Rochester is desired.</p>
<p>Atlanta</p>	<p>Atlanta owes its existence to railroading, as the city grew around a spot where five southern railroads came together (known then as Atlantica-Pacific). Today, those same rail lines are still thriving freight routes, which also presents the chief obstacle to RER service in the ATL. If regional trail trains could operate on or alongside these corridors, good run-through trackage exists downtown to connect outlying communities. Funding has been approved for an initial line from MARTA's East Point station to Lovejoy.</p>	<p>Pittsburgh</p>	<p>The Pittsburgh region is laden with rail lines and abandoned corridors that once delivered the coal and ore needed for the Steel City's most famous export. As coal traffic dwindles, new capacity for passenger rail may open up. Dozens of mature towns and small cities are tucked along the region's riverbanks and valleys that could supplement the existing light-rail and busway networks that already serve downtown. However, the lack of connections between previously competing railroads could make run-through operations tricky.</p>
<p>Kansas City</p>	<p>A plethora of rail corridors spans out from Kansas City in all directions, but most still carry heavy freight loads. In particular, the Kansas City Terminal Railroad corridor – which serves the city's impressive Union Station – is currently maxed-out with traffic, a major impediment to a regional rail network. The former Rock Island Railroad corridor from the Chiefs' and Royals' stadiums through Raytown to Lee's Summit could see passenger service within the next decade.</p>	<p>Houston</p>	<p>While Los Angeles is often perceived as the nation's most auto-dominated area, the development of its Metrolink regional rail system has left Houston as the largest metropolitan region without any regional rail routes (it does feature a limited light-rail network). Some momentum exists for the so-called 90A route from Missouri City to the southern terminus of the Red Line. Other natural regional corridors were overtaken by highways years ago, especially the former Katy line. Reliable and frequent regional rail could provide a meaningful alternative to the region's congested thruways. Galveston would be an obvious priority for such a system.</p>