

ON THE BRINK:

2021 Outlook for the Intercity Bus Industry in the United States

BY JOSEPH SCHWIETERMAN, BRIAN ANTOLIN & CRYSTAL BELL
JANUARY 30, 2021



CHADDICK INSTITUTE FOR METROPOLITAN DEVELOPMENT AT DEPAUL UNIVERSITY | POLICY SERIES



THE STUDY TEAM

AUTHORS

BRIAN ANTOLIN, JOSEPH P. SCHWIETERMAN AND CRYSTAL BELL

CARTOGRAPHY AND GRAPHICS

ALL TOGETHER STUDIO

ASSISTING CONTRIBUTORS

MICHAEL R. WEINMAN AND PATRICIA CHEMKA SPERANZA OF PTSI TRANSPORTATION

DATA TEAM

KIMBERLY FAIR AND MITCH HIRST

COVER PHOTOGRAPHY

BOTTOM CENTER: ANNA SHVETS; BOTTOM LEFT: SEE CAPTION ON PAGE 1;
TOP AND BOTTOM RIGHT: CHADDICK INSTITUTE

The Chaddick Institute does not receive funding from intercity bus lines or suppliers of bus operators. This report was paid for using general operating funds. For further information, author bios, disclaimers, and cover image captions, see page 20.

JOIN THE STUDY TEAM FOR A WEBINAR ON THIS STUDY:

Friday, February 19, 2021 from noon to 1 pm CT (10 am PT) | Free
Email chaddick@depaul.edu to register or for more info

CHADDICK INSTITUTE FOR METROPOLITAN DEVELOPMENT AT DEPAUL UNIVERSITY

CONTACT: JOSEPH SCHWIETERMAN, PH.D. | PHONE: 312.362.5732 | EMAIL: chaddick@depaul.edu

INTRODUCTION

The prognosis for the intercity bus industry remains uncertain due to the weakened financial condition of most scheduled operators and the unanswerable questions about the pace of a post-pandemic recovery. This year's *Outlook for the Intercity Bus Industry* report draws attention to some of the industry's changing fundamentals while also looking at notable developments anticipated this year and beyond.

Our analysis evaluates the industry in six areas: i) The status of bus travel booking through January 2021; ii) Notable marketing and service developments of 2020; iii) The decline of the national bus network ticket options sold on greyhound.com that is relied upon by travelers on thousands of routes across the U.S. Mainland; iv) Trends in bus fares versus those for air and rail travel; v) Legislative trends and service innovations; and vi) Conclusions and predictions about near-term developments likely to affect the industry.

Our seven principal findings presented below show that despite the challenges, signs of optimism are emerging that the intercity bus industry will move from “the brink” onto a more solid financial footing in post-pandemic times.



A Greyhound buses pauses at the Binghamton Transportation Center in Upstate New York on January 19, 2019.

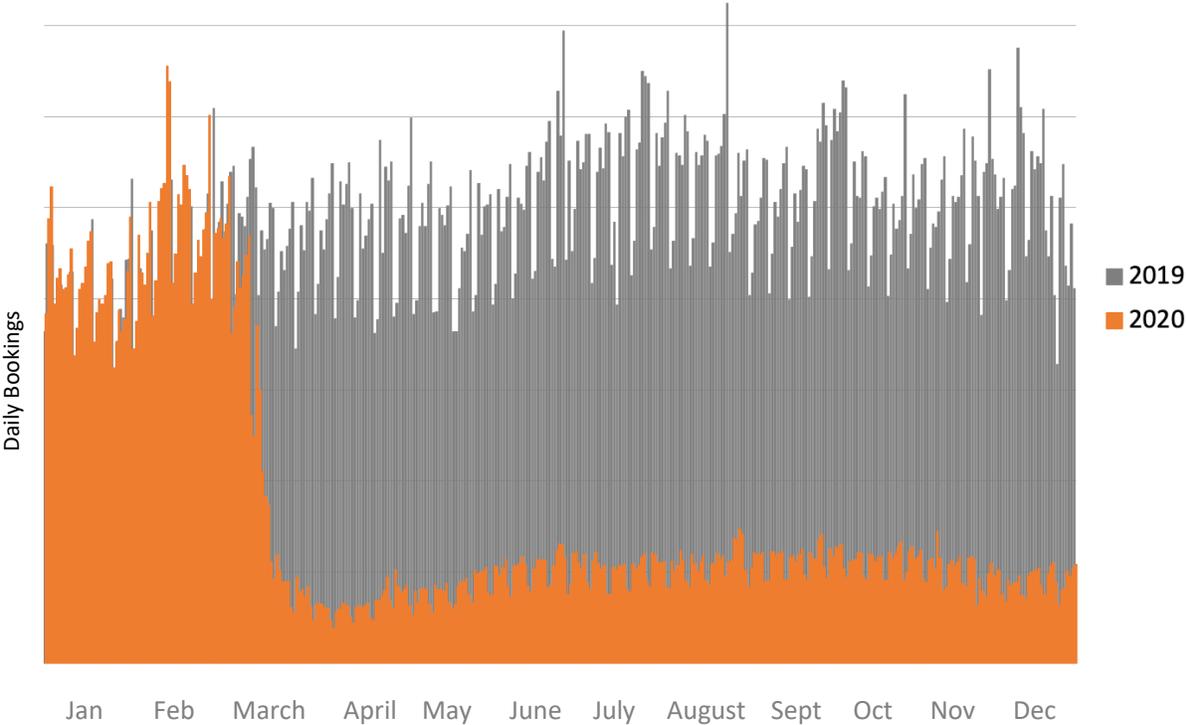
Nightfall: Binghamton NY by *Can Pac Swire* licensed by [CC BY-NC 2.0](https://creativecommons.org/licenses/by-nc/2.0/)

FINDING 1.

Bookings for bus travel ended 2020 at around 16% of the previous year in the Northeast and at 24 – 35% of the previous year in other parts of the country. Cash shortfalls will make the next five or six months a tumultuous time for scheduled bus lines, particularly those with asset-intensive business models. Optimism is nonetheless growing that a recovery will gather momentum by mid-summer.

Booking information provided to us by Transcor Data Services (TDS) shows the steep decline in bus ticket purchases throughout most of the United States in 2020 compared to 2019 (Figure 1). The gray lines represent 2019 sales, while the orange lines track 2020 sales (Figure 1). This information was compiled and aggregated from TDS’s clients, who operate in most areas of the country, but not all. Bookings are around 22 – 25% of 2019 levels in December 2020 for the country as a whole. The up-and-down cycle evident in the charts over successive dates reflects the tendency of bookings to be much lower during midweek (Tuesday, Wednesday and Thursday) than during the Friday - Monday period. The softness of demand in December is particularly evident.

FIGURE 1: Total Bookings for Bus Travel, Comparison versus Previous Year



This chart shows year-over-year changes in bookings observed by Transcor Data Service. This information was compiled and aggregated from TDS’s clients, who operate in most areas of the country, but not all. The chart shows December 2020 bookings are in the 20-25% range of those in the previous year, although much lower in the Northeast and higher in rest of the country. Credit: Terry Cordell, CEO, Transcor Data Services (TDS) via email on January 18, 2021. Please refer to Page 20 to see regional trends.

Not all regions have performed the same. The Northeast and West regions, for example, have underperformed the rest of the country by a considerable margin, in part due to continuing public health mandates and restrictions in those areas. Bookings in those two regions rose steadily from April to September, but they only reached roughly 26.9% and 33.3% of 2019 levels respectively in September 2020 (Table 1). In the Midwest, Southeast, and Southwest, bookings rose more impressively, rising to around 36 - 38% of 2019 levels in September 2020.

After September, however, bookings fell precipitously. The severity of the decline was particularly stark in the Northeast and West, where

bookings fell by 11.4 and 9.2 percentage points, respectively, after September. By December, bookings in the Northeast had fallen to just 15.5% of those from the previous year. Bookings were only marginally better, at 24.1%, in the West. (See month charts for each region on page 20).

We believe that January 2021 brought a modest rebound over December 2020 levels, and that traffic will gradually build through mid-summer, when a more robust recovery will occur. Summer will bring more seasonal demand, and vaccines are likely to be more widely administered to all age groups by that time (see our Conclusions and Predictions on Page 18).

TABLE 1: 2020 Bookings as a Share of 2019 Levels

	SEPTEMBER 2020	DECEMBER 2020	PCT. POINT CHANGE SEPT. – DEC
Midwest	36.9%	33.9%	-3.0 pts.
Southeast	38.8%	34.0%	-4.8
Southwest	38.5%	34.9%	- 3.6
West	33.3%	24.1%	-9.2
Northeast	26.9%	15.5%	11.4

FINDING 2.

Although the pace of route development dramatically dropped due to the pandemic, intercity bus lines made a variety of strategic moves last year, including experimentation with new booking platforms and service enhancements. These innovations will likely accelerate as demand gradually rebounds.

Many carriers continue to operate dramatically reduced schedules and are only gradually adding back schedules as conditions improve, a process we will cover in future reports. Over the past 10 months, some have struggled to maintain continuity in operations and planning in 2020 after a sizeable

proportion of their operators, mechanics, station personnel, and management were stricken with COVID-19. Despite such problems, numerous bus lines rolled out notable initiatives.

1. MAJOR PLANS ANNOUNCED FOR THE PORT AUTHORITY BUS TERMINAL.

The Port Authority of New York and New Jersey [announced](#) this month that it will reconstruct and expand the Port Authority Bus Terminal in Manhattan over the next ten years. The ambitious plan includes room to handle 30% more buses, including electric buses and potentially automated buses. The plan also incorporates a [terminal to be built west](#) of the main terminal for intercity buses and ramps that connect to the Lincoln tunnel. The expansion will provide expanded capacity that reduces the number of intercity buses picking up and

dropping off curbside. The project still needs to undergo an environmental review and will likely not be complete until 2030 or later. The new terminal will be financed by agency funds, private investment, and yet to be approved federal funds.

2. MORE COACH USA ROUTES ARE BEING SOLD ON THE MEGABUS.COM PLATFORM.

Megabus.com added several regional Coach USA-operated routes to its Megabus booking platform. Moving these services to this online reservation platform helps support capacity control required by COVID-19 safety precautions and service planning.

Kerrville Bus operated several intrastate Texas routes sold on the Megabus.com platform on weekends and holiday periods starting in September, including trips from Houston to College Station and Prairie View (both home Texas A&M campuses) and San Marcos (Texas State). Kerrville also ran trips from Dallas to Austin (Texas), Waco (Baylor), College Station, and San Marcos.



Partial list of bus lines making notable moves after start of pandemic

ShortLine Bus operated a variety of intrastate New York routes on the platform from August to November, primarily during college breaks and holiday periods. The routes included New York to Alfred and Morrisville (both home to SUNY campuses) and Hamilton (Colgate University). ShortLine also operated limited New York - Binghamton - Ithaca schedules during breaks and holidays, filling a gap created by the suspension of its daily operations on that route.

3. ENHANCEMENTS TO HAMPTON JITNEY.

Notwithstanding the abrupt decline of leisure and commuter traffic to and from New York City, **Hampton Jitney** [partnered](#) with a niche travel provider, **Rove**, to launch a co-branded Hampton Ambassador service between Manhattan and the Hamptons in August. The luxury service operated from new stops on the far West Side of Manhattan near Hudson Yards, and features enhanced onboard services, including a curated beverage menu and other amenities. Hampton Ambassador operated a weekly Friday eastbound and Sunday westbound trip until the service was suspended due to COVID-19.¹ Hampton Jitney also [enhanced](#) its Ambassador service in October by allowing passengers to pre-order bagels and delicacies from local purveyor Ess-A-Bagel to enjoy onboard or carry with them upon arrival. This represents a “win-win” for both companies, as it provides a new revenue source during trying times.

In June the company added a new stop in Farmingville, NY along one of its existing North Fork Long Island-Manhattan routes. Aimed at commuters, this service provides passengers multiple departure options to and from Manhattan’s East Side daily. Hampton Jitney has been aggressive in online marketing. Part of its success has been attributed to customer reticence to use its competitor, the Long Island Rail Road (LIRR). LIRR has reduced service since the pandemic and is regarded by some as too crowded to be safe, especially on the three hour journey from New York

City to the Hamptons, Montauk, and the North Fork.²

4. COLORADO'S BUSTANG FILLS A GAP.

Colorado Department of Transportation initiated a [new Bustang route](#) between Craig, CO and Denver, CO in June, taking the place of a discontinued **Greyhound** Salt Lake City, UT - Denver, CO route. The daily round trip service makes a variety of stops, including Steamboat Springs, Hot Sulphur Springs, Granby, Winter Park, Idaho Springs, and the Denver Federal Center. This state subsidized service is temporarily operated by Greyhound until a full transition to a local operator occurs later in 2021.³ Refer to our 2020 Outlook for more on Bustang.

5. ST. GEORGE EXPRESS REBRANDED AS SALT LAKE EXPRESS.

St. George Express, based in St. George, UT, was officially [rebranded](#) as **Salt Lake Express**, its sister company, in September. The move unifies the company's network under the Salt Lake City Express name, stretching from Arizona to Montana, with extensive service as well in Idaho, Nevada, Utah, and Wyoming. In January 2021, Salt Lake Express [also launched](#) a new daily round trip between Jackson, WY and Salt Lake City, UT, eliminating the need to transfer in Idaho Falls, ID. Stops on that route include Alpine Junction, WY, Evanston, WY and Park City, UT.

6. FLIXBUS AND OURBUS FORGE PARTNERSHIPS TO EXPAND BOOKING PLATFORMS.

Companies are finding new ways to fill empty seats amid the devastating effects of the pandemic. **FlixBus** and **OurBus**, for example, are hosting other service providers on their booking platforms while allowing these providers to retain their own branding and control over pricing, scheduling, and customer service. The booking platforms act purely as new sales channels and generate a commission for the hosts on each ticket sold.

OurBus added these services to its booking platform, none of which are branded as Ourbus:

- Select **BestBus/DC Trails** schedules for New York-Washington, DC and New York-Vienna, VA (began in March)
- **MJM Travel Group/Silver Star Transportation** schedules between New York and Woodbury Commons Mall (began in October, operates select days)
- Daytrip excursions by **Superior Tours** between metropolitan Baltimore and Atlantic City Casinos (offered in November)

FlixBus added these services to its booking platform, none branded as Flixbus:

- **National Park Express** service between the Las Vegas Strip and the Grand Canyon (select days, sold with through connections to Los Angeles and Phoenix)
- **Wenatchee Valley Shuttle** service from Seattle (Sea-Tac Airport) - Wenatchee Station, WA, with intermediate stops in Bellevue, North Bend, and Peshatin)
- **Wanda Coach** service from New York – Atlanta, with intermediate stops in Durham, Greensboro, Charlotte, NC, and Greenville, SC (daily service)
- **OvRide** service from New York – Mountain Creek Ski Resort, NJ, with multiple pick-up locations in Brooklyn and Manhattan (operated select days).

7. ROX CREATES—AND THEN PAUSES—NEW VIRGINIA BUS SERVICE.

Rapid Overland Express, "ROX", [launched a luxury coach service](#) in July between Virginia Beach, VA and the Washington, DC area, with a stop at Pentagon City, VA near Reagan National Airport. The new service, the brainchild of former Virginia State Senator and local businessman Jeff McWaters, was facilitated by a grant from the Virginia Beach Development Authority. Complete with an onboard attendant, hot meals, and 2x1 seating, this service was patterned on premium services across the

country, such as Vonlane. The two daily roundtrips provide a viable alternative to driving or flying from the coast. In August, ROX realigned its intra-state Virginia route network, launching service connecting Charlottesville to Virginia Beach and Washington, DC. Due to the pandemic, however, the company paused all regular line service in September and is currently only offering charter runs with its luxury vehicles. *Please refer to our 2019 Outlook report for a summary of the many premium services operated throughout the county.*

8. C&J BUS LINES NEW TERMINAL.

In November, **C&J Bus Lines** opened [a new state-of-the-art facility](#) in Seabrook, NH on the site of a former Sam's Club. This facility replaces the company's former terminal in Newburyport, MA. The property boasts an attractive terminal building and parking space for up to 800 vehicles. Passengers enjoy express service to Boston South Station and Logan Airport as well as direct service to New York City.

9. ROCKY MOUNTAINEER ANNOUNCED TRAIN ROUTE WITH MOTOR COACH CONNECTIONS

Rocky Mountaineer, the Canadian Vancouver based tour train service is launching a U.S. service in August 2021. It will operate twice weekly on a two day schedule from Denver, CO to Moab, UT by rail, with direct connecting (fare-inclusive) buses to Salt Lake City UT and Las Vegas, NV. Other bus connections may be operated, and single tickets are available at super-premium fares and include meals and a night in a hotel in Glenwood Springs each way. The service will operate through October and resume again in Spring 2022.

FINDING 3.

The national network of intercity bus schedules that is sold on Greyhound's computer reservation system and website, which is supported by extensive interline and terminal-sharing arrangements, has markedly diminished in the past few years. The network's problems predate the pandemic but are being magnified by tepid demand during the public health emergency. If the network further erodes, it could leave thousands of city pairs without any scheduled intercity transportation service.

The national intercity bus network offers travelers attractive connections over a coordinated network of routes encompassing a wide variety of connecting hubs. That network has been sustained by collaborations between independent bus lines. Each independent bus line apportions revenues based on interline agreements and sells tickets through a computer reservation system (CRS) managed by Greyhound Lines. This CRS is used by ticket agents at the carrier's stations and those of partner lines as well as by the websites of these carriers. The platform uses algorithms that build itineraries using the schedules of more than 20 carriers. These "interlined" carriers use a common terminal at nearly all points at which passenger transfers are made.

Examples of small and mid-size bus lines that are part of this national network are **Barons Bus, Burlington Trailways, Greyhound, Indian Trails, Jefferson Lines, Martz Trailways, Miller Transportation, New York Trailways, and Peter Pan**. The network allows passengers to make bus trips, for example, from Columbus, Ohio to Des Moines, Iowa with a single ticket. This trip may involve travelling by Greyhound to Chicago and then using Burlington Trailways for the rest of the journey. Passengers have a guaranteed connection, meaning

that the bus lines involved have an obligation to re-accommodate them if they are unable to make the transfer due to a late arriving or cancelled bus, much as airlines do for their passengers.⁴

The importance of having the network became evident during 2018 and 2019, when tens of thousands of immigrants purchased tickets (or had tickets purchased for them) at Greyhound stations for travel between the Texas/Mexico border areas and interior points throughout the country.⁵ In other cases, social service organizations bought tickets for immigrants using the greyhound.com website. These travelers made trips from El Paso, TX, Phoenix, AZ, and other cities near the border to places throughout the country, many requiring two or three transfers. The network allowed them to reach family and friends living in almost any city with more than a few thousand residents on the U.S. Mainland. (For analysis, see our *2020 Outlook* report)



A Megabus coach at the carrier's San Jacinto Boulevard stop in Austin, TX prepares for its afternoon run to Houston in September 2020

The network must offer customers a variety of choices involving well timed connections to be truly effective. However, before the pandemic traffic had already become too thin to support service on many routes. The weakening of demand was due to a variety of factors, including:

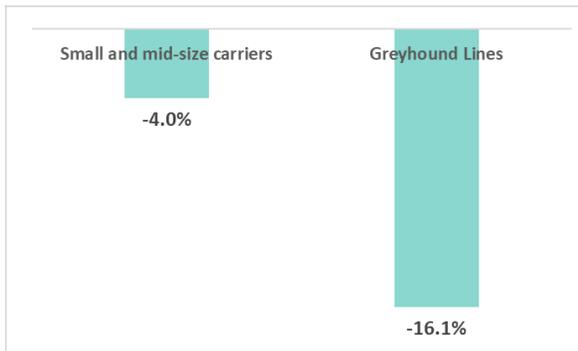
- **Low gasoline pricing** and rising car ownership, which reduced demand on many local routes.
- **Perceptions that bus travel was undesirable** or unsafe, an image that in some instance was due to problems in neighborhoods in which bus stations are located. This has been magnified by concern among some travelers over a lack of customer service staff at terminals, particularly during a pandemic.
- **The high costs of operating terminals** in cities, which, in contrast to airports and train stations, often require bus lines to pay property taxes and incur other expenses not borne by these other modes.
- **Loss of traffic to express city-to-city operators**, such as **FlixBus, Megabus, OurBus, and RedCoach**, which are not sold on the greyhound.com platform. These carriers generally focus on point-to-point trips rather than those involving connections through centralized hubs.
- **Lack of state or federal policies—and lack of financial support—to assure a healthy mix of ground travel options between metropolitan areas.** Whereas explicit federal policies for the development of rail corridors and airports exist, no substantive policies are in place for the creation of a *balanced* transportation system of bus and rail service (or specifically for bus services) between major cities—a problem explored in a recent Transportation Research Board publication.⁶

An example of how service degradation can affect the network occurred recently when Greyhound discontinued express service on the Chicago – Cincinnati, OH route. This resulted in sharply increased travel time for nearly all passengers booking travel on greyhound.com from Cincinnati to the Illinois hub and points beyond. Slower trips and longer wait times when making transfers push away “riders of choice” who have other mobility options at their disposal, further weakening the network.

To illustrate these effects, we estimated the degree to which bus lines encompassing the national network sold on the Greyhound CRS reduced schedules from early 2016 to February 2020, just before the pandemic. (A schedule is usually associated with a distinct schedule number and often involves multiple stops, akin to a numbered airline flight).

FIGURE 2: Reduction in Daily Schedules 2015 – early 2020

Changes in daily bus operations in the five years leading up to the pandemic



This chart shows the reduction in schedules from 2015 to 2020, immediately prior to the pandemic on Greyhound and smaller and mid-size bus lines sold on Greyhound.com. A schedule is defined as a unique bus operation assigned a schedule number.

The number of daily Greyhound operations (schedules) fell by approximately 16%, whereas the mid-size and smaller carriers we evaluated reduced schedules by about 4% (Figure 4). A wide variation exists among the smaller carriers. Caution should be exercised in interpreting the Greyhound number

since it is not possible to measure the number of “extra sections” the carrier operates, which can be considerable during the holidays. Nevertheless, these results leave little doubt that the system was diminishing even before the pandemic. This trend is illustrated by the diminishing size of the Russell’s Guide, a compilation of timetables comprised heavily of bus lines with interline agreements.

The pandemic has brought much more severe cuts, with some carriers having cut schedules by 40% or more since the start of the crisis. As schedule flexibility falls, the risk grows that the network loses its critical mass, denying Greyhound and its interline partners the traffic densities they need to sustain both local and express service on many routes. This could be driving more traffic away, as noted in Finding 5.

FINDING 4.

The duration of trips on the intercity bus network has lengthened markedly over the past several years as a result of schedule cuts before and during the pandemic. On 186 routes we evaluated in which the network is critical due to the lack of direct express coach or Amtrak service, the length of the average trip increased by more than an hour between 2016 to 2021. On more than a quarter (26%) of these routes, the trip is now two hours longer due to the need to make more stops and accept longer wait times at transfer points.

We measured how much the duration of trips changed on 186 routes over the past five years to assess the effects of the schedule cuts on travel times. Our sample consists of routes in which the national intercity bus network offers the only scheduled ground travel option available that does not require “mixing modes” (such as transferring from trains to buses). We recorded the fastest trip

option available on greyhound.com departing between 7 a.m. and 8 p.m. on a Friday in May 2016 and Friday, January 29, 2021.

Each of the 186 routes in our sample:

- **Links two metropolitan regions**, each having populations greater than 500,000.
- **Involves a trip 150 – 400 miles** based on highway miles.
- **Lacks other scheduled ground travel alternatives**, such as direct express coach (e.g., Megabus) or Amtrak service. (Some of the routes have Amtrak Thruway service, which combines bus and train travel).

All of the routes in the sample can be comfortably driven between three and eight hours, including allowances for brief stops. Examples of routes in the sample are Cleveland, OH – Scranton, PA; Kansas City, MO – Wichita, KS; and Las Vegas, NV – Bakersfield, CA. 

Our analyses show that the mean (average) travel time rose on these routes from about 6 hours 14 minutes (433.5 minutes) to 7 hours 26 minutes (506.2 minutes), an increase of 72.7 minutes. That represents a 16.8% increase over the less than five year period (Table 2). The *median* travel time rose by almost an hour (55 minutes, or 12.8%). The increases were partially due to an increasing number of stops, which (when transfer points are included) rose from an average of 4.9 to 5.5 (12.6%), as well as the need to make more transfers.

These changes have made bus travel too slow or tedious to be considered a workable option for many travelers. The number of routes with more than six stops rose from 47 to 55 (17.0%). The number of routes in which travel time exceeded ten hours more than doubled from 21 to 50 (a 138% increase). The number of routes requiring more than 15 hours of travel—a length nearly all passengers with other options would consider unacceptable—rose from two to 10.

TABLE 2: Degradation of Intercity Bus Service on 186 Routes without Daily Express Coach or Amtrak Service

Schedule Comparisons 2016 versus 2021, Routes 150 - 400 miles

	2016	2020	CHANGE	% CHANGE
Mean travel time (minutes)	433.5	506.2	72.7	17%
Median travel time (minutes)	430	485	55	13%
Average number of stops	4.9	5.5	0.6	13%
Number of routes > 10 hours	21	50	29	138%
Number of routes > 6 stops	47	55	8	17%

The frequency of routes with different travel time changes appears in Figure 3. About one in six routes (14.5%) had a travel time *improvement* of 15 minutes or more. Unfortunately, more than four times as many (56.9%) had travel time *degradation* in this range. The deterioration of service is even

more significant on roughly four in ten routes (40.8%), in which travel times grew by an hour or more. On a quarter of routes (25.3%), travel time increased by two hours or more. 35 routes (19%) experienced travel time increases of *three hours* or more (Table 3). The largest increase occurred in the

Jacksonville – Ft. Myers, FL route. Travel time on this route grew from 10 hours 20 minutes to more than 22 hours due to the lack of viable connections.⁷ Raleigh, NC – Knoxville, TN saw travel time increase from 8 hours 20 minutes to more than 18 hours. Among the routes that had travel time *improvements* were Raleigh, NC – Charleston, WV and Nashville, TN – Little Rock, AK. In both cases, travel times dropped by two hours and 55 minutes. Regrettably, such success stories are comparatively few in number.

Some of the results may reflect the peculiarities of schedules on the particular days we evaluated.

Moreover, none of the routes in the sample are major corridors. Most major corridors continue to have (or will have after the pandemic) high quality bus service. Nevertheless, these results show why passengers who are traveling on secondary routes may now think twice before going by bus.

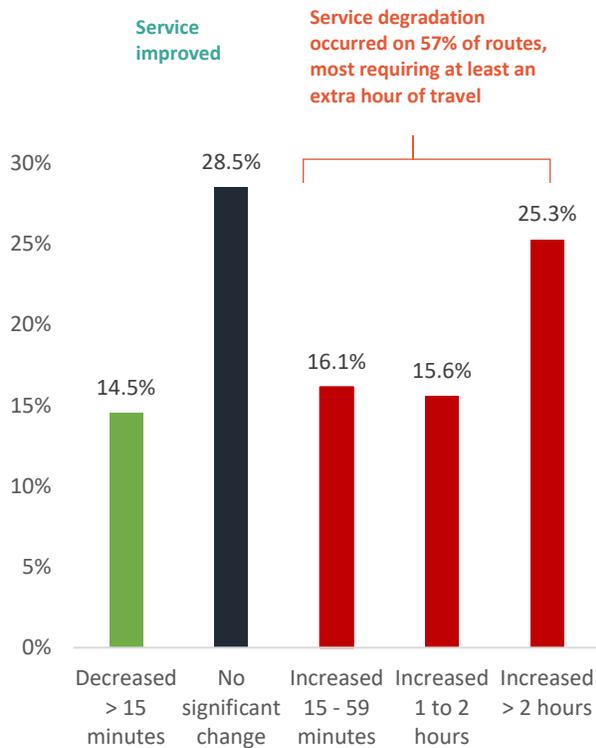
Such schedule deterioration is detrimental to the traveler experience and could delay the pace of recovery for the intercity bus industry. If bus lines add back schedules in response to strengthening demand as the pandemic eases, some of these degradations could be reversed. The likelihood of this, however, is unclear.



A RedCoach departure to Tallahassee, operated with a business class coach, is in the final stages of boarding in Orlando, FL

Figure 3: Travel Time Change from 2016 to 2021

186 secondary routes in the 100 – 525 mile range, pandemic schedules



These results illustrate the need for governmental assistance to address the network’s precarious condition. The risk is acute that bus lines that are part of the network could dramatically downsize (or even shut down entirely), which would hurt marginalized populations, the elderly, those living in smaller towns and cities, and those who cannot (or choose not to) drive.

The Greyhound CRS is the *only* booking platform with built-in capability to connect thousands of points across the United States by bus involving itineraries supported by comprehensive interline agreements. Many booking sites, including wanderu.com and busbud.com, rely on interfaces with greyhound.com to support many of their customer offerings. These sites have been critical to making bus travel more attractive and convenient, but neither they, nor Amtrak.com, megabus.com, or any other existing booking site could fill the void if the wide array of routes sold on the Greyhound reservation system sharply diminished (Table 4).



The departure board at the Chicago Greyhound Station shows departures to a variety of Midwestern and Southern U.S. points in January 2021

TABLE 3: Notable Routes in which Travel Times have Increased 3 hours or more*2016 to 2021, Pandemic Schedules*

RANK	ORIGIN	DESTINATION	MILES	2016 TIME	2021 TIME	INCREASE IN MINUTES
1	Jacksonville, FL	Fort Myers, FL	317	10h 20m	22h 30m	730
2	Raleigh, NC	Knoxville, TN	365	8h 20m	18h 45m	625
3	Birmingham, AL	Little Rock, AR	374	9h 20m	16h 50m	450
4	Saint Louis, MO	Madison, WI	360	10h 0m	17h 15m	435
5	Pittsburgh, PA	Buffalo, NY	215	5h 45m	12h 40m	415
6	Louisville, KY	Youngstown, OH	388	9h 20m	15h 40m	380
7	San Jose, CA	Fresno, CA	152	3h 20m	9h 25m	365
8	Pittsburgh, PA	Rochester, NY	284	8h 40m	14h 25m	345
9	Philadelphia, PA	Youngstown, OH	365	8h 40m	14h 20m	340
10	Buffalo, NY	Dayton, OH	397	9h 45m	15h 10m	325
11	Orlando, FL	Fort Myers, FL	163	6h 5m	11h 30m	325
12	Nashville, TN	Greenville, SC	347	7h 50m	13h 5m	315
13	Indianapolis, IN	Knoxville, TN	361	9h 0m	14h 5m	305
14	Indianapolis, IN	Akron, OH	299	7h 0m	11h 55m	295
15	Buffalo, NY	Allentown, PA	355	9h 25m	14h 10m	285
16	Las Vegas, NV	Oxnard, CA	325	7h 25m	12h 5m	280
17	Rochester, NY	Allentown, PA	290	7h 45m	12h 25m	280
18	Cleveland, OH	Scranton, PA	377	10h 55m	15h 30m	275
19	Indianapolis, IN	Youngstown, OH	347	8h 15m	12h 40m	265
20	Kansas City, MO	Wichita, KS	200	4h 10m	8h 15m	245
21	Philadelphia, PA	Worcester, MA	273	7h 25m	11h 30m	245
22	Sacramento, CA	Oxnard, CA	391	10h 0m	14h 5m	245
23	Birmingham, AL	Columbia, SC	360	7h 0m	10h 55m	235
24	Nashville, TN	Augusta, GA	400	8h 0m	11h 55m	235
25	San Jose, CA	Bakersfield, CA	243	7h 0m	10h 45m	225
26	Las Vegas, NV	Bakersfield, CA	286	5h 55m	9h 35m	220
27	Louisville, KY	Charleston, WV	248	11h 45m	15h 20m	215
28	Cincinnati, OH	Charleston, WV	207	9h 5m	12h 35m	210
29	Birmingham, AL	Augusta, GA	294	5h 35m	9h 0m	205
30	Boston, MA	Allentown, PA	332	7h 45m	11h 10m	205
31	Kansas City, MO	Tulsa, OK	276	4h 15m	7h 40m	205
32	Norfolk, VA	Columbia, SC	385	11h 40m	15h 5m	205
33	Milwaukee, WI	Cincinnati, OH	391	10h 55m	14h 10m	195
34	Indianapolis, IN	Cleveland, OH	318	6h 40m	9h 45m	185
35	Pittsburgh, PA	Syracuse, NY	360	10h 20m	13h 25m	185

FINDING 5:

Intercity buses remain the least expensive travel option on the vast majority of the country's major routes. The budget stretching benefits of bus travel are greatest for those buying tickets only a few days before departure, particularly during holiday periods. Persistently low air and rail fares, however, have posed an increasing threat on mid-distance and longer-haul routes.

The importance of intercity bus service in providing affordable transportation options to those with limited economic resources (as well as the value it provides to other types of travelers) is evident in our newly collected data for the cost of travel in late November and early January 2021 (Figure 4). This analysis identified the lowest fares available for air, bus, and rail travel for trips departing during daytime hours (8:30 a.m. – 4 p.m.) in a stratified sample of 20 heavily traveled routes ranging from 100 - 525 miles (via highway) in length. See the inset box for details of our sampling process.

Bus fares for tickets bought three days in advance were consistently below those for Amtrak and almost always well below airline travel, although the gap between bus and the other modes has narrowed since November. Prices of tickets bought only a few days before departure are particularly important for bus travelers, as the vast majority book at most a few days before their trip.

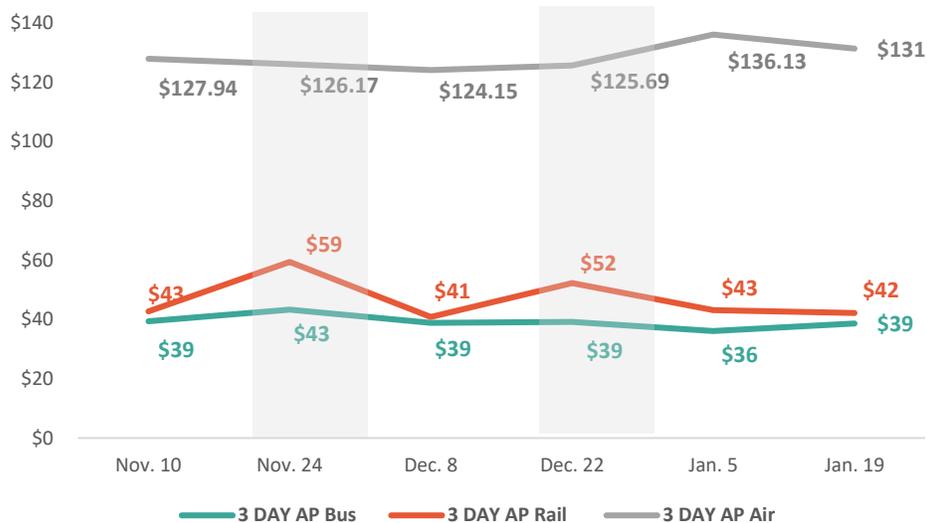
Average bus fares remained relatively stable in the \$38 - \$42 range over the five periods we observed. Average train (Amtrak) fares fluctuated to a higher degree, but never cumulatively fell below bus fare.



Several families collect their baggage at the Greyhound Bus Terminal in Chicago on January 13, 2021. The wearing of facemasks was strictly enforced at the station.

Figure 4: Average Fares with a Three-Day Advance Purchase by Mode

20 Prominent Routes in 100 – 525 mile range



This chart shows the average fare on 20 routes over the past three months by booking date. Intercity bus fares were lowest in all periods evaluated. Amtrak fares rose appreciably for booking during holiday periods, which is shown with shading. Airfares, while much higher, have gradually come down in recent weeks.

The monetary savings from bus travel are greatest during holiday periods, when Amtrak tends to engage in premium pricing more aggressively than bus lines.

observed as more than \$75, and in many cases more than \$120.

Our analysis shows that bus fares:

- **During the Christmas holiday averaged \$13 (25%) less than train tickets** for three day advance purchases and \$7 (14.6%) less for 10-day advance purchases.
- **Over all five periods, averaged \$6 (16.1%) less than train tickets** for three day advance purchases and \$5 (12.2%) less for 10-day advance purchases.
- **Are only a small fraction of air fares**, with one-way savings during each time period



Passengers board and alight the westbound California Zephyr at the Galesburg, IL station, a multimodal hub also served by Burlington Trailways, which offers Amtrak Thruway connections to Bloomington-Normal, IL and other points

BUSES, PLANES, AND TRAINS: HOW WE COMPARED FARES

The analysis considered the lowest fare bus or train option between 8:30am and 4:00pm (local time for the departure city). The options considered were limited to those no more than 90 minutes longer than the shortest trip duration anytime during the day. Both 3- and 10-day advance purchase scenarios were considered. Bus fares were collected by viewing all options on megabus.com and Wandru.com, and included applicable booking fees imposed by carriers. Airfares were based on all options on Orbitz.com and Southwest.com. Carriers with “unbundled” pricing such as Frontier are excluded due to their add-on costs to basic tickets.

Routes: Fare were collected on 20 routes: Atlanta, GA – Nashville, TN*; Boston, MA - New York, NY; Chicago, IL – Detroit, MI; Chicago, IL - St. Louis, MO; Dallas/Ft. Worth, TX - San Antonio, TX; Dallas/Ft Worth, TX* - Houston, TX; Denver, CO - Salt Lake City, UT; New York, NY– Washington, DC; Buffalo, NY- New York, NY; New York, NY– Pittsburgh, PA; New York, NY- Providence, RI^; Miami, FL – Orlando, FL; Milwaukee, WI - Minneapolis/St. Paul, MN; Los Angeles, CA - San Francisco, CA+; Los Angeles, CA – Phoenix, AZ; Portland, OR – Seattle, WA; Seattle, WA – Spokane, WA; Memphis, TN - New Orleans, LA; Philadelphia, PA - Washington, DC^

Symbols:

* no Amtrak; + Used Oakland, CA for Amtrak fares; ^Air fares not included due to short travel distance

The upper bound on bus fares tends to be relatively low. The most expensive “lowest fare” observed during any of the five periods evaluated was a \$91 Greyhound ticket booked three days in advance for travel on Saturday, November 28, during the Thanksgiving holiday. That fare was for the Denver, CO to Salt Lake City route, a 510 mile trip, making it the longest route in the sample. Although Greyhound had no direct bus or rail transportation competition on the day we observed (as Amtrak is tri-weekly), it still charged less than 18 cents per mile, which is below the variable cost of driving a medium sedan (gas, tire wear and other operating costs).

The growing tendency for discounted airfares available for last minute buyers is less favorable for bus travel. This tendency is made evident by the downward trend in three day advance purchase airfares shown in Figure 4. As recently as 2017, it was rare for “walkup” airfares to be priced comparatively to fares for bookings a week or two in advance. The pandemic has made these “walkup”

discount airfares less rare. Fewer travelers whose preferred option is flying are now likely to default to buses due to issues of affordability.

FINDING 6:

Amtrak is proving to be a particularly vigorous competitor to bus lines during early 2021. Those booking trips 10 days in advance will find fares on the passenger railroad below those for bus travel on about a third (35%) of the routes evaluated. This vigorous discounting is partially in response to Amtrak’s diminished schedule frequency in many corridors.

The Boston – New York route illustrates the intensity of competition provided by Amtrak. On this 215 mile corridor, the lowest Amtrak fare for a passenger buying a ticket on January 4, 2021 for a trip three days later was \$58. That fare made travel by train nearly twice as expensive as the \$30 bus fare for the

same travel corridor. However, an Amtrak passenger who booked a ticket on that same date for a trip 10 days in advance was offered a \$39 fare, just \$9 more than the cheapest bus ticket (which remained \$30). This “airline style” pricing appears to target passengers who book ahead, which likely accounts for a large share of the market during the pandemic. Considering that most Amtrak trips are faster than motorcoach trips on this route (even without upgrading to Amtrak Acela service), such discounted train fares could weaken a post-pandemic recovery of bus traffic. Indeed, Amtrak’s [promotional fares](#) in the Northeast have garnered much attention.

Throughout our data, we found that train fares tend to be much more closely priced to bus fares for buyers who book well in advance. In early January 2021, the percentage of the 20 routes in which bus travel was the least expensive fell to 60 - 65% for trips purchased 10 days ahead of departure. That is the lowest rate observed in the entire sample (Figure 5). These results contrast sharply with those from around the Thanksgiving and Christmas holidays,

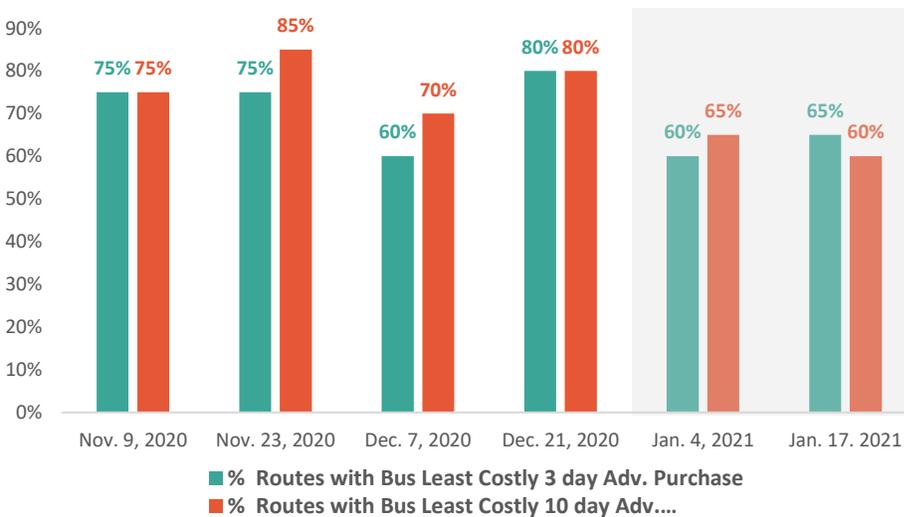
during which bus travel booked 10 days in advance was cheapest on 85% and 80% of routes respectively.

We believe that the heightened price competition from Amtrak in recent months is the result of both the soft demand conditions that characterize this time of year and the continuing effects of the second wave of the pandemic. Amtrak’s liberal rules on ticket changes and cancellations further nullify some of the advantages of bus lines, many have generally made it easy to change tickets.

We anticipate that by summer Amtrak will use its yield-management system to push prices upward, restoring the larger gap between train and bus fares that existed prior to the pandemic. The degree to which this occurs will depend on whether Amtrak restores daily service on long distance routes and returns short- and medium-distance service to pre-pandemic levels.

FIGURE 5: Percentage of Routes in which Bus Fares are lower than Air and Rail Fares

20 Prominent Routes in 100 – 525 mile range



This chart shows the percentage of the 20 routes sampled in which bus travel was the lowest cost option available under different advance purchase scenarios. The percentage fell to 60 - 65% for tickets bought 10 days in advance in early January, largely due to steep Amtrak discounting.

FINDING 7.

The Coronavirus Economic Relief for Transportation Services Act, passed in late December 2020, provides temporary relief for the ailing intercity bus industry. The amount of financial support set aside for the motorcoach industry in this legislation, however, is relatively meager. Additionally, it does not address the systemic problems facing the sector, many of which emerged before the pandemic and have now reached crisis proportions.

The \$2 billion set aside mostly for motorcoach operators in the Coronavirus Economic Relief for Transportation Services (CERTS) Act is far short of the \$10 billion the American Bus Association (ABA), United Motorcoach Association, and others advocated. The funding does come at a pivotal time. It will partially close a financial gap that has left many bus lines teetering on a financial cliff. Some operators, such as the Coach USA unit Lakefront Lines and several suburban operators have already closed. If more follow suit it could cripple mobility for vulnerable segments of society.

The \$2 billion will be divided among many different sectors, including private school bus operators, charter buses, tour operators, scheduled bus lines, and private commuter lines. Private passenger carrying vessels (e.g., ferries) are also included, further dividing the available funds. Funding will likely come in the form of both grants and loans, although critical details are not yet clear.

To appreciate the mismatch between the \$2 billion provided and actual needs, consider that based on our estimates the revenue loss for scheduled intercity bus lines alone could exceed \$1.5 billion during the first year of the pandemic. Additionally, there will be further losses in Pandemic Year 2. Passenger airlines have received (or are set to receive) more than ten times as much direct support as all types of over-the-road bus operators combined. Billions more have been awarded to airports and airport contractors. Amtrak has also received extensive supplemental funding, although its financial woes resulted in the temporary reduction of many long distance train schedules from daily to tri-weekly in October 2020.

The relief offered to the motorcoach operators, based on our calculations, has been proportionally far less than would be appropriate considering the enormous size of the sector (ABA estimates that, pre-pandemic, motor coaches handled 756 million annual trips).⁸ The \$10 billion requested would have been more in line with the support provided to other modes than the modest sum provided in the CERTS Act. As Mike Weinman of PTSI Transportation noted, the funding shortfall could be partially due to intercity buses being “out of sight, out of mind” for many legislators in Washington.⁹

On a more favorable note, federal and state support for rural and tribal intercity bus services, including that provided through the Federal 5311(b) program, have continued through the pandemic. This has allowed many secondary routes, particularly those serving urbanized areas with populations less than 200,000, to continue. The development of these routes depends heavily on the strength of the national bus network, as described in Finding 5.

CONCLUSIONS AND PROGNOSTICATIONS

The intercity bus industry's long term place on the country's transportation landscape, despite the present challenges, seems secure. The near term outlook, however, is less sanguine. We expect the following for the remainder of the year and into 2022.

PREDICTION #1.

A move by a major carrier (or perhaps some combination of smaller carriers), to dramatically downsize service, or even shut down entirely and dispose of equipment will occur unless a more favorable set of policies emerge from Washington.

Although we are bullish about the sector's long term potential, we are concerned about the near term and believe that the flow of red ink could trigger a major downsizing event. This could be forestalled if the Biden Administration sets into motion a more assertive federal response to the industry's financial losses, but the prospects for that remains unclear.

PREDICTION #2.

A recovery in traffic will start around mid-July, when travel demand typically is near its summer peak, air and rail fares rise in response to seasonal demand, and vaccines are widely administered to all age groups.

Almost all universities should return to in-person classes by late summer, and we expect to see renewed life in the central business districts of major cities—the lifeblood of many intercity bus services. Although demand will not likely return to levels approaching pre-pandemic levels for several years, the warmer months will bring back a sense of normalcy to a beleaguered industry. We believe summer bookings could rise toward 60 percent of pre-pandemic levels by the end of summer, roughly twice the rate today. The financial strain facing bus companies will continue, but conditions, thankfully, will have greatly improved.

PREDICTION #3.

Pro-rail policies of the Biden Presidency will foster enhanced coordination between intercity bus and Amtrak services.

Amtrak has devoted considerable resources to developing the Amtrak Thruway system prior to the pandemic, with particularly impressive programs in place in California, Michigan, Oregon, and other states. Indeed, much of the success of the Amtrak Thruway network has been due to state direction and investment. The Thruway system, however, has yet to reach its potential. Due to the profound effects of the pandemic, and President Biden's anticipated support for both Amtrak and public transit, more forceful efforts to leverage the combined strength of the bus and rail systems seem probable. Funding for new and enhanced downtown terminals and intermodal transportation centers, more incentives to provide bus routes into underserved areas, and more aggressive use of buses to complement Amtrak service in corridors could be in the offing.

PREDICTION #4.

Flixbus, Greyhound, and Megabus will accelerate efforts to expand their booking platforms by adding the services of other carriers that operate as independent brands, including new publicly funded routes to rural and mid-size communities.

We anticipate that Greyhound, Megabus, and Flixbus will work aggressively to add more services to their booking platforms through partnerships with smaller carriers that operate under separate brand identities. Greyhound has long been doing this, and Megabus and Flixbus took notable steps in this direction in 2020. We expect that more such additions are to come, including new publicly funded services. Funding for service to rural communities and small cities appears poised to expand (and, in fact, *needs* to expand) as the result of the financial difficulty of sustaining routes in a world forever changed by COVID-19. Megabus’s addition of the *Virginia Breeze*, a state supported service enjoying great success prior to the pandemic, provides a glimpse of the enhanced integration we expect to become more common. Booking aggregator sites such as BusBud and Wanderu, meanwhile, will continue to innovate and develop new ways to promote services that have in the past suffered from a lack of brand awareness.

PREDICTION #5.

There will be more aggressive expansion by “asset-light” brands such as FlixBus and OurBus, which employ business models that give them more versatility.

Although the entire industry has suffered enormously during the pandemic, carriers that outsource their operations, such as Flixbus and OurBus are in a somewhat better position to respond rapidly to post-pandemic changes in demand. We anticipate that the presence of these carriers will continue to grow across the country, in some cases filling the void left by more traditional carriers that have downsized.

Regardless of whether or not all or some of our predictions come true, the next year will be a pivotal time for the industry. ■

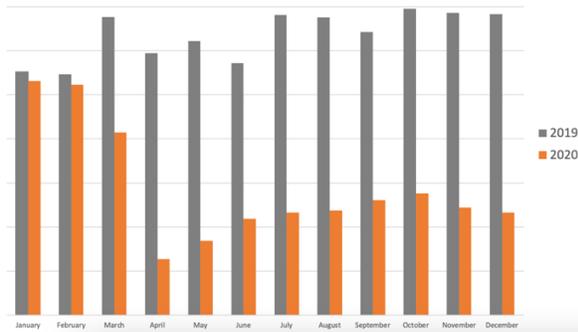


A Miller Transportation/Hoosier Ride bus arriving from Indiana at the Chicago Greyhound Terminal

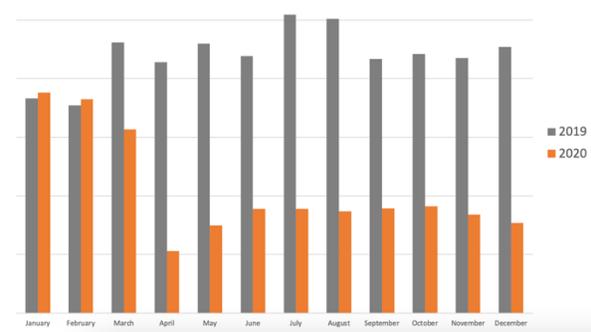
REGIONAL BOOKINGS

This chart shows year-over-year changes in bookings observed by Transcor Data Service. This information was compiled and aggregated from TDS's clients, who operate in most areas of the country, but not all.

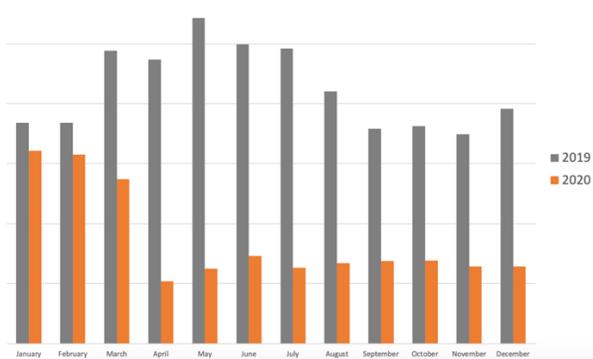
US REGION: MIDWEST



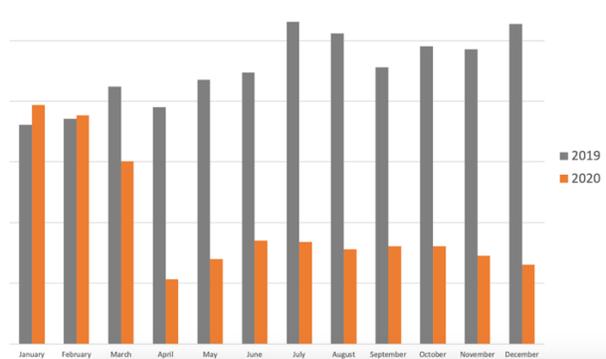
US REGION: SOUTHEAST



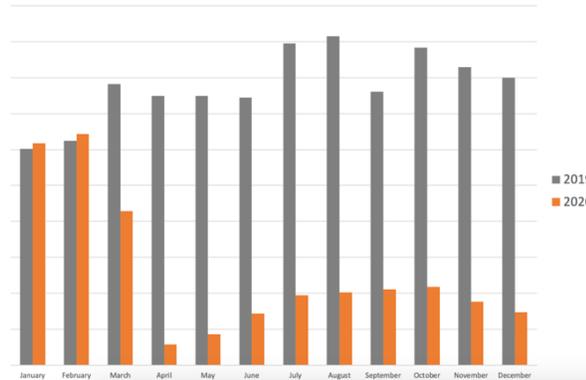
US REGION: SOUTHWEST



US REGION: WEST



US REGION: NORTHEAST



AUTHOR INFORMATION



JOSEPH P. SCHWIETERMAN, PH.D., a professor of Public Service Management and director of the Chaddick Institute for Metropolitan Development at DePaul University, is a nationally known authority on transportation and urban economics. He has testified three times on transportation issues before subcommittees of the U.S. Congress. Schwieterman holds a Ph.D. in public policy from the University of Chicago and is president of the Chicago chapter of the Transportation Research Forum. He is widely published on intercity bus and rail travel.



BRIAN ANTOLIN is an entrepreneur, consultant, and researcher following his childhood love for travel and transportation. As a respected thought leader in public transportation, Brian's research and commentary has been cited in numerous national publications including the *Boston Globe*, *Philadelphia Inquirer*, *New York Times*, and regional affiliates of National Public Radio. Prior to launching his tour and transportation company, CoTo Travel, Brian worked for BoltBus, a division of Greyhound Lines, Inc., in various operations and management positions.



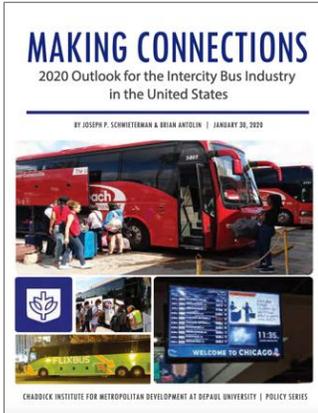
CRYSTAL BELL is the program manager for the Chaddick Institute for Metropolitan development and a graduate student studying public policy in DePaul University's School of Public Service. She has assisted in the development of Chaddick's Intercity Bus E-News publications. Crystal also provided technical assistance for Chaddick's recent research publications investigating the rapid growth of Amazon Air.

THE CHADDICK INSTITUTE, WHICH PROMOTES EFFECTIVE PLANNING AND TRANSPORTATION, DOES NOT RECEIVE FINANCIAL SUPPORT FROM INTERCITY BUS LINES OR SUPPLIERS OF BUS OPERATORS.

Would you like to join our intercity bus listserv? We send approximately 8 – 10 emails annually (no spam). Contact chaddick@depaul.edu or call 312.362.5731.

Photo captions and credits for cover photos can be found through this report except the bottom center photo. We include the latter photo, taken at a bus top at an international airport, to illustrate the global effects of the pandemic on bus travel.

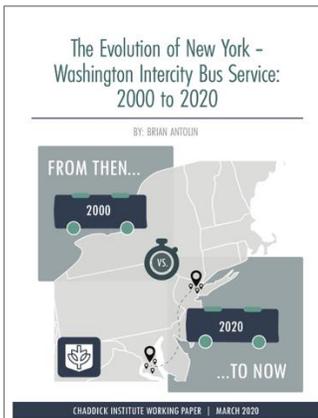
RELATED STUDIES BY THE CHADDICK INSTITUTE



[Making Connections: 2020 Outlook for the Intercity Bus Industry in the United States](#)

January 30, 2020

Our analysis of the state of the intercity bus industry in 2019 highlights notable service changes and includes an interactive map of premium service routes.



[The Evolution of New York – Washington Intercity Bus Service: 2000 to 2020](#)

March 2020

Our analysis of the evolution of regionally focused intercity bus networks highlights the New York City to Washington, DC corridor.

REFERENCES

- Antolin, Brian (2020). The Evolution of New York-Washington Intercity Bus Service: 2000 to 2020, Chaddick Institute for Metropolitan Development, DePaul University.*
- Chaddick Institute for Metropolitan Development (2015). *Adding Amenities, Broadening the Base: 2014 Year in Review of Intercity Bus Service in the United States*. DePaul University. Authors: Schweierman, Joseph, Brian Antolin, Marisa Schultz, Gary Scott, and Martin Sellers.*
- Chaddick Institute for Metropolitan Development. (2016). *The Remaking of the Motor Coach: 2015 Year in Review of Intercity Bus Service in the United States*. DePaul University. Authors: Schwieterman, Joseph, Brian Antolin, Alexander Levin, Matthew Michel, and Heather Spray.*
- Chaddick Institute for Metropolitan Development (2017). *Running Express: 2017 Outlook for the Intercity Bus Industry in the United States*. DePaul University. Authors: Schwieterman, Joseph and Brian Antolin.*
- Chaddick Institute for Metropolitan Development. (2018). *Driving Demand: 2018 Outlook for the Intercity Bus Industry in the United States*. DePaul University. Authors: Schwieterman, Joseph and Brian Antolin.*
- Chaddick Institute for Metropolitan Development (2019). *New Directions: 2019 Outlook for the Intercity Bus Industry in the United States*. DePaul University. Authors: Schwieterman, Joseph, Brian Antolin, Matthew Jacques.*
- Chaddick Institute for Metropolitan Development Schwieterman. (2020). *Making Connections: 2020 Outlook for the Intercity Bus Industry in the United States*. DePaul University. Authors: Joseph Schwieterman and Brian Antolin.*
- Elking, Issac and Robert Windle, Examining Differences in Short-Haul and Long-Haul Markets in US Commercial Airline Passenger Demand, *Transportation Journal*, 53 (4) (Fall 2014), 424-452.
- Federal Transit Administration. (2002). *TCP Report 79: Effective Approaches to Meeting Rural Intercity Bus Transportation Needs*. Transit Research Cooperative Program, Washington, DC.
- Grengs, Joe. (2009). Intercity Bus and Passenger Rail Study: Prepared for the Michigan Department of Transportation, University of Michigan Department of Architecture and Urban Planning.
- Hall, David. (2013) The Intercity Bus Renaissance: One Company's Experiences, *TR News: A Publication of the Transportation Research Board*, 303 (May/June 2013), 11–16.
- Hough, Jill and Jeremy Mattson, (2016). The Changing State of Rural Transit. *TR News: A Publication of the Transportation Research Board*, 303 (May/June 2013), 34–37.
- Klein, Nicholas J. (2015). Get on the (curbside) bus: The new Intercity Bus. *Journal of Transport and Land use*, 8(1), 155.

RSG, Inc. (2016). *Developing Refined Estimates of Intercity Bus Ridership*. Prepared for the Federal Highway Administration (April 23, 2015).

Schwieterman, Joseph P., Lauren Fischer, Sara Smith, and Christine Towles. (2007). *The Return of the Intercity Bus: The Decline and Recovery of Scheduled Service to American Cities, 1960 - 2007*. Chaddick Institute for Metropolitan Development, DePaul University.*

Schwieterman, Joseph and Lauren Fischer. (2012a). *Competition from the Curb: Survey of Passengers on Discount Curbside Bus Operators in Eastern and Midwestern Cities*. *Transportation Research Record*, 227, 49–56.

Schwieterman, Joseph and Lauren Fischer. (2012b). *The Decline and Recovery of Intercity Bus Service in the United States: A Comeback for an Environmentally Friendly Transportation Mode*. *Environmental Practice*, 13, 7–15.

Schwieterman, Joseph, Justin Kohls, Marisa Schultz, and Kate Witherspoon. (2014). *The Traveler's Tradeoff: Comparing Intercity Bus, Plane, and Train Fares Across the United States*. Chaddick Institute for Metropolitan Development, DePaul University.*

Transportation Research Board. (2016). *Interregional Travel: A New Perspective for Policy Making*. Transportation Research Board Special Report 320.

U.S. General Accounting Office (USGAO). (1992). *Surface Transportation: The Availability of Intercity Bus Service Continues to Decline*. GAO/RECD-92-126. USGAO, Washington, DC.

Walsh, M. (2000). *Making Connections: The Long-Distance Bus Industry in the USA*. Ashgate, Aldershot, UK.

* study with free download available on the [publications page at chaddick.depaul.edu](https://publications.chaddick.depaul.edu)

ENDNOTES

¹ ROX's new Virginia Beach service was suspended in August, 2021 due to COVID-19.

² We thank the staff at PTSI Transportation for this insight.

³ The new route from Denver to Craig, like several of Bustang's routes, is a recreation of a former Denver & Rio Grande Western Railroad passenger service (in this case, the train known as the Yampa Valley Mail). We thank Mike Weinman at PTSI for this insight.

⁴ Bus travelers tend to be provided fewer services when missing connections than airline travelers. In some cases, such as in cases of mechanical problems, airlines are required to provide hotels and meals. This requirement is largely nonexistent for bus travelers.

⁵ For a summary of the rise in immigrant travel, see Chaddick's [Making Connections: 2020 Outlook for the Intercity Bus Industry in the United States](#).

⁶ See Transportation Research Board. (2016). *Interregional Travel: A New Perspective for Policy Making*. Transportation Research Board Special Report 320 for a discussion of the problem of multi-modal planning in corridors 100 – 500 miles.

⁷ RedCoach operates connecting service on this route, provided with both business- and first-class buses.

⁸ See the American Bus Foundation's 2019 Census report, available at <https://www.buses.org/aba-foundation/research-summary/motorcoach-census-2019>

⁹ We thank Mike Weinman at PTSI Transportation for assisting in editing this section and providing us his insights on January 27, 2021.