





Project Background

- The Connect Mid-Hudson Transit Study focused on identifying opportunities to improve transit connections between Orange, Dutchess, and Ulster Counties, as well as between the study area and major employment hubs outside the region
 - Key areas of analysis include:
 - Effectiveness of regional services
 - Opportunities for new technologies and service models
 - Capital improvements to alleviate corridor congestion or capacity constraints at park-and-rides
 - A review of service performance and customer satisfaction monitoring
 - Recommendations reflect pandemic-related changes to travel patterns



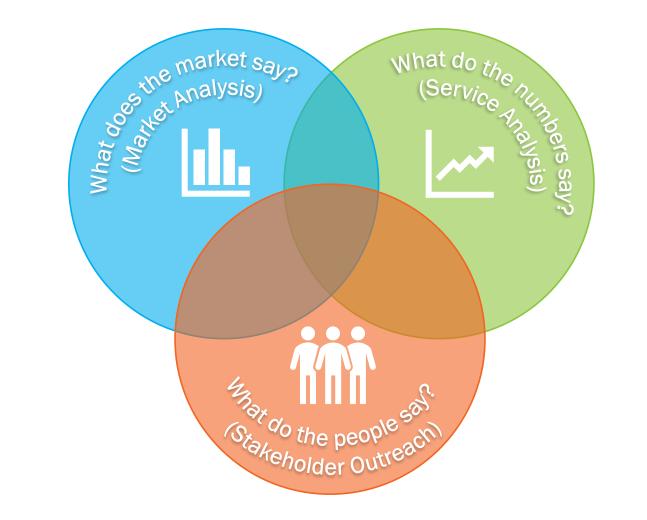
Project Background

COVID-19 Impacts

- Travel patterns changed significantly over the course of the project in response to the pandemic and mitigation efforts
 - By April 2020, most transit operations in the region were suspended or significantly reduced
 - Service restoration began in June 2020, but at a different pace for each agency/operator
 - In September 2020, monthly Metro-North Ridership remained down more than 75% from the same month in the previous year
- Data collection occurred before pandemic
 - Study team expects long-term commuting patterns to resemble past patterns more than present ones, but with lower volumes for quite some time
 - Stewart Airport's role in the region is expected to shift from passenger gateway to NYC to key cargo hub to support increased shipping
 - More intra-regional job-access trips
 - Fewer trips to/from NYC



Project Approach





Public Survey

- Online survey was conducted in the winter of 2018 and publicized through press releases and 12 pop-up events around the region
- 1,295 surveys were submitted
 - 75% identified as riders / 24% non-riders
- Survey helped study team understand how area commuters interact with the existing services and highlight issues that concern them, but was not necessarily a representative sample of area residents





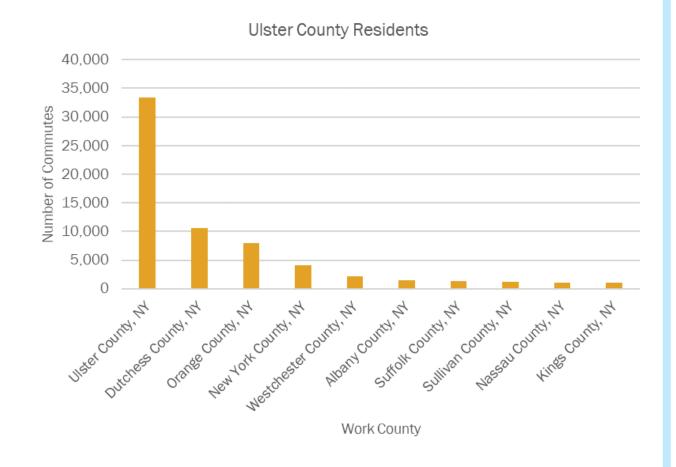


Public Survey

- Ulster County Survey Response Highlights
 - Regional Connections
 - UCAT DCPT Connections
 - At Poughkeepsie Train Station, UCAT routes connect well with Metro-North trains, but not with DCPT buses
 - Regional Rail Connections
 - Parking challenges at Rhinecliff and Poughkeepsie train stations limit access to regional rail services
 - Passenger Amenities
 - New Paltz Park-and-Ride Shelter
 - Survey respondents requested a more robust shelter or waiting area at the New Paltz Park-and-Ride that can better protect from cold temperatures and inclement weather.
 - Service Gaps
 - UCAT KS Route
 - 90-minute mid-day gap in service between Kingston and Saugerties
 - Hamlet of Wallkill
 - No current service to Wallkill
 - Ulster Avenue
 - Survey respondents commented on closed-door UCAT service along Ulster Avenue (although this has been addressed with the combination of UCAT and Citibus).

Market Analysis

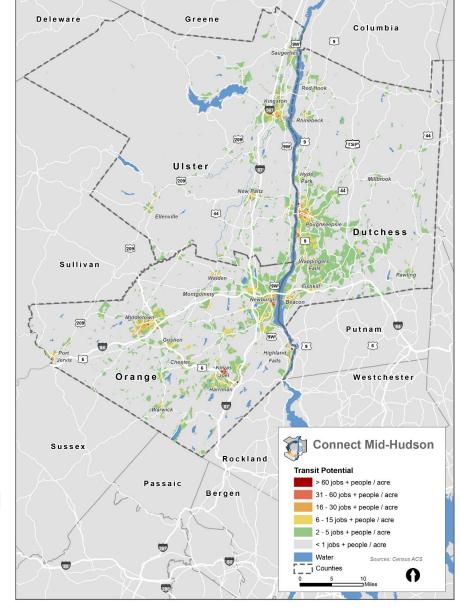
- The top commuting destinations for Ulster County residents are within the county
 - 45% of commuting trips are internal to the county
 - These trips are best served by local transit service





Market Analysis

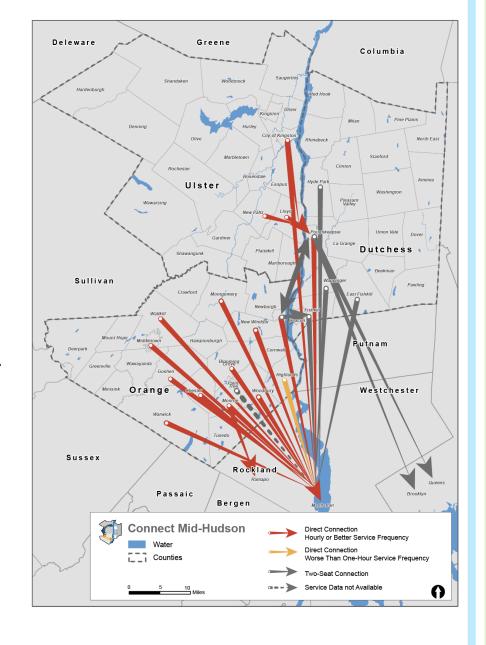
- Density is key to supporting local fixed-route service
 - Transit Potential is a measure of an area's population and/or employment density
 - 5 people and/or jobs per acre is the recommended minimum density to support local fixed-route service
 - In Ulster County, urban areas of Kingston, New Paltz, and Saugerties have the highest transit potential
 - Smaller clusters of transit-supportive density found in Walkill, Ellenville, and Woodstock





Service Analysis

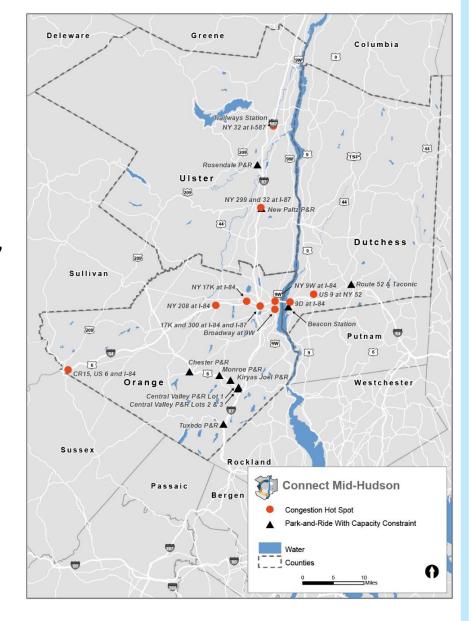
- For regional commuter services, density is less important than features that address commuters' pain points (traffic congestion, parking costs, travel time, etc.)
- All major regional commuting patterns (500+ trips per day between municipalities) originating in Ulster County are served by direct and frequent regional transit service





Service Analysis

- Commuting by transit allows Ulster County residents to avoid the stresses associated with parking, particularly in New York City
 - While these pain-points drive commuters to try transit, other pain-points can drive them away
 - Poor on-time performance
 - Limited parking availability at popular park-and-ride locations
 - Congestion Hot Spots in Ulster County:
 - NY Route 32 at the I-587 Terminus Interchange (NYSDOT improvements in progress)
 - NY Route 299 at the I-87 Interchange
 - Park-and-Ride Capacity Issues in Ulster County:
 - Rosendale Park-and-Ride
 - NYS Thruway Park-and-Ride, New Paltz





Service Analysis

- The identification of service issues like poor ontime performance requires regular service monitoring and/or investigations of customer complaints
- The Mid-Hudson region is fairly unique in the US in terms of the number of privately operated commuter services
 - Private carriers receive operating assistance through the Statewide Mass Transportation Operating Assistance (STOA) program and submit high-level ridership and service statistics
 - Reporting is not detailed enough to evaluate service effectiveness or customer satisfaction



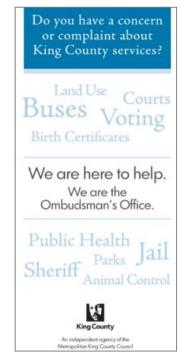






- Transit Ombudsman
 - Public advocate charged with representing the interests of consumers and/or taxpayers by investigating complaints related to publicly funded services such as transit
 - Publicly-subsidized private operators are overseen by NYSDOT, but the agency has limited staff/resources to examine customer complaints
 - Operators are largely policing themselves when it comes to customer complaints
 - In addition to serving as an advocate for commuters, a transit ombudsman could take on additional roles
 - Service monitoring and reporting, including on-time performance and park-and-ride utilization
 - Service planning and mobility management







- Passenger Information and Mobile Payment
 - Transit agencies pioneered the development of transit-specific apps to allow users to plan trips and track vehicles from their own devices
 - Industry trend is now to make transit data open-source to allow developers to lead the way with new and improved apps (no cost to operators)
 - Allows transit operators to focus on services
 - Several large transit agencies (including Baltimore, Boston, LA, and Montreal)
 have suspended their own in-house app development and focus only ensuring
 open-source data is accurate and up-to-date



moovit

- Key benefit of third-party apps is that they feature info for multiple systems (including other modes like scooters, microtransit, etc.)
 - Simplifies multi-modal trip planning
 - Increasingly include in-app features like mobile fare payment (requires formal partnership between transit operators and app developers)
 - Regional participation could be coordinated by proposed ombudsman





- Microtransit Service
 - Technology-driven demand-response service model that allows riders to directly request vehicles in real time through a smartphone app (or by phone)
 - Versatile solution that can provide both local coverage and regional first/last mile connections
 - Similar technology and user-interface to Uber and Lyft but with set fleet of vehicles operated or overseen by a public entity
 - More control of service branding and driver vetting/training
 - Right-sized vehicles based on demand
 - Lower-density areas
 - COVID-19 impacts of travel patterns

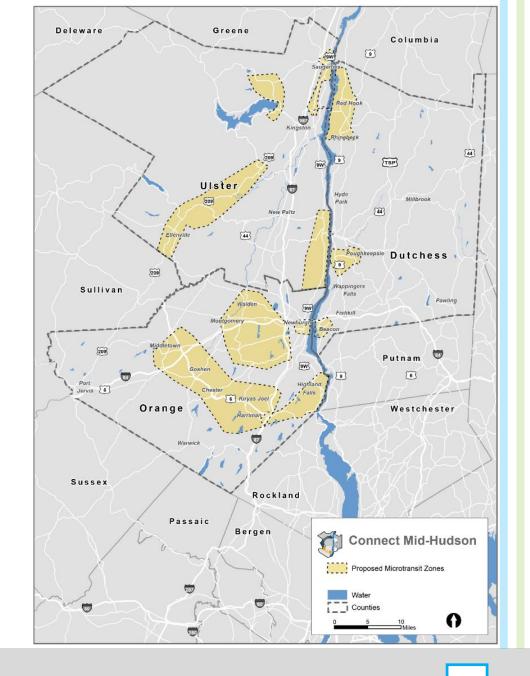






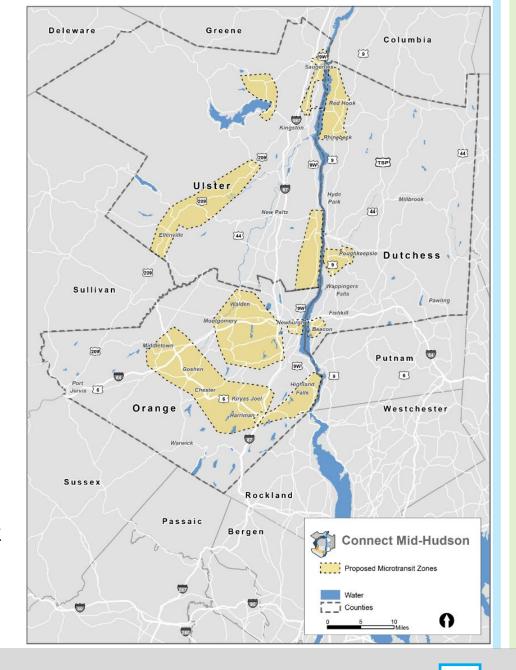


- Ulster County Microtransit Zones
 - Four microtransit opportunity zones identified for Ulster County (plus one Dutchess County zone with a link to Ulster County)
 - Zones reflect findings of market analysis, service analysis, and stakeholder input
 - Zone boundaries are approximate and preliminary
 - Addition zones may be considered in the future
 - Southern Ulster County Microtransit Zone
 - Could restore service to southern Ulster County Communities of Marlboro, Milton, and Highland, along the 9W corridor
 - UCAT KPL Route service cut in March 2020



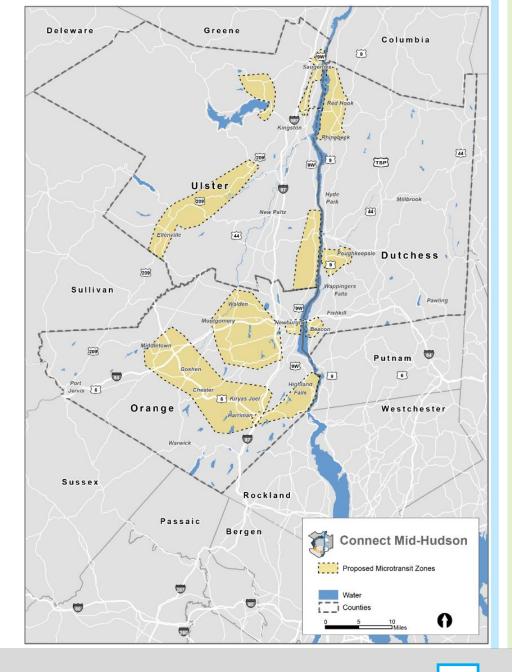


- Ulster County Microtransit Zones
 - Ulster County US-209 Microtransit Zone
 - Serving US-209 corridor communities of Ellenville, Napanoch, Kerhonkson, Accord, Stone Ridge, and SUNY Ulster
 - Would provide better frequency and coverage than UCAT UE Route, which could be truncated at SUNY Ulster
 - Ulster County West Hurley / Woodstock
 Microtransit Zone
 - Would streamline UCAT Z Route and provide local coverage to Woodstock, Bearsville, Zena, and West Hurley



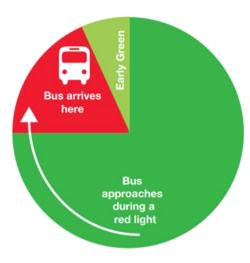


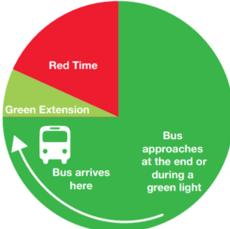
- Ulster County Microtransit Zones
 - Northern Ulster County Microtransit Zone
 - Serving 9W corridor communities of Saugerties,
 Malden, Glasco, and Lake Katrine
 - Addresses limited frequency and coverage of UCAT KS Route
 - Northern Dutchess County Microtransit Zone
 - Would provide feeder service for Rhinecliff Amtrak Station
 - Connections to Ulster County at Hudson Valley Mall via Kingston-Rhinecliff Bridge





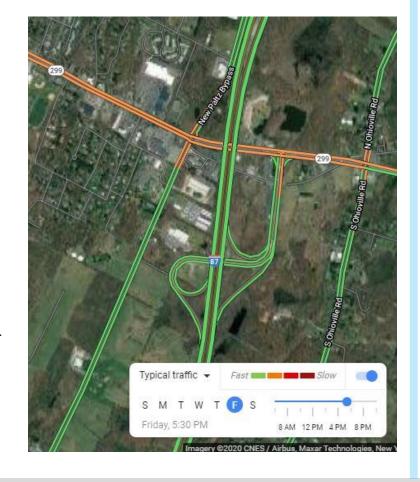
- Transit Signal Prioritization (TSP)
 - TSP is the practice of providing transit vehicles with priority at signalized intersections to reduce travel time and improve schedule reliability
 - TSP can be active or passive
 - Passive TSP involves optimizing signal timing by time of day to improve traffic flow for all vehicles
 - Active TSP relies on detecting transit vehicles as they approach an intersection and adjusting signal timing dynamically to prioritize transit over other traffic
 - Active TSP technology is evolving
 - Goal is visual identification of vehicle types
 - Currently requires transponders





Active TSP

- NY Route 299 at the I-87 Interchange
 - Heavy congestion (pre-COVID) between 5:00 and 6:00 PM
 - Congestion mostly impacts Route 299
 - Trailways buses serve a park-and-ride on Route 299, east of I-87 with 27 northbound trips and 26 southbound trips, for a total of 53 weekday trips (pre-COVID)
 - Area also served by UCAT's NPL Route
 - Proposed improvements include active TSP at the Route 299 and I-87 interchange to permit signal preemption for transit buses at this intersection
 - Also coordinate with NYSDOT to incorporate active TSP into ongoing intersection improvement projects along Route 299 at the Chestnut Street, Manheim Boulevard, Cherry Hill Road, and Putt Corners Road





- Park-and-Ride Expansion
 - Rosendale Park-and-Ride
 - Lot is served by Trailways and has 59 spaces
 - Prior to COVID-19, parking utilization was near-capacity on a regular basis
 - Lot could be expanded in two phases
 - Lot A would expand the existing lot by 67 spaces to 126 total parking spots
 - Lot B would include construction of 132 new parking spaces
 - Both phases would require acquisition of property
 - There have been prior unsuccessful attempts to acquire property for expansion
 - Impact studies would be required for both lots as expansion may impact wetland areas to the east
 - Lots could be expanded/added in phases





- Park-and-Ride Expansion
 - NYS Thruway Park-and-Ride, New Paltz
 - Lot is served by Trailways and has 149 spaces
 - Prior to COVID-19, parking utilization was near-capacity on a regular basis
 - Expansion of the existing lot would provide space for an additional 155 spaces providing a total capacity of 298 vehicles
 - Impact study would be required as expansion may impact wetland areas to the west

Larger and heated passenger shelter is also recommended for this location





Public Meeting

- Virtual public meeting will be held on December 10th at 6:00 PM
 - Zoom link can be found at www.ConnectMidHudson.com
 - Open to all
 - Meeting will be recorded and video will be posted to project website along with comment form on December 11th

Zoom Meeting Information

https://us02web.zoom.us/j/84598710813?pwd=ZFhMTHNxallhbE5XWXhSdmloQ1ZkQT09

Meeting ID: 845 9871 0813

Passcode: 975406

To participate by phone only, dial (929) 205-6099





Funding and Implementation

- The full implementation of all the recommendations in this plan, together with previously programmed projects, would require more than \$113.6 million in funding over the next ten years.
- This amount exceeds the estimated amount of unallocated transit funds available in the region, after accounting for each jurisdiction's existing capital needs (e.g. planned facility renovations, replacement vehicles, etc.).
- Region could implement up to \$25 million worth of the capital and operating recommendations using unallocated TMA funds, after accounting for existing capital needs
- Additional improvements would require new funding sources
- Study recommends creation of a Regional Transit Fund managed by a TMA committee and potentially overseen by the proposed ombudsman



Funding and Implementation

Capital Projects: (Values shown in Thousands of \$)

Projects	Jurisdiction	Year	Cost				
TSP / Transit Priority							
Passive TSP (Route 9D & I-84)	Dutchess County	2022	93				
Active TSP (Routes 9 at Route 52)	Dutchess County	2023	96				
Queue Bypass Lanes	Dutchess County	2023	168				
Active TSP (Route 17K at Route 9W)	Orange County	2023	58				
Active TSP Upgrades (CR 15)	Orange County	2023	174				
New Active TSP Signal (US 6 at I-84)	Orange County	2023	206				
Active TSP Upgrades at (NYSDOT Improvement Locations)	Orange County	2023	69				
Active TSP Upgrade (Route 9W at I-84)	Orange County	2023	58				
Active TSP Upgrades (Route 17K at I-84)	Orange County	2023	222				
Active TSP Upgrades (Route 17K and Route 300)	Orange County	2023	222				
Active TSP (Route 208 at I-84)	Orange County	2023	169				
Active TSP Upgrades (NYSDOT Improvement Locations)	Ulster County	2023	140				
Active TSP Upgrades at Route 299 and I-87 Intersection	Ulster County	2023	55				
TSP Subtotal							
Park & Rides							
Chester Park-and-Ride	Orange County	2024	2,025				
Tuxedo Park-and-Ride Lot	Orange County	2024	1,371				
Monroe Park-and-Ride	Orange County	2028	4,721				
Rosendale Park-and-Ride Phase 1	Ulster County	2024	1,595				
NYS Thruway Park-and-Ride, New Paltz	Ulster County	2024	2,002				
Rosendale Park-and-Ride Phase 2	Ulster County	2028	2,265				
Park-and-Ride Subtotal							



Funding and Implementation

Operating Projects: (Values shown in Thousands of \$)

Description	County	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total
Operating Recon	Operating Recommendations (Fiscally Constrained)										
Transit Ombudsmen	Regional		249	253	258	262	267	272	277	282	2,120
Microtransit Feasibility Study	Regional	204									204
Microtransit Pilot: Beacon- Newburg Zone	Orange/ Dutchess County	764	777	791	805	820	835	850	865	881	7,388
Microtransit Pilot: Ulster County West Hurley/Woods tock Zone	Ulster County	458	466	475	483	492	501	510	519	528	4,433
Sub-Total		1,426	1,492	1,519	1,547	1,574	1,603	1,632	1,661	1,691	14,144
Operating Reco	mmendation	ns (Fiscall	y Uncons	trained)							
Northern Dutchess County Microtransit Zone	Dutchess County	0	1,055	1,074	1,093	1,113	1,133	1,153	1,174	1,174	8,970
Southern Poughkeepsie Microtransit Zone	Dutchess County	0	612	623	634	646	657	669	681	681	5,203
Northern Ulster County Microtransit Zone	Ulster County	0	1,055	1,074	1,093	1,113	1,133	1,153	1,174	1,174	8,970
Ulster County US-209 Microtransit Zone	Ulster County	0	939	956	973	991	1,008	1,027	1,045	1,045	7,983
Orange County US-6/17M Corridor Microtransit Zone	Orange County	0	3,165	3,222	3,280	3,339	3,399	3,460	3,523	3,523	26,910
Southern Ulster County Microtransit Zone	Ulster County	0	812	827	842	857	872	888	904	904	6,907
West of Newburg Microtransit Zone	Orange County	0	2,637	2,685	2,733	2,782	2,833	2,884	2,935	2,935	22,425
Highlands / West Point Microtransit Zone	Orange County	0	1,055	1,074	1,093	1,113	1,133	1,153	1,174	1,174	8,970
Sub-Total		0	11,330	11,534	11,742	11,953	12,169	12,388	12,611	12,611	96,338

