Massachusetts Bay Transportation Authority

Forging Ahead: Supplemental Information on Ridership, Service Plans and Mode Specific Issues

Submitted to MEPA as part of Environmental Notification Form

February 1, 2020

Blue = will take significant amount of time to re-add service after reductions
All levers shown are additive and do not overlap

Appendix: Commuter Rail

Fairmount Line

Lever	% of service hours represented	Pre-COVID weekly riders impacted	Sept. 2020 riders impacted	Gross Savings ($M)		Risks / Consequences
				FY21	FY22	
• End Foxboro Pilot & Old Colony Late Night	1%	2K	N/A Lack of Access	$1 *(Nov 2020)*	$2	
• Eliminate all weekend service (Fairmount via bus)	12%	31K	~14K Lack of Access	$4 *(Jan)*	$17	
• Eliminate weekday service after 9 PM	13%	11.7K	939 Lack of Access	$0.5 *(May)*	$7	
• Reduce midday trains	2%	5.7K	~16K Frequency	$0.3 *(Jan)*	$1	
• Reduce peak service by 18%, incl. reduction of locomotives (8) and coaches (50)	7%	97.9K		$1.8 *(May)*	$14	• Station Closures (see below) • Closure of Needham Facility • Loss of skilled labor • Additional cost to mothball assets
• Additional reduction in coaches (50)	-	-		n/a	$4 *(Nov 2021)*	
• Station Closures	-	<200 Lack of Access (likely Divert)	<50 Lack of Access (likely Divert)	-	*minimal*	• Supports operationalization of peak service reduction
TOTAL	**35%**			***$8***	***$45***	

Appendix: Ferry

Lever	% of trips represented	Pre-COVID riders impacted	Sept. 2020 riders impacted	Gross Savings ($M)		Risks / Consequences
				FY21	FY21	
• Eliminate Direct Hingham service (F1) • Eliminate Hingham/Hull local (F2H) • Eliminate weekend Charlestown/Boston (F4)	100%	F1: 4,183 F2H: 1,350 Lack of Access F4: 1,230 Divert	F1: 279 F2H: 314 Lack of Access F4: 210 Divert	$3.5 *(Mar)*	$13	• Maintain MBTA ferries and other assets • Bus Route 93 provides alternative service to the F4 • Greenbush stations within 5-15 minute drive of Hull & Hingham
Total	**100%**	**5,533 Lack of Access** **1,230 Divert**	**593 Lack of Access** **210 Divert**	**$3.5**	**$13**	

Blue = will take significant amount of time to re-add service after reductions
All levers shown are additive and do not overlap

Appendix: Rapid Transit

Orange, Blue, Red, Green Line (trunk), Mattapan	

Lever	% of service hours represented	Riders impacted (avg. wkdy)		Gross Savings ($M)		Risks / Consequences
		Pre-COVID	Sept. 2020	FY21	FY22	
• Short-turn E Line at Brigham Circle, no Green Line service to Heath Street	3%	4,057 Divert	<1,000 (est.) Divert	$0.5 *(March)*	$2.0	• Route 39 replacement service (assuming some increase in Rt. 39 frequency); ~1,000 riders equivalent to ~25% of current Rt. 39 Ridership
• End service at midnight on all lines	2%	2,785 Lack of Access	733 Lack of Access	$0.6 *(March)*	$2.8	• Increase window of work available for maintenance and construction
• Reduce peak frequency by 20% on all lines*	10%	~497K SDP Frequency	~120K SDP Frequency	$0.8 *(partially in March)*	$12.1	• Green Line operations will not receive additional resources when GLX opens
• Reduce off-peak frequency by an additional 20% on all lines*	15%			$0.9 *(partially in March)*	$14.9	• Green Line operations will not receive additional resources when GLX opens
Total	**30%**			**$2.8**	**$32**	

Blue = will take significant amount of time to re-add service after reductions
All levers shown are additive and do not overlap
*Implementation timing for lever on Blue Line may need to be adjusted based on state and federal guidelines in regards to social distancing

65% of Pre-COVID service hours

Appendix: Bus (1/2)

Lever	% of service hours represented	Riders impacted (avg. wkdy)		Gross Savings ($M)		Notes
		Pre-COVID	Sept. 2020	FY21	FY22	
• 5% frequency reduction on essential (top left box) routes*	3%	~308K Freq, within SDP	~130K Freq, within SDP	-	$6.0	• 5% on average system-wide, impact may vary significantly route by route based on ridership (e.g. Routes 111, 116, 117, 104 and similar routes unlikely to reduced due to ridership)
• 10% reduction on all non-essential routes	3%	~100K Freq, not SDP	~31K Freq, not SDP	-	$7.2	• 10% on average system-wide, impact may vary route by route based on ridership
• 10% additional reduction on all non-essential routes	3%			-	$5.5	• 10% on average system-wide, impact may vary route by route based on ridership
• Eliminate or restructure bottom-right box routes, including Suburban Program subsidy	3%	6,794 Divert/ 1,444 Lack of Access + suburban subsidy	1,058** Divert/ 386** Lack of Access + suburban subsidy	-	$7.6	• Shorten route: 553, 554, 556, 558, 230 Eliminate: 52, 72, 79, 131, 136, 212, 351, 451, 465, 505, 710, 714 • Eliminate Suburban Subsidy Program

Blue = will take significant amount of time to re-add service after reductions
All levers shown are additive and do not overlap
*Implementation timing for lever on essential routes may need to be adjusted based on state and federal guidelines in regards to social distancing
**Some routes have been consolidated/restructured/suspended as part of COVID-19 response and unable to count all impacted riders

Appendix: Bus (2/2)

65% of Pre-COVID service hours	

Lever	% of service hours represented	Riders impacted (avg. wkdy)		Gross Savings ($M)		Notes
		Pre-COVID	Sept. 2020	FY21	FY21	
• Eliminate redundant routes that are within 1/4 mile of bus or rapid transit	2%	8,601 Divert	2,283** Divert	-	$4.8	• Fully redundant: 325, 326, 456 • Within ¼ mile of alt.: 43, 55, 68 • Within ¼ mile of alt. (post-GLX): 80, 88 (consolidate 88 & 90, extend to Clarendon Hill)
• Consolidate routes	1%	68 Lack of Access	N/A** Lack of Access	-	$2.1	• 62/76, 84/78, 214/216, 352/354, 501/503, 502/504
• Stop service at midnight	1%	4,212 Lack of Access	1,748 Lack of Access	-	$2.5	
• Eliminate very low ridership bottom-left routes, redundant options on portion of most routes	<1%	914 Divert/ 170 Lack of Access	134** Divert/ 54** Lack of Access		$0.9	• Eliminate: 18 (w/in ½ mile of Red Line), 170, 221, 428, 434, 716
Total	**16%**				**$38M**	

Blue = will take significant amount of time to re-add service after reductions
All levers shown are additive and do not overlap
**Some routes have been consolidated/restructured/suspended as part of COVID-19 response and unable to count all impacted riders

Nearly 99% of pre-COVID trips are unaffected

Appendix: The RIDE

Lever	Pre-COVID trips impacted		Gross Savings ($M) FY22	Risks / Consequences
	Annual	Avg. daily		
• Increase scheduling window from 30 to 40 minutes	All riders		$0.4 - $1.2	• Some trips may be booked 40 minutes from request time instead of current 30 minutes
• Changes to ADA/Premium service area based on fixed route eliminations/restructuring	~18,000 impacted (assume of that, ~4,000 trips no longer made)	~50 trips impacted (assume of that, ~11 trips no longer made)	$0.3 - $0.5	• Of 1.5M pre-COVID weekday trips, approx. 18,000 would shift from ADA to premium service • Of these, it's estimated customers would avoid taking 4,000 trips due to the higher premium fare, leaving 14,000 trips shifted to premium service • **Dependent on final package of service changes for fixed route**
• Changes to ADA/Premium service to fully adhere fixed route times of service	Under review			• Start/stop of RIDE service adjusted to fully match times of service of other MBTA modes (e.g. Bus/Rapid transit stopping at midnight, Commuter Rail at 9 PM)

RIDE fares per trip:

- Premium - $5.60
- ADA - $3.35

Appendix: List of all essential bus routes

High Transit Priority & High Ridership Potential (Key Bus Routes and Silver Line Routes in gray)							
1	21	**32**	42	69	105	120	504
8	**22**	33	44	83	106	121	CT2
9	**23**	34	45	85	108	202	CT3
10	24	35	47	86	109	210	**SLW**
11	26	36	50	89	110	215	**SL1**
14	27	37	51	91	**111**	240	**SL2**
15	**28**	38	**57**	93	114	411	**SL3**
16	29	**39**	64	97	**116**	424	**SL4**
17	30	40	65	99	**117**	429	**SL5**
19	31	41	**66**	104	119	455	

	2017 Service Delivery Policy* (only applicable for essential service)
Hours of operations	• **Weekdays & Saturdays:** 6:00 AM to midnight for Key Bus Routes (KBR); 7/8:00 to 6:30/7:00 PM for Local Routes • **Sundays:** 7:00 AM to midnight for KBR; 10:00 AM to 6:30 PM for Local
Frequency	• **Peak:** Every 10 min. for KBR, every 30 min. for Local • **Off-Peak weekday**: Every 15-20 for KBR, every 60 min for Local • **Weekends:** Every 20 min for KBR, every 60 min for Local

**Commuter or Community Route Standard not shown; Minimum span only standard for high-density areas. There is no span standard for low-density areas on weekend*

Note: Route 68 initially included in essential services (as serves essential trips), but as multiple alternatives exist with ¼ mile, proposed eliminating route

Appendix: List of all non-essential bus routes (without major structural changes)

Non-essential bus routes w/o major structural changes (Key Bus Routes in gray)					
4	74	101	195	238	450
7	75	112	201	245	712
34E	**77**	132	211	350	713
59	87	134	216	426	
60	90	137	217	430	
61	92	171	220	435	
67	94	191	222	436	
70	95	192	225	439	
71	96	193	226	441	
73	100	194	236	442	

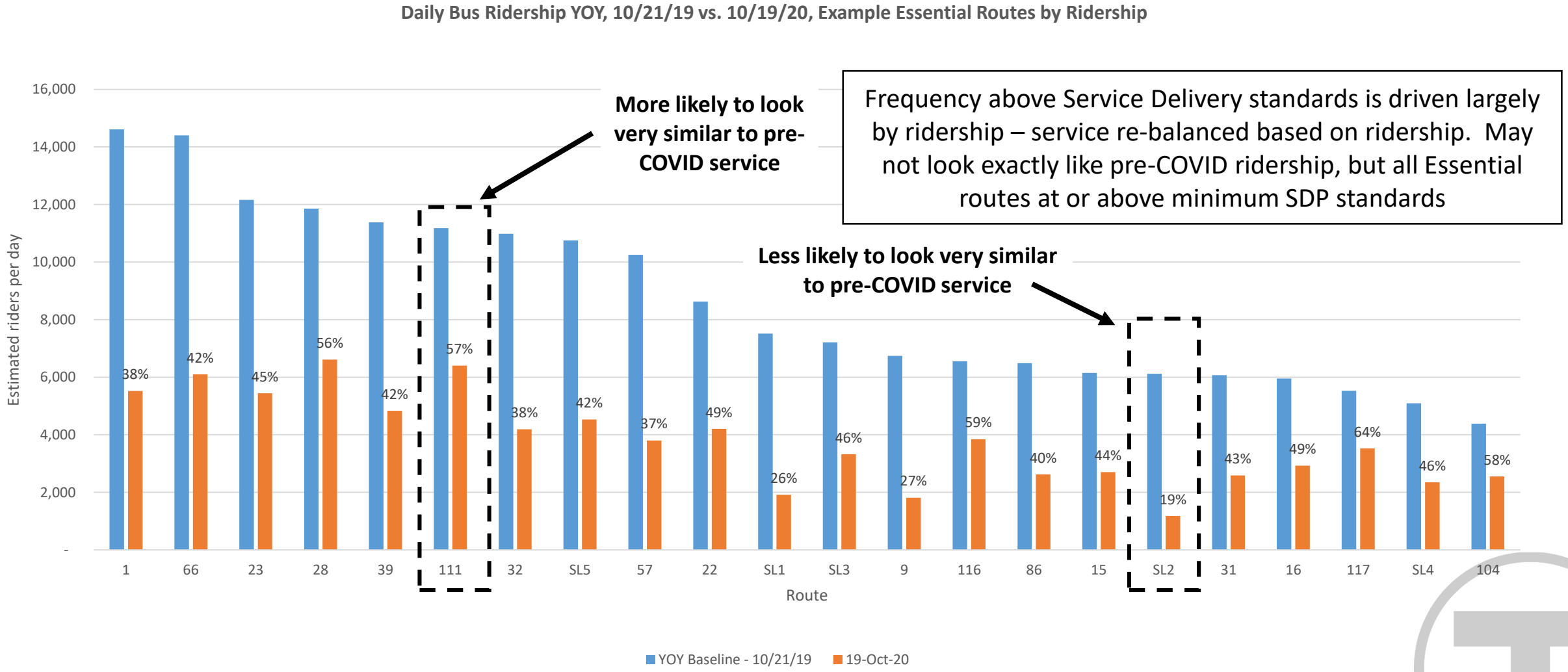
- All routes listed here will continue to operate
- All routes will stop service at midnight
- Frequency may be significantly reduced throughout the day

Appendix: All bus routes with major structural changes or eliminations

Consolidated Routes	Restructured routes (shortened)
62 & 76	553
84 & 78	554
88 & 90 (w/ GLX)	556
214 & 216	558
352 & 354	230
501 & 503	
502 & 504	
Restructured & consolidated routes will continue to operate, but stop at midnight and with lower frequency	

Eliminated routes			
Within ¼ mile of bus or rapid transit	High transit critical, very low ridership, redundant options available on portion of most routes	Low transit critical, low ridership)	
43	18	52	505
55	170	72	710
68	221	79	714
80 (w/ GLX)	428	131	Suburban subsidies
325	434	136	
326	716	212	
456		351	
		451	
		465	

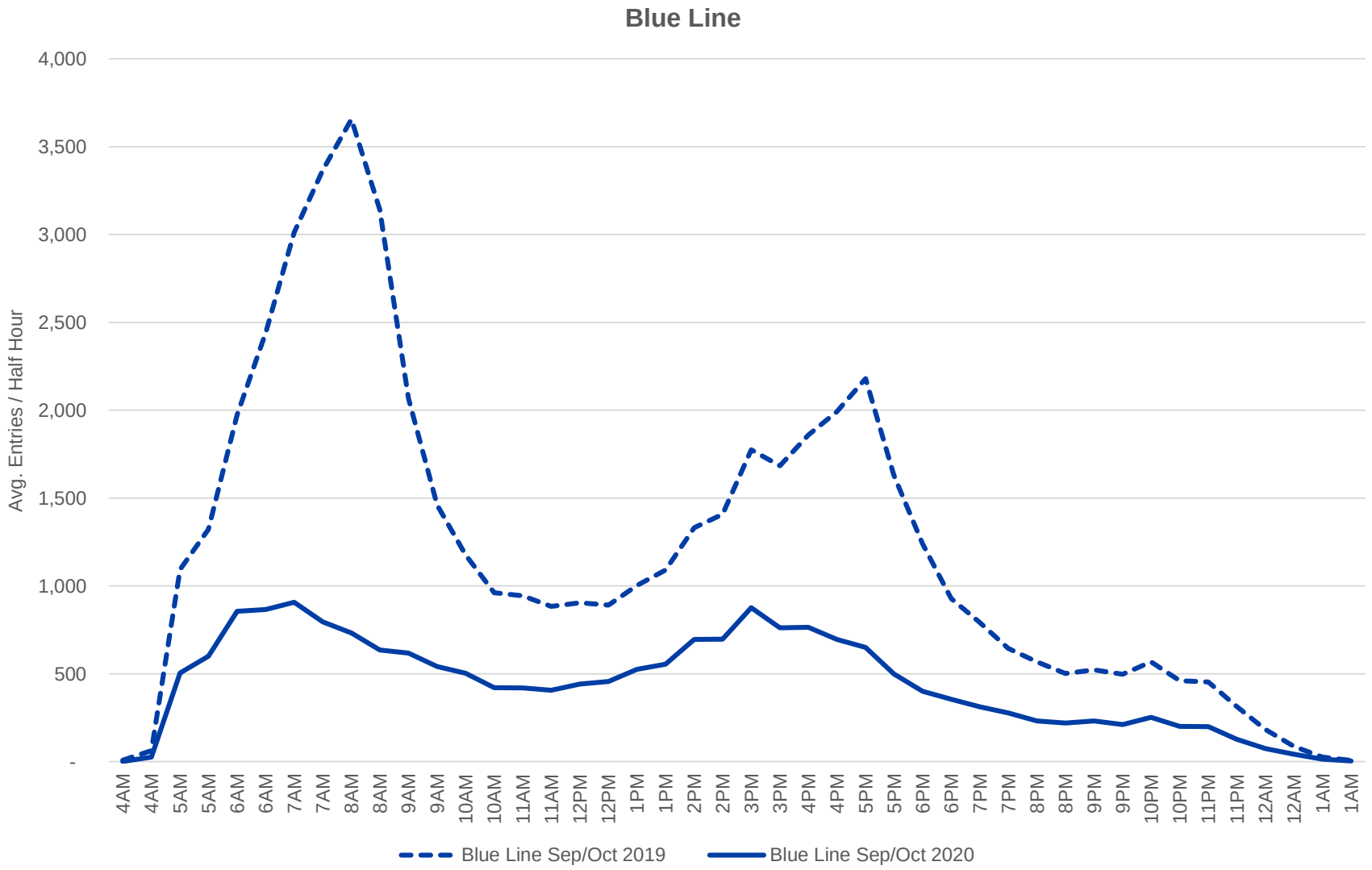
Appendix: What 5% frequency reduction looks like on Essential Services



Rapid Transit Ridership: Blue Line

~19,700 gate entries on weekdays, 37% pre-COVID

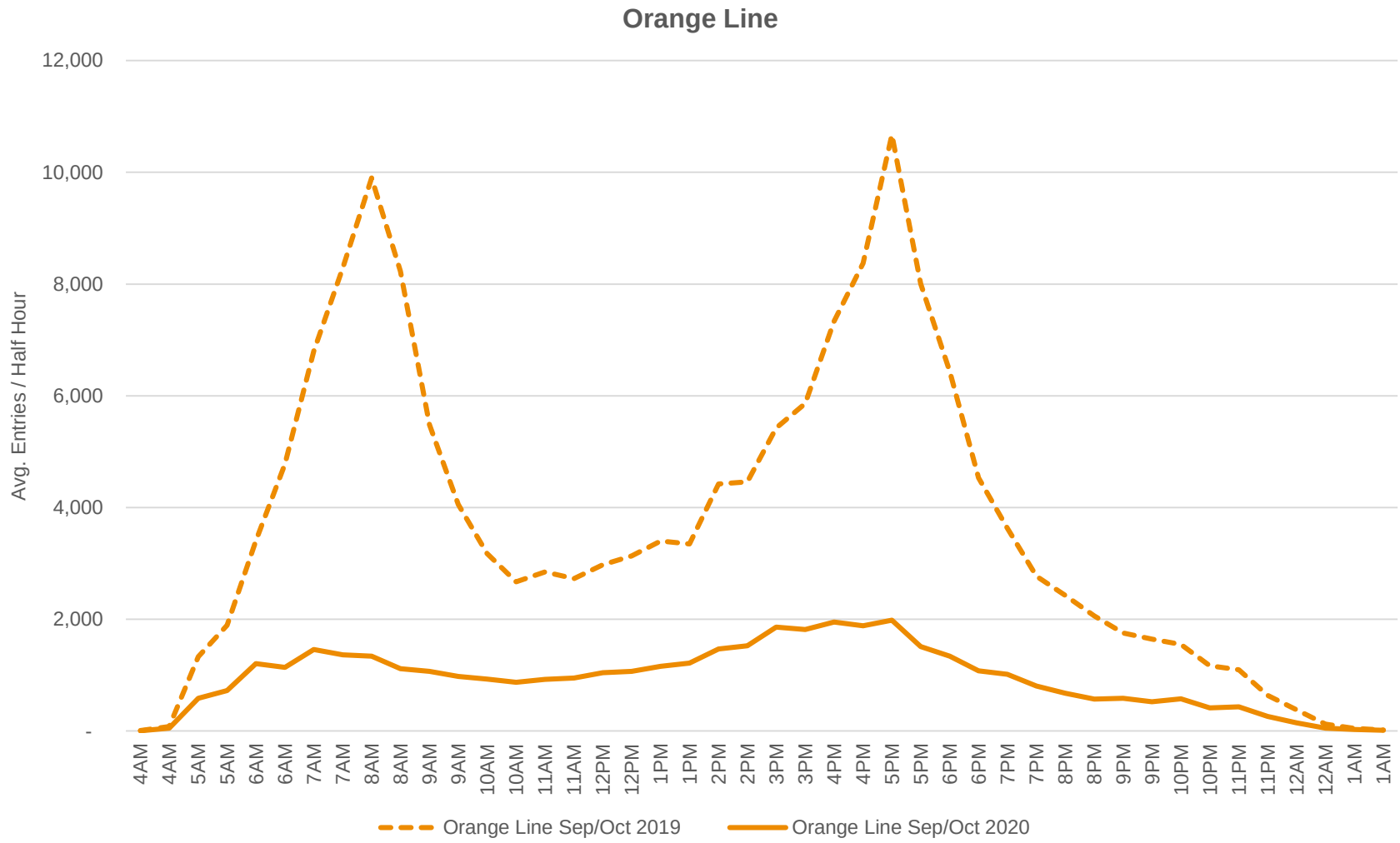
Sept/Oct 2020 Boardings after midnight
Blue: 134



Rapid Transit Ridership: Orange Line

~41,700 gate entries on weekdays, 26% pre-COVID

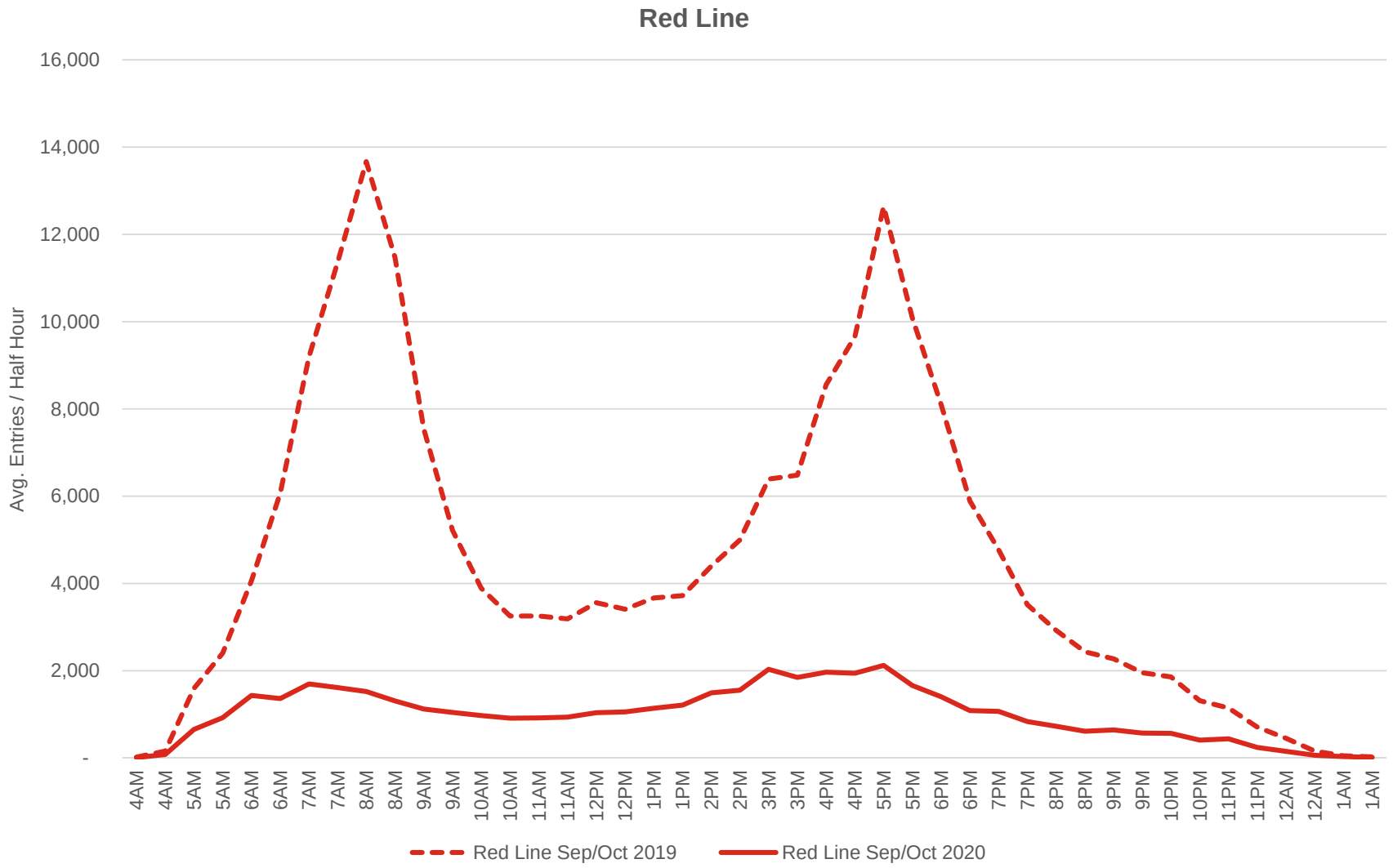
Sept/Oct 2020 Boardings after midnight
Orange: 237



Rapid Transit Ridership: Red Line

~44,400 gate entries on weekdays, 22% pre-COVID

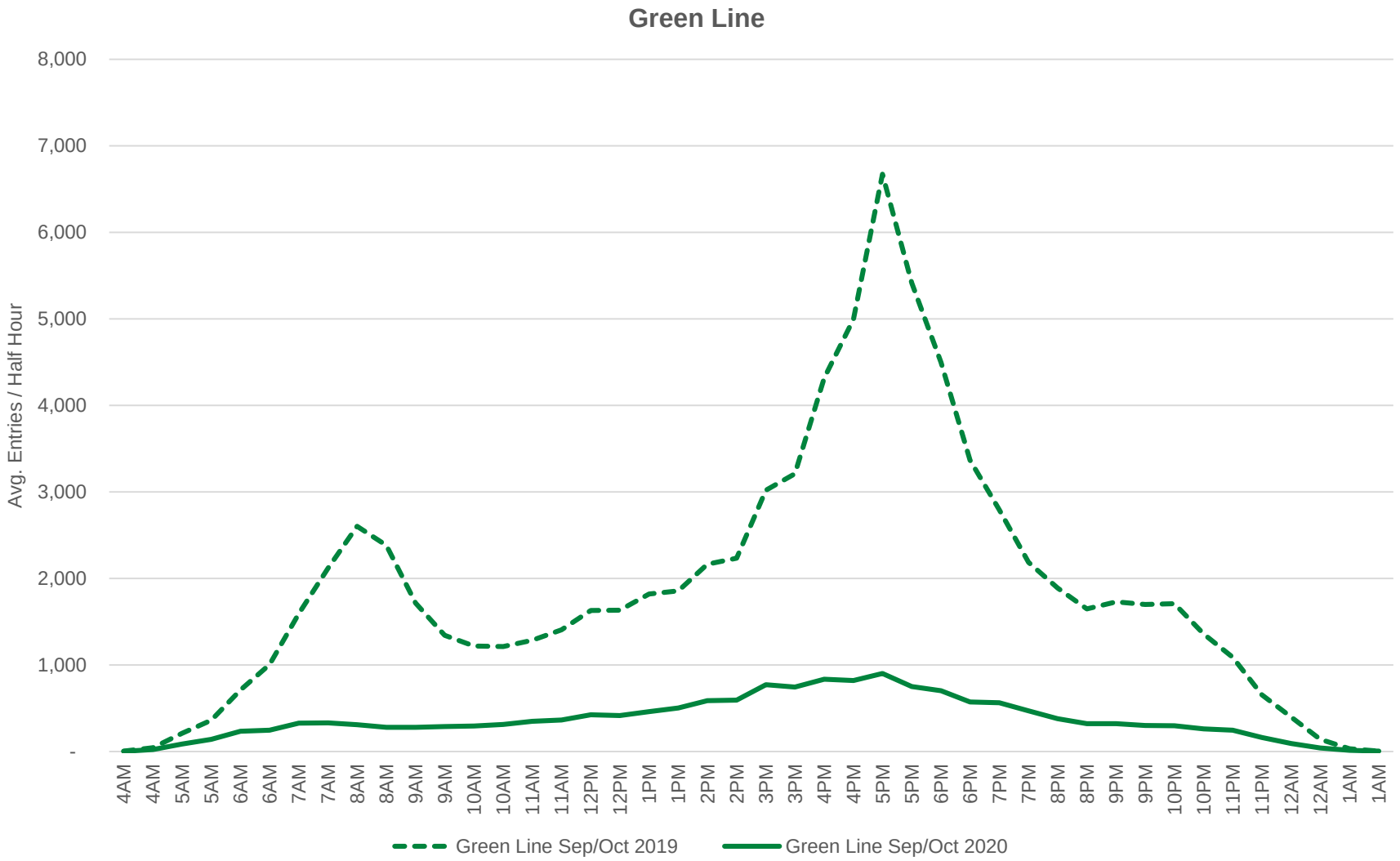
Sept/Oct 2020 Boardings after midnight
Red: 247



Rapid Transit Ridership: Green Line (gated stations)

~16,500 gate entries on weekdays, 20% pre-COVID

Sept/Oct 2020 Boardings after midnight
Green: 155



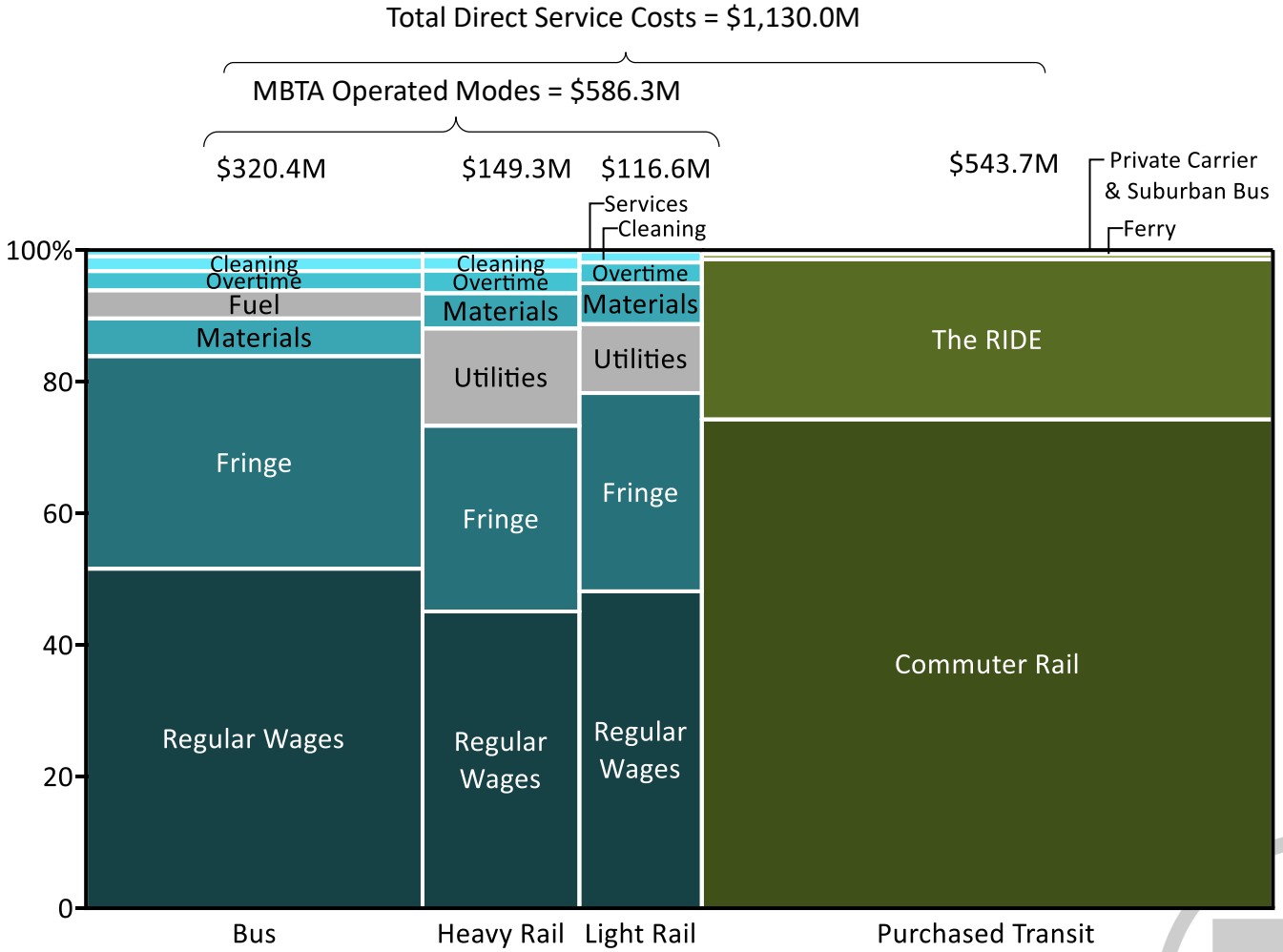
Appendix: Service Delivery Policy - Frequency & Span

		Commuter Rail	Ferry	Rapid Transit	Bus – Key Bus Routes	Bus – Local Routes*
Frequency	**AM & PM Peak**	3-4 trips in peak direction	3 trips in peak direction	Every 10 minutes	Every 10 minutes	Every 30 minutes
	All other weekday periods	Every 3 hours in each direction	Every 3 hours	Every 15 minutes	Every 15-20 minutes	Every 60 minutes
	Saturday	Every 3 hours in each direction	-	Every 15 minutes	Every 20 minutes	Every 60 minutes
	Sunday	-	-	Every 15 minutes	Every 20 minutes	Every 60 minutes
Span of Service	**Weekday**	7:00 AM – 10:00 PM	7:00 AM – 6:30 PM	6:00 AM - midnight	6:00 AM - midnight	7:00 AM – 7:00 PM
	Saturday	8:00 AM – 6:30 PM	8:00 AM – 6:30 PM (seasonal)	6:00 AM – midnight	6:00 AM – midnight	8:00 AM – 6:30 PM*
	Sunday	-	-	7:00 AM – midnight	7:00 AM – midnight	10:00 AM – 6:30 PM*

**Commuter or Community Route Standard not shown; Minimum span only standard for high-density areas. There is no span standard for low-density areas on weekend*

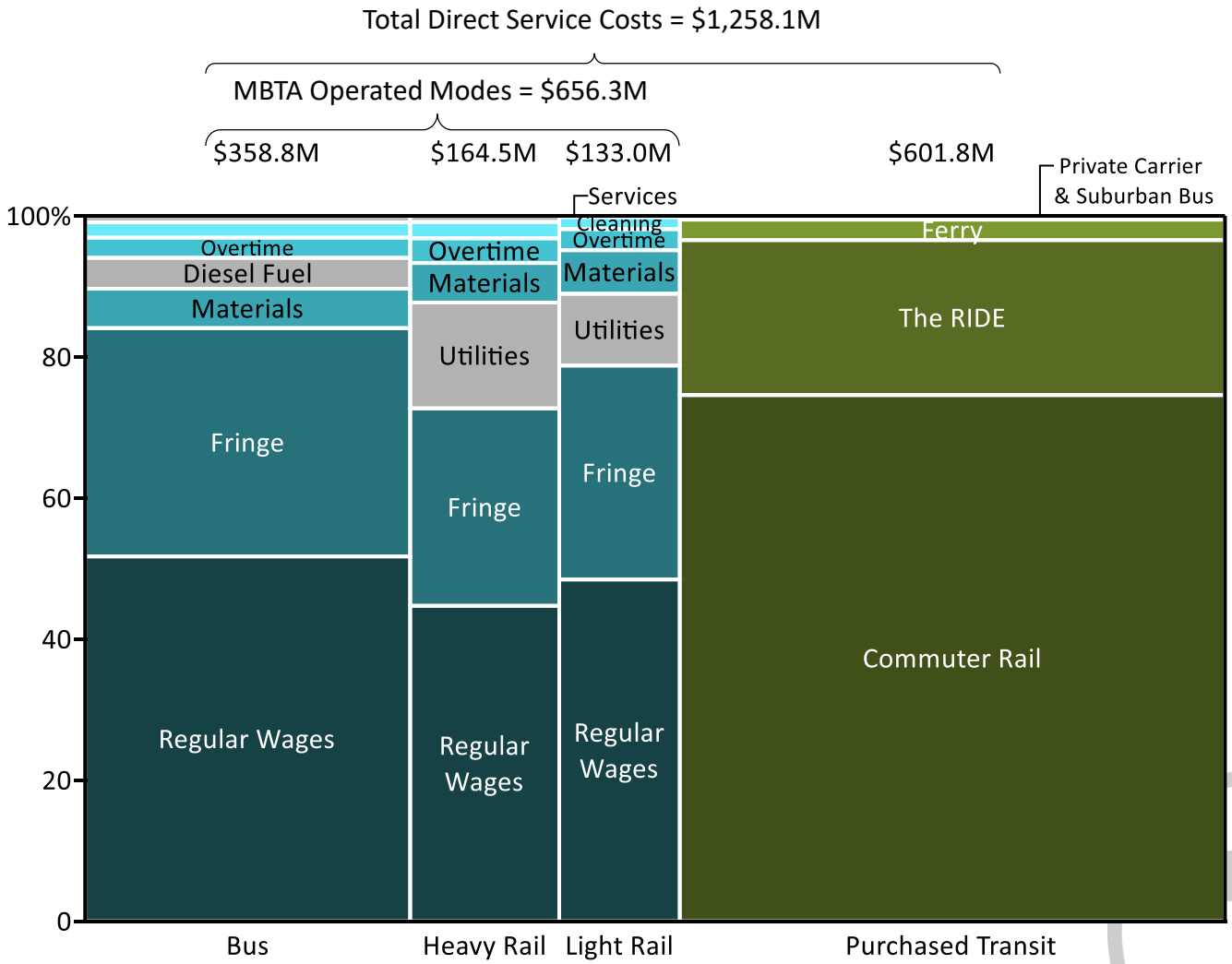
Direct Cost of providing Base Service Levels

- Direct service costs after savings from service packages is $1,130M
- $586M (52%) is for MBTA operated services
  - Of this, $488M (83%) is regular wages, overtime and fringe
- $544M (48%) is for purchased transit services
- Infrastructure Maintenance, and Other Operations are not included in these costs as their costs are assumed to be fixed with service levels



Direct Cost of providing Pre-COVID Service Levels

- Direct service costs for Pre-COVID service levels is budgeted for $1,258M
- $656M (52%) is for MBTA-operated services
  - Of this, $546M (83%) is regular wages, overtime and fringe
- $602M (48%) is for purchased transit services
- Infrastructure Maintenance, and Other Operations are not included in these costs as their costs are assumed to be fixed with service levels



Resolving the Budget Gap Summary

- Incorporating Scenario 3 Fare Revenue projection (as presented October 19th) FY22 budget gap projection at $579M.
- Taking steps now in FY21 to build reserves and reduce the level of spending cuts next year
- With the FY22 budget gap estimate at the upper bound of the initially projected range, altering recommendations results in direct trade-offs among the approaches
- Lowering recommendations in any one of the approaches would mean raising recommendations among the other approaches in order to achieve budget balance
- All cost saving actions are estimates and likely upon implementation will not reach full amounts listed