

FAIRFIELD PUBLIC SCHOOLS TRANSPORTATION DEPARTMENT



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To: Dr. David Title and Board of Education Members

Re: School Bus Grid System

In Fairfield we operate the buses on a three tier grid system. With the current fleet of 91 buses the three tiers will allow for 273 possible time slots if it was possible to do three trips with every bus. Due to the school start times and the PM dismissal times there is a limited amount for each bus to do a run. Some schools could do three schools in the AM but the PM run might be too long to get to the next school on time. The grid has public and private schools mixed together to use the buses as efficiently as possible. One complicated thing about this is a change to a private school tier slot or run can have an adverse effect on the public school side of the budget as well.

Here are a few examples:

1. Student enrollment at Assumption School dropped to 23 students. We had four buses in the budget for this school. When we took two of those buses off the grid they were combined with public school runs so this change cost the public school budget about \$ 30,000 and saved the town budget money.
2. When we set up or modify bus routes the amount of time it takes to do the run can increase which can make the run too long to fit into the grid. This year as we set up the bus routes we had a number of runs that were too long so we had to split the runs in half so they could get to school and home in time for the next run. We had a Warde HS run and a Ludlowe HS run that we needed to split this year.
3. We have also found that if a particular run had a number of valid complaints on the length of time it takes to do the run then we will split the run in half. We split a Warde HS run for the bus that picks up students near Treasure Rd. in the Easton, Westport border area and although the bus rides are still long there are only 20 to 25 students on the bus. We also had to split a Fairfield Woods Middle School run to try to make things better.

As we make all these changes to the grid to be able to provide safe, timely runs it increases/changes the One, Two and Three Tier counts which raises or lowers the two budgets (public & private). If we have more students Opt-Out of a school and choose to go to a different elementary school we could have to add a run to a school to keep the length of the ride time down. When the bell times at a school are changed this can help some of the tiers but at the same time make runs not fit on their tier. When we increase the number of three tier runs we also have to watch for vehicle breakdowns because they will then affect more than one school being late while the bus is fixed or a replacement is put in service.

The attached color coded bus grid will show how long the bus rides are, because the times are at the first student pick-up or last student drop-off then the bus will need to go to the next location. You could possibly have a bus by the Easton border that will need to get to Ludlowe Middle School to get the next group of students in the afternoon or it doesn't fit and we need to have a two tier run or in some cases with the middle school runs only a single tier is possible.

2011-2012 Bus Grid
Flow Chart

ROUTE #	1	2	3	4	5	6	7	8	9	10	11	12
6:25 AM			6:21									
6:30 AM												
6:35 AM												
6:40 AM												
6:45 AM												
6:50 AM						6:53		6:53				
6:55 AM												
7:00 AM	6:58			6:59	7:02							6:58
7:05 AM												
7:10 AM												
7:15 AM	WHS		NDH	LHS	LHS	LHS		WHS				WHS
7:20 AM		7:20										
7:25 AM							7:23		7:26		7:23	7:27
7:30 AM				7:30								
7:35 AM			7:37			7:35				7:35		
7:40 AM					7:41			7:39				
7:45 AM	7:46											
7:50 AM												
7:55 AM												
8:00 AM	FWS	LUD	FWS	LUD	FWS	LUD	LUD	FWS	LUD	LUD	TOM	LUD
8:05 AM												
8:10 AM												
8:15 AM												
8:20 AM						8:18				8:22		
8:25 AM					8:25						8:23	8:24
8:30 AM	8:28											
8:35 AM												
8:40 AM												
8:45 AM	STR				BUR	MCK				STR	RIV	STR
KRUN								NSS-KC		STR-KA		
								TWF		TWF		
1:45 PM			NDH									
2:20 PM												
2:25 PM	WHS			LHS	LHS	LHS		WHS				WHS
2:30 PM												
2:35 PM			2:34	2:33	2:37							
2:40 PM	2:38					2:38		2:39				2:39
2:45 PM												
2:50 PM												
2:55 PM												
3:00 PM	FWS	LUD	FWS	LUD	FWS	LUD	LUD	FWS	LUD	LUD	TOM	LUD
3:05 PM												
3:10 PM												
3:15 PM												
3:20 PM	3:19			3:20	3:21	3:18						
3:25 PM			3:23							3:24		3:23
3:30 PM	STR				BUR	MCK		3:29		STR		STR
3:35 PM							3:35				3:36	
3:40 PM									3:38			
3:45 PM	3:45										ASM	
3:50 PM												
3:55 PM		3:55								3:57		3:54
4:00 PM						4:00						
4:05 PM												
4:10 PM												
4:15 PM												
LTRUN		LUD #4							LUD #2			
4:30 PM												

2011-2012 Bus Grid
Flow Chart

ROUTE #	13	14	15	16	17	18	19	20	21	22	23	24
6:25 AM					6:26							
6:30 AM						6:29						
6:35 AM				6:35								
6:40 AM			6:41									
6:45 AM											6:43	
6:50 AM												
6:55 AM								6:56				
7:00 AM												6:59
7:05 AM												
7:10 AM							7:08					
7:15 AM			LHS	WHS	WHS	WHS		LHS			LHS	WHS
7:20 AM												
7:25 AM									7:23			
7:30 AM		7:30								7:31		
7:35 AM												
7:40 AM	7:38											
7:45 AM												7:43
7:50 AM					7:50	7:48						
7:55 AM												
8:00 AM	TOM	LUD		8:01			TOM		TOM	LUD		FWS
8:05 AM												
8:10 AM								8:08				
8:15 AM												
8:20 AM			8:22			FCD						
8:25 AM		8:25										
8:30 AM	8:28									8:32	ASM	8:30
8:35 AM												
8:40 AM												
8:45 AM	MCK	SHR	RIV	BUR	BUR			BUR		OBH		OBH
KRUN		SHR-KB	RIV-KA	BUR-KD	BUR-KB					OBH-KB		
		WED	MWR	TWF	WED					WED		
1:45 PM												
2:20 PM												
2:25 PM			LHS	WHS	WHS	WHS		LHS			LHS	WHS
2:30 PM												
2:35 PM												2:33
2:40 PM												
2:45 PM								2:38				
2:50 PM			2:51								2:49	
2:55 PM												
3:00 PM	TOM	LUD		2:59			TOM		TOM	LUD		FWS
3:05 PM					3:06							
3:10 PM												
3:15 PM						3:13						3:17
3:20 PM	3:19					FCD						
3:25 PM		3:27								3:24		
3:30 PM	MCK	SHR	RIV	BUR	BUR			BUR		OBH	RIV	OBH
3:35 PM												
3:40 PM						3:38			3:38			
3:45 PM										3:44		3:44
3:50 PM		3:52										
3:55 PM			3:53				3:53				3:55	
4:00 PM								3:59				
4:05 PM												
4:10 PM				4:11								
4:15 PM					4:14							
LTRUN	TOM #3											FWS #3
4:30 PM												
						5:00						

2011-2012 Bus Grid
Flow Chart

ROUTE #	25	26	27	28	29	30	31	32	33	34	35	36
6:25 AM												
6:30 AM										6:31		
6:35 AM				6:36								
6:40 AM							6:41					
6:45 AM												
6:50 AM												6:49
6:55 AM												
7:00 AM			7:01									
7:05 AM								7:03	7:08			
7:10 AM												
7:15 AM	7:17		LHS	NDH			WHS	LHS		WHS		LHS
7:20 AM												
7:25 AM		7:26										
7:30 AM			7:32								7:32	
7:35 AM					7:35			7:37	STT	WHS/AQUA		
7:40 AM						7:39			7:41			
7:45 AM												
7:50 AM				7:49								
7:55 AM												
8:00 AM	TOM	FWS	TOM	TOM	LUD	TOM		TOM	LUD		LUD	
8:05 AM												
8:10 AM								8:12				
8:15 AM												8:17
8:20 AM		8:20	8:21		8:19	8:18	8:16					
8:25 AM									8:23			
8:30 AM				8:28							8:32	
8:35 AM												
8:40 AM												
8:45 AM		MCK	MCK	RIV	BUR	MHS	BUR	MHS	DWI		JEN	DWI
										AQUA/WHS		
KRUN		MCK-KA			BUR-KA	MHS-KA	BUR-KC	MHS-KB			JEN-KA	DWI-KB
		WED			WED	TWF	WED	MWR			TWF	WED
1:45 PM				NDH								
2:20 PM									STT			
2:25 PM			LHS	2:26			WHS	LHS		WHS		LHS
2:30 PM								2:30				
2:35 PM			2:33									
2:40 PM									2:39			
2:45 PM												
2:50 PM												2:51
2:55 PM							2:54					
3:00 PM	TOM	FWS	TOM	TOM	LUD	TOM		TOM	LUD	3:01	LUD	
3:05 PM												
3:10 PM												
3:15 PM				3:15					3:16			
3:20 PM			3:19		3:22							
3:25 PM						3:25		3:25			3:24	
3:30 PM		MCK	MCK	RIV	BUR	MHS	BUR	MHS	DWI		JEN	DWI
3:35 PM												
3:40 PM												
3:45 PM				3:46								
3:50 PM	3:50					3:51					3:51	
3:55 PM		3:54			3:53				3:56			
4:00 PM						4:00		4:00				4:01
4:05 PM			4:04									
4:10 PM												
4:15 PM												
LTRUN	TOM #1											
4:30 PM												

2011-2012 Bus Grid
Flow Chart

ROUTE #	37	38	39	40	41	42	43	44	45	46	47	48
6:25 AM												
6:30 AM												
6:35 AM												
6:40 AM												
6:45 AM												
6:50 AM	6:51							6:51			6:51	
6:55 AM												
7:00 AM									7:00	7:02		6:57
7:05 AM												
7:10 AM							7:08					
7:15 AM	WHS					7:16		WHS				LHS
7:20 AM												
7:25 AM												
7:30 AM		7:29		7:32								
7:35 AM			7:33						STT	STT	STT	
7:40 AM	7:40							7:42				7:41
7:45 AM												
7:50 AM					7:52							
7:55 AM										7:57		
8:00 AM	FWS	LUD	TOM	LUD				FWS				FWS
8:05 AM												
8:10 AM												
8:15 AM						FPS	FPS		8:17			8:14
8:20 AM					FCD					FCD		
8:25 AM	8:24	8:23	8:23	8:27							8:27	
8:30 AM								8:30				
8:35 AM												
8:40 AM												
8:45 AM	JEN	MCK	RIV	OBH				OBH	DWI		RIV	JEN
KRUN		MCK-KB		OBH-KC							RIV-KB	
		TWF		WED							TWF	
1:45 PM												
2:20 PM									STT	STT	STT	
2:25 PM	WHS							WHS				LHS
2:30 PM												
2:35 PM												
2:40 PM	2:42					FPS	FPS	2:39				2:41
2:45 PM												
2:50 PM												
2:55 PM												
3:00 PM	FWS	LUD	TOM	LUD				FWS	3:01	3:01		FWS
3:05 PM											3:03	
3:10 PM												
3:15 PM					FCD					FCD		
3:20 PM	3:20		3:19									
3:25 PM				3:23								3:25
3:30 PM	JEN	3:28	RIV	OBH			JEN/NSS	3:28	DWI		RIV	JEN
3:35 PM		MCK				3:37	JEN/NSS	OBH				
3:40 PM												
3:45 PM				3:45			3:46				3:45	
3:50 PM		3:49	3:52					3:48				
3:55 PM	3:53				3:54					3:54		
4:00 PM							TO WKMN		3:59			4:00
4:05 PM												
4:10 PM												
4:15 PM												
LTRUN				LUD #1		NDH late	FPS			FCD Late		
4:30 PM						when calls	TWR					
					5:00					4:51		

2011-2012 Bus Grid
Flow Chart

ROUTE #	49	50	51	52	53	54	55	56	57	58	59	60
6:25 AM												
6:30 AM												
6:35 AM												
6:40 AM												
6:45 AM					6:43							
6:50 AM												
6:55 AM	6:55			6:55		6:58	6:53					
7:00 AM								6:59				
7:05 AM		7:06	7:03									
7:10 AM												7:09
7:15 AM	LHS			LHS	LHS			LHS				
7:20 AM												
7:25 AM									7:24			
7:30 AM		STT	STT			STT	STT			7:28	7:30	STT
7:35 AM	LHS/AQ			7:34				7:38				7:36
7:40 AM												
7:45 AM												
7:50 AM					7:49							
7:55 AM												
8:00 AM		8:01		TOM				FWS		TOM	LUD	TOM
8:05 AM												
8:10 AM												
8:15 AM									FPS			
8:20 AM				8:21	FCD		8:22					
8:25 AM	8:26		8:26			8:25						
8:30 AM								8:21			8:25	8:33
8:35 AM												
8:40 AM												
8:45 AM	MHS	BUR	STR	MHS		SHR	DWI	OBH			OBH	MHS
	AQ/LHS											
KRUN						SHR-KA	DWI-KA					MHS-KC
						TWF	WED					WED
1:45 PM												
2:20 PM		STT	STT			STT	STT					STT
2:25 PM	LHS			LHS	LHS			LHS				
2:30 PM												
2:35 PM	2:33							2:35				
2:40 PM				2:39	2:41				FPS			
2:45 PM												2:43
2:50 PM												
2:55 PM		2:53	2:54									
3:00 PM				TOM				FWS		TOM	LUD	TOM
3:05 PM						3:06						
3:10 PM												
3:15 PM					FCD		3:16					
3:20 PM											3:20	
3:25 PM				3:25				3:25				3:24
3:30 PM	MHS	BUR	STR	MHS		SHR	DWI	OBH	3:32		OBH	MHS
3:35 PM										3:35		
3:40 PM												
3:45 PM								3:45			3:45	3:43
3:50 PM	3:52		3:48			3:52	3:52					
3:55 PM				3:56	3:53							
4:00 PM												
4:05 PM												
4:10 PM		4:11										
4:15 PM												
LTRUN										TOM #2		
4:30 PM					4:53							

2011-2012 Bus Grid
Flow Chart

ROUTE #	61	62	63	64	65	66	67	68	69	70	71	72
6:25 AM												
6:30 AM	6:31											
6:35 AM												
6:40 AM												
6:45 AM									6:44			
6:50 AM												
6:55 AM												
7:00 AM		6:59		6:58								
7:05 AM						7:05				7:07		
7:10 AM			7:09				7:11					
7:15 AM	WHS	LHS		LHS								
7:20 AM												7:21
7:25 AM												
7:30 AM		7:29									7:28	
7:35 AM					7:33			7:33	STT	STT		
7:40 AM												
7:45 AM				7:43					7:46			
7:50 AM										7:52		
7:55 AM												
8:00 AM		LUD		TOM				LUD			FWS	FWS
8:05 AM	8:03		EHS		EHS							
8:10 AM												
8:15 AM						FPS						
8:20 AM												
8:25 AM									FCD	FCD		
8:30 AM		8:28					UNQ					
8:35 AM				8:35				8:34				
8:40 AM												
8:45 AM	BUR	MHS		MHS				SHR				
KRUN												
1:45 PM												
2:20 PM									STT	STT		
2:25 PM	WHS	LHS		LHS								
2:30 PM												
2:35 PM												
2:40 PM		2:41		2:39		FPS						
2:45 PM										2:45		
2:50 PM												
2:55 PM												
3:00 PM		LUD		TOM				LUD	2:58		FWS	FWS
3:05 PM	3:06											
3:10 PM				3:12								
3:15 PM			EHS		EHS				FCD	FCD		
3:20 PM												
3:25 PM												
3:30 PM	BUR	3:31		MHS			UNQ	SHR				
3:35 PM		MHS				3:36					3:35	
3:40 PM				3:42	3:40							3:42
3:45 PM								3:45				
3:50 PM		3:49										
3:55 PM												
4:00 PM												
4:05 PM												
4:10 PM	4:09		4:10									
4:15 PM												
LTRUN											FWS #1	
4:30 PM												RCA/LHS
									4:54			
							4:55			5:07		

2011-2012 Bus Grid
Flow Chart

ROUTE #	73	74	75	76	77	78	79	80	81	82	83	84
6:25 AM												
6:30 AM												
6:35 AM												
6:40 AM												
6:45 AM												
6:50 AM					6:52							6:51
6:55 AM								6:56			6:55	
7:00 AM						7:03						
7:05 AM										7:05		
7:10 AM	7:08	7:11										
7:15 AM			7:13		WHS	LHS	7:13	WHS			LHS	WHS
7:20 AM												
7:25 AM				7:26								
7:30 AM												
7:35 AM									7:33			
7:40 AM								7:40				
7:45 AM					7:44							
7:50 AM												
7:55 AM												
8:00 AM	FWS	FWS		LUD	FWS		TOM	FWS	LUD			8:01
8:05 AM											8:05	
8:10 AM												
8:15 AM			FPS						8:15			
8:20 AM						8:18						
8:25 AM												
8:30 AM										UNQ		ASM
8:35 AM					8:34							
8:40 AM												
8:45 AM					STR	BUK			JEN		EUR	
KRUN				NSS-KA	STR-KB			NSS-KB	JEN-KB			
				WED	WED			MWR	WED			
1:45 PM												
2:20 PM												
2:25 PM					WHS	LHS		WHS			LHS	WHS
2:30 PM						2:30						
2:35 PM												
2:40 PM			FPS		2:42			2:41			2:39	
2:45 PM												2:43
2:50 PM												
2:55 PM												
3:00 PM	FWS	FWS		LUD	FWS		TOM	FWS	LUD			
3:05 PM												
3:10 PM												
3:15 PM												
3:20 PM					3:22			3:21	3:19			
3:25 PM				3:27								
3:30 PM					STR	EUR			JEN	UNQ	EUR	MHS
3:35 PM			3:34									
3:40 PM					3:41							
3:45 PM							3:47					3:46
3:50 PM												
3:55 PM	3:55					3:56					3:54	
4:00 PM									4:02			
4:05 PM		4:05										
4:10 PM												
4:15 PM												
LTRUN		FWS #2										LUD #3
4:30 PM	RCA/WH											
										4:51		

2011-2012 Bus Grid
Flow Chart

ROUTE #	85	86	87	88	89	90	91
6:25 AM							
6:30 AM							
6:35 AM							
6:40 AM							
6:45 AM							
6:50 AM	6:48						
6:55 AM							
7:00 AM						7:02	
7:05 AM					7:06		
7:10 AM							
7:15 AM				7:13			
7:20 AM							
7:25 AM							7:24
7:30 AM							
7:35 AM	STT				STT		
7:40 AM		7:38			7:39		
7:45 AM	7:47		7:46				
7:50 AM							
7:55 AM							
8:00 AM		HHS	HHS	TOM	LUD	TOM	TOM
8:05 AM							
8:10 AM			8:10				
8:15 AM							
8:20 AM	FCD						
8:25 AM							
8:30 AM		8:29			8:31		8:31
8:35 AM							
8:40 AM							
8:45 AM		OBH	DWI		DWI		MHS
KRUN		OBH-KA	DWI-KC				
		WED	WED				
1:45 PM							
2:20 PM	STT				STT		
2:25 PM							
2:30 PM							
2:35 PM							
2:40 PM							
2:45 PM					2:45		
2:50 PM		HHS	HHS				
2:55 PM							
3:00 PM				TOM	LUD	TOM	TOM
3:05 PM	3:05		3:03				
3:10 PM		3:12					
3:15 PM	FCD				3:15		
3:20 PM							
3:25 PM							
3:30 PM		OBH	DWI		DWI		3:37
3:35 PM							
3:40 PM							
3:45 PM		3:45			3:46		ASM
3:50 PM				3:49			
3:55 PM							
4:00 PM						3:58	
4:05 PM			4:06				
4:10 PM							
4:15 PM							
LTRUN							
4:30 PM							
	5:04						

Total Runs Per School
2010 - 11 vs. 2011 - 12

PUBLIC SCHOOLS	2010-11	2011-12
BURR	10	10
DWIGHT	6	6
HOLLAND HILL	2	2
JENNINGS	4	4
MCKINLEY	5	5
MILL HILL	8	8
NORTH STRATFIELD	6	6
OSBORNE HILL	7	7
RIVERFIELD	5	5
SHERMAN	3	3
STRATFIELD	5	5
WOODS MS	12	16
LUDLOWE MS	19	20
TOMLINSON MS	14	18
LUDLOWE HS	17	18
WARDE HS	12	15
SPECIAL EDUCATION RUNS	31	31
TOTAL RUNS	166	179

Total Runs Per School
2010 - 11 vs. 2011 - 12

PRIVATE SCHOOLS	2010-11	2011-12
ASSUMPTION	4	2
EAGLE HILL	2	2
FAIRFIELD COUNTRY DAY	7	7
FAIRFIELD PREP	5	5
NOTRE DAME HS	2	2
ST THOMAS	13	13
UNQUOWA	2	2
TOTAL RUNS	35	33

Note:

In the 2010 - 11 School Year there were 95 buses used.
 In the 2011 - 12 School Year there were 91 buses used.
 We did 11 more runs with 4 less buses by changing the
 high school bell times for 2011- 12.

[illegible]

(A) Explanation of Increase / Decrease	"Other"
Preschool Tuition - Increase	\$ (60,000)
Regional Trans - Increase	\$ (2,500)
Regional Trans - Decrease	\$ 6,500
Regional Trans - Increase	\$ (576)
Savings from Bus Optimization	\$ (1,300)
Excess Cost-Increase	\$ (34,249)
Excess Cost-Decrease	\$ 1,165
Excess Cost-Decrease	\$ 1,562
Performance Bond Increase	\$ 594
Consultant-New Contract 13-14	\$ 12,000
	\$ (76,903)