



Note added by General Manager:

Back-up data and schematics for all options (reference only)

See Board presentation version dated August 28, 2018 for narrative and proposal

MANCHESTER SCHOOLS PHASE II

SMARTR II Committee – August 21, 2018

School Modernization and Reinvestment Team Revisited (SMARTR)



SMARTR 1 GUIDING PRINCIPLES

- **Current elementary schools are aging, inefficient, and do not provide a 21st century learning environment.**
- **There needs to be parity of facilities and sustainable racial balance between all elementary schools.**
- **Some of the district's schools experience significant conflict between buses, cars, and walkers.**
- **Where prudent, state school construction assistance money should be optimized. State reimbursement formulas do discourage construction/rehabilitation of smaller schools, however for the size of schools being considered with classroom sizes between 17 – 22 students, research by SMARTR indicates that enrollment capacity does not have an impact on learning.**
- **There is a strong desire to maintain a “neighborhood” structure to the elementary schools. This structure can be maintained by expanding current neighborhood boundaries and maintaining geographic continuity.**





OPTIONS STUDIED

- **4 School Option – Renovate 4 Elementary Schools**
- **3 School Option – Renovate 3 Elementary Schools
4th School Converted to Pre K**
- **2 School Option – Renovate 2 Elementary Schools**

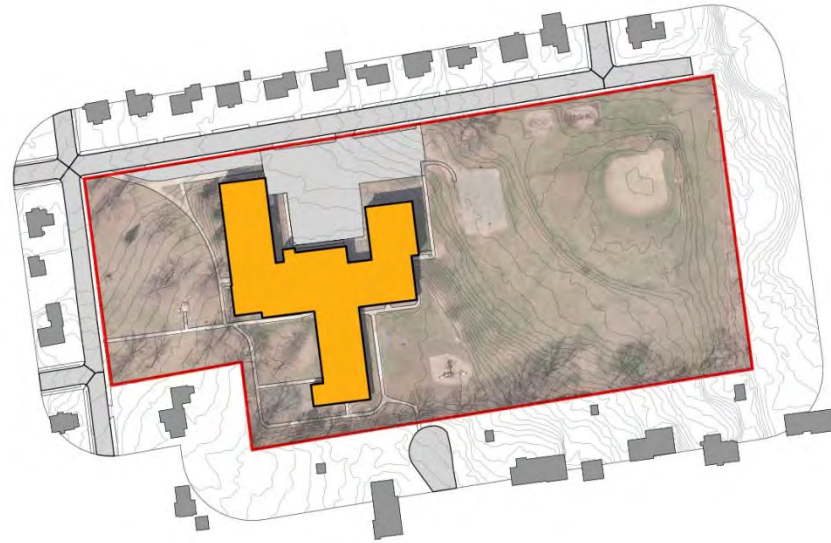


EXISTING CONDITIONS

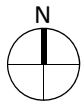


BOWERS
Site

- Small site
- Vehicular Traffic /
Parking Issues



BOWERS
ELEMENTARY SCHOOL
141 PRINCETON
STREET
MANCHESTER, CT
06042

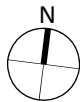
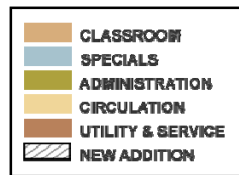


8.1 ACRES, SITE AREA

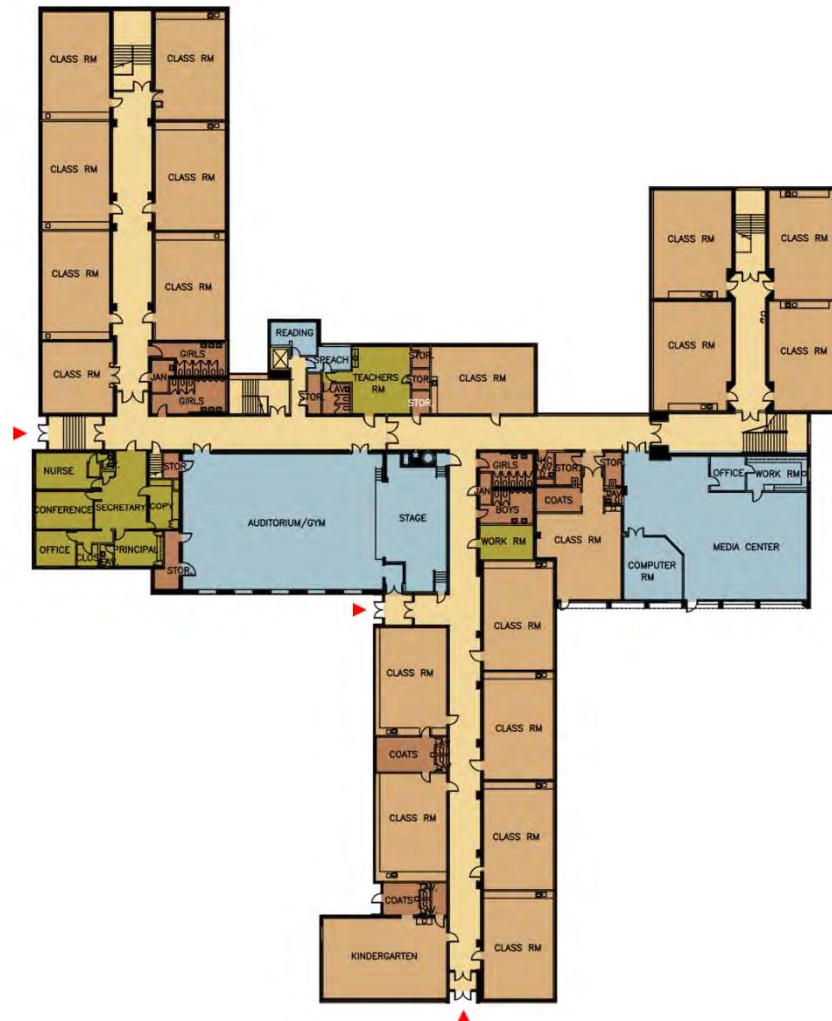
BOWERS

Upper level

- Wing Configuration Makes Grade Continuity Difficult
- Main Office Not Near Actual Entrance



40' 0' 40' 80'

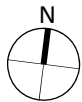


BOWERS

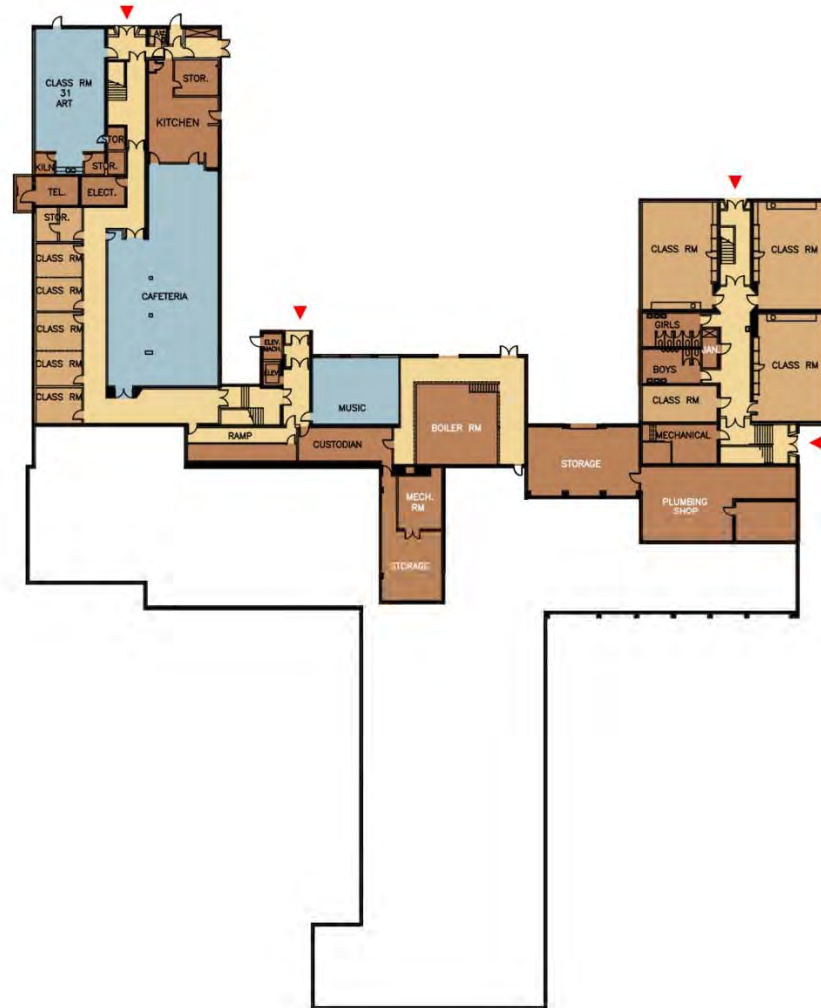
Lower level

- Lower Level Classrooms Isolated From School
- Lower Level Classrooms not Handicap Accessible
- School Entrance Not Prominent

	CLASSROOM
	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION



40' 0' 40' 80'

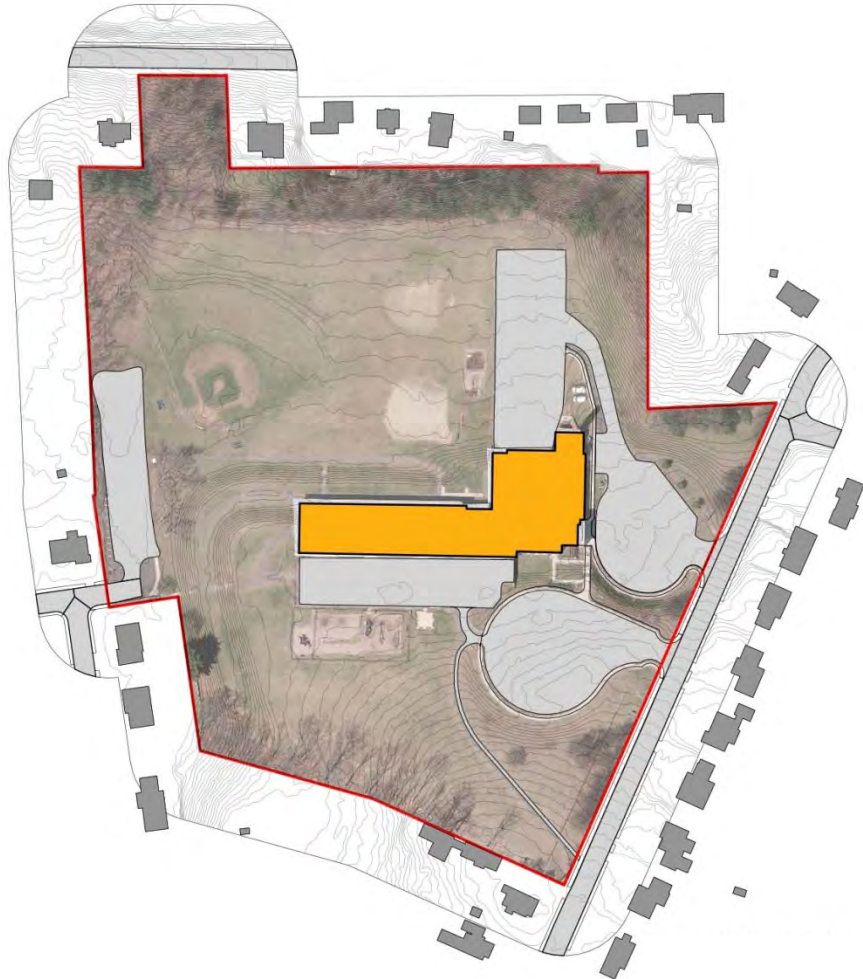
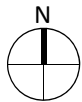


BUCKLEY

Site

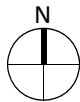
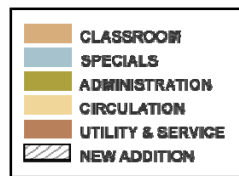
- Building Straddles
Significant Topography

BUCKLEY ELEMENTARY
SCHOOL
250 VERNON STREET
MANCHESTER, CT 06042
16.6 ACRES, SITE

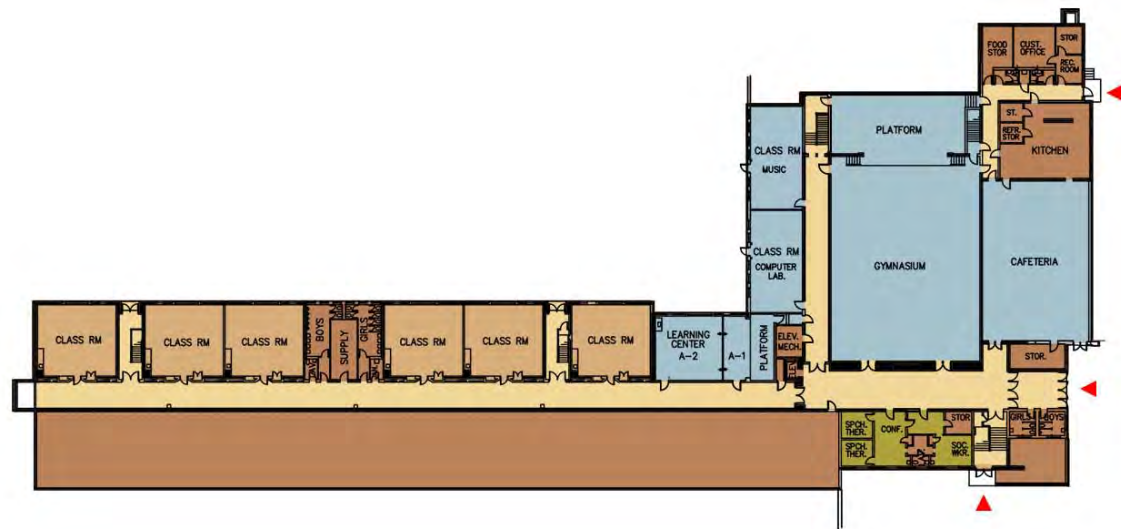


BUCKLEY Lower Level

- Small Classroom Size
- Administration Not on Main Floor

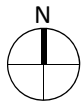
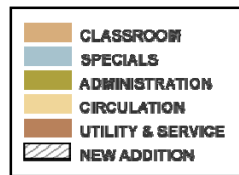


40' 0' 40' 80'

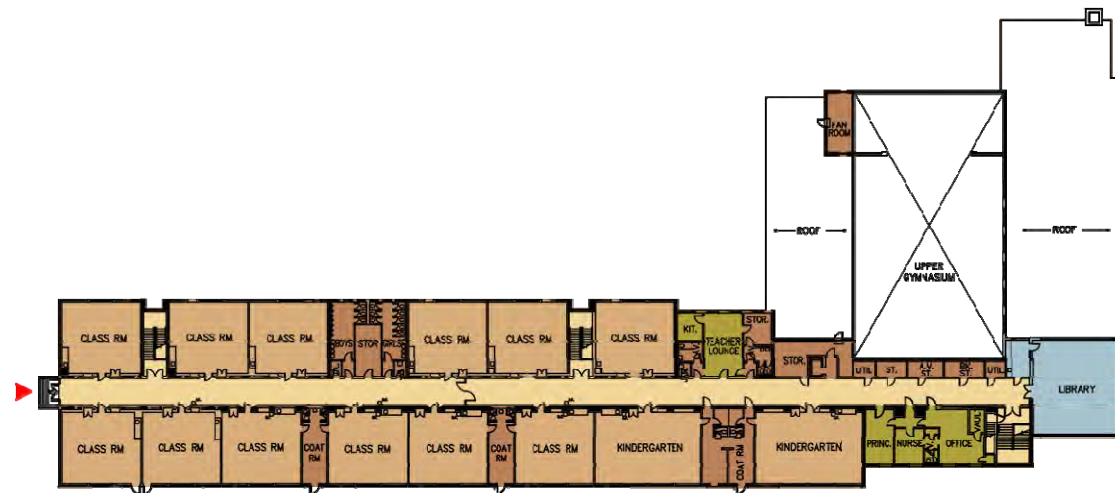


BUCKLEY Upper Level

- Small Classroom Size
- Not Handicap Accessible









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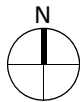


BUCKLEY

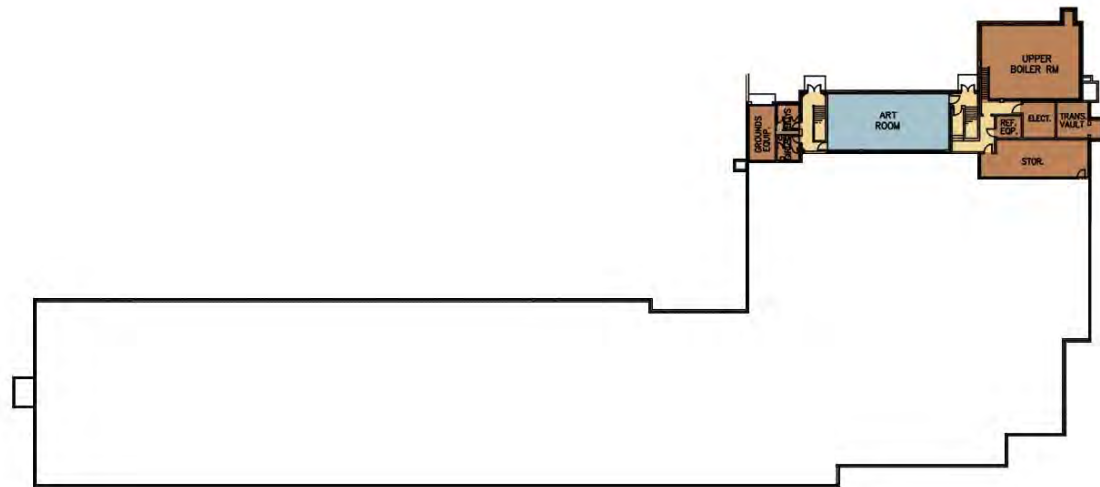
Basement level

- Art Room Remote and Not Handicap Accessible

	CLASSROOM
	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION



40' 0' 40' 80'

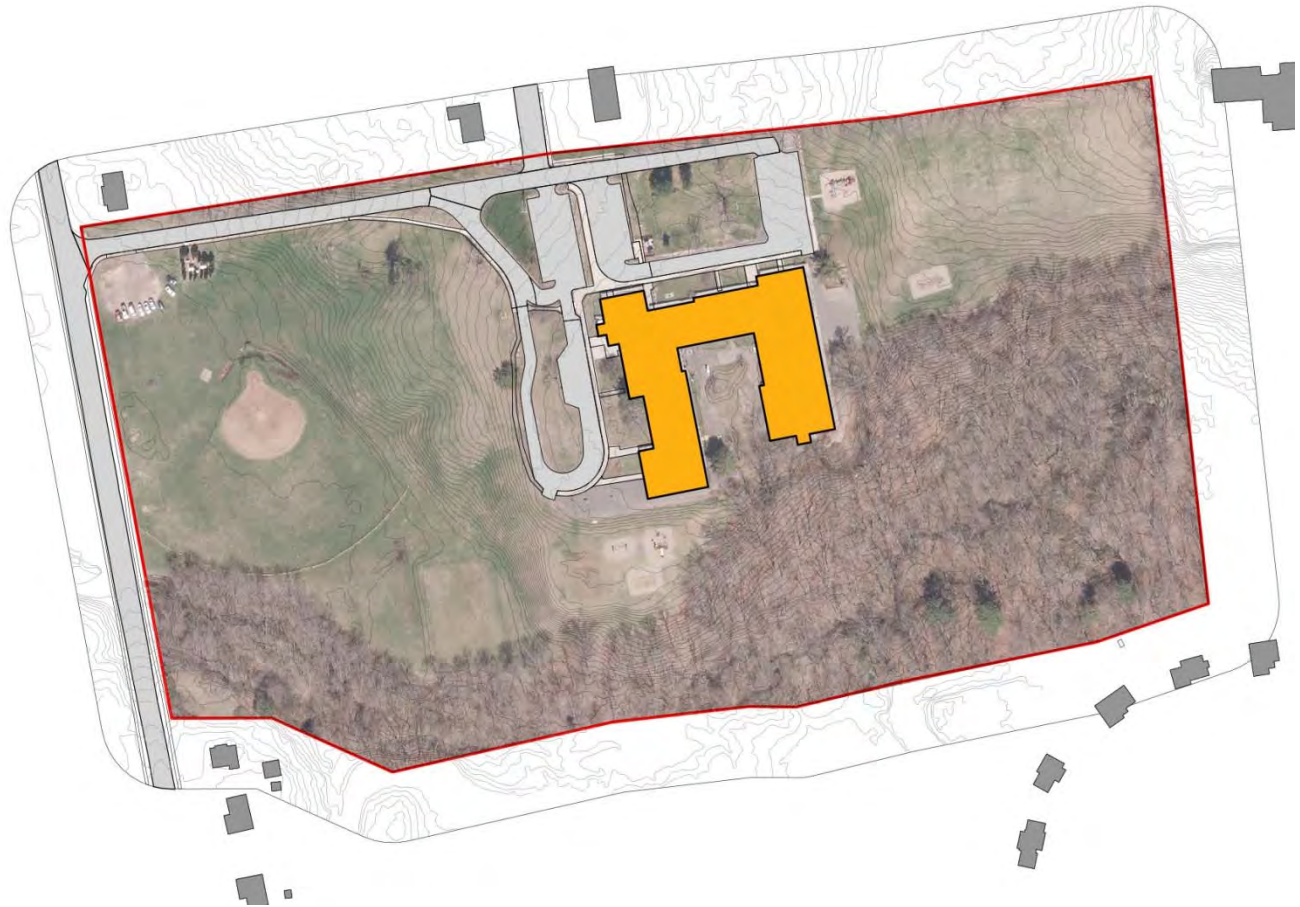
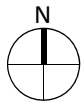


KEENEY
Site

- Significant Topography to South, East and West
- Wetlands to South

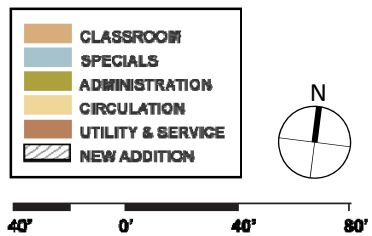
KEENEY ELEMENTARY
SCHOOL
179 KEENEY STREET
MANCHESTER, CT
06040

27.1 ACRES, SITE



KEENEY First Floor

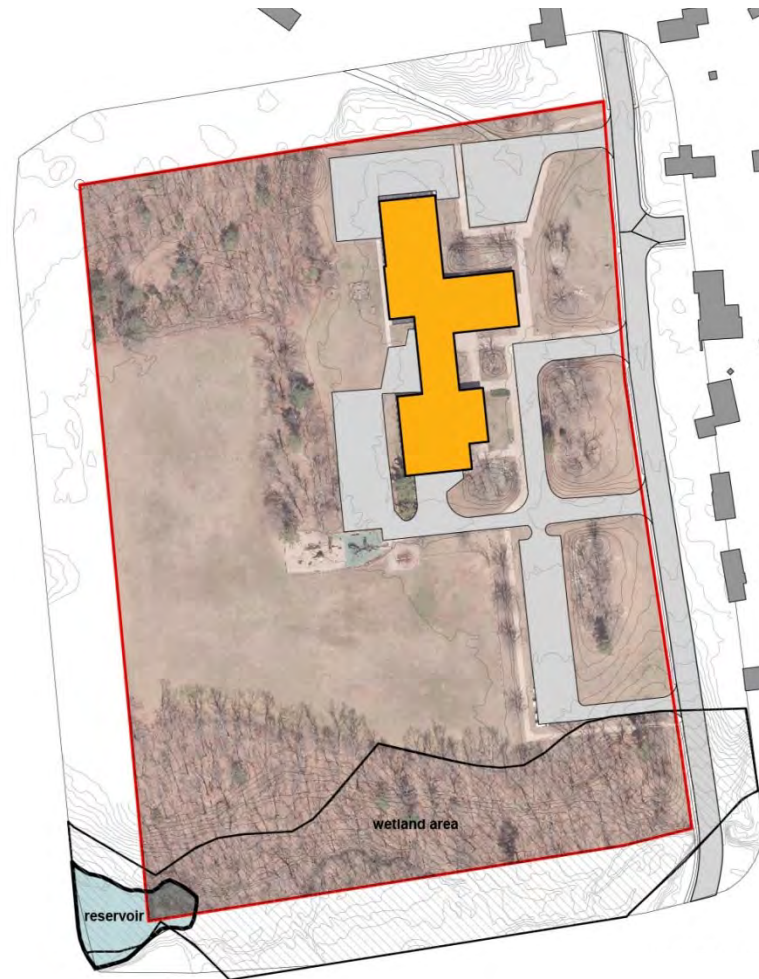
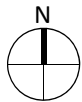
- Significant Variation in Classroom Size



MARTIN
Site

MARTIN ELEMENTARY
SCHOOL
140 DARTMOUTH
MANCHESTER, CT
06040

18.1 ACRES, SITE

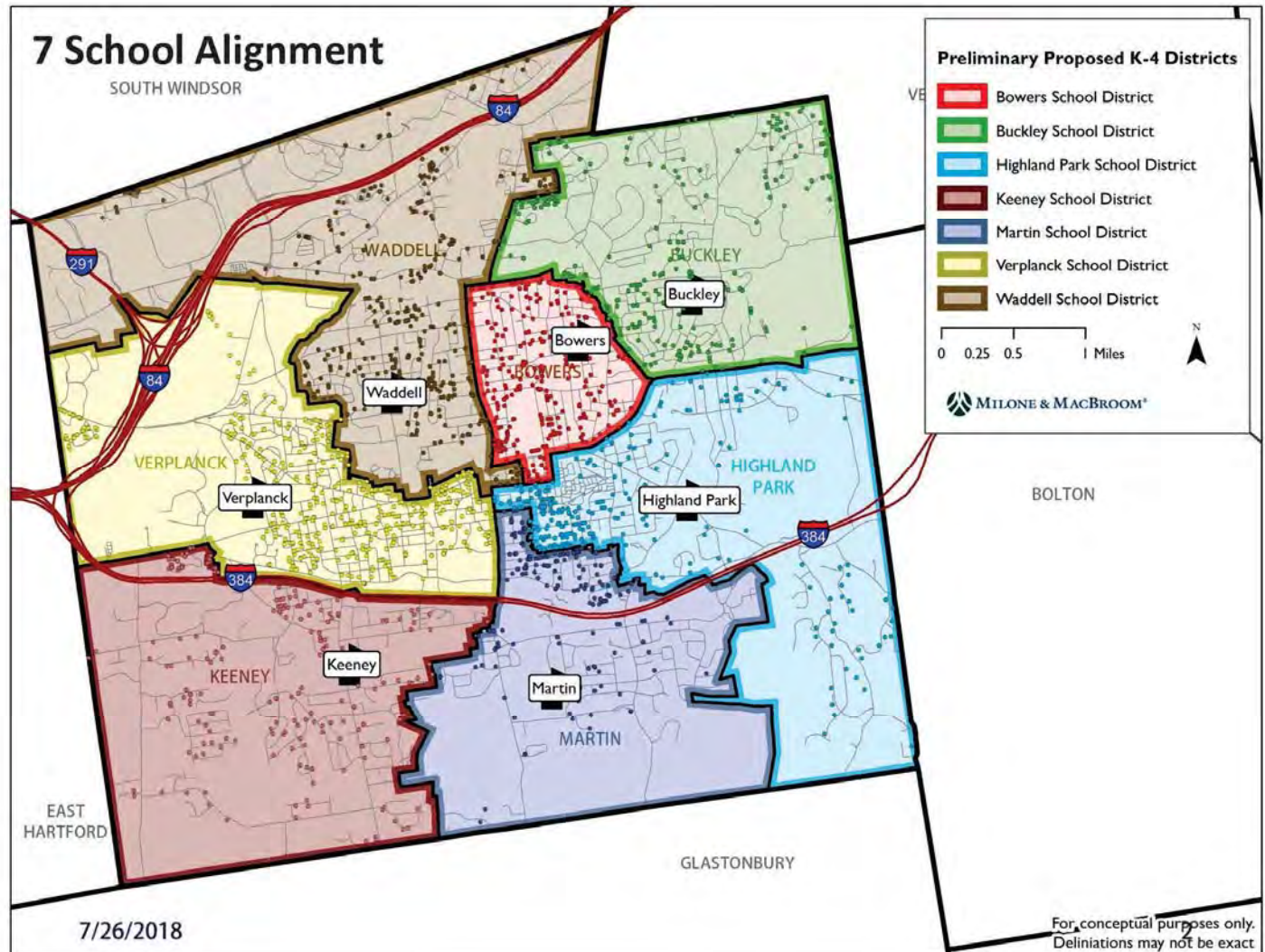


MARTIN
First floor



4 SCHOOL OPTION





Manchester Public Schools K-4 Enrollment, by Grade: 2016-17

School	K	1	2	3	4	K-4 Total
Bowers	66	64	67	66	78	341
Buckley	66	58	62	61	54	301
Highland Park	67	65	61	62	64	319
Keeney	68	56	57	71	62	314
Martin	43	49	35	42	43	212
Verplanck	105	127	108	108	116	564
Waddell	125	112	117	94	97	545
Total	540	531	507	504	514	2,596

Based on 7 school Elementary Alignment

As if consolidated K-4 boundaries were already in place

All out of area placements were returned to their elementary school district of residence

Manchester Phase II Program Comparison - 4 School Option

Program	Bowers Total Area (SF), 341 students, 20 classrooms @ 900 SF	Buckley Total Area (SF), 301 students, 17 classrooms @ 820 SF	Keeney Total Area (SF), 314 students, 17 classrooms @ 850 SF	Martin Total Area (SF), 212 students, 12 classrooms @ 915 SF
Parking	106 (51 existing)	93 (79 existing)	97 (71 existing)	68 (55 existing)
Classrooms	18,000	13,940	14,450	10,980
Special Ed Resource	600	600	600	600
OT/PT	400	400	400	400
Social Work, Psychologist,	800	800	800	800
Speech	800	800	800	800
Speech Language	250	250	250	250
ELL/Reading	300	300	300	300
ELL/Math	300	300	300	300
Art	1,150	1,150	1,150	1,150
Band	0	0	0	0
Music	900	900	900	900
STEM	900	900	900	900
Gym	3,365**	4,775**	2,725**	3,300**
PE Office/Storage	400	400	400	400
Stage	1,065	1,255	935	1,200
LMC	2,100	2,100	2,100	2,100
Project Room	570	570	570	570
Cafe	2,035	1,665	2,165	1,500
Kitchen	1,500	1,260	1,500	1,500
Principal's Office	250	250	250	250
Main Office	600	600	600	600
Conference Room	200	200	200	200
Health Services	450	450	450	450
Staff Work Room	450	450	450	450
Family Resouce Room	500	500	500	500
Staff Lounge	450	450	400	350
Custodial Office	150	150	150	150
Storage	2,000	700	0	0
PROGRAM SUB-TOTAL	39,685	35,315	33,445	30,100
PROGRAM GROSS AREA	59,528	52,973	50,168	45,150
EXISTING GROSS AREA	66,750	56,420	48,550	41,300
ALLOWABLE AREA (SF)	42,625	37,625	39,250	26,500
REQUIRED ADDITIONAL AREA	-7,223	-3,448	1,618	3,850

Manchester Phase II Budget Comparison - 4 School Option

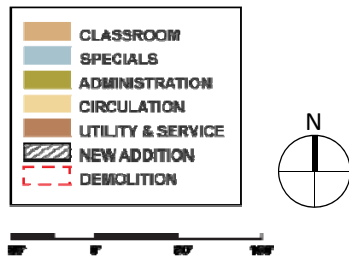
Program	Bowers Total Area (SF), 341 students, 20 classrooms @ 900 SF	Buckley Total Area (SF), 301 students, 17 classrooms @ 820 SF	Keeney Total Area (SF), 314 students, 17 classrooms @ 850 SF	Martin Total Area (SF), 212 students, 12 classrooms @ 915 SF	
PROGRAM SUB-TOTAL	39,685	35,315	33,445	30,100	
PROGRAM GROSS AREA	59,528	52,973	50,168	45,150	
EXISTING GROSS AREA	66,750	56,420	48,550	41,300	
ALLOWABLE AREA (SF)	42,625	37,625	39,250	26,500	
REQUIRED ADDITIONAL AREA	-7,223	-3,440	1,618	3,850	TOTALS
PROJECT BUDGET (\$440 PER SF)	\$18,800,000	\$16,600,000	\$17,300,000	\$11,700,000	\$64,400,000
MAXIMUM REIMBURSEMENT (68.57%)	\$12,900,000	\$11,400,000	\$11,900,000	\$8,000,000	\$44,200,000
EFFECTIVE RATE	48.94%	48.80%	53.76%	40.17%	
EFFECTIVE RATE PENALTY	\$3,660,000	\$3,300,000	\$2,590,000	\$3,300,000	\$12,850,000
TOTAL REIMBURSEMENT	\$9,200,000	\$8,100,000	\$9,300,000	\$4,700,000	\$22,100,000
NET COST TO TOWN	\$9,600,000	\$8,500,000	\$8,000,000	\$7,000,000	\$33,100,000

NOTE: Costs Do Not Include Escalation

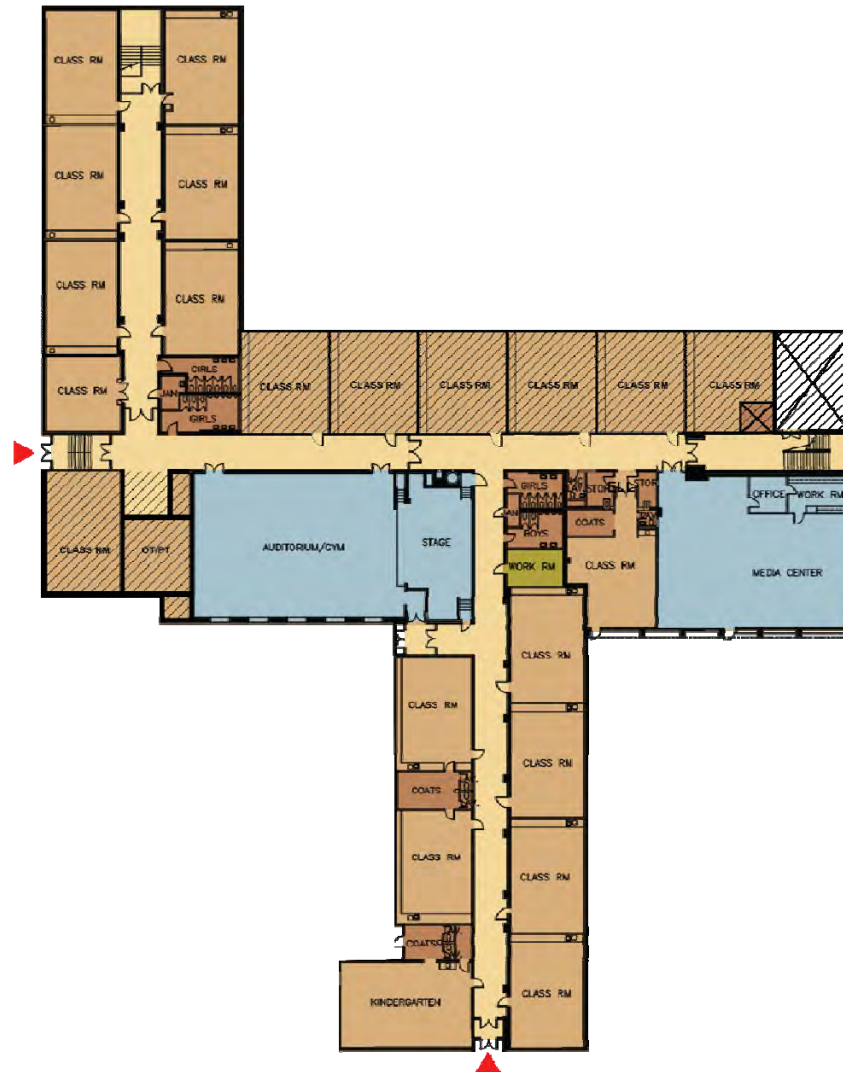
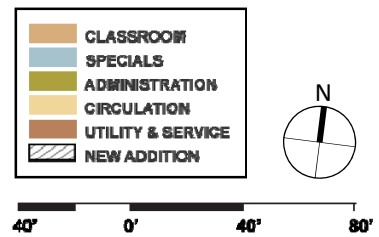
BOWERS

Site

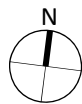
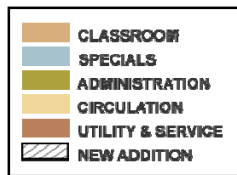
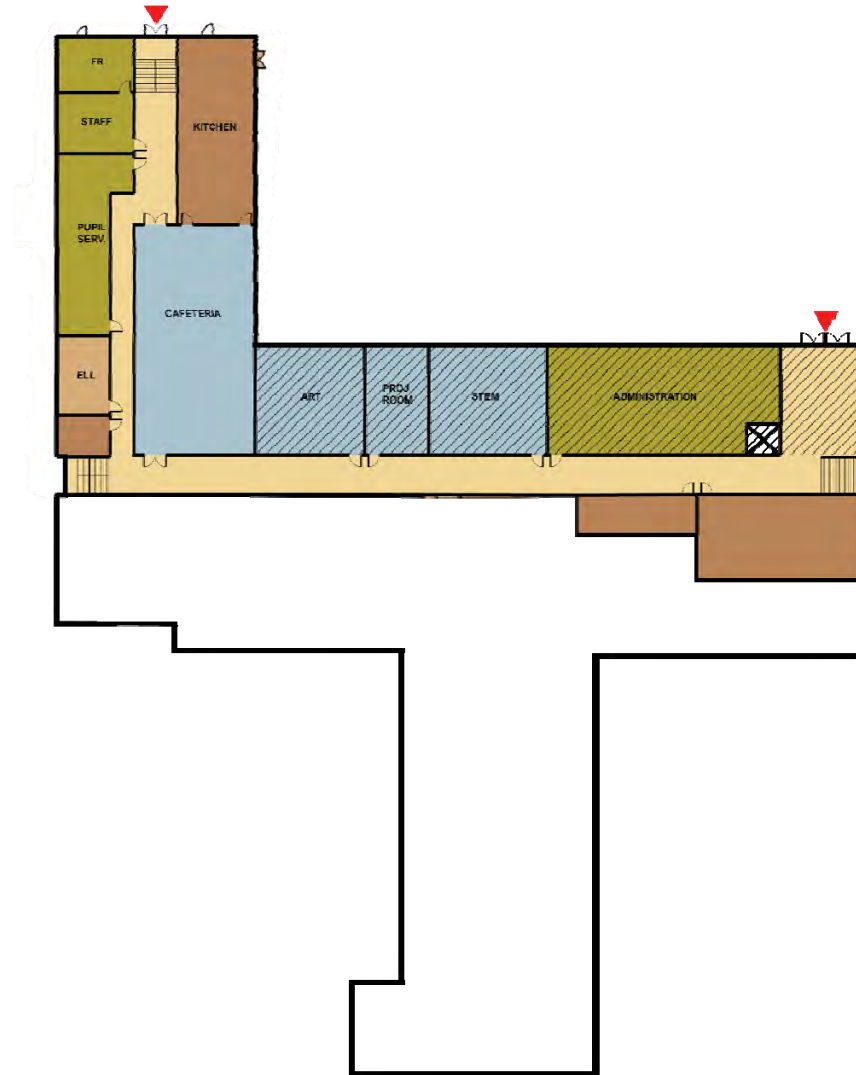
- Separate Cars/Buses
- Increase On Site Parking



BOWERS
Upper Level Plan

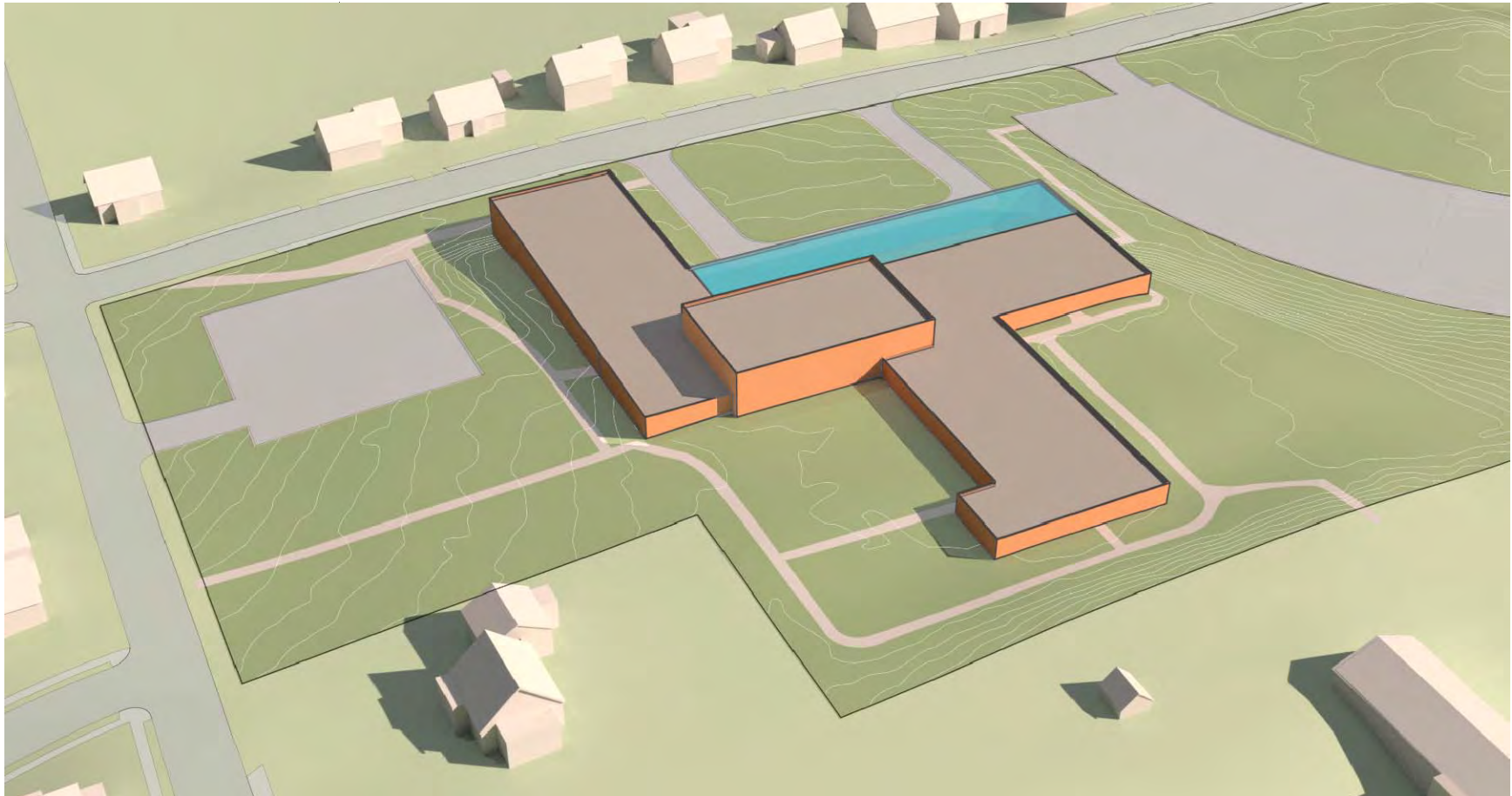


BOWERS
Lower Level Plan



40' 0' 40' 80'

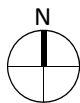
BOWERS
Perspective



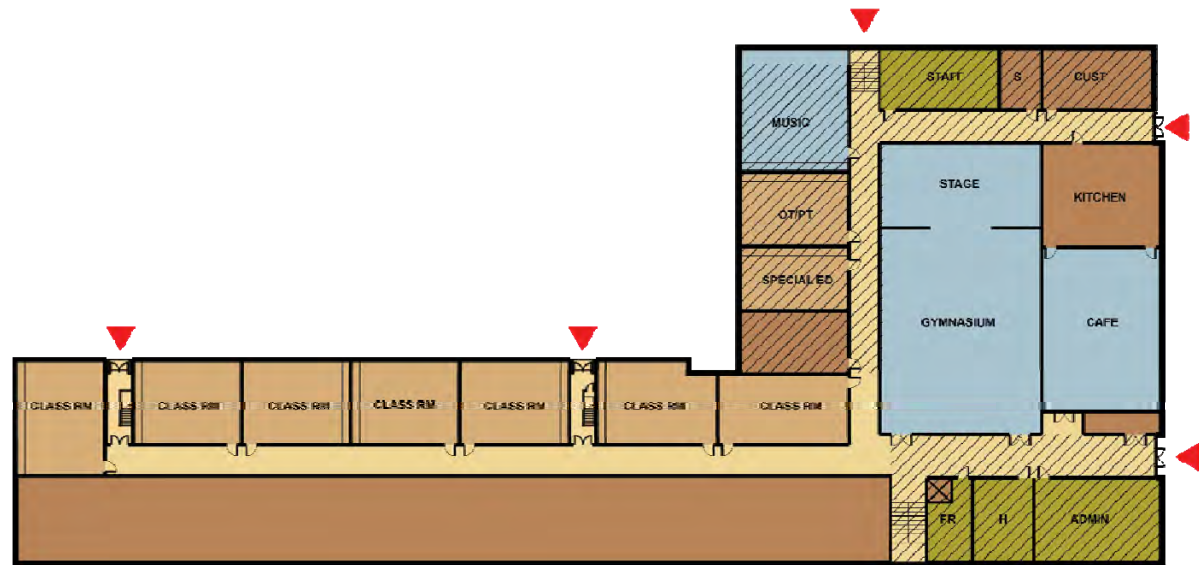
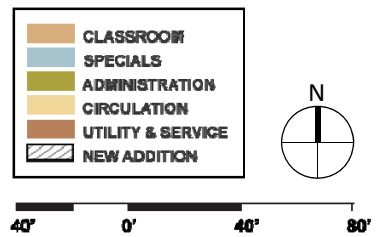
BUCKLEY Site

- Increase On Site Parking

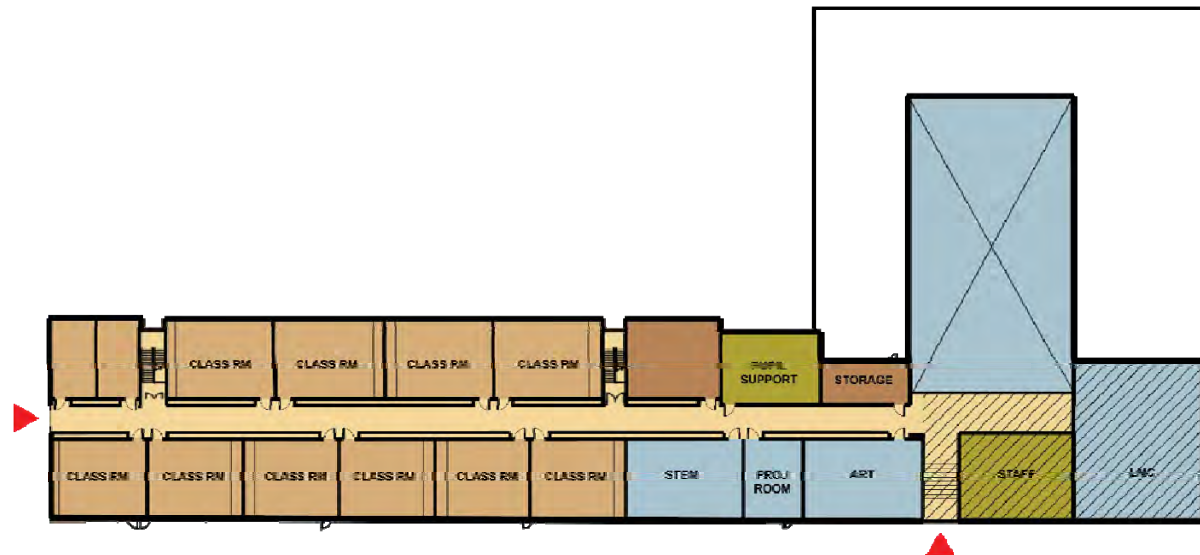
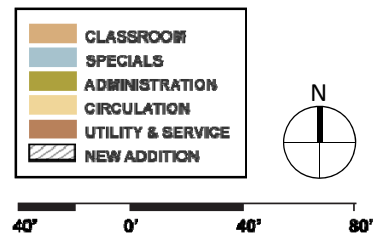
	CLASSROOM
	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION
	DEMOLITION



BUCKLEY
Lower Level Plan



BUCKLEY
Upper Level Plan



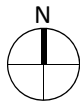
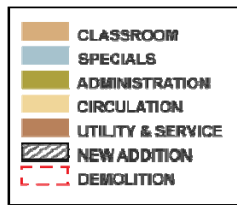
BUCKLEY
Perspective



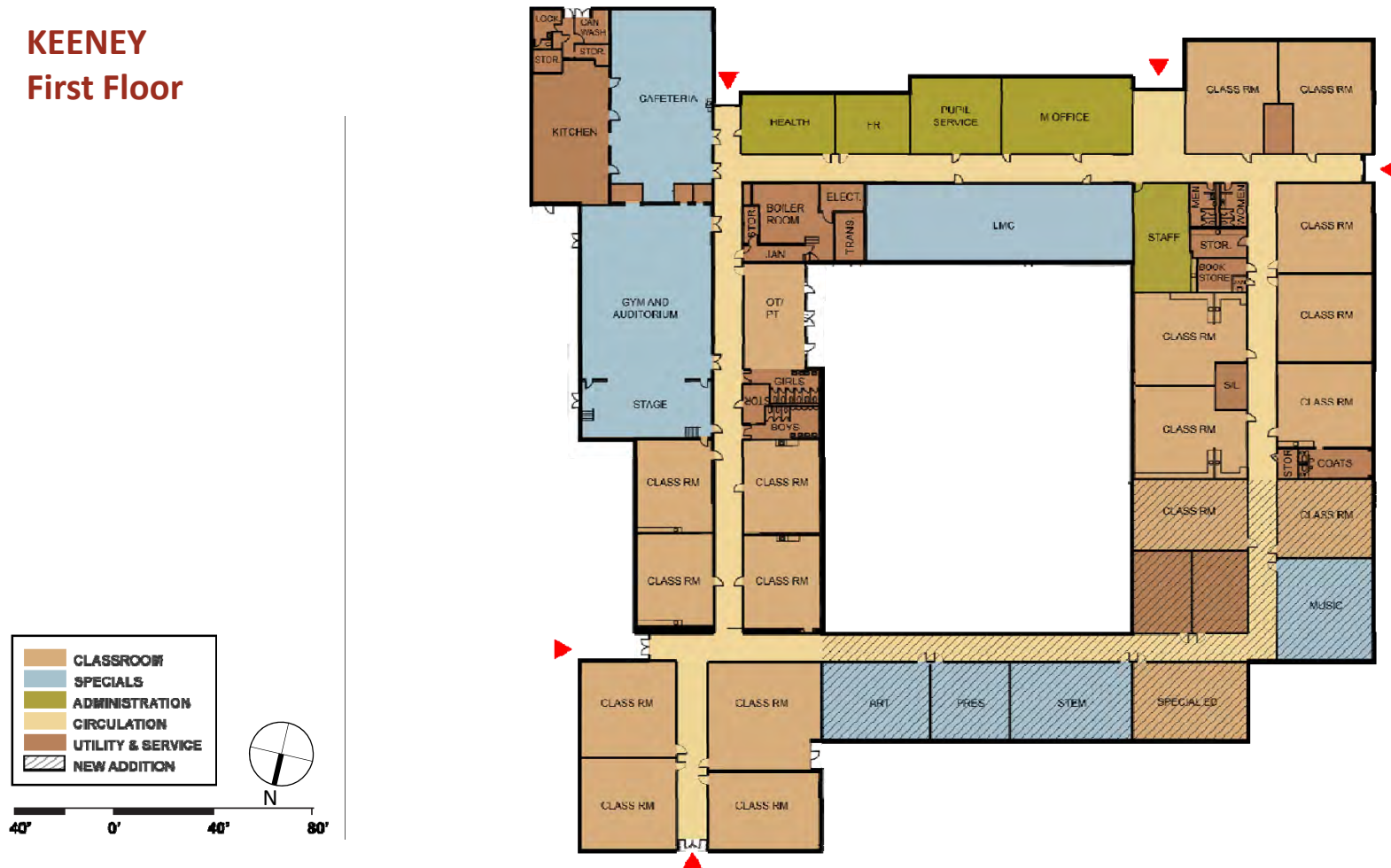
KEENEY

Site

- Increase On-Site Parking
- Separate Cars/Buses



KEENEY First Floor

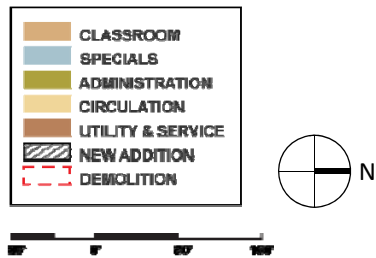


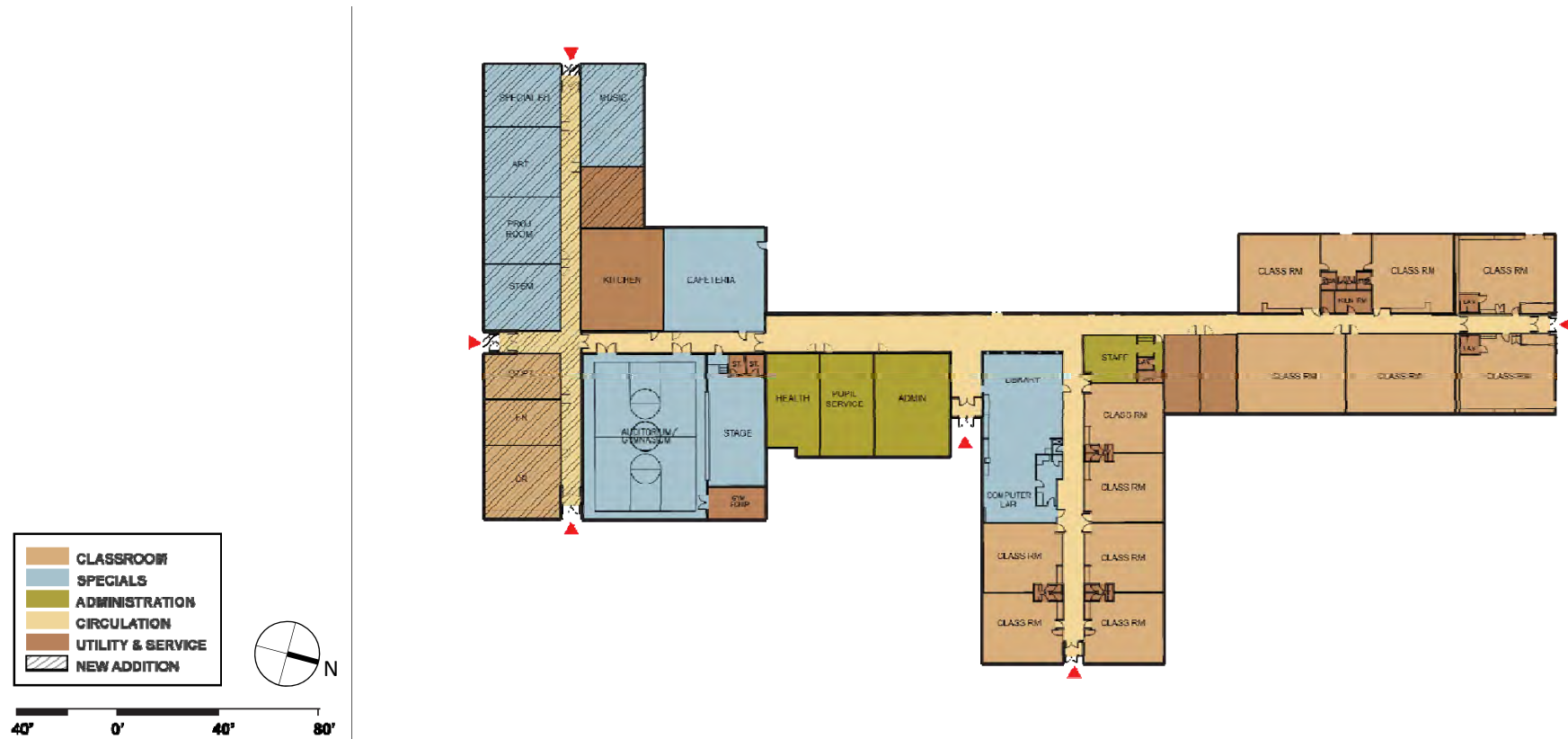
KEENEY
Perspective



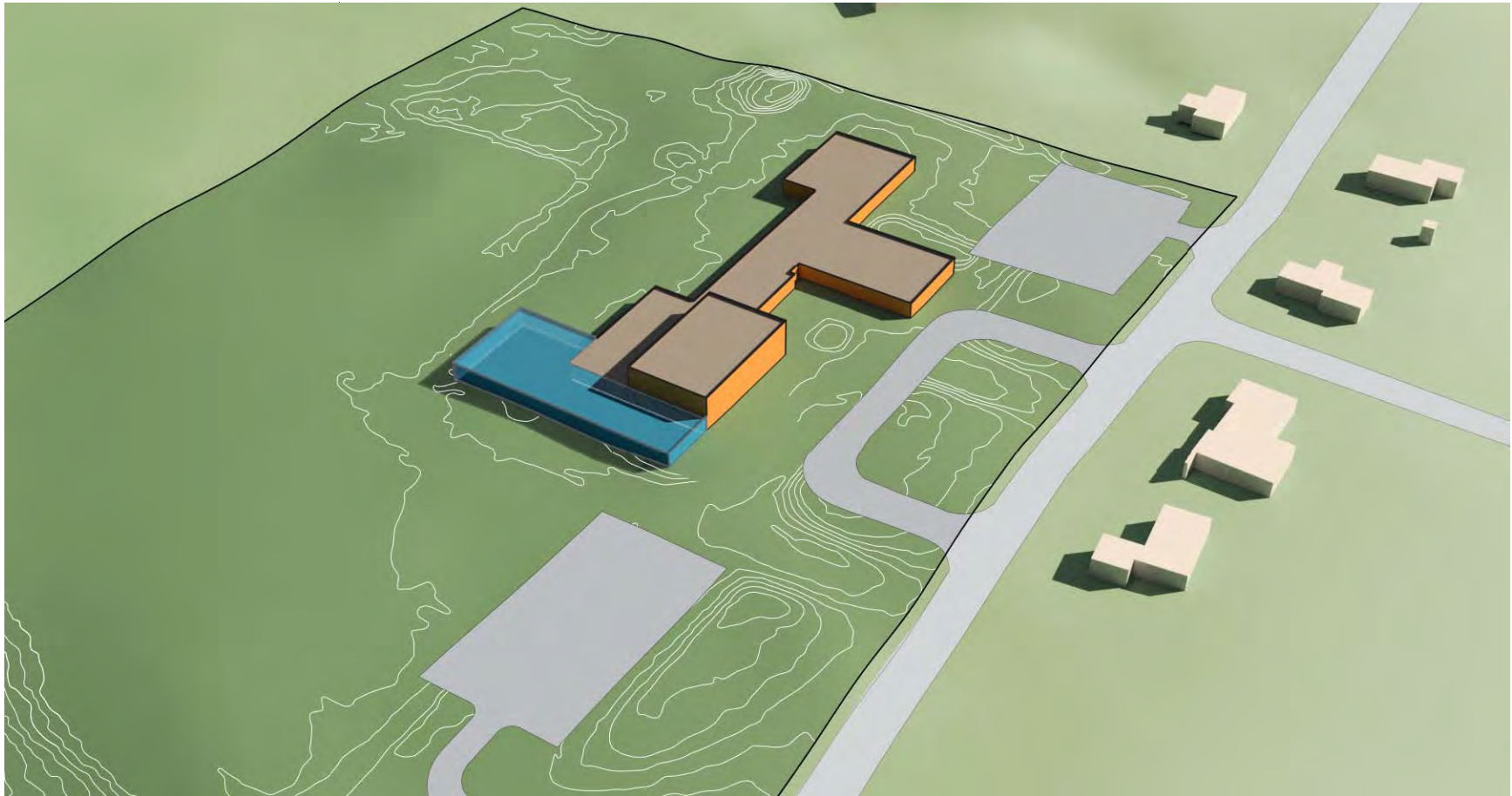
MARTIN Site

- Increase On-Site Parking
- Separate Cars/Buses





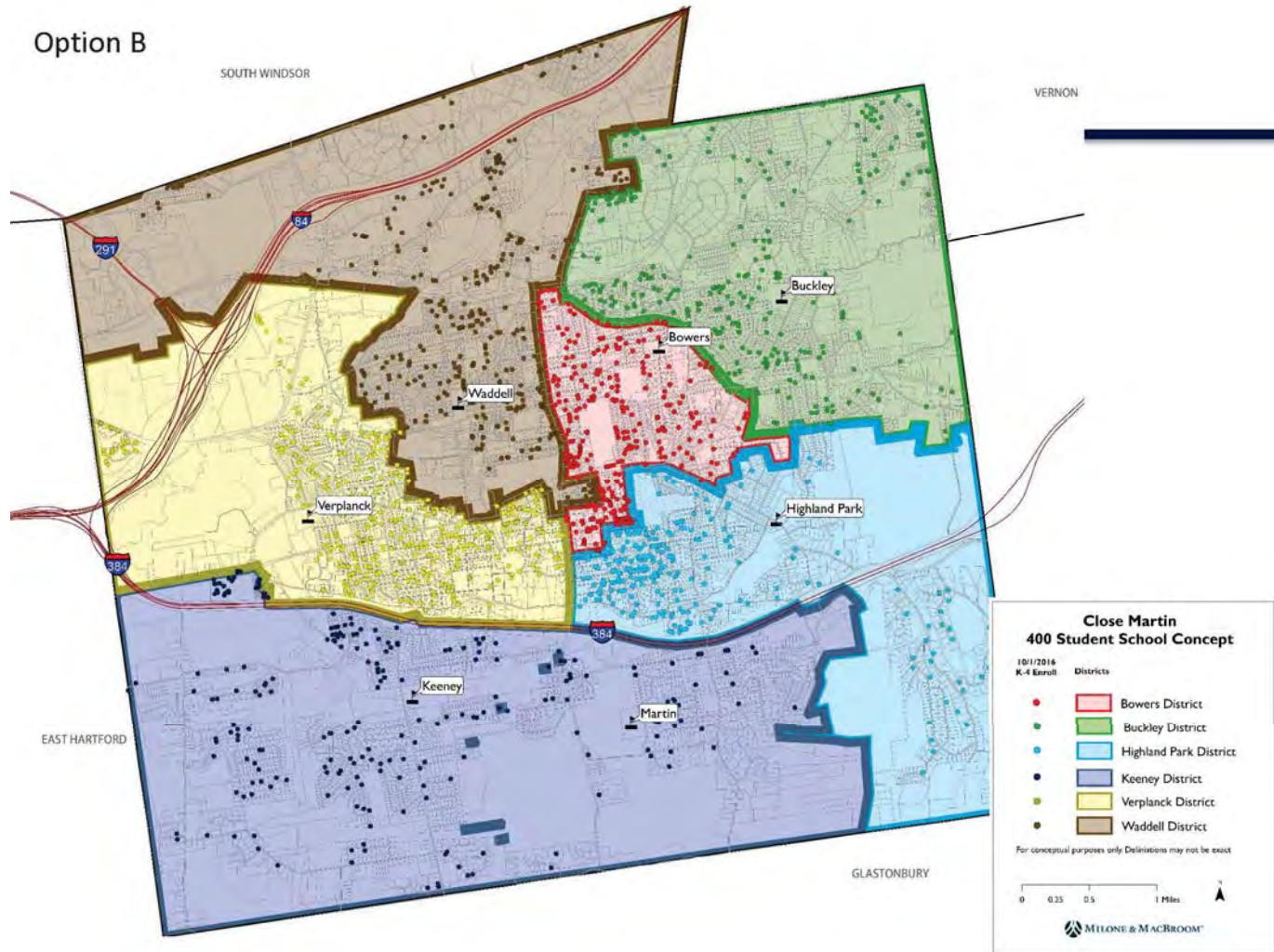
MARTIN
Perspective



3 SCHOOL OPTION



Option B



Manchester Public Schools K-4 Enrollment, by Grade: 2016-17

School	K	1	2	3	4	K-4 Total
Bowers	73	76	75	78	84	386
Buckley	77	77	80	76	67	377
Highland Park	76	66	58	66	68	334
Keeney	75	71	66	82	82	376
Verplanck	105	126	107	106	115	559
Waddell	124	110	115	94	97	540
Total	540	531	507	504	514	2,596

Based on 5 school Elementary Alignment

As if consolidated K-4 boundaries were already in place

All out of area placements were returned to their elementary school district of residence

- Martin is closed or repurposed
- Bowers, Buckley and Keeney fit a 400 student school model
- Highland Park remains 320 student school model
- Verplanck and Waddell districts remain intact

Manchester Phase II Program Comparison Current Target Enrollment

Program	Bowers Total Area (SF), 386 students, 21 classrooms @ 900 SF	Buckley Total Area (SF), 377 students, 21 classrooms @ 820 SF	Keeney Total Area (SF), 376 students, 21 classrooms @ 850 SF
Parking	120 (51 existing)	125 (79 existing)	115 (71 existing)
Classrooms	18,900	17,220	17,850
Special Ed Resource	600	600	600
OT/PT	400	400	400
Social Work, Psychologist,	800	800	800
Speech Language	250	250	250
ELL/Reading	300	300	300
ELL/Math	300	300	300
Art	1,150	1,150	1,150
Band	900	900	900
Music	0	0	0
STEM	900	900	900
Gym	5,000	4,775**	5,000
PE Office/Storage	400	400	400
Stage	1,065	1,255	935
LMC	2,100	2,100	2,100
Project Room	570	570	570
Cafe	2,035	1,665	2,165
Kitchen	1,500	1,260	1,500
Principal's Office	250	250	250
Main Office	600	600	600
Conference Room	200	200	200
Health Services	450	450	450
Staff Work Room	450	450	450
Family Resouce Room	500	500	500
Staff Lounge	450	400	450
Custodial Office	150	150	150
Storage	2,000	700	0
PROGRAM SUB-TOTAL	42,220	38,545	39,170
PROGRAM GROSS AREA	63,330	57,818	58,755
EXISTING GROSS AREA	66,750	56,420	48,550
ALLOWABLE AREA (SF)	48,250	50,194	47,000
REQUIRED ADDITIONAL AREA	-3,420	1,398	10,205

Manchester Phase II Budget Comparison - 3 School Option

Program	Bowers Total Area (SF), 386 students, 21 classrooms @ 900 SF	Buckley Total Area (SF), 377 students, 21 classrooms @ 820 SF	Keeney Total Area (SF), 376 students, 21 classrooms @ 850 SF	
PROGRAM SUB-TOTAL	42,220	38,545	39,170	
PROGRAM GROSS AREA	63,330	57,818	58,755	
EXISTING GROSS AREA	66,750	56,420	48,550	
ALLOWABLE AREA (SF)	48,250	50,194	47,000	
REQUIRED ADDITIONAL AREA	-3,420	1,398	10,205	TOTALS
PROJECT BUDGET (\$440 PER SF)	\$21,200,000	\$22,100,000	\$20,700,000	\$64,000,000
MAXIMUM REIMBURSEMENT (68.57%)	\$14,500,000	\$15,200,000	\$14,200,000	\$43,900,000
EFFECTIVE RATE	52.36%	59.73%	55.07%	
EFFECTIVE RATE PENALTY	\$3,450,000	\$2,000,000	\$2,840,000	\$8,290,000
TOTAL REIMBURSEMENT	\$11,100,000	\$13,200,000	\$11,400,000	\$35,700,000
NET COST TO TOWN	\$10,100,000	\$8,900,000	\$9,300,000	\$28,300,000

NOTE: Costs Do Not Include Escalation

Manchester Phase II 3 School Option

Martin PK Conversion

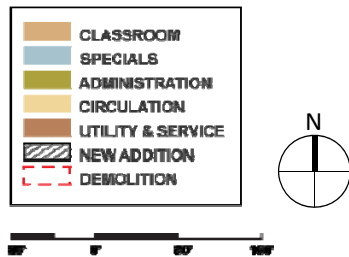
	Cost/SF	Cost
Demolition/HAZMAT	\$21	\$ 867,300
Misc Structure	\$5	\$ 206,500
Exterior Envelope	\$28	\$ 1,156,400
Roofing	\$24	\$ 991,200
Interior Construction	\$23	\$ 949,900
Interior Finishes	\$9	\$ 371,700
Plumbing	\$17	\$ 702,100
HVAC	\$50	\$ 2,065,000
Fire Protection	\$5	\$ 206,500
Electrical	\$24	\$ 991,200
Tel/Data/Security	\$12	\$ 495,600
Sub Total	\$218	\$ 9,003,400
Sitework Allowance		\$ 1,500,000
Construction Total		\$ 10,503,400
Estimate Contingency		\$ 1,575,510
TOTAL CONSTRUCTION COST		\$ 12,078,910
Soft Costs		\$ 2,415,782
TOTAL PROJECT COST		\$ 14,494,692

NOTE: Costs Do Not Include Escalation

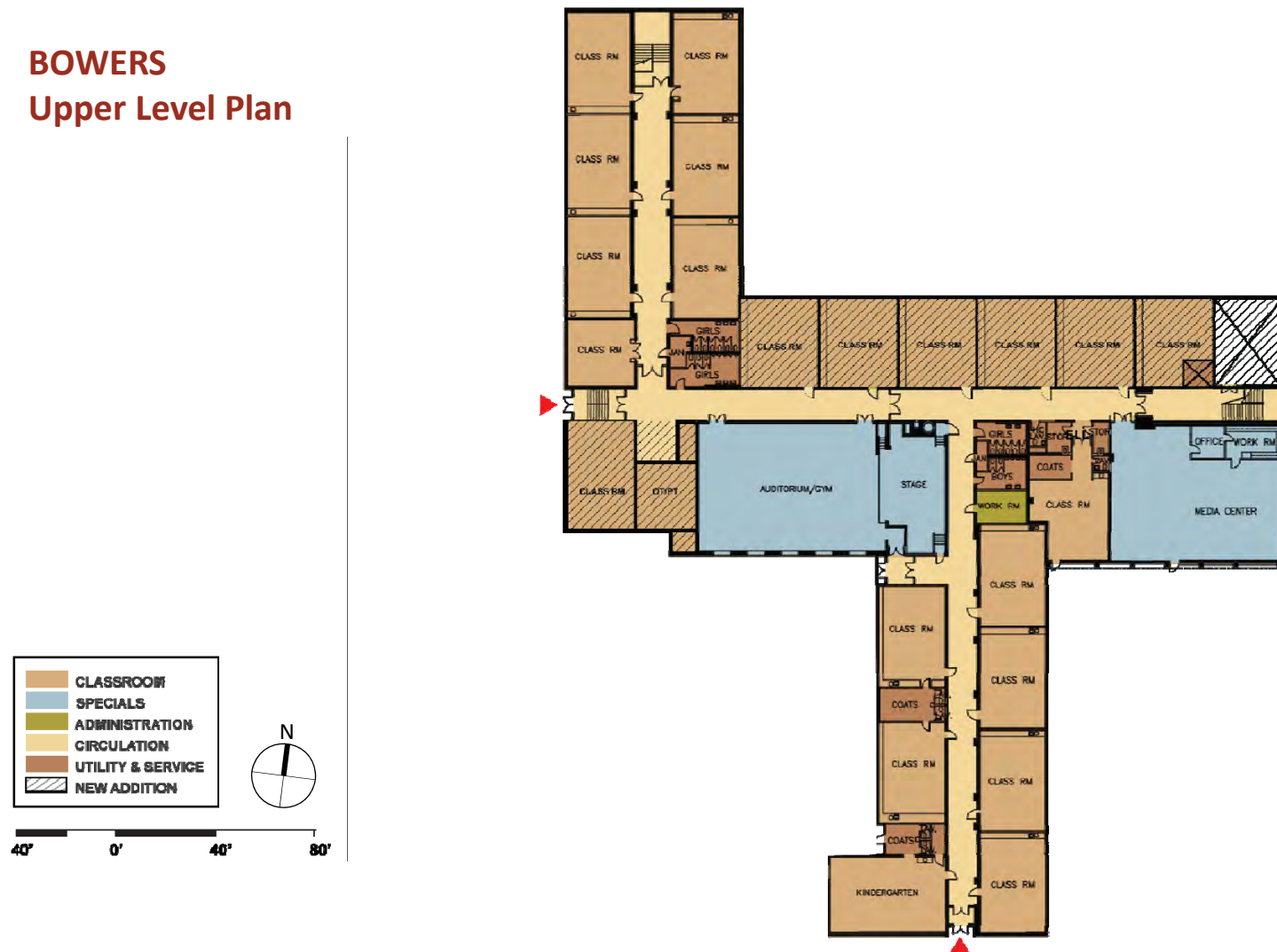
BOWERS

Site

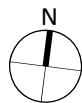
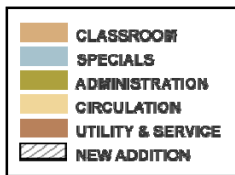
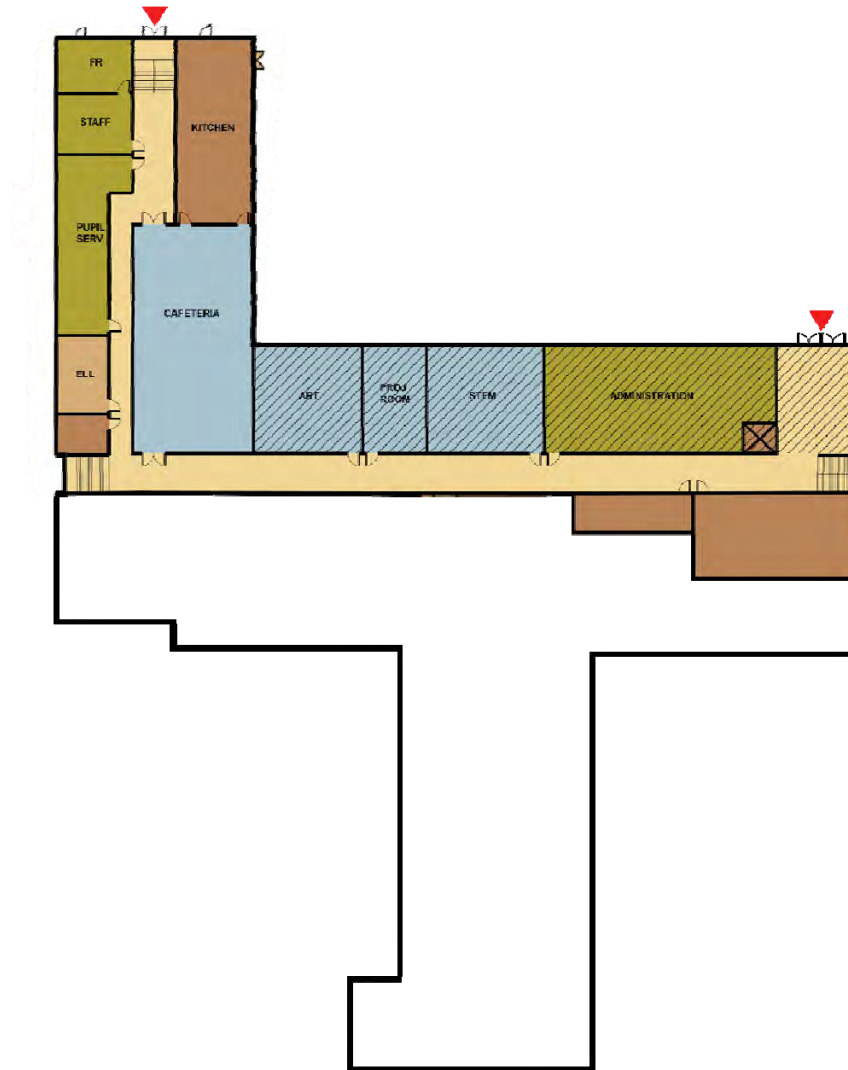
- Separate Cars/Buses
- Increase On Site Parking



BOWERS
Upper Level Plan

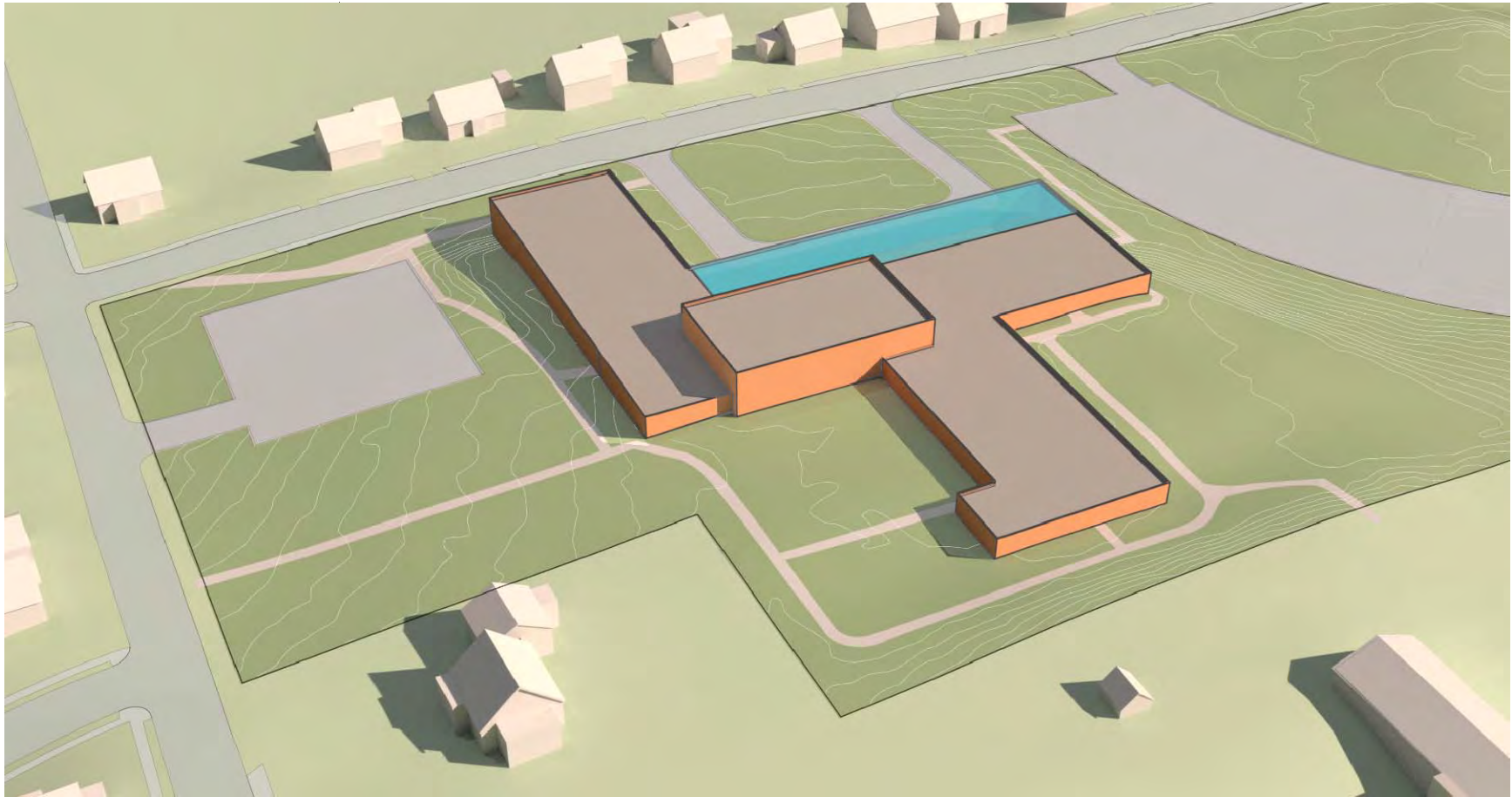


BOWERS
Lower Level Plan



40' 0' 40' 80'

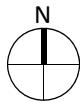
BOWERS
Perspective



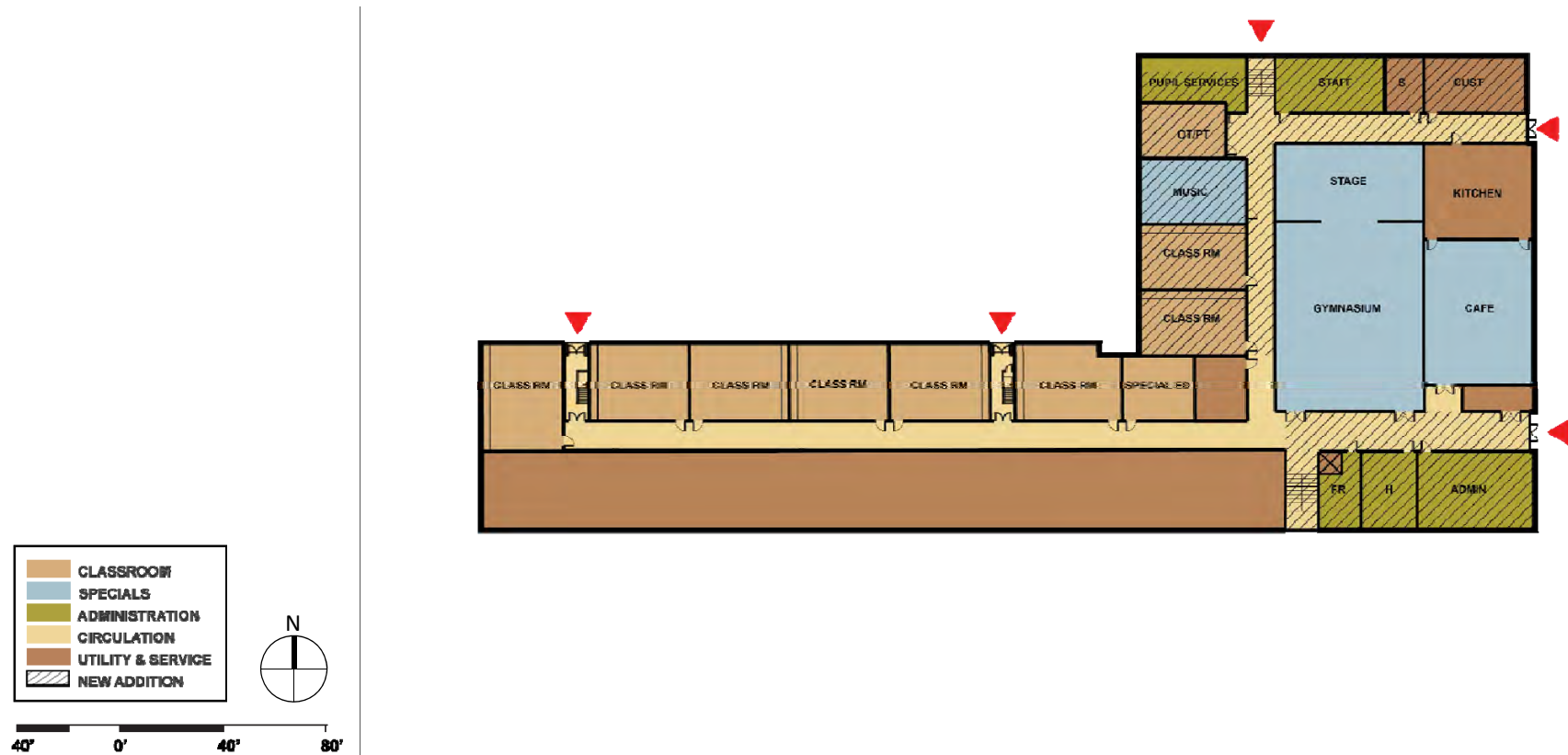
BUCKLEY Site

- Increase On-Site Parking
- Discharge Cars in Two Directions

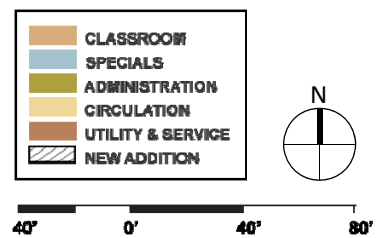
	CLASSROOM
	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION
	DEMOLITION



BUCKLEY
Lower Level



BUCKLEY
Upper Level



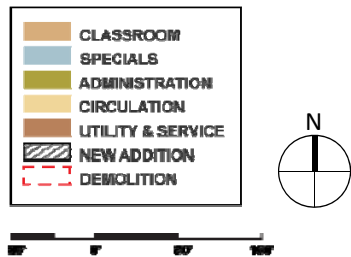
BUCKLEY
Perspective



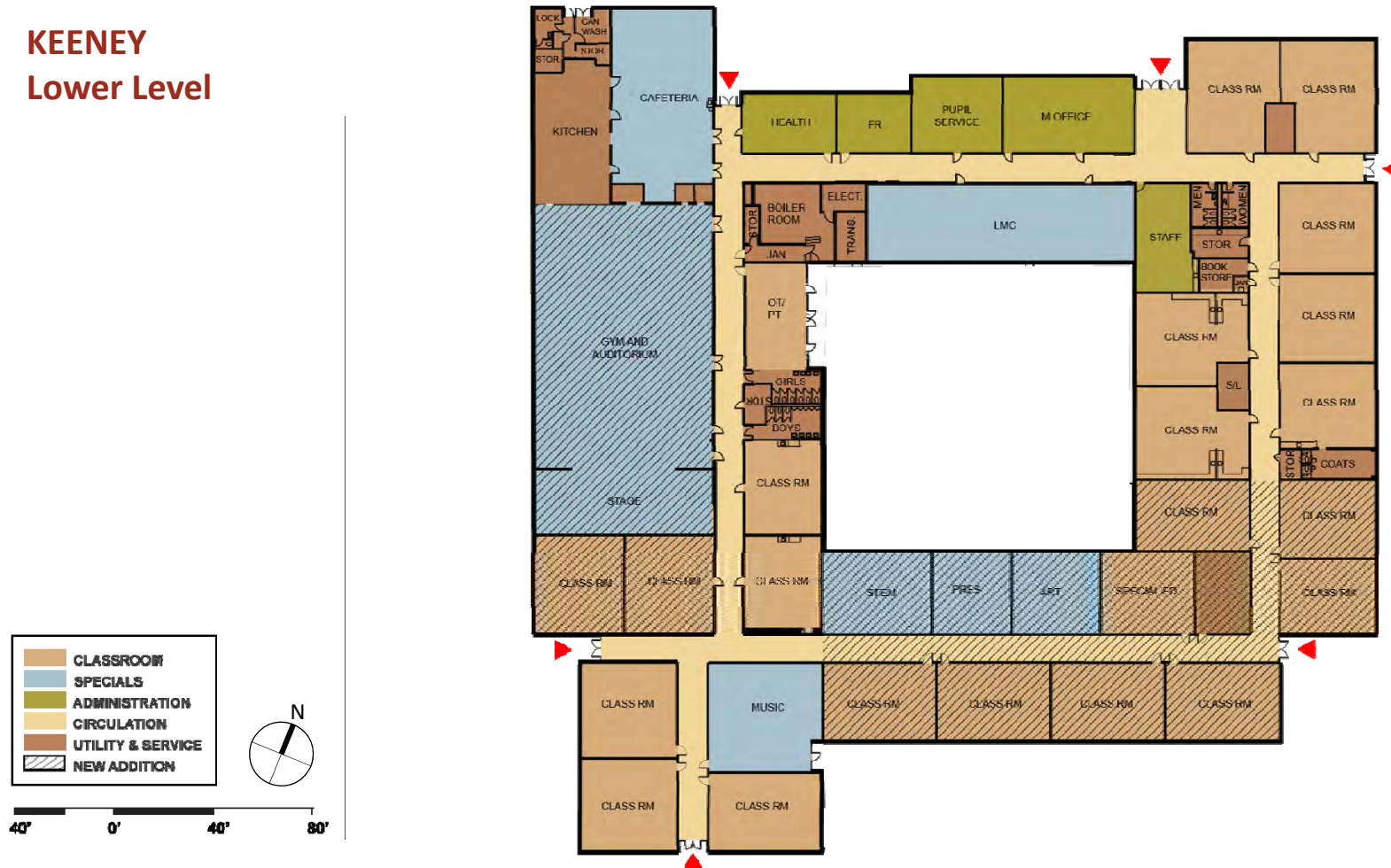
KEENEY

Site

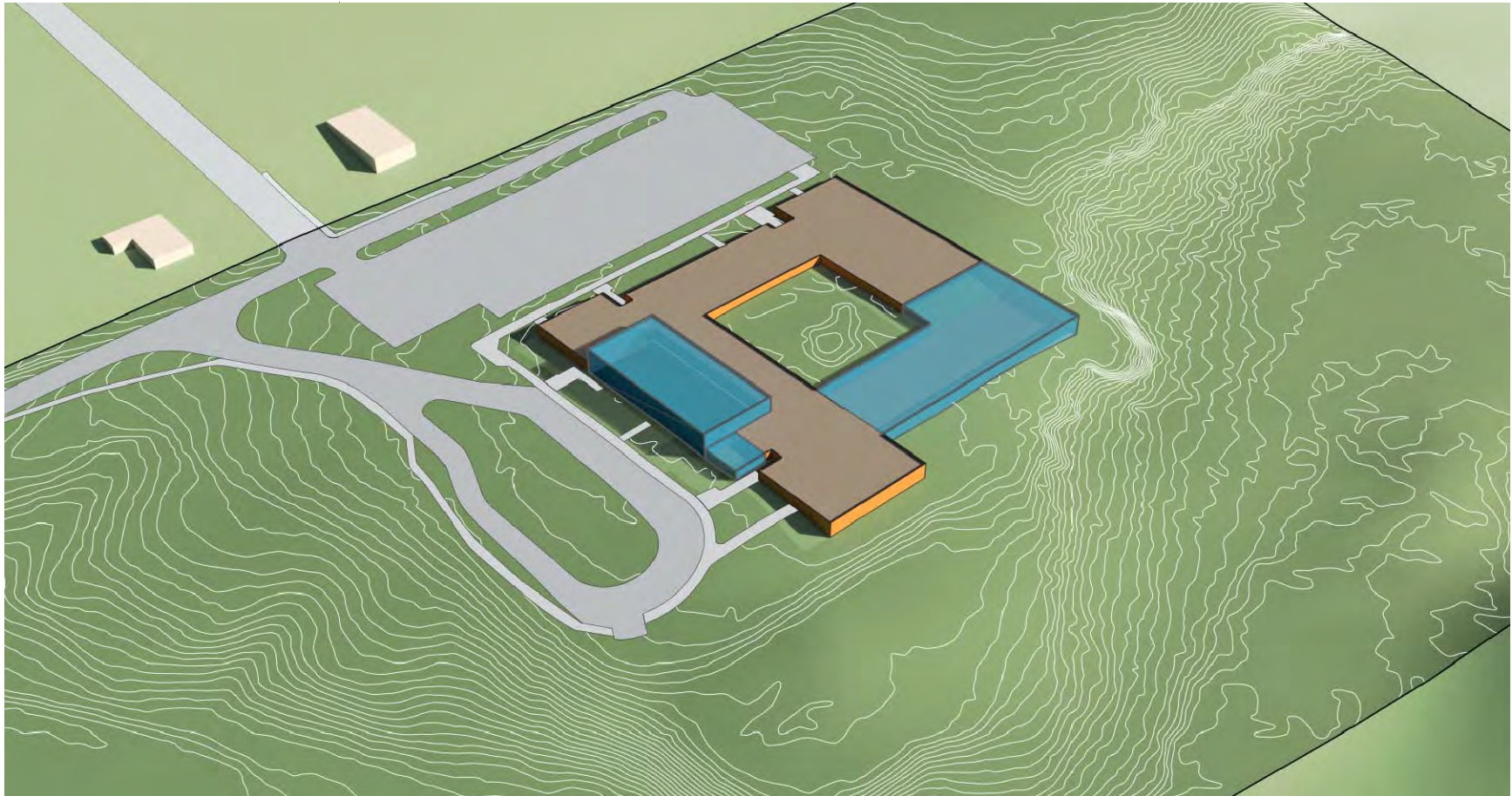
- Increase On-Site Parking
- Separate Cars/Buses



KEENEY
Lower Level



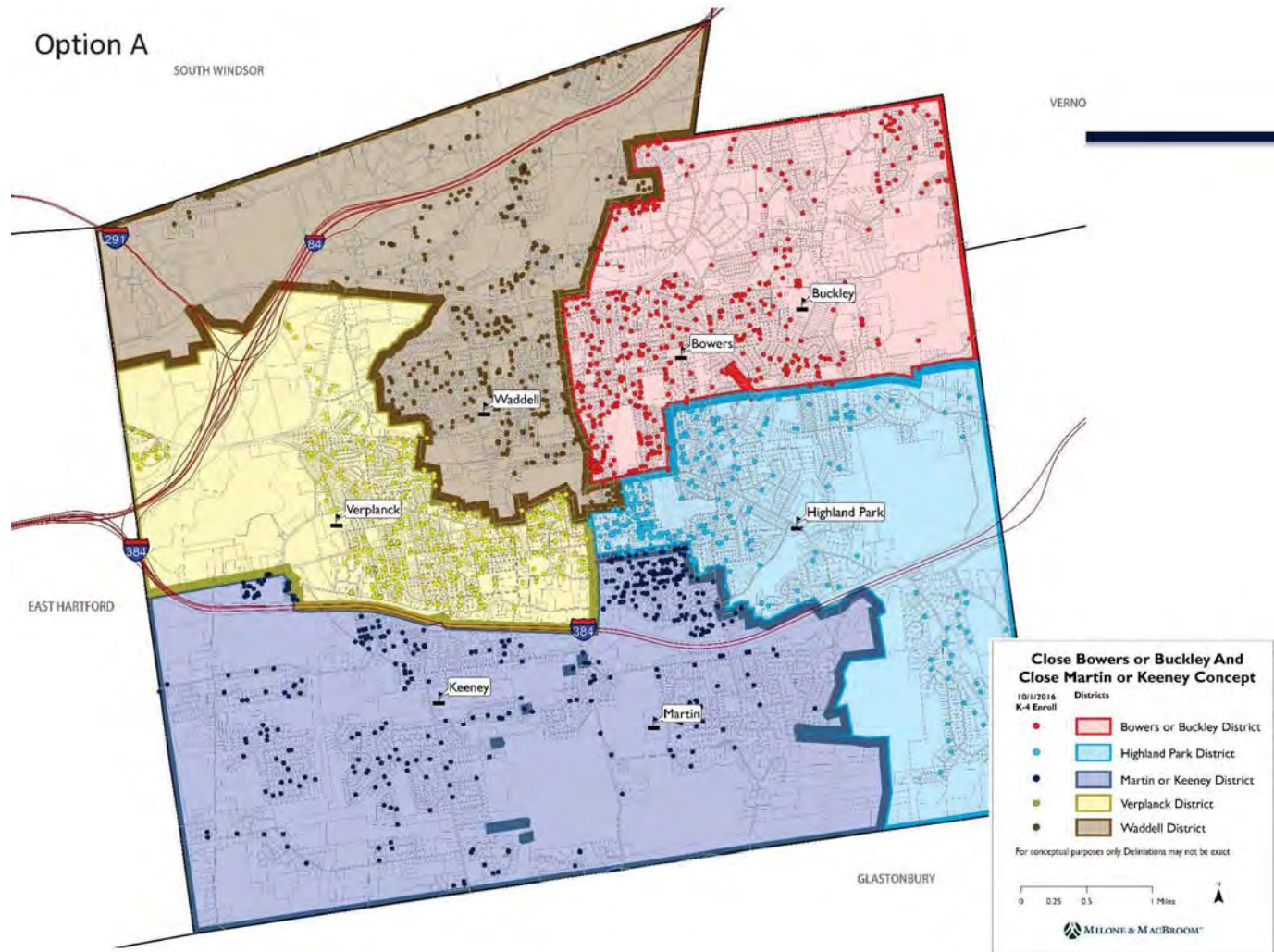
KEENEY
Perspective



2 SCHOOL OPTION



Option A



Manchester Public Schools K-4 Enrollment, by Grade: 2016-17

School	K	1	2	3	4	K-4 Total
Bowers or Buckley	122	109	114	117	120	582
Highland Park	66	69	66	63	66	330
Keeney or Martin	121	114	102	122	115	574
Verplanck	105	127	108	108	116	564
Waddell	125	112	117	94	97	545
Total	540	531	507	504	514	2,596

Based on 5 school Elementary Alignment

As if consolidated K-4 boundaries were already in place

All out of area placements were returned to their elementary school district of residence

- Bowers or Buckley is closed – whichever can best accommodate expansion to **580** student model remains
- Keeney or Martin is closed – whichever can best accommodate expansion to **580** student model remains
- Highland Park fits the 320 student school model
- Verplanck and Waddell districts remain intact

Manchester Phase II Program Comparison - 2 School Option

Program	Bowers Total Area, 582 students, 28 classrooms @ 900 SF	Buckley Total Area, 582 students, 28 classrooms @ 820 SF	Keeney Total Area, 574 students, 28 classrooms @ 850 SF	Martin Total Area, 574 students, 28 classrooms @ 915 SF
Parking	190 (51 existing)	190 (79 existing)	190 (71 existing)	190 (55 existing)
Classrooms	25,200	22,960	23,800	25,620
Special Ed Resource	600	600	600	600
OT/PT	400	400	400	400
Speech	800	800	800	800
Speech Language	250	250	250	250
ELL/Reading	300	300	300	300
ELL/Math	300	300	300	300
Art	1,150	1,150	1,150	1,150
Band	900	900	900	900
Music	900	900	900	900
STEM	900	900	900	900
Gym	5,000	4,775**	5,000	5,000
PE Office/Storage	400	400	400	400
Stage	1,000	1,255	1,000	1,000
LMC	2,100	2,100	2,100	2,100
Project Room	570	570	570	570
Cafe	2,400	2,400	2,400	2,400
Kitchen	1,500	1,260	1,500	1,500
Principal's Office	250	250	250	250
Main Office	600	600	600	600
Conference Room	200	200	200	200
Health Services	450	450	450	450
Staff Work Room	450	450	450	450
Family Resource Room	500	500	500	500
Staff Lounge	450	450	400	350
Custodial Office	150	150	150	150
Storage	2,000	700	0	0
PROGRAM SUB-TOTAL	49,720	45,970	46,270	48,040
PROGRAM GROSS AREA	74,580	68,955	69,405	72,060
EXISTING GROSS AREA	66,750	56,420	48,550	41,300
ALLOWABLE AREA (SF)	67,269	67,269	66,354	66,354
REQUIRED ADDITIONAL AREA	7,830	12,535	20,855	30,760

Manchester Phase II Budget Comparison - 2 School Option

Program	Bowers Total Area, 582 students, 28 classrooms @ 900 SF	Buckley Total Area, 582 students, 28 classrooms @ 820 SF	Keeney Total Area, 574 students, 28 classrooms @ 850 SF	Martin Total Area, 574 students, 28 classrooms @ 915 SF		
PROGRAM SUB-TOTAL	49,720	45,970	46,270	48,040		
PROGRAM GROSS AREA	74,580	68,955	69,405	72,060		
EXISTING GROSS AREA	66,750	56,420	48,550	41,300		
ALLOWABLE AREA (SF)	67,269	67,269	66,354	66,354		
REQUIRED ADDITIONAL AREA	7,830	12,535	20,855	30,760		
PROJECT BUDGET (\$440 PER SF)	\$29,600,000	\$29,600,000	\$29,200,000	\$29,200,000		
MAXIMUM REIMBURSEMENT (68.57%)	\$20,300,000	\$20,300,000	\$20,000,000	\$20,000,000		
EFFECTIVE RATE	61.82%	66.89%	65.41%	63.01%		
EFFECTIVE RATE PENALTY	\$1,990,000	\$500,000	\$880,000	\$1,580,000		
TOTAL REIMBURSEMENT	\$18,300,000	\$19,800,000	\$19,100,000	\$18,400,000		
NET COST TO TOWN	\$11,300,000	\$9,800,000	\$10,100,000	\$10,800,000		

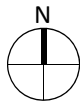
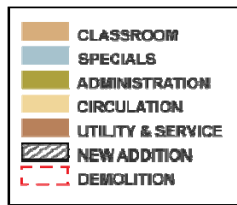
TOTAL RANGE OF COSTS		
\$58,800,000	-	\$58,800,000
\$40,319,160	-	\$40,319,160
\$1,380,000	-	\$3,570,000
\$38,939,160	-	\$36,749,160
\$19,860,840	-	\$22,050,840

NOTE: Costs Do Not Include Escalation

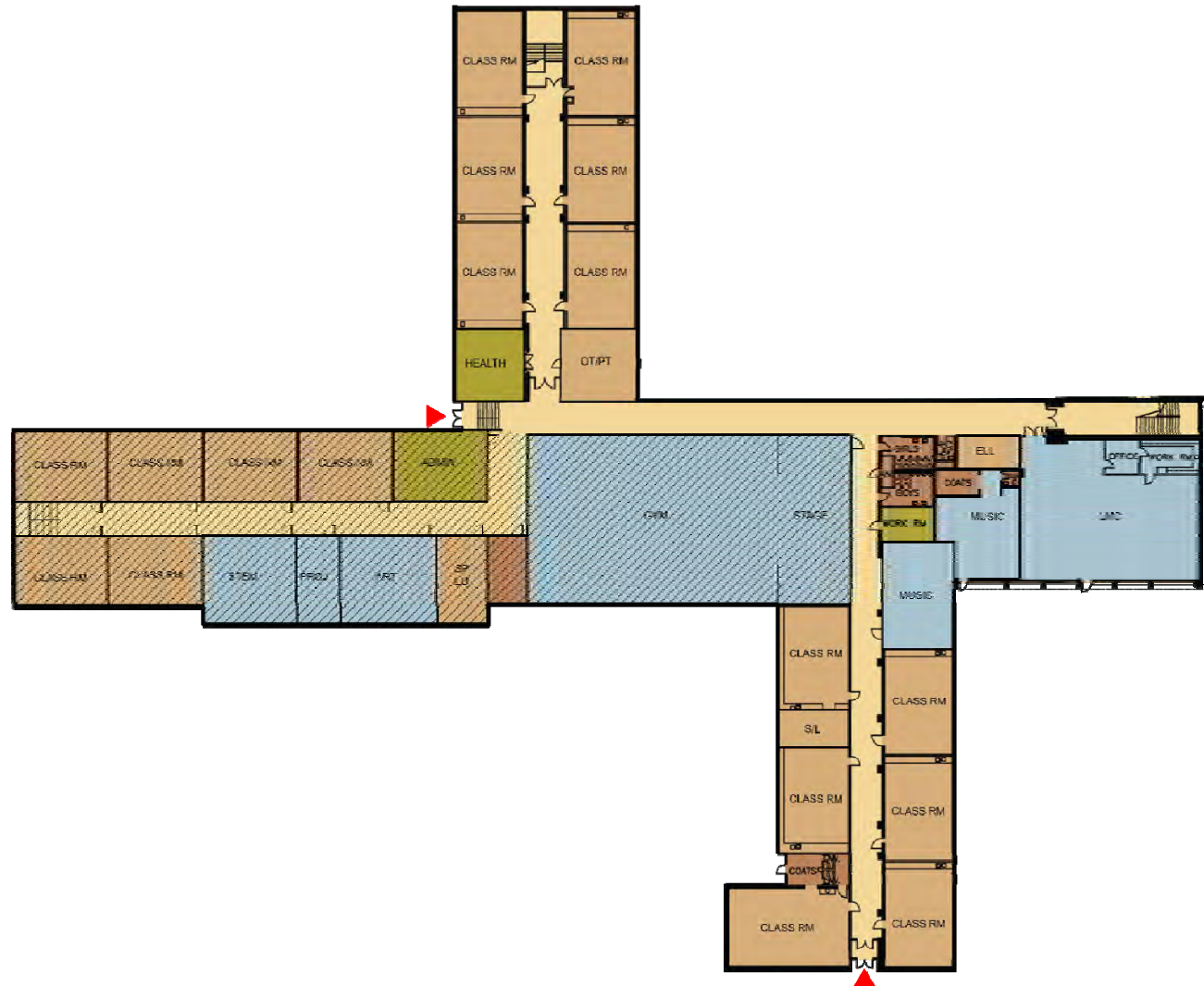
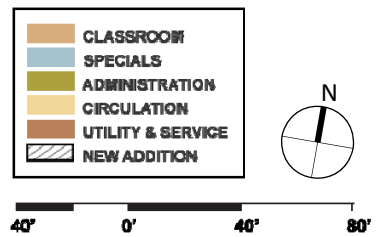
BOWERS

Site

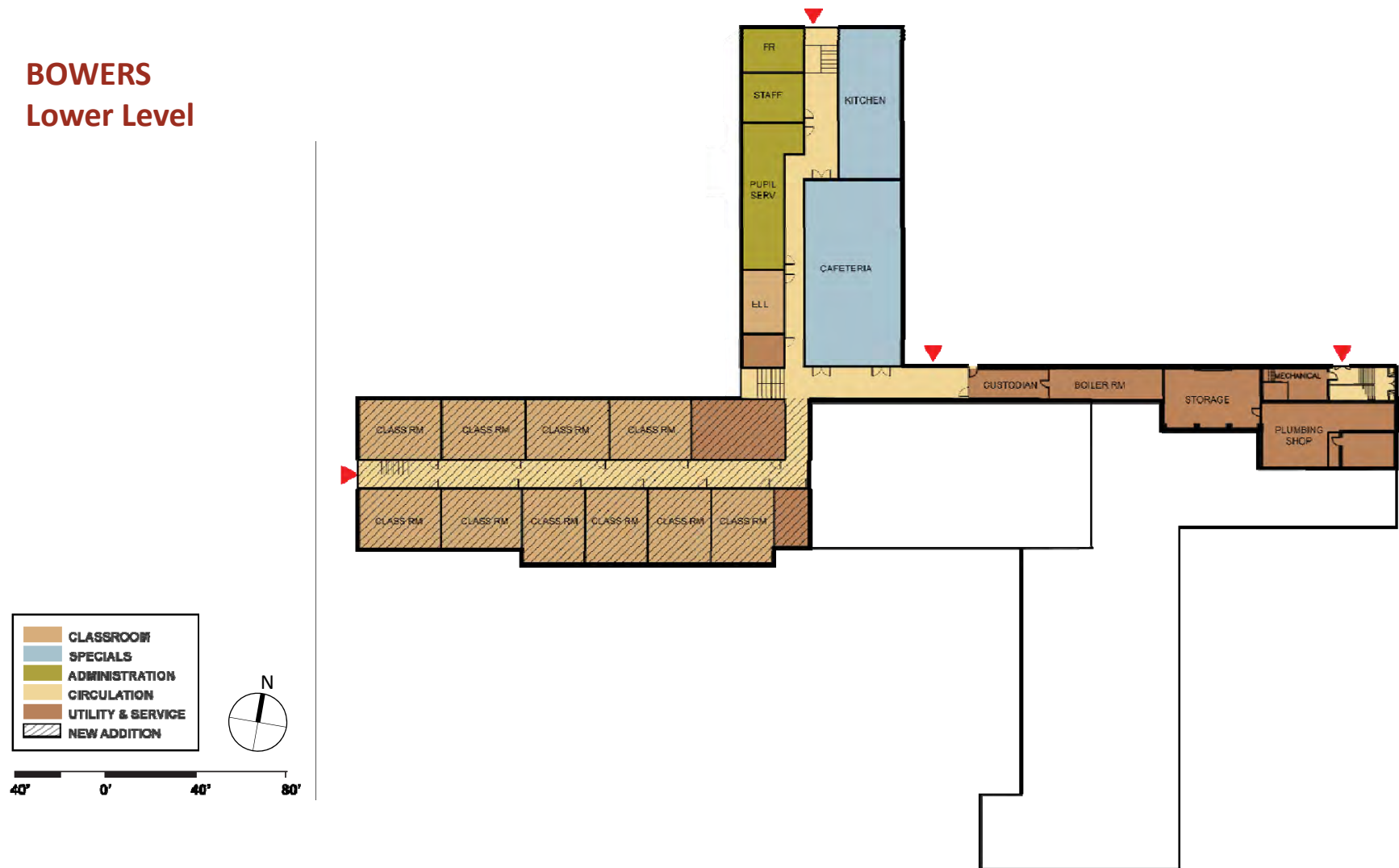
- Separate Cars/Buses
- Increase On-Site Parking
- Discharge Cars in Tow Directions



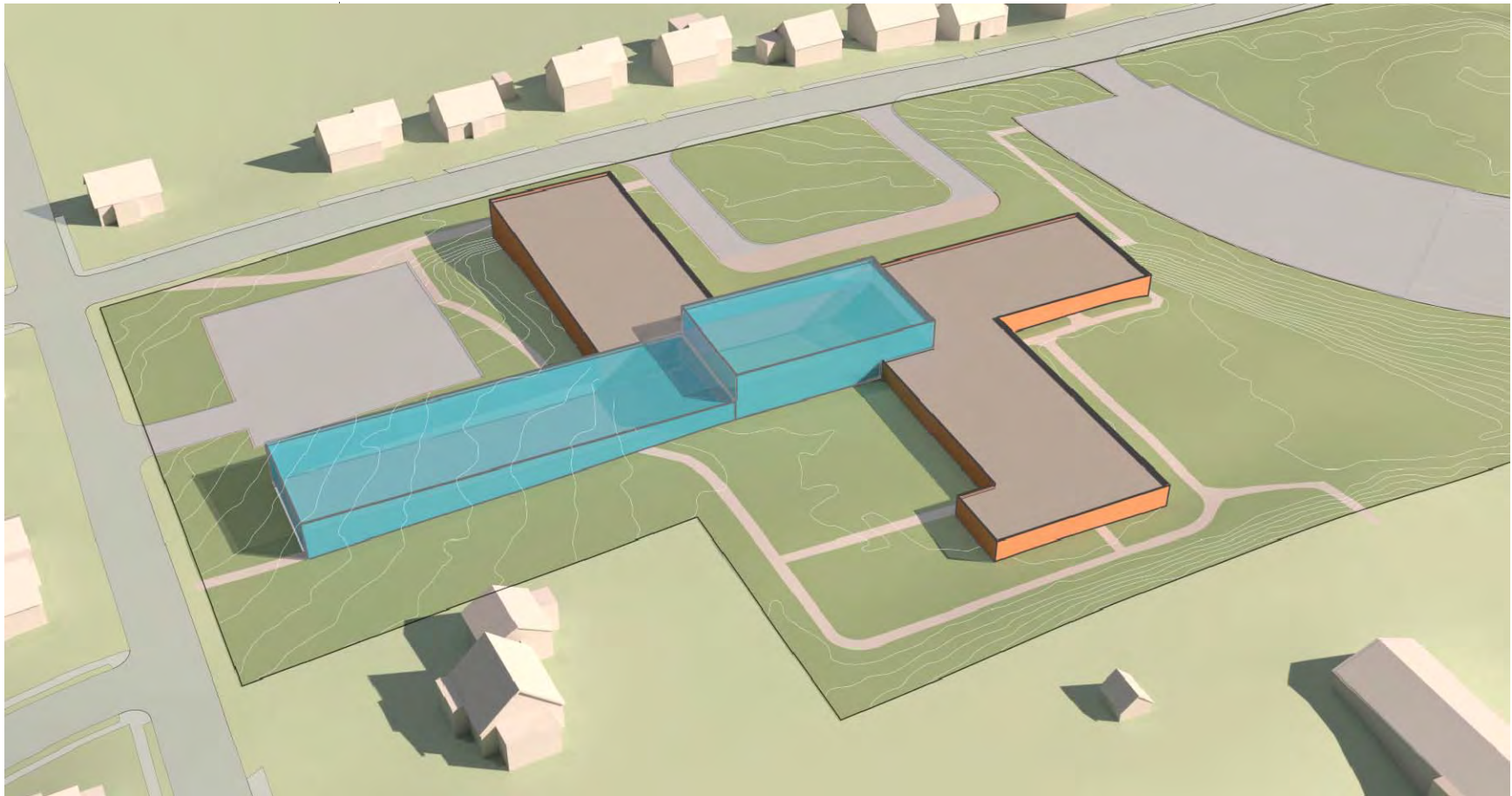
BOWERS
Upper Level



BOWERS
Lower Level



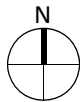
BOWERS
Perspective



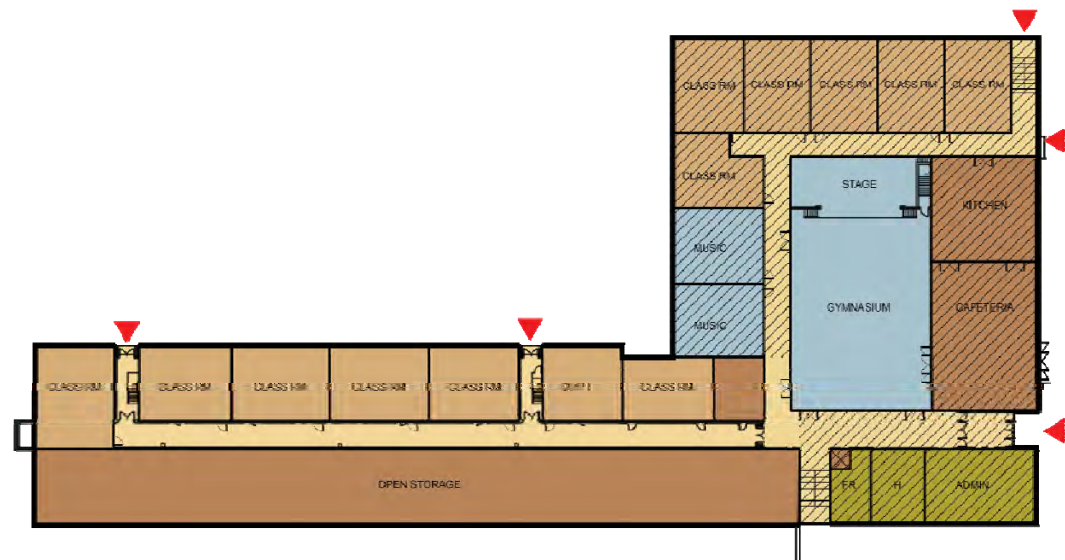
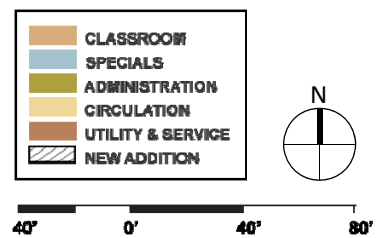
BUCKLEY Site

- Increase On-Site Parking
- Discharge Cars in Two Directions

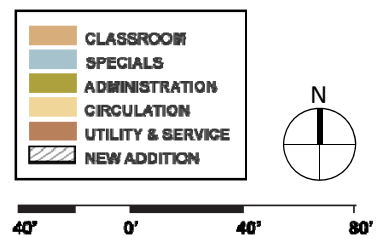
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	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION
	DEMOLITION



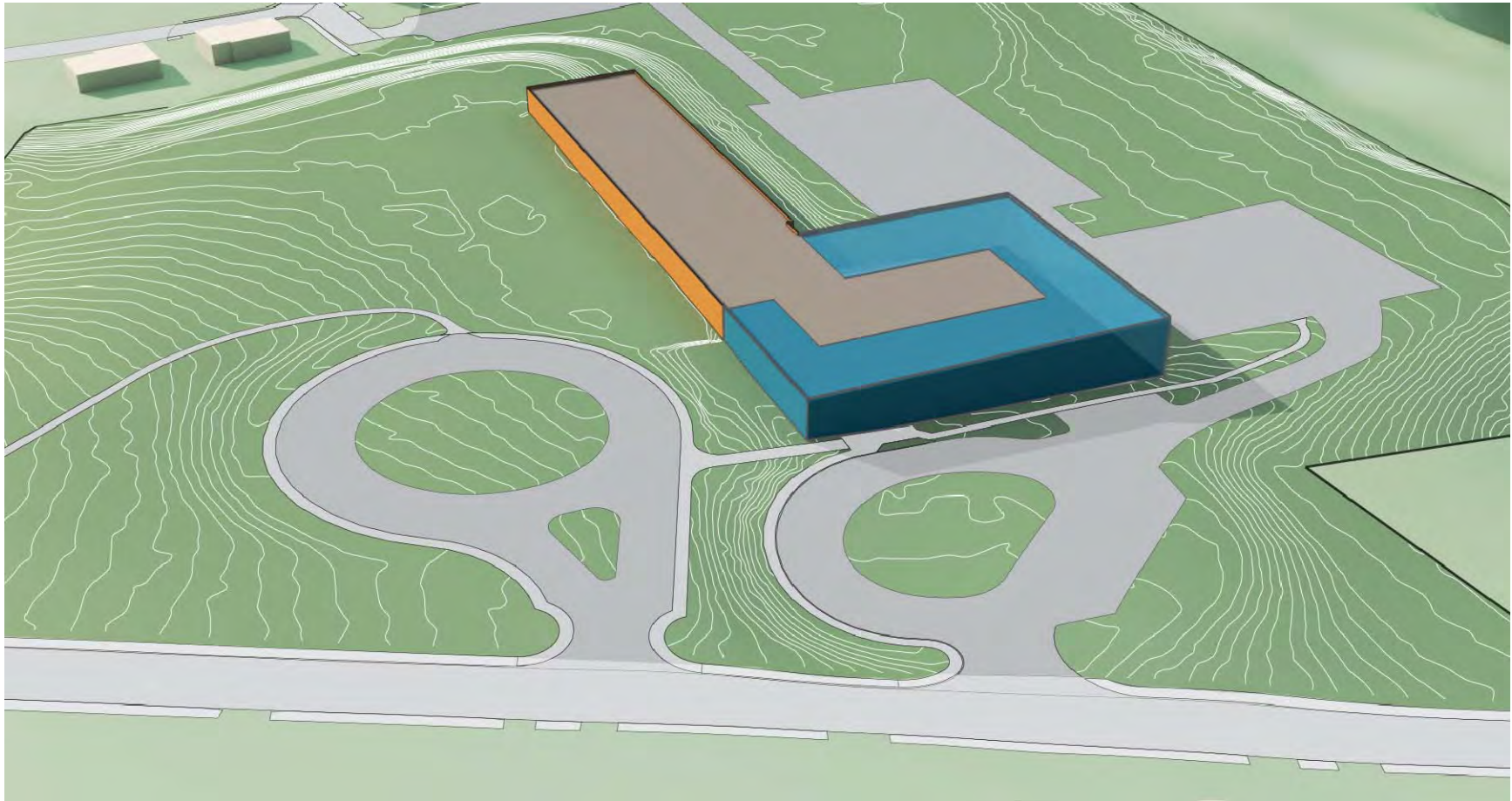
BUCKLEY
Lower Level



BUCKLEY
Upper Level



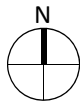
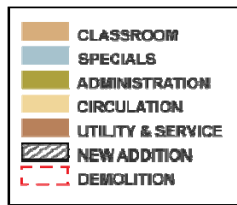
BUCKLEY
Perspective



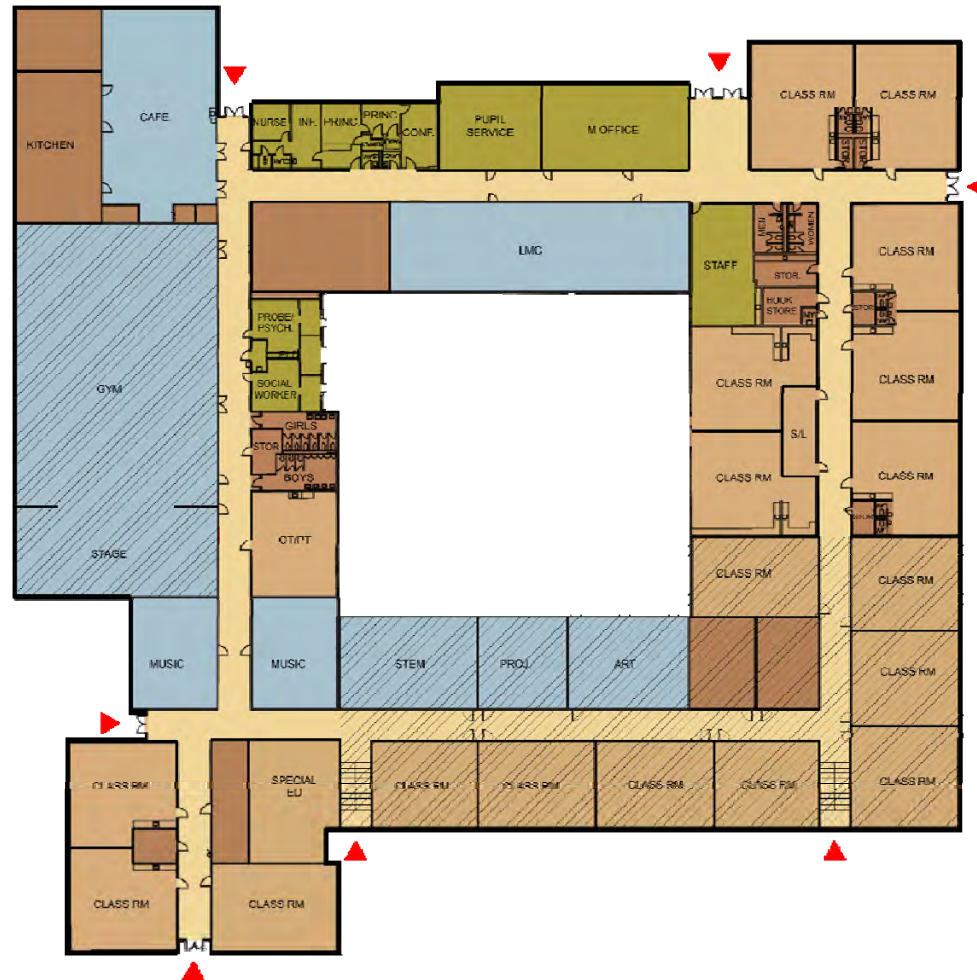
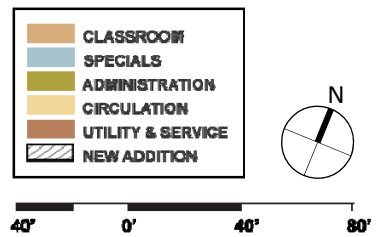
KEENEY

Site

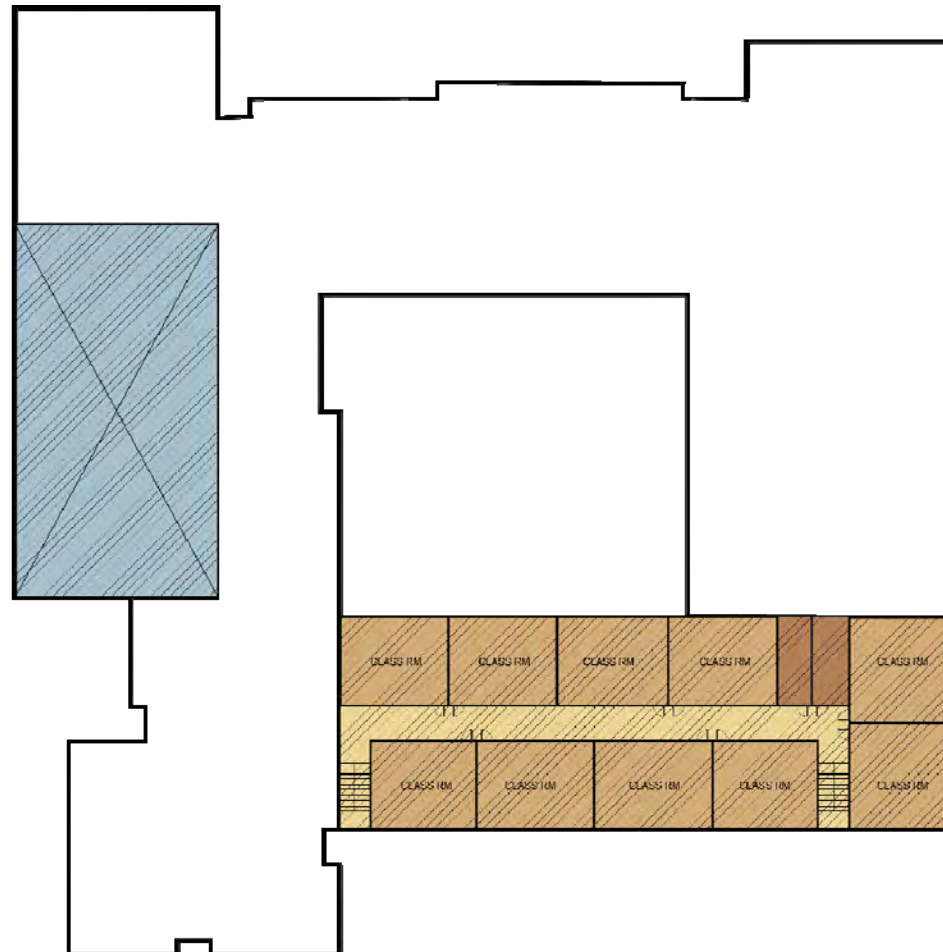
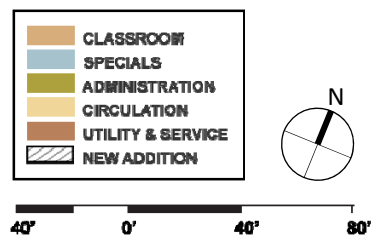
- Separate Cars/Buses
- Increase On-Site Parking



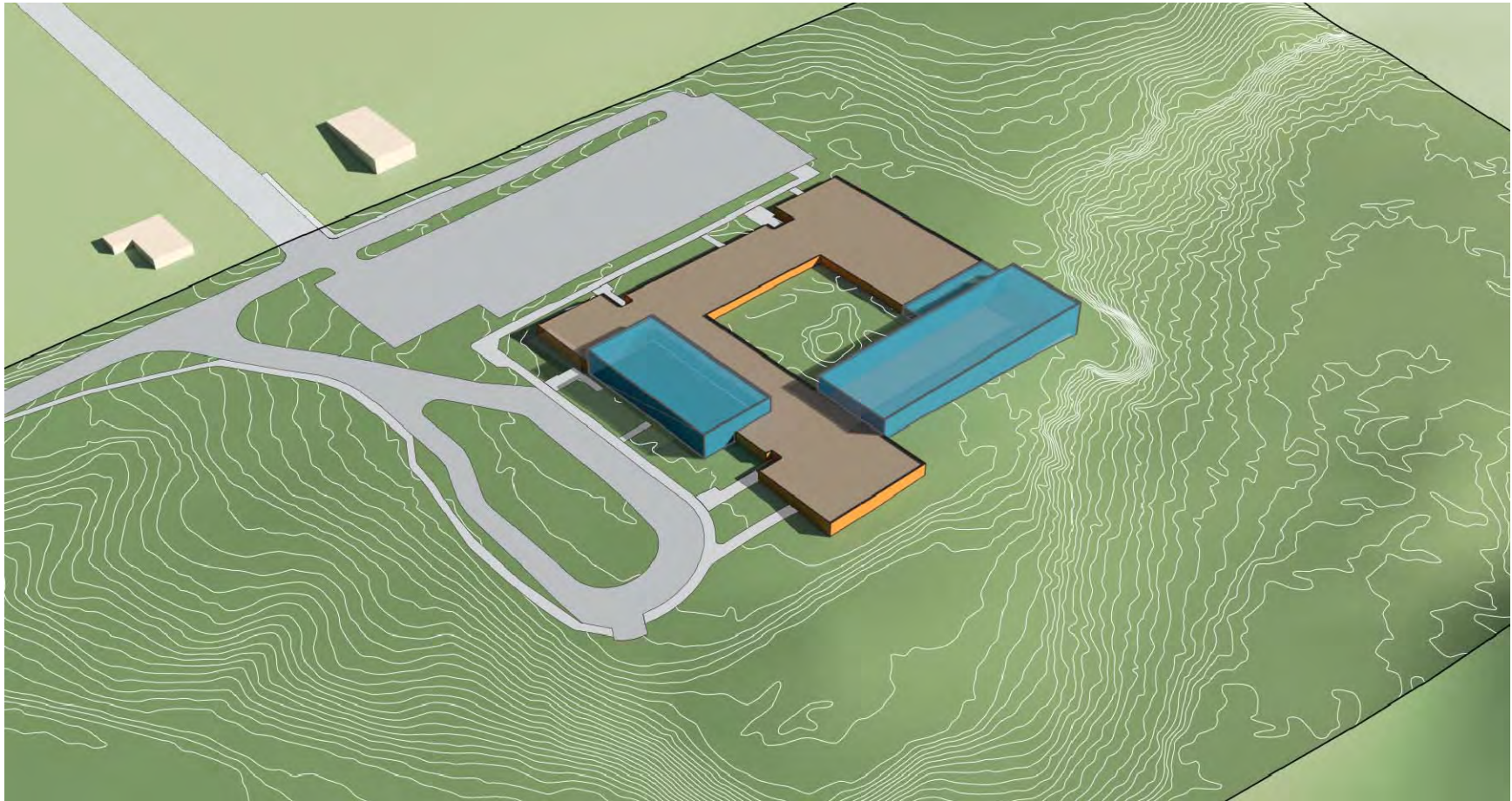
KEENEY Lower Level



KEENEY
Upper Level



KEENEY
Perspective



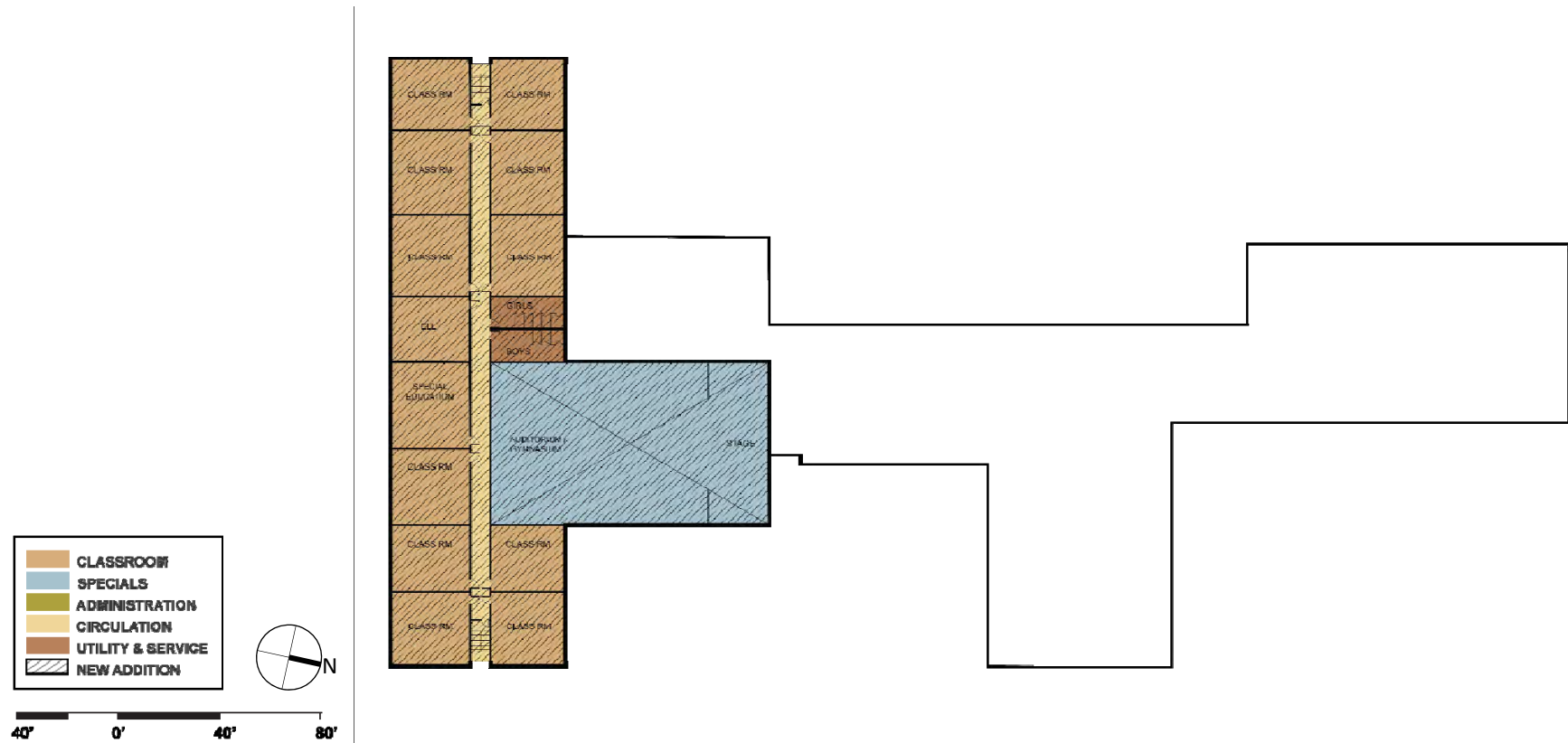
MARTIN Site

- Separate Cars/Buses
- Increase On-Site Parking
- Discharge Cars In Two Directions

	CLASSROOM
	SPECIALS
	ADMINISTRATION
	CIRCULATION
	UTILITY & SERVICE
	NEW ADDITION
	DEMOLITION







MARTIN
Perspective

