



BOARD of ALDERMEN Meeting

Zervas Elementary School – Newton, MA

September 15, 2014



Design*partnership*
OF CAMBRIDGE

**JOSLIN
LESSER**
Project Management



5.3 Acres (**3.5 Useable**)
35k SF Building

43k SF Play Areas
+ Outdoor Classroom
+ Outdoor Gardens

Plaza/Gathering on Lawn
8+ Bike Storage
Dumpsters/Service

44 Parking Spaces (lined)
1 Bus Drop-Off (lined)
0 Car Drop-Off
(on-site totals listed)

SF Over 100' Setback
5.2k Building (4.6+.6k)
19.8k Paving (19.7+.1k)
25k Total within Setback

EXISTING AERIAL

Zervas Elementary School – Newton, MA

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Priority Site Goals:

- **Safety of Students/Pedestrians**
(Including Separation of Bus and Car Drop Off)
- **Maximize Open Space**
- **Minimize Traffic Impact on Beethoven**
- **Minimize Impact on Abutters**



Site Program: Expanded vs. Non-Expanded

Program Goals	Program	Existing Zervas	Expanded Site	* Without Expansion
Site Acreage		3.5 usable	4.2 usable	3.5 usable
24 Classroom Building SF	78,800 SF	35,000 SF	✓	✓
Shared Building Entry (if walking, driven or bused)	single entry point	✓	✓	X
Staff Parking	80	44	75	52
Separate Bus and Car (Pick-Up and Drop-Off)	4 buses/20+ cars	X	✓	✓
Keep Bus Traffic Off Beethoven	Beacon bus loop	X	✓	X
Entry Plaza + Gathering Space	8K SF	via lawn (8K SF)	✓	2K SF
Playgrounds + Fields	60K SF	43K SF	✓	50K SF
Outdoor Garden + Classroom	2,500 SF	✓	✓	✓
Walker Friendly + Enhanced Pedestrian Paths	separate from cars	X	✓	students cross traffic
Snow Storage	6K SF	4K SF	✓	0 SF
Drainage/Bio-Swales	8K SF	0 SF	✓	0 SF
Minimize Wetland Impact	no pavement within 25' buffer	X	✓	X
Minimize Massing Near Adjacent Properties	100'+ away	126'	115'	75'

LEGEND

meets program
does not meet program

* Based on Option A1.2C

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6.0 Acres (**4.2 Useable**)
78.8k SF Building

60k SF Play Areas
+ Outdoor Classroom
+ Outdoor Gardens

8k SF Plaza/Gathering
36+ Bike Storage
Dumpsters/Service

75 Parking Spaces
4 Bus Drop-Off
20 Car Drop-Off
(added drop-off lane)

SF Over 100' Setback
11.2k Building (vs. 5.2k)
5.4k Paving (vs. 19.8k)
9.2k Pervious
25.8k Total (25k exists)

SCHEMATIC DESIGN PROGRESS – SITE PLAN

Zervas Elementary School – Newton, MA

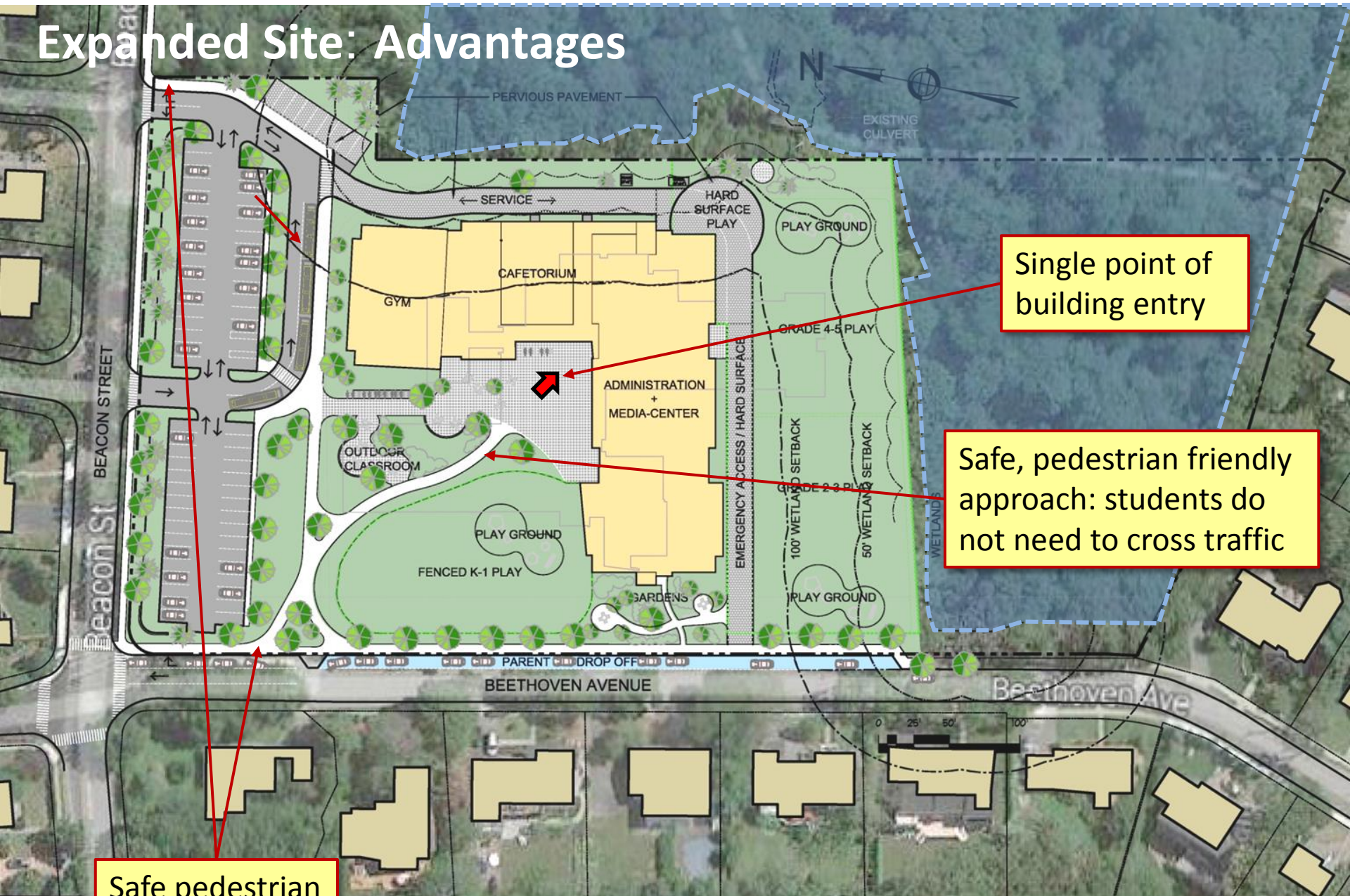
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Expanded Site: Advantages

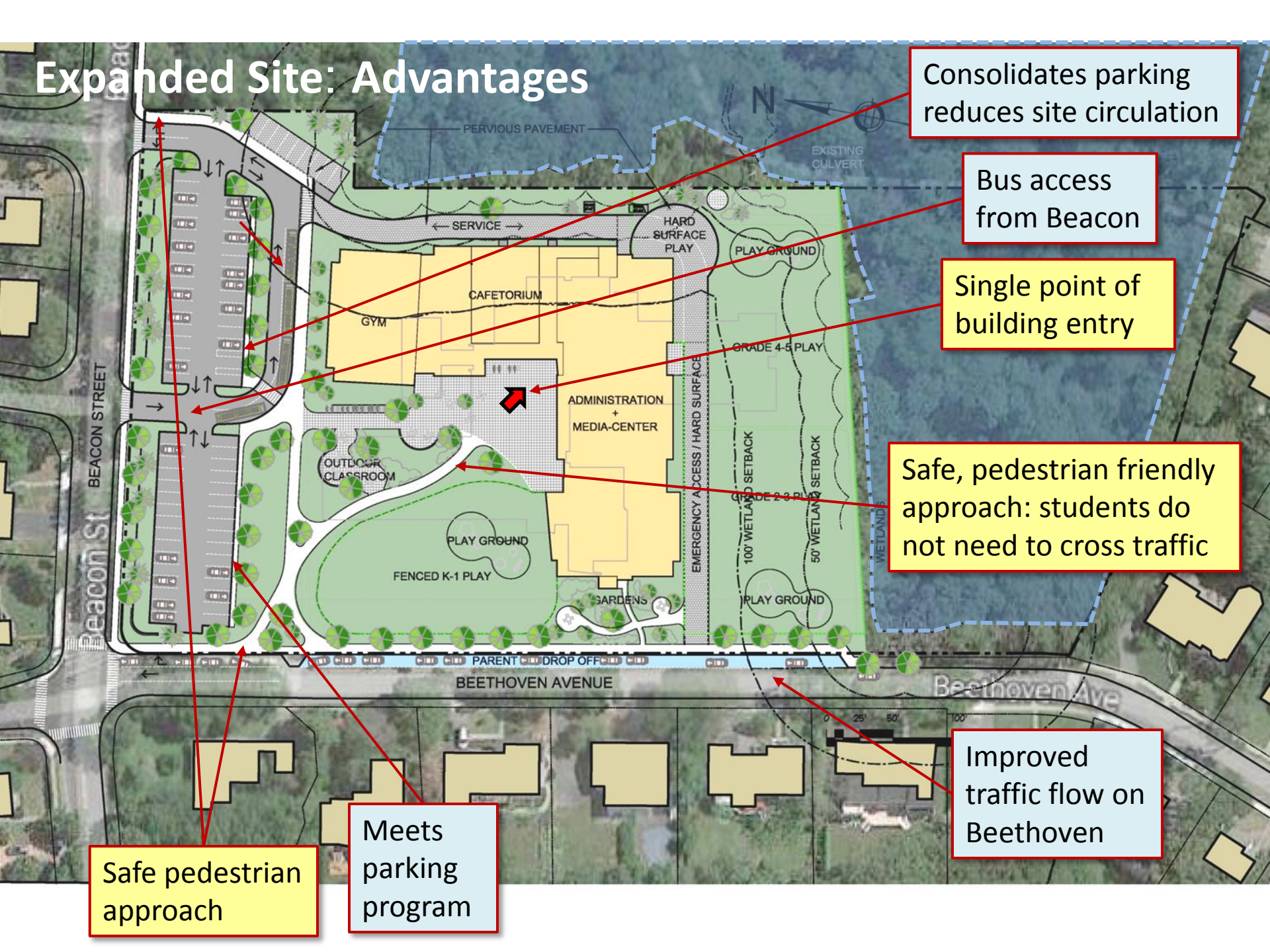


Single point of building entry

Safe, pedestrian friendly approach: students do not need to cross traffic

Safe pedestrian approach

Expanded Site: Advantages



Consolidates parking
reduces site circulation

Bus access
from Beacon

Single point of
building entry

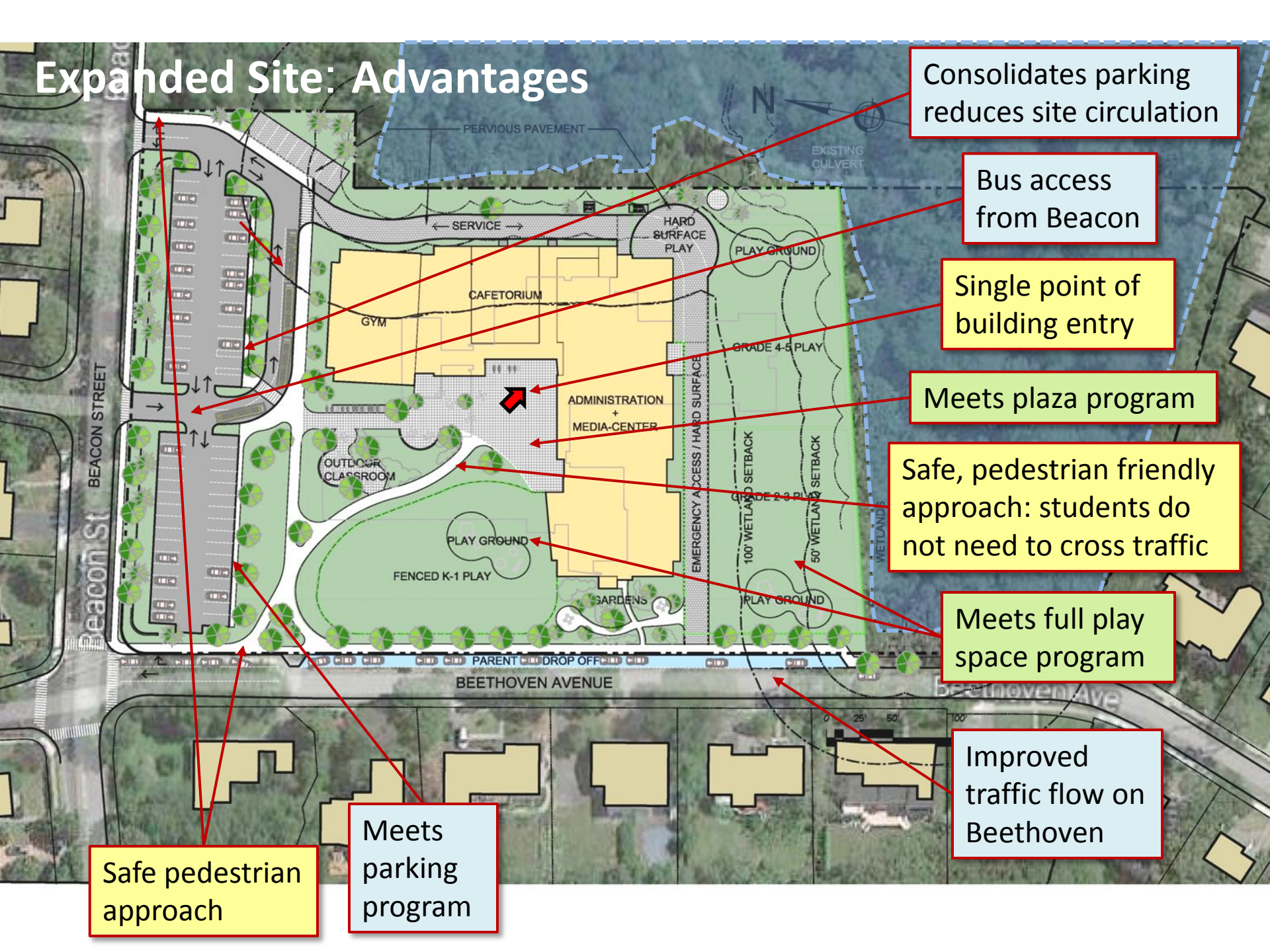
Safe, pedestrian friendly
approach: students do
not need to cross traffic

Improved
traffic flow on
Beethoven

Safe pedestrian
approach

Meets
parking
program

Expanded Site: Advantages



Consolidates parking
reduces site circulation

Bus access
from Beacon

Single point of
building entry

Meets plaza program

Safe, pedestrian friendly
approach: students do
not need to cross traffic

Meets full play
space program

Improved
traffic flow on
Beethoven

Safe pedestrian
approach

Meets
parking
program

Expanded Site: Advantages

Maintains 25' wetland buffer

Consolidates parking
reduces site circulation

Bus access
from Beacon

Single point of
building entry

Meets plaza program

Safe, pedestrian friendly
approach: students do
not need to cross traffic

Meets full play
space program

Improved
traffic flow on
Beethoven

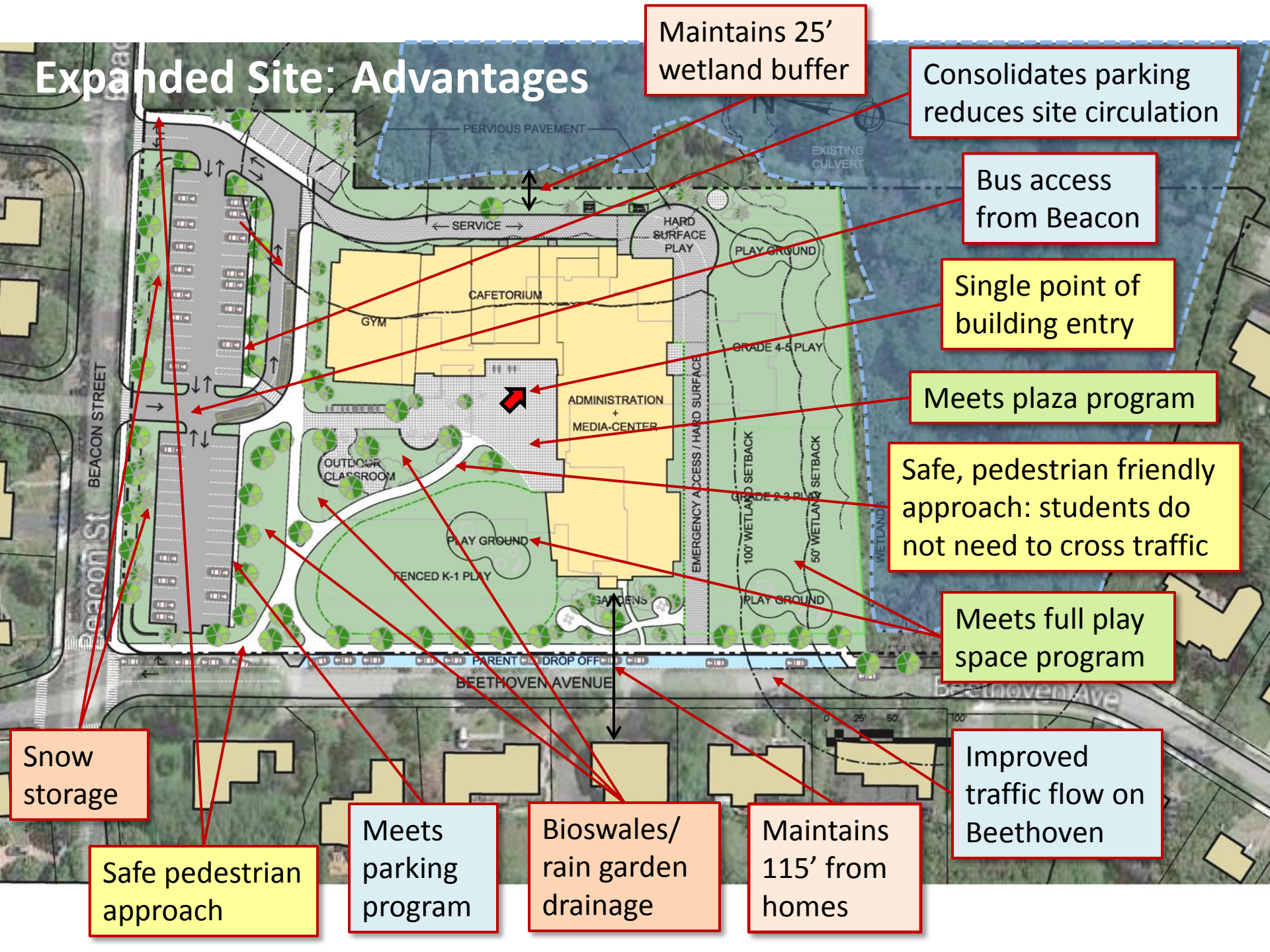
Snow
storage







Safe pedestrian
approach

Meets
parking
program

Bioswales/
rain garden
drainage

Maintains
115' from
homes



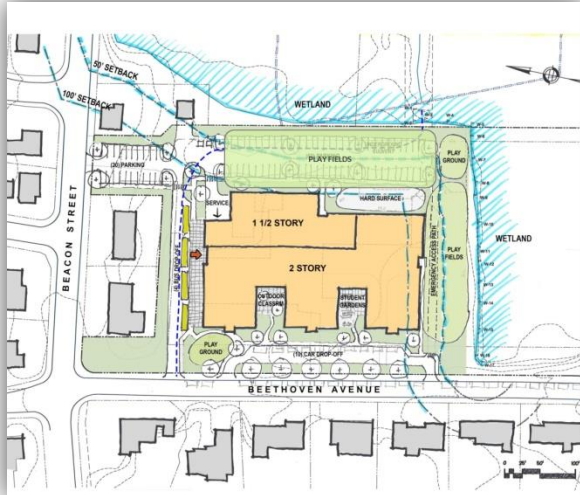
EXISTING SITE STUDIES		SITE PROGRAM ELEMENTS						OTHER NOTES
5.3 acre site (3.5 useable including setbacks)		Play Space	Parking	Car Drop*	Bus Drop	Outdoor Learning	Service	Including Wetland Buffers**
	EXISTING Pinwheel Plan	43k square feet	44 lined	0 cars	1 bus	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Small Scale / 1 to 1-1/2 Story Building • Wetland Buffer Overlaps = 25k SF • West Facing Entry • East/West Classroom Orientation • All Bus & Car Drop-Offs on Street
	A1.1b Multi-Wing Plan	50k square feet	20 spaces	10 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • 2 Story Along Beethoven Edge, 1 & 2 Story Behind • Reduced Wetland Buffer Overlap • Hidden / North Entry • Playfields Behind School
	A1.2b Elbow Plan - South	50k square feet	36 spaces	0 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Maintains 1 & 2 Story Building • Increased Wetland Buffer Overlap • North-West Entry • Narrow / Separated Playfields
	A1.2c Elbow Plan - North	50k square feet	52 spaces	23 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Wetland Buffer Overlap = Existing • South-West Entry • 3-Story Adjacent to Neighbors with 1 & 2 Story Caf/Gym Opposite
	A1.3b Pinwheel Plan	50k square feet	38 spaces	0 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Maintains 1 & 2 Story Building • Reduced Wetland Buffer Overlap • North-West Entry • Very Separate Playfields
	A1.4b Add/Reno Plan	45k square feet	40 spaces	0 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Maintains 1 & 2 Story Building • Reduced Wetland Buffer Overlap • South-West Entry • Very Separated Playfields
PROGRAM NEEDS		50-60k	80-95	TBD	4	2	2	

*Car drop-off counts listed are within the property. Additional drop-off/cueing remains along Beethoven Avenue.

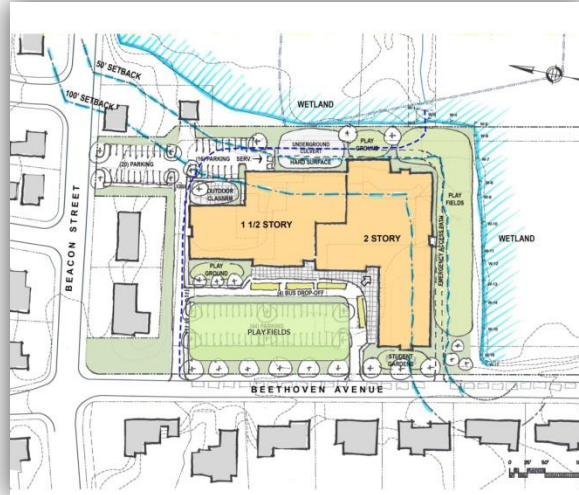
** Any work within wetland buffers requires Conservation Commission approval



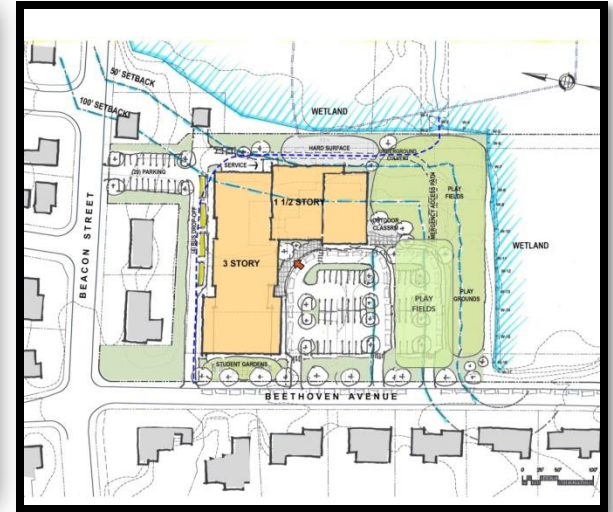
EXISTING SITE – RANGE of STUDIES:



A1.1b Multi-Wing Plan



A1.2b Elbow Plan - South



A1.2c Elbow Plan - North



Disadvantages:

- Dual Entry/Approach
- Within 25' of Wetlands
- Within 75' of Homes
- Minimal Play Space
- Parking Dominant Beethoven
- Bus Access via Beethoven
- Minimal Snow Storage and Bio-Swale Drainage Areas



A1.3b Pinwheel Plan



A1.4b Add/Reno Plan

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Site Program: Expanded vs. Non-Expanded

Program Goals	Program	Existing Zervas	Expanded Site	* Without Expansion
Site Acreage		3.5 usable	4.2 usable	3.5 usable
24 Classroom Building SF	78,800 SF	35,000 SF	✓	✓
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Staff Parking	80	44	75	52
Separate Bus and Car (Pick-Up and Drop-Off)	4 buses/20+ cars	X	✓	✓
Keep Bus Traffic Off Beethoven	Beacon bus loop	X	✓	X
Entry Plaza + Gathering Space	8K SF	via lawn (8K SF)	✓	2K SF
Playgrounds + Fields	60K SF	43K SF	✓	50K SF
Outdoor Garden + Classroom	2,500 SF	✓	✓	✓
Walker Friendly + Enhanced Pedestrian Paths	separate from cars	X	✓	students cross traffic
Snow Storage	6K SF	4K SF	✓	0 SF
Drainage/Bio-Swales	8K SF	0 SF	✓	0 SF
Minimize Wetland Impact	no pavement within 25' buffer	X	✓	X
Minimize Massing Near Adjacent Properties	100'+ away	126'	115'	75'

LEGEND

meets program
does not meet program







* Based on Option A1.2C

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EXPANDED SITE STUDIES		SITE PROGRAM ELEMENTS						OTHER NOTES
6.0 acre site (4.2 useable including setbacks)		Play Space	Parking	Car Drop*	Bus Drop	Outdoor Learning	Service	Including Wetland Buffers**
	EXISTING Pinwheel Plan	43k square feet	44 lined	0 cars	1 bus	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Small Scale / 1 to 1-1/2 Story Building • Wetland Buffer Overlaps = 25k SF • West Facing Entry • East/West Classroom Orientation • Bus & Car Drop-Offs on Street
	A2.1b Multi-Wing Plan	50k square feet	80 spaces	10 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • 2 Story Along Beethoven, 1 & 2 Story Behind • Reduced Wetland Buffer Overlaps • Hidden / North Entry • Playfields Behind School
	A2.2b Elbow Plan - South	50k square feet	80 spaces	15 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • Wetland Buffer Overlap = Existing • North West Entry • Separate Playfields + Rd Crossing • Long / Narrow Service Approach
	A2.3b Elbow Plan - North	58k square feet	80 spaces	30 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • 3-Story Along Beacon, 2 Story Behind • Reduced Wetland Buffer Overlaps • South West Entry • Diverts Culvert
	A2.3c Elbow Plan - North	50k square feet	80 spaces	30 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • 2 Story • Reduced Wetland Buffer Overlaps • South West Entry • Tight Service & Perimeter Access • Diverts Culvert
	A2.4 Box Plan	45k square feet	80 spaces	0 cars	4 buses	2 (classroom + garden)	2 dumpsters + loading	<ul style="list-style-type: none"> • 2 Story along Wetland, 1 Story Front • Wetland Buffer Overlap = Existing • North West Entry • Narrow / Separated Playfields • Building Plan Not Ideal (un-zoned)
PROGRAM NEEDS		50-60k	80-95	TBD	4	2	2	

*Car drop-off counts listed are within the property. Additional drop-off/cueing remains along Beethoven Avenue.

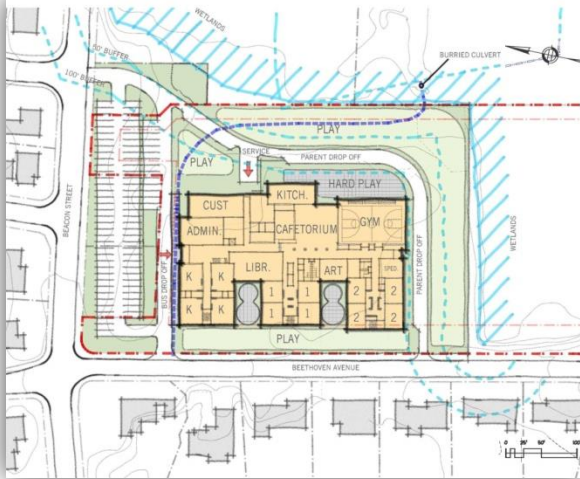
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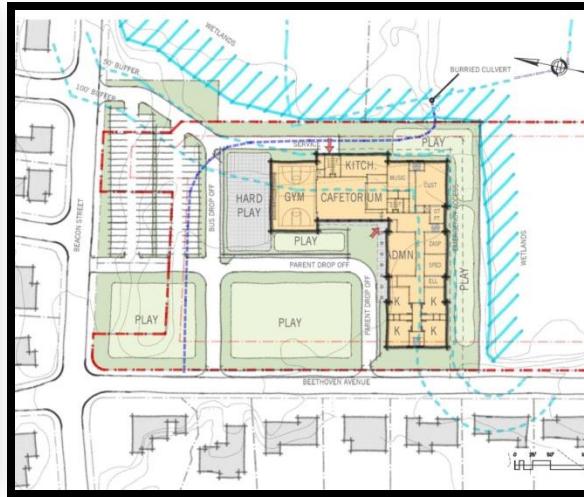
September 15, 2014



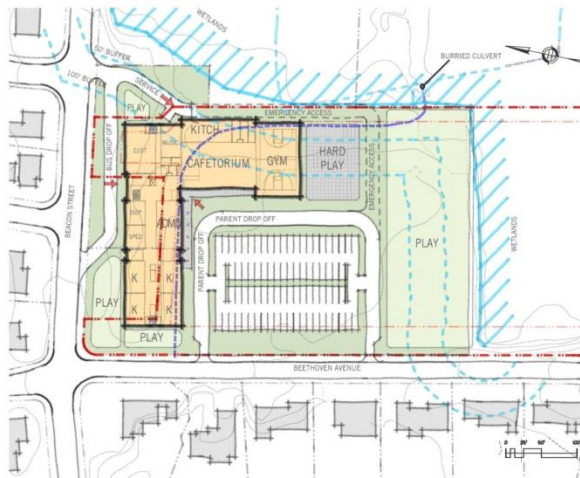
EXPANDED SITE – RANGE of STUDIES:



A2.1b Multi-Wing Plan



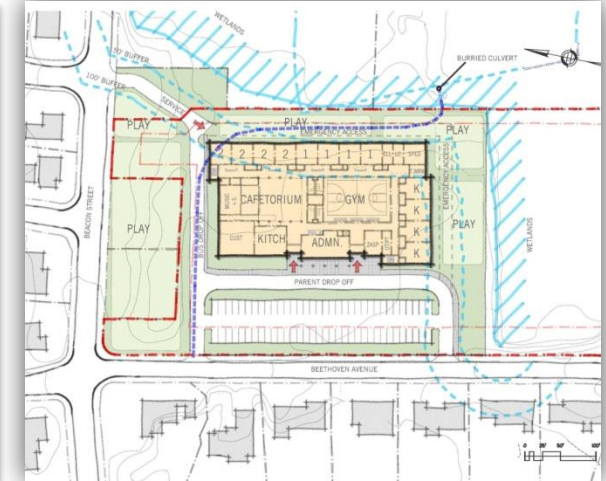
A2.2b Elbow Plan - South



A2.3b Elbow Plan - North



A2.3c Elbow Plan - North



A2.4 Box Plan

Preferred Option

- Elbow Plan, Open to NW



Variant to be Studied

- Locate Centrally on Site
- Shift Away from Wetland (for contiguous play)
- Shift Back from Beethoven
- Refine Traffic Assessment



6.0 Acres (4.2 Useable)
78.8k SF Building

60k SF Play Areas
+ Outdoor Classroom
+ Outdoor Gardens

8k SF Plaza/Gathering
36+ Bike Storage
Dumpsters/Service

75 Parking Spaces
4 Bus Drop-Off
20 Car Drop-Off
(added drop-off lane)

SF Over 100' Setback
11.2k Building (vs. 5.2k)
5.4k Paving (vs. 19.8k)
9.2k Pervious
25.8k Total (25k exists)

SCHEMATIC DESIGN PROGRESS – SITE PLAN

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Questions and Answers



SCHEMATIC DESIGN PROGRESS – PRELIMINARY ELEVATIONS

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VIEW FROM BEACON/BEETHOVEN INTERSECTION



SCHEMATIC DESIGN PROGRESS – PRELIMINARY ELEVATIONS

Zervas Elementary School – Newton, MA

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VIEW FROM BEETHOVEN TOWARD BEACON



SCHEMATIC DESIGN PROGRESS – PRELIMINARY ELEVATIONS

Zervas Elementary School – Newton, MA

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Staff Parking Estimates

* Part-time staff work a variety of schedules and may be in the building each day for just a portion of the day, therefore needing their own parking spot. Also, some part-time staff overlap with one another (ie: Social Worker and Psychologist may each work 3-4 days a week) so sharing a space may be problematic. Some sharing of spaces is expected but overlap cannot be determined accurately at this point.

Current Enrollment			Projected Enrollment		
Position	Full/Part	# of spots	Position	Full/Part	# of spots
16 teacher	full	13	20 teacher	full	20
Kindergarten	full	3	4 teacher	full	4
4 sped	full	4	5 sped	full	5
1 IF	full	1	1 IF	full	1
1 SW/1 Psych	part*	1 to share	1 SW/1 Psych	part*	2
4 specialists	full	4	4+ specialists	full	4
1 OT/1PT/1 VS	part*	1 to share	1 OT/1PT/1 VS/1 Adap PE	part*	2 to share
2 S/L	part*	1 to share	2 S/L	part*	2
2 ELL	part*	1 to share	2 ELL	part*	2
1 principal	full	1	1 principal	full	1
1 admin asst	full	1	1 admin asst	full	1
1 nurse	full	1	1 nurse	full	1
1 lit spec	full	1	1 lit spec	full	1
1 math coach	part	1	1 math coach	part	1
14 sped aides	full	14	20 sped aides	full	20
1 custodian	full	1	2 custodian	full	2
2 ISS	part*	1 to share	3 ISS	part*	2 to share
1 building aide	part	1 to share	2 building aide	part*	1 to share
1 lunch mgr	part	1	1 lunch mgr	part	1
2 lunch aides	part	2	3 lunch aides	part	3
Other itinerant	part*	1	Other itinerant	part*	2
			1 asst princ	part*	1
Total:			Total:		
59+ staff		56+ spots	81+ staff		79+ spots



Program Comparison

Zervas Elementary	ANGIER / MSBA for 465 STUDENTS			ZERVAS SCHEMATC for 490 STUDENTS		
	NFA	QTY	TOTAL	NFA	QTY	TOTAL
ROOM TYPE						
CORE ACADEMIC SPACES			21,450			23,300
Pre-Kindergarten w/ toilet	0	0	0	0	0	0
Kindergarten w/ toilet	1,200	4	4,800	1,200	4	4,800
General Classrooms - Gr. 1-6	925	18	16,650	925	20	18,500
SPECIAL EDUCATION			5,800			5,650
Self-Contained SPED			0			0
Self-Contained SPED - toilet			0			0
Resource Room			0			0
Small Group Room / Reading			0			0
Substantially Separate Classroom	925	1	925	900	1	900
Learning Centers (K-2 & 3-5)	433	2	866	450	2	900
Breakout Rooms (1 for each grade)	125.3	6	752	125	6	750
ELL Program	240	1	240	150	1	150
OT/PT	450	1	450	450	1	450
Quiet Room (1 per academic floor)	105	2	210	100	2	200
Speech & Language	240	1	240	150	2	300
Reading/Literacy Classroom	925	1	925	900	1	900
Inclusion Facilitators	207	1	207	150	1	150
Literacy Specialist	140	1	140	125	1	125
Math Coach	127	1	127	125	1	125
IEP Conference Rooms	420	1	420	400	1	400
Psychologist (office, testing, therapy & storage)	149	1	149	150	1	150
Social Worker (office, testing & conference)	149	1	149	150	1	150
Intervention Office					0	0
ART & MUSIC			2,675			2,725
Art Classroom - 25 seats	1,000	1	1,000	1,000	1	1,000
Art Workroom w/ Storage & kiln	150	1	150	150	1	150
Music Classroom / Large Group - 25-50 seats	1,200	1	1,200	1,200	1	1,200
Music Practice / Ensemble	155	1	155	150	2	300
Music Storage	70	1	70	75	1	75
HEALTH & PHYSICAL EDUCATION			6,300			6,300
Gymnasium	5,997	1	5,997	6,000	1	6,000
Gym Storeroom	198	1	198	200	1	200
Health Instructor's Office w/ Shower & Toilet	105	1	105	100	1	100
MEDIA CENTER			2,763			2,875
Media Center / Reading Room	2,763	1	2,763	2,875	1	2,875

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Program Comparison

Zervas Elementary	
ROOM TYPE	
DINING & FOOD SERVICE	
Cafeteria / Dining	
Stage	
Chair / Table / Equipment Storage	
Kitchen	
Staff Lunch Room	
MEDICAL	
Medical Suite Toilet	
Nurses' Office / Waiting Room	
Examination Room / Resting	
ADMINISTRATION & GUIDANCE	
General Office / Waiting Room / Toilet	
Teachers' Mail and Time Room	
Duplicating Room	
Records Room	
Principal's Office w/ Conference Area	
Principal's Secretary / Waiting	
Assistant Principal's Office	
Supervisory/Spare Office +After School Pgm	
Conference Room	
Guidance Office	
Guidance Storeroom	
Teachers' Work Room	
CUSTODIAL & MAINTENANCE	
Custodian's Office	
Custodian's Workshop	
Custodian's Storage	
Custodian's Storage	
Recycling Room / Trash	
Receiving and General Supply	
Storeroom	
Network / Telecom Room	
Total Building Net Floor Area (NFA)	
Total Building Gross Floor Area (GFA) ²	
Grossing factor (GFA/NFA)	

ANGIER / MSBA for 465 STUDENTS			ZERVAS SCHEMATC for 490 STUDENTS		
NFA	QTY	TOTAL	NFA	QTY	TOTAL
		6,366			6,663
3,025	1	3,025	3,200	1	3,200
996	1	996	1,000	1	1,000
355	1	355	363	1	363
1,470	1	1,470	1,600	1	1,600
260	2	520	250	2	500
		510			510
51	1	51	60	1	60
234	1	234	250	1	250
112.5	2	225	100	2	200
		2,318			2,515
681	1	681	680	1	680
included in General Office			included in General Office		
included in General Office			included in General Office		
62	1	62	60	1	60
300	1	300	300	1	300
included in General Office			included in General Office		
125	1	125	125	1	125
450	1	450	650	1	650
200	1	200	200	1	200
0	0	0	0	0	0
0	0	0	0	0	0
250	2	500	250	2	500
		1,861			1,865
130	1	130	125	1	125
0	0	0	0	0	0
141	2	282	120	2	240
185	1	185	200	1	200
655	1	655	650	1	650
included in Recycling Room			included in Recycling Room		
176	2	352	200	2	400
257	1	257	250	1	250
		49,943			52,403
		74,960			78,800
		1.50			1.50

