



Tecton
ARCHITECTS

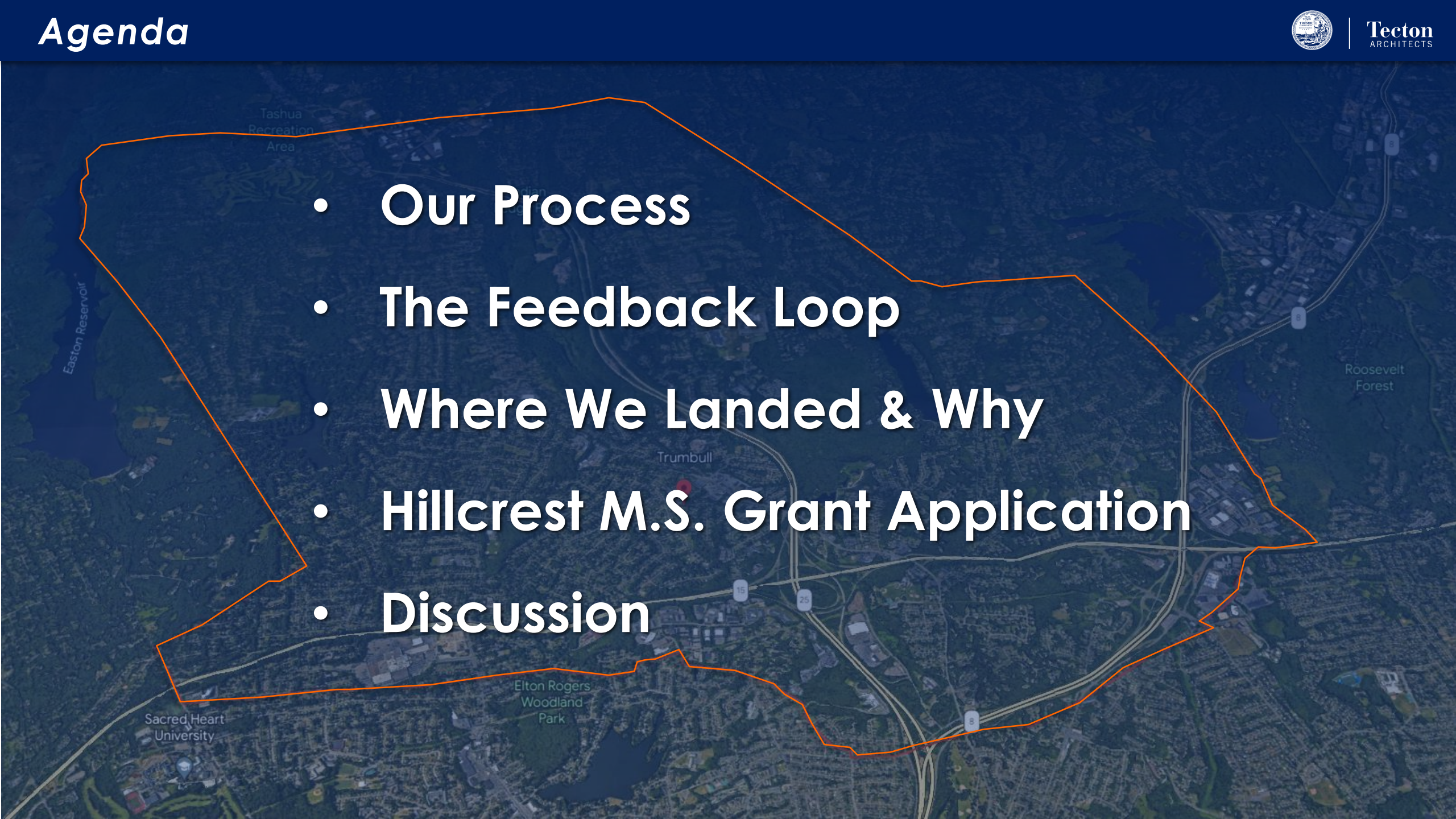
SUMMARY PRESENTATION FOR TRUMBULL PUBLIC SCHOOLS
**MASTER PLAN & HILLCREST MIDDLE
SCHOOL GRANT APPLICATION**

for

Trumbull Town Council Meeting

Town Hall

March 19, 2024

- 
- **Our Process**
 - **The Feedback Loop**
 - **Where We Landed & Why**
 - **Hillcrest M.S. Grant Application**
 - **Discussion**

UTILIZATION & PROGRAMMING



**EDWARD
WIDOFSKY**

AIA, LEED AP BD+C

*Project Manager
Tecton*

OVERSIGHT & DAY-TO-DAY CONTACT



**JEFF
WYSZYNSKI**

AIA

*Principal-in-Charge
Tecton*

COMMUNITY ENGAGEMENT



**ANTONIA
CIAVERELLA**

EDAC, LEED AP BD+C,
WELL AP, FITWEL

*Architectural Designer
Tecton*

BUILDING CONDITION ASSESSMENT



ALISON FROST

*Project Architect
Tecton*

CONSULTANT EXPERTISE



**BRAD
PARK**

*MEP Engineer, Associate
CES*

CONSULTING ENGINEERING SERVICES
MEP Engineering

MCKIBBEN DEMOGRAPHIC RESEARCH
Enrollment Projections & Demographics Study

Central Office

Dr. Martin Semmel
Superintendent

Dr. Susan C. Iwanicki
Assistant Superintendent

David Cote
Director of Operations

Christina Hefele
Director of Digital Learning

Lauren Butler
Secretary to the Superintendent

Maria Vaz
Registration and Residency

Dawn Perkins
Transportation Coordinator

Board of Education

Lucinda Timpanelli
Board Chair

Tim Gallo

Jackie Norcel

Alison Squicciarro

Marie Petitti

Christopher Bandecchi

Julia McNamee

Lisa Nuland

Administration

Dana Pierce
Principal, Booth Hill

Gary Kunschaff
Principal, Daniels Farm

Gina Prisco
Principal, Frenchtown

Pat Horan
Principal, Jane Ryan

Administration, ctd.

Debra Ponte
Principal, Middlebrook

Bryan Rickert
Principal, Hillcrest

Katie Laird
Assistant Principal, Hillcrest

Peter Sullivan
Principal, Madison

Paul Coppola
Assistant Principal, Madison

Marc Guarino
Principal, Trumbull High School

Dr. Linda Paslov
Director, Agriscience &
Biotechnology Center

Deborah McGrath
Director, REACH

Dr. Matthew Wheeler
Principal, TECEC

Others

Trumbull PTA Council

Public Works Administration

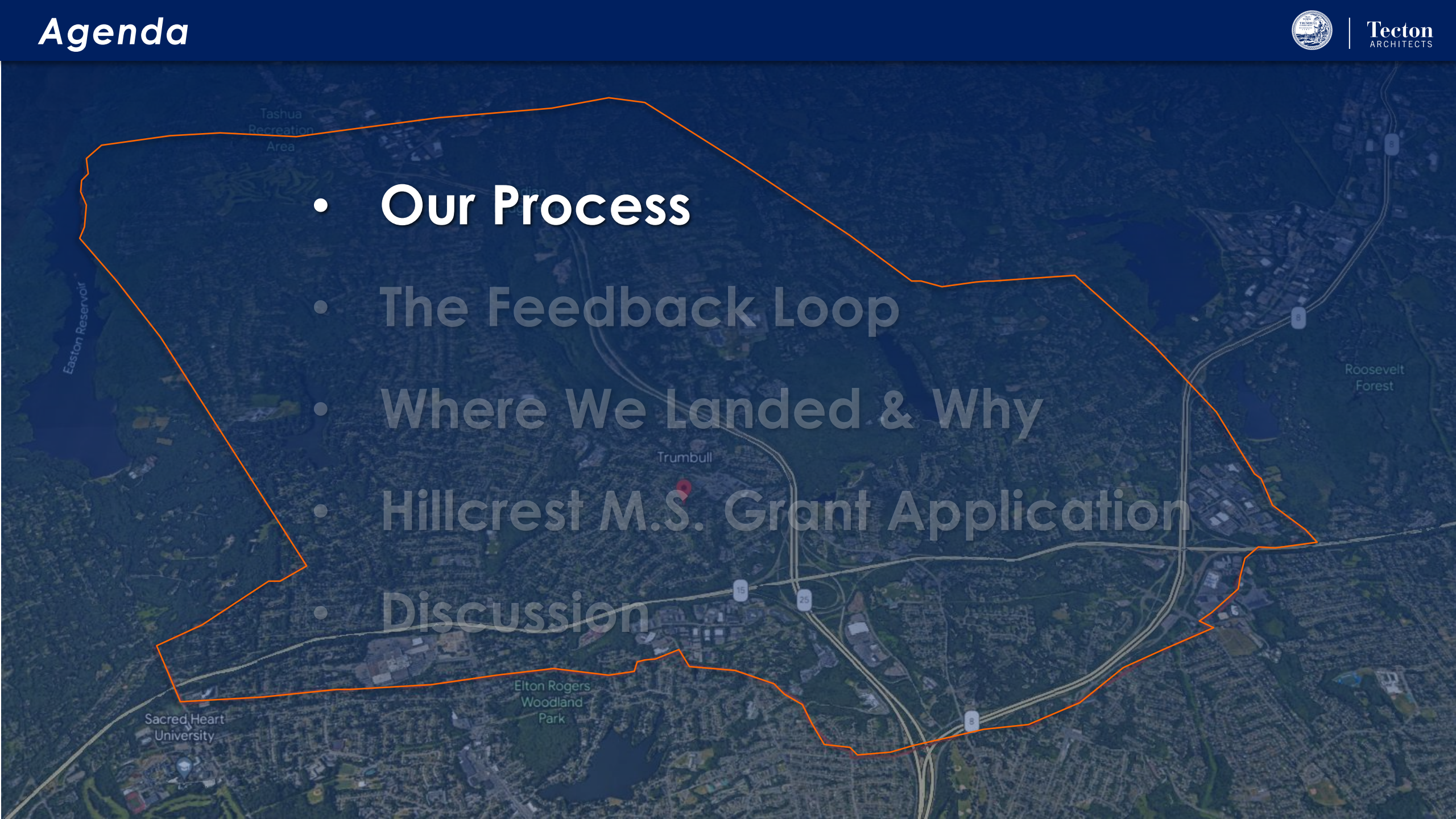
**Community at
Large...Thank you!**

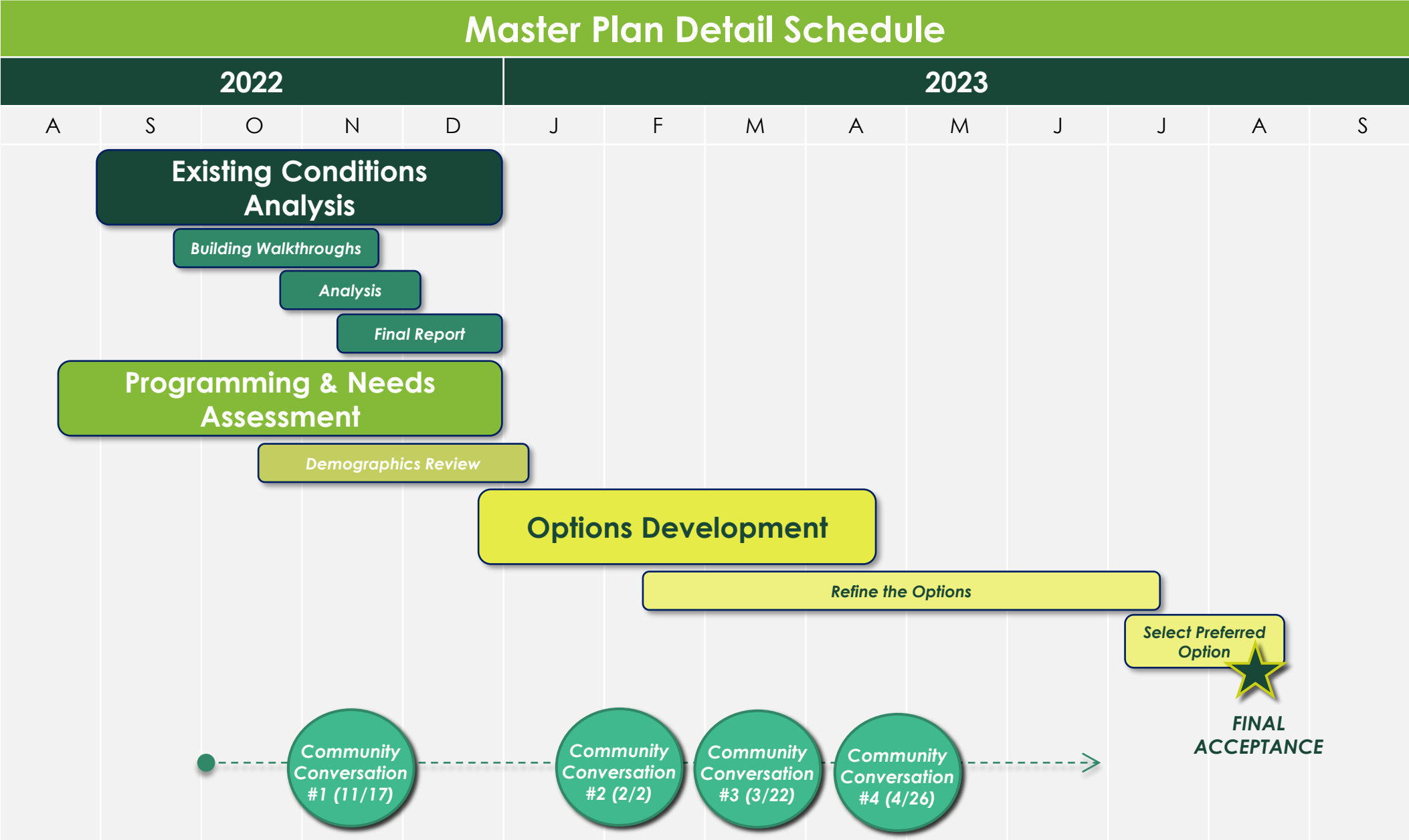
Project Email:

DistrictPlan@trumbullps.net

Project Website:

<https://www.trumbullps.org/boe/district-wide-master-plan>

- 
- **Our Process**
 - The Feedback Loop
 - Where We Landed & Why
 - Hillcrest M.S. Grant Application
 - Discussion



Existing Conditions

- 1 Physical condition** of building exterior, interior, systems and site
- 2 Code and life safety** systems analysis
- 3 Programmatic needs** and concerns based on condition
- 4 Prioritization ranking system** as a tool for long-term planning

Demographics & Utilization

- 1 Highest projected enrollment** per building over the next 10 years
- 2 Allowable SF** per the State of Connecticut
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Options & Final Plan

- 1 Available “swing space”** within the building, (if any)
- 2 Capacity and condition of the site** for a new building or addition
- 3 Best strategic first step**, followed by a long-term plan
- 4 Other opportunities** or variations on the long-term plan

The Scope.

Analyze the existing facilities for **age/condition, program needs, capacity & utilization**.

Conduct a demographic study for enrollment projections, **develop a population forecast**.

Identify a planning strategy for future educational delivery and building use to serve the Town for the next **10-15 years and beyond**.

The Goal.

Prioritize the need across the district based upon **objective analysis (Program, condition, capacity)**.

Develop a plan to alleviate **capacity concerns and build in flexibility** (elementary and middle schools).

Provide a consistent, transparent, and interactive process to engage the community to develop the best plan overall for **Trumbull**.

Existing Conditions

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Site

Exterior

Interior

**Code, Accessibility
& Life Safety**

Building Systems

850+
pages

13
buildings

5
categories

Capital Improvement costs
are in development...

1

COMPREHENSIVE APPROACH



2

Building Walkthroughs & Initial Programming Discussions

- Booth Hill Elementary School ~ 9/13/2022
- Daniels Farm Elementary School ~ 9/13/2022
- TECEC (Trumbull Early Childhood Education Center) ~ 9/13/2022
- Middlebrook Elementary School ~ 9/14/2022
- Jane Ryan Elementary School ~ 9/14/2022
- Hillcrest Middle School ~ 9/16/2022
- Madison Middle School ~ 9/16/2022
- REACH ~ 9/22/2022
- Agriscience High School ~ 9/22/2022
- Long Hill Admin. ~ 9/22/2022
- Trumbull High School ~ 9/22/2022
- Tashua Elementary School ~ 9/22/2022
- Frensham Elementary School ~ 9/22/2022

Existing
Conditions
Review

Site & Building
Envelope

Conditions Analysis

Areas of Study

- 1. Site** (Pavement, traffic circulation, signs, parking, curbs, sidewalks)
- 2. Architectural Exterior** (Building envelope, roofs, windows, doors, masonry, trim, downspouts)
- 3. Architectural Interior** (Flooring, ceiling, lighting, wall finishes, doors, frames)
- 4. Code ~ Accessibility / Life Safety** (accessible entrances, lifts/ramps, floor clearance, sprinklers, fire alarm)
- 5. Building Systems** (plumbing, heating, ventilation & air conditioning by S/P, lighting, electrical systems, technology, fire protection, fire alarms)

Site

Building
Envelope

Accessibility

Building
Systems

(Plumbing, FP, Elec.
Lighting, Alarms)

1

13 buildings being studied

2

13 educational and conditions walkthroughs completed in September 2022
(approximately 1.1 million SF!)

3

850+ page conditions assessment report outlining physical and programmatic building needs, ongoing since November 2022

4

Meetings with BOE, PTA, Superintendent, Facilities & the community **(including a community survey!)**

Physical Condition

Well maintained, but tired

Creative reuse, but not ideal operationally

Programmatic
Needs

Common Findings:

Poor definition of the school/site boundaries

Building systems at or past useful life

Poor comfort/temperature control and IAQ

Additions, but no comprehensive renovations

Accessibility concerns throughout

Building envelopes showing signs of age

Buildings Summary



Area Summary Table

Building Name		GSF	% of total town bldgs	Orig. Const.	Age
PK	Trumbull Early Childhood	26,350	2.4%	2005	18
K-5	Booth Hill Elementary	53,660	4.8%	1955	68
	Daniels Farm Elementary	61,480	5.5%	1962	61
	Frenchtown Elementary	89,960	8.1%	2003	20
	Jane Ryan Elementary	46,430	4.2%	1955	68
	Middlebrook Elementary	65,690	5.9%	1953	70
	Tashua Elementary	59,660	5.4%	1965	58
6-8	Hillcrest Middle	117,000	10.5%	1967	56
	Madison Middle School	154,970	13.9%	1960	63
9-12	Regional Agriscience Center	38,200	3.4%	2001	22
	Trumbull High School	369,350	33.2%	1971	52
6-8/9-12	REACH	8,700	0.8%	1970	53
Admin	Long Hill Administration	21,950	2.0%	1920	103
	Subtotal	1,113,400	Average Age	55	



Areas of Study

1. **Site** (Pavement, traffic circulation, signs, parking, curbs, sidewalks)
2. **Architectural Exterior** (Building envelope, roofs, windows, doors, masonry, trim, downspouts)
3. **Architectural Interior** (flooring, ceiling, lighting, wall finishes, doors, frames)
4. **Code ~ Accessibility / Life Safety** (accessible entrances, lifts/ramps, floor clearance, sprinklers, fire alarm)
5. **Building Systems** (plumbing, heating, ventilation & air conditioning by S/P, lighting, electrical systems, technology, fire protection, fire alarms)

Site



Building Envelope



Accessibility



Building Systems

(Plumbing, FP, Elec.
Lighting, Alarms)

* HVAC by another firm



1. Most buildings have been well maintained, yet **no building has received comprehensive, like new, renovations.**
2. Reuse, modification, and past adaptations affect **educational use and operational efficiency.**
3. In most cases, **poor definition of the school/site boundaries** lead to some concern(s) related to traffic flow, safety and security.
4. For buildings constructed prior to 2000s, majority of building systems and finishes are **at or past their useful life.**
5. **Poor comfort/temperature control. IAQ** (Indoor Air Quality) does not meet current code ~ commonly voiced concern throughout (S/P conducting report).
6. **Accessibility concerns throughout** building/site, few and uneven attempts at compliance.

Existing Conditions

Analysis, methodology, and conclusions

Programmatic Needs

Physical Condition

Grouped by Grade (K-5, 6-8, 9-12)

Collected & Analyzed Information

Ranked based upon findings

Prioritized based upon rankings

Think of the rankings like a movie,
the more stars you have the better!



Elementary Schools – Programmatic Needs



1 = Poor, 5 = Good

									TOTAL	Average	Rank (Priority)
Building Name		Demog. & Capacity	21st Century	Special Ed.	Program Space	Staff/Support Space	Site (Function)	ADA Compliant			
PK	Trumbull Early Childhood (TECEC)	2	4	3	2	4	3	5	23	3.29	4
K-5	Booth Hill Elementary	1	2	1	2	2	2	1	11	1.57	1
	Daniels Farm Elementary	3	3	2	3	2	2	2	17	2.43	2
	Frenchtown Elementary	4	4	2	3	3	2	5	23	3.29	4
	Jane Ryan Elementary	1	2	1	2	2	4	2	14	2.00	2
	Middlebrook Elementary	3	2	2	2	3	3	2	17	2.43	2
	Tashua Elementary	4	3	2	2	3	2	3	19	2.71	3

Elementary Schools – Physical Condition

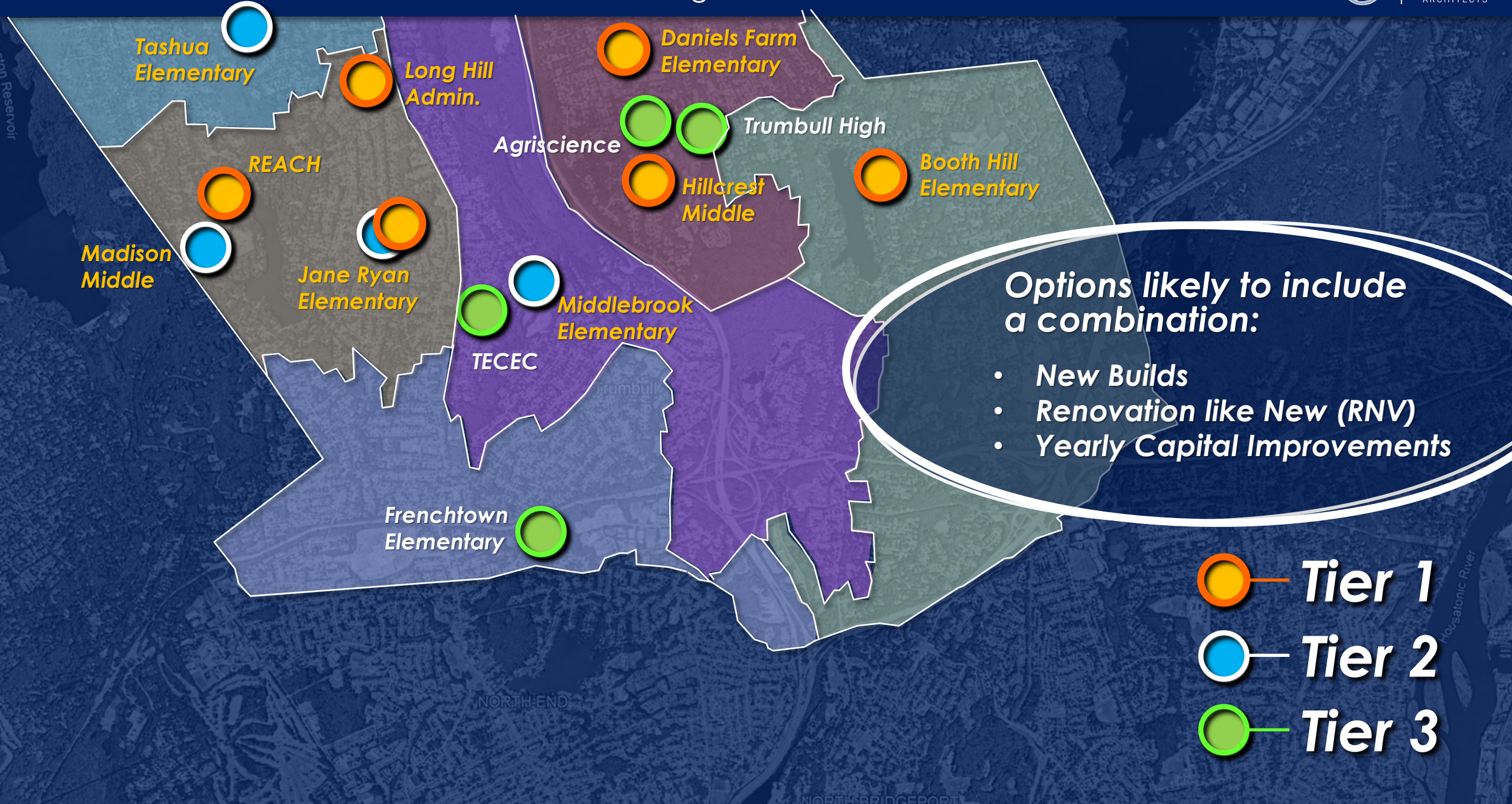


1 = Poor, 5 = Good

Building Name		Building Shell	Site (Phys. Cond.)	Interior	HVAC	F.P. & Alarm	Plumbing	Electrical	Security	TOTAL	Rank (Priority)
PK	Trumbull Early Childhood (TECEC)	4	3	4	4	4	3	3	3	28	4
K-5	Booth Hill Elementary	3	3	3	2	2	3	2	3	21	2
	Daniels Farm Elementary	2	2	3	3	3	3	2	3	21	2
	Frenchtown Elementary	3	2	3	4	3	4	4	4	27	4
	Jane Ryan Elementary	3	3	3	3	3	3	3	4	25	4
	Middlebrook Elementary	3	3	3	2	2	3	2	4	22	3
	Tashua Elementary	3	2	3	3	3	3	3	4	24	3

		Programmatic Needs		Physical Condition		AVERAGE (Priority)
Building Name		TOTAL	Rank (Priority)	TOTAL	Rank (Priority)	
PK	Trumbull Early Childhood (TECEC)	23	4	28	4	4
K-5	Booth Hill Elementary	11	1	21	2	1.5
	Daniels Farm Elementary	17	2	21	2	2
	Frenchtown Elementary	23	4	27	4	4
	Jane Ryan Elementary	14	2	25	4	3
	Middlebrook Elementary	17	2	22	3	2.5
	Tashua Elementary	19	3	24	3	3
6-8	Hillcrest Middle School	13	1	21	2	1.5
	Madison Middle School	22	4	20	2	3
9-12	Agriscience & Biotech Center	25	5	28	4	4.5
	Trumbull High School	18	3	28	4	3.5
6-12	REACH	15	2	18	1	1.5
Adm.	Long Hill Administration	10	2	16	1	1.5

PLANNING OPTIONS ~ Initial Thoughts



Options likely to include a combination:

- New Builds
- Renovation like New (RNV)
- Yearly Capital Improvements

-  Tier 1
-  Tier 2
-  Tier 3

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Projection vs. Forecast

Extrapolation of
historical trends

Expected as a result of
studied components of change
(births, deaths, and migration)

We are utilizing a
cohort-component
forecast.

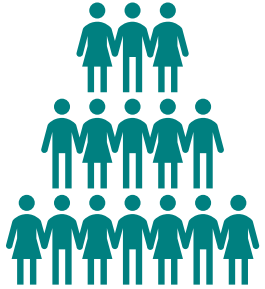
The Five Data Sets

(required to generate population
and enrollment forecasts...)

- 1 A base-year **population** (2010 Census)
- 2 Age-specific **fertility rates**, district-wide for the next 10 years by attendance area
- 3 Age-specific **survival (mortality) rates** district-wide for attendance areas
- 4 Age-specific **migration rates** district-wide for attendance areas
- 5 Historical **enrollment figures** by grade



Elementary enrollment will slowly increase over the next 10 years.



This is (in part) due to the increase in the number of empty nest households turning over and in migration of young households.



Even with new housing unit construction, the price of existing home sales is the dominant factor affecting population and enrollment.

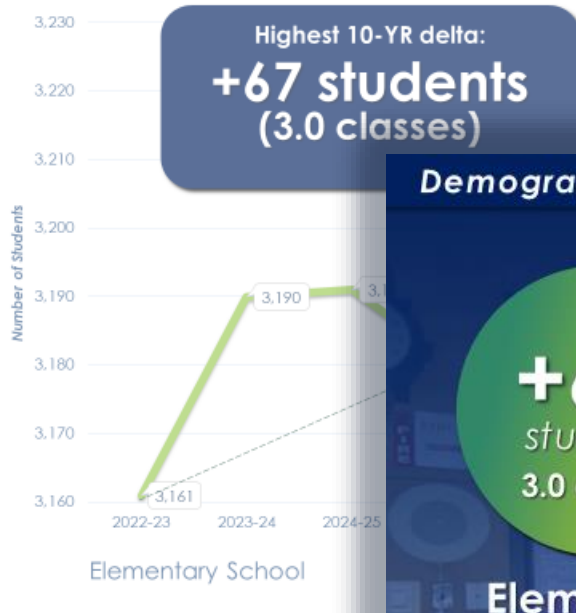
Refer to the Executive Summary of the Demographics Study for other key findings.

Elementary School – Boundary Map



Review population areas

Demographics – Elementary Total



Analyzed and Projected

Proposed demographics

Demographics – Summary



Elementary



Middle



High School

What does
this mean?

Consider capacity, flexibility, effect on special education and specials (art, music, gym, media, STEAM)

Useable Area Analysis

Useable Area Analysis ~ Where can education spaces be located?

Middlebrook ~ Existing Floor Plan



Middlebrook ~ Lower Level



Middlebrook ~ Upper Level

Expected useable area available
(Assignable Area ~ Light Green/Total Area ~ Dark Green)

Useable Area Analysis ~ Where can education spaces be located?

Booth Hill School ~ Existing Floor Plan



Expected useable area available
(Assignable Area ~ Light Green/Total Area ~ Dark Green)

Plan Efficiency Review

Benchmarking ~ Analysis of Core Spaces

Benchmarking Core Spaces

Booth Hill School ~ Existing Floor Plan

Media ~ 1,388 sf
OSCG&R ~SF based on 10% of student enrollment x 35 SF/Student
(514x10% x 35 ~ 1,799 sf)

**30%
Smaller**
(OSCG&R Standard)

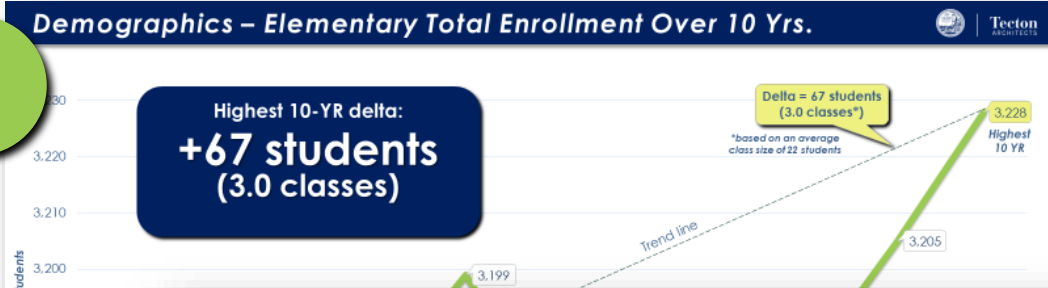
Cafeteria ~ 2,413 sf
OSCG&R ~SF based on 3 waves at 17.5 sf per student
(514/3 x 17.5 ~ 2,998 sf)

**25%
Smaller**
(OSCG&R Standard)

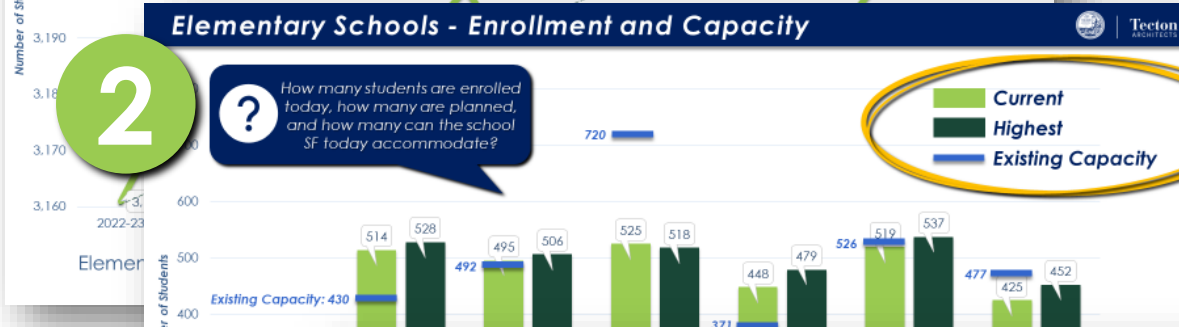
Gym ~ 4,285 sf
OSCG&R ~Typical Gym 6,000 SF

**40%
Smaller**
(OSCG&R Standard)

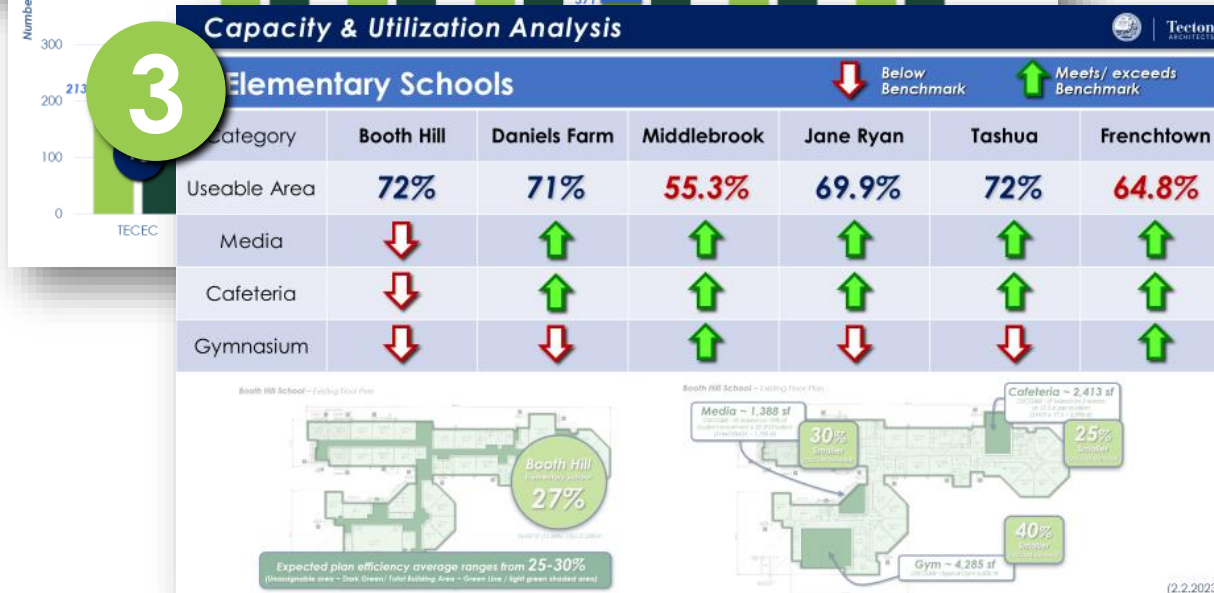
1



2



3



1

Demographics forecast that **elementary enrollment will slowly increase** over the next 10 years (*middle and high school will also see modest growth*).

2

Useable area analysis reveals that **most schools are operating at or above their capacity** (*every SF is being used for educational purposes, and there is no room to grow*).

3

Core spaces benchmarking **reveals greater need in certain schools** for major program spaces (*Gymnasium, Cafeteria & Media Center*).

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OPTION 1 *Middle School “Swing”*

Build a new Hillcrest and use the existing building as swing space for Tier 1 elementary renewal

OPTION 2 *“One at a time” please*

Methodically replace Tier 1 buildings one at a time as either New, or Renovate Like New

OPTION 3 *“If it ain’t broke, don’t fix”*

Resolve issues as they arise as part of a capital improvement program

OPTION 4 *Intermediate Introduction*

Build two new intermediate schools (GR 4-5) on each side of the district to create swing space and flexibility at elementary level

OPTION 5 *Accommodating an Academy*

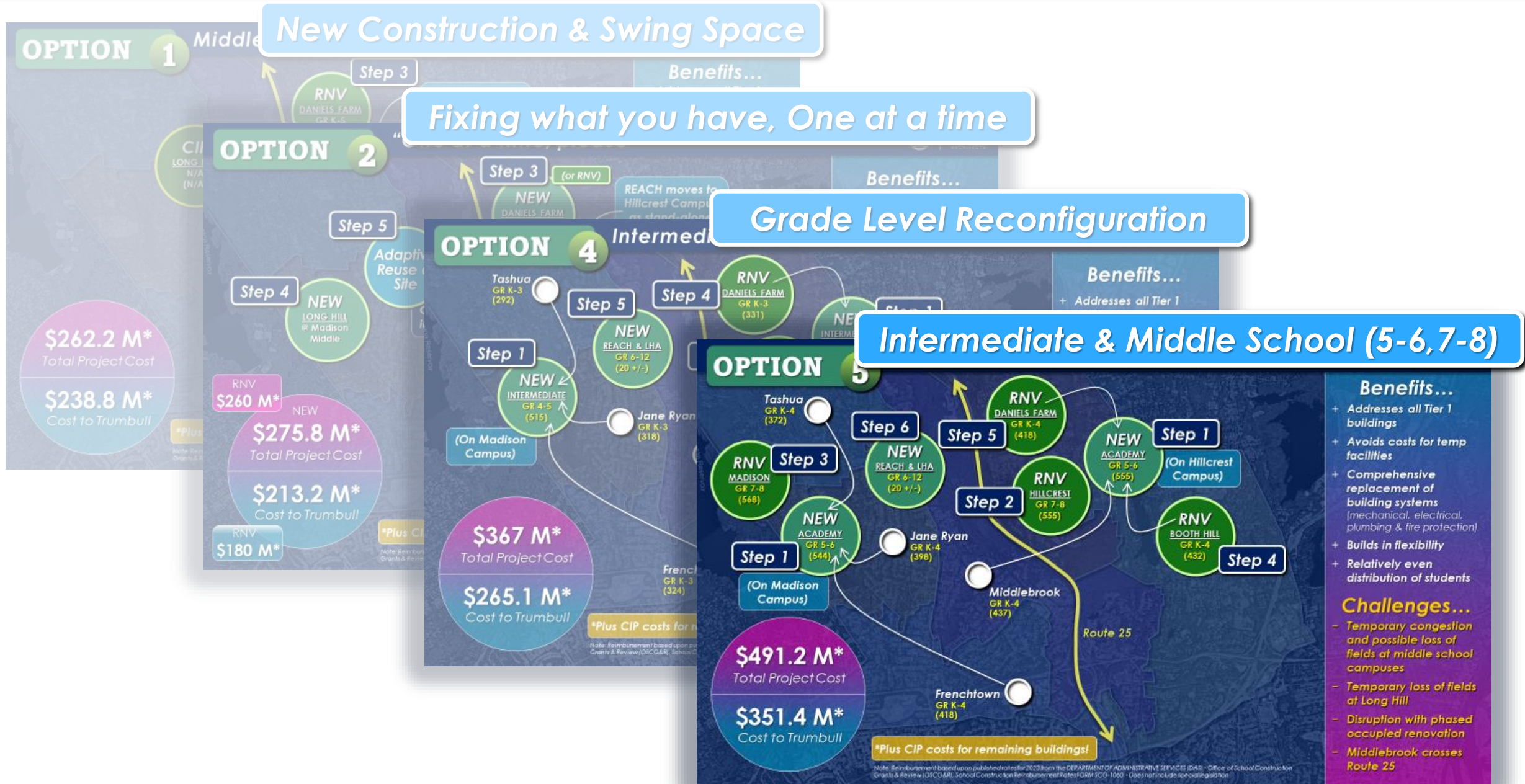
Build two new academy schools (GR 5-6) on each side of the district to create space at both elementary and middle school levels

OPTION 6 *Integration Starting at 5th*

Reimagine Madison and Hillcrest as district-wide GR 5-6 and GR 7-8 schools (respectively) to create some space at elementary and bring students together earlier

OPTION 7 *District-wide Middle School*

Reimagine Madison as district-wide GR 6-8 to bring students together earlier and free up Hillcrest campus for use as a community amenity



ANALYSIS OF OPTIONS ~ New Builds



Site Capacity & Analysis ~ Phased Imp

Analysis of site capacity

Cost & Budget Review

Order of Magnitude Project Costs ~ New

New K-5 ~ Booth Hill		
Grade Levels	Proj. Enr.	\$/sf.
K	84	116
Grade 1	81	116
Grade 2	81	116
Grade 3	89	116
Grade 4	97	116
Grade 5	94	148
Total	528	
Max. Area Allowed	66,838	
New Building	66,838	
Existing Building	53,660	

Project Cost Summary		
Scope of work	Amt.	Unit
Site Improvements	6.70	Acres
Parking Lot & Vehicular Circ. (2.25/1000)	120	spaces
Whole Building Haz. Mat. Abatement	53,660	sf
Whole Building Demolition	53,660	sf
New Construction	66,838	sf
Geothermal Bore Field	66,838	sf
Carbon Neutral & Netzero Premium	66,838	sf
Subtotal		
Soft Costs	19.5%	
Cost Escalation (Mid point of years 2025)	12.5%	4%/year
Phasing & Logistics Costs for Occupied Site	1.25%	
Portable Lease Costs	0/mth/CR	
Total Project Costs		
State Reimbursement		
Ineligibles		
Estimated Total Cost		

Booth Hill Elementary School

New

Total Population: 528P

Phasing & logistics review

Site Capacity & Analysis ~ Phased

Total Acreage ~ 16.96, nearly half (8.41)

Order of Magnitude

Comprehensive Approach to Costs

New K-5 ~ Daniels Farm		
Grade Levels	Proj. Enr.	\$/sf.
K	76	116
Grade 1	84	116
Grade 2	85	116
Grade 3	84	116
Grade 4	87	116
Grade 5	88	148
Total	506	
Max. Area Allowed	64,053	
New Building	64,053	
Existing Building	61,480	

Project Cost Summary		
Scope of work	Amt.	Unit
Site Improvements	7.51	Acres
Parking Lot & Vehicular Circ. (2.25/1000)	120	spaces
Whole Building Haz. Mat. Abatement	61,480	sf
Whole Building Demolition	61,480	sf
New Construction	64,053	sf
Geothermal Bore Field	64,053	sf
Carbon Neutral & Netzero Premium	64,053	sf
Subtotal		
Soft Costs	19.5%	
Cost Escalation (Mid point of years 2025)	12.5%	4%/year
Phasing & Logistics Costs for Occupied Site	1.25%	
Portable Lease Costs	0/mth/CR	
Total Project Costs		
State Reimbursement		
Ineligibles**		
Estimated Total Cost to Trumbull		

Daniels Farm Elementary

New

Total Population: 506P
Allowable Area: 64,053 SF

Site Improvements: 120 parking spaces, play fields, outdoor educational space, age-appropriate play, bus/parent drop off

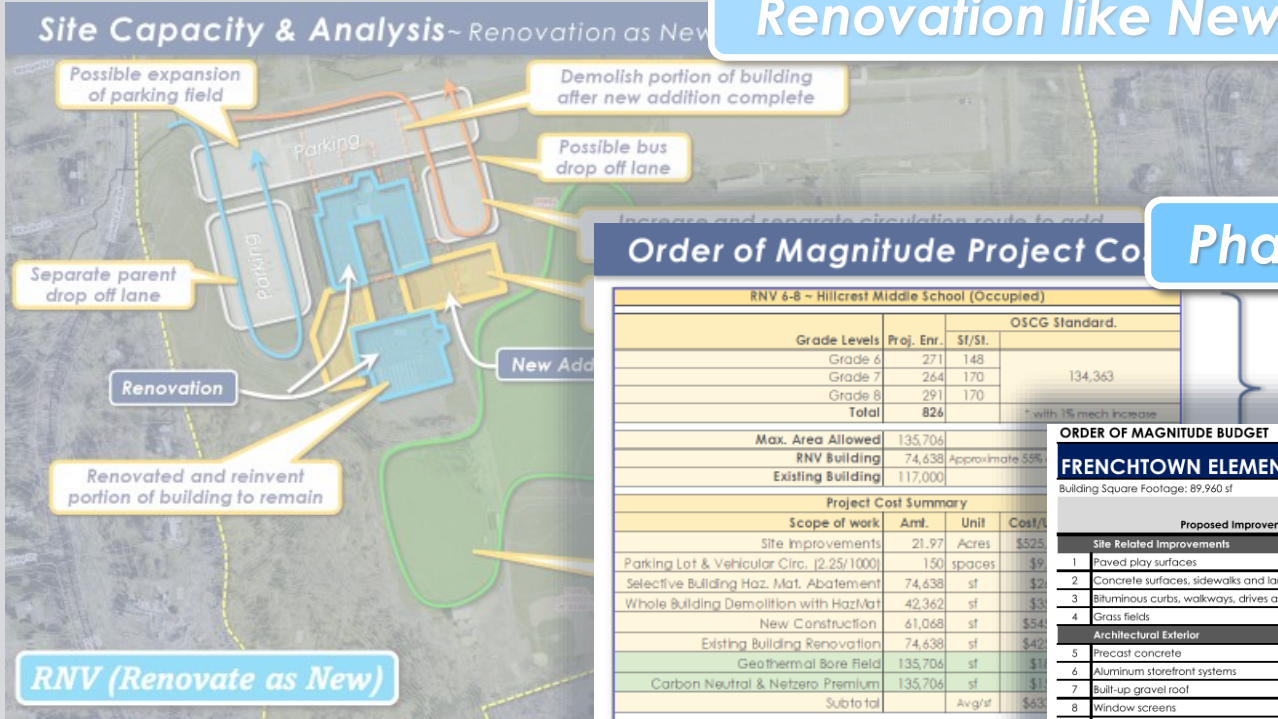
Building: Whole building demolition and abatement, new construction and Netzero/Carbon neutral premiums

Total Project Costs: \$59,754,269
Cost to Trumbull: \$45,986,885

ANALYSIS OF OPTIONS ~ Renovations & fixing what you have



Renovation like New



Order of Magnitude Project Cost

RVN 6-8 ~ Hillcrest Middle School (Occupied)			
Grade Levels	Proj. Enr.	\$1/\$1.	OSCG Standard.
Grade 6	271	148	
Grade 7	264	170	
Grade 8	291	170	
Total	826		134,363
* with 1% mech increase			
Max. Area Allowed	135,706		
RVN Building	74,638	Approximate 55%	
Existing Building	117,000		
Project Cost Summary			
Scope of work	Am't.	Unit	Cost/ft
Site Improvements	21.97	Acres	\$525
Parking Lot & Vehicular Circ. (2.25/1000)	150	spaces	\$9
Selective Building Haz. Mat. Abatement	74,638	sf	\$2
Whole Building Demolition with HazMat	42,362	sf	\$3
New Construction	61,068	sf	\$54
Existing Building Renovation	74,638	sf	\$42
Geothermal Bore Field	135,706	sf	\$1
Carbon Neutral & Netzero Premium	135,706	sf	\$1
Subtotal		Avg/ft	\$63
Phased Moving Costs	5	phase	\$125
Premium for Phased Work	1.5%		
Soft Costs	19.5%		
Cost Escalation (Mid point of cases Mar. 2020)	12.5%	4%/year	
Portable Lease Costs	0	mth/CR	\$1
Total Project Costs	\$86		
State Reimbursement	34		
Ineligibles**	2		
RVN 6-8 ~ Hillcrest Middle School (Occupied)			

Phasing Logistics & Costing

Hillcrest Middle School

Total Population: 826P

RVN

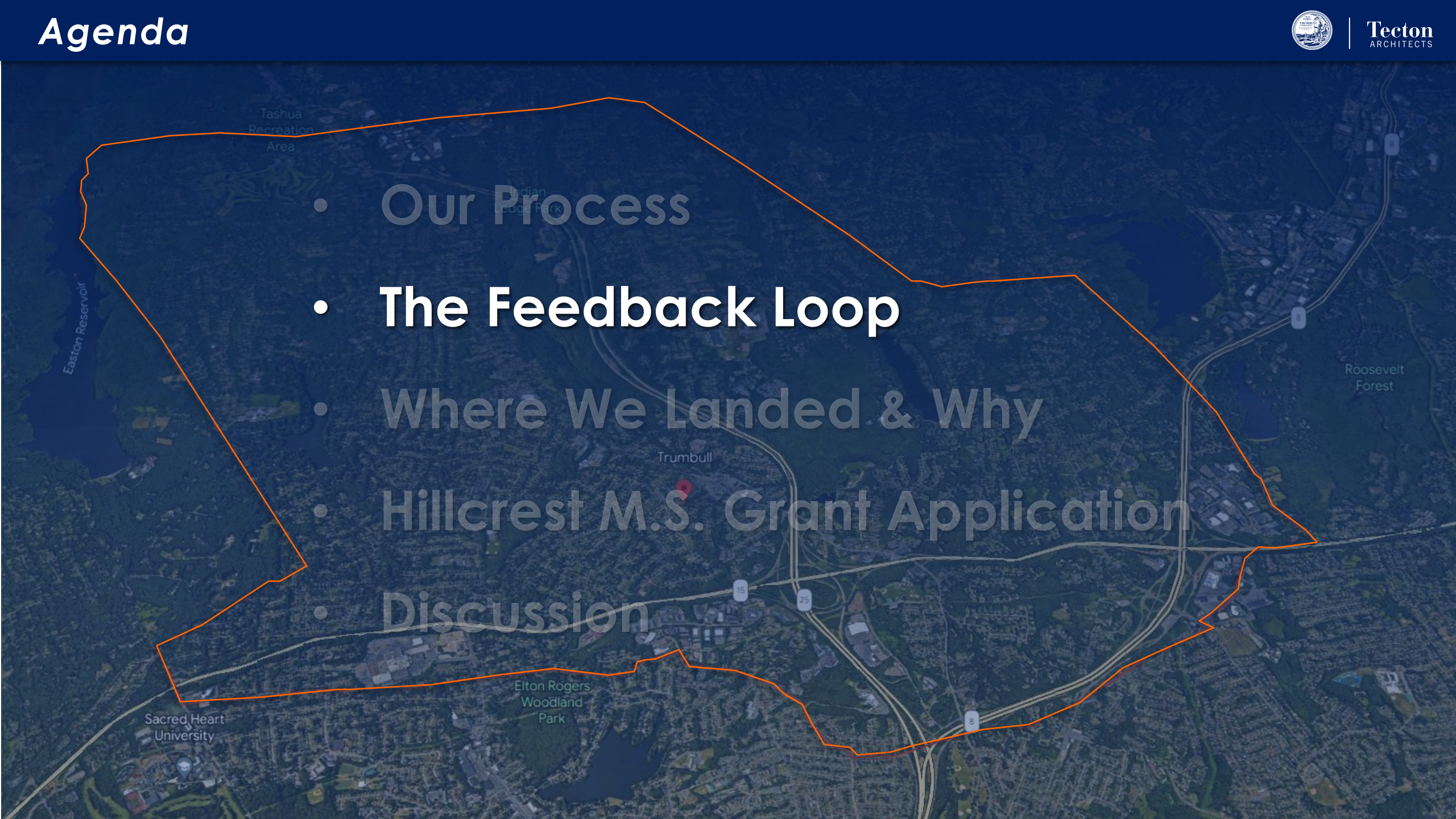
Fixing what you have over time

ORDER OF MAGNITUDE BUDGET

FRENCHTOWN ELEMENTARY SCHOOL (FE)

Building Square Footage: 89,960 sf

Proposed Improvement	Immediate	Recommended Timeframe				Comments
		1-3 Years	3-5 Years	5-10 Years	10 + Years	
Site Related Improvements						
1 Paved play surfaces			\$106,470.00			Full replacement of paved play surfaces.
2 Concrete surfaces, sidewalks and landings		\$209,800.00				Full replacement of Main Entry and west courtyard, full replacement at exterior door.
3 Bituminous curbs, walkways, drives and parking		\$1,135,000.00				Full replacement of bituminous surfaces.
4 Grass fields			\$2,500.00			Reseed grass fields.
Architectural Exterior						
5 Precast concrete			\$15,400.00			Clean stained coping and window sills.
6 Aluminum storefront systems		\$20,000.00				Repair/replace leaking aluminum storefront systems, particularly at vestibules.
7 Built-up gravel roof		\$30,000.00				Investigate built-up roof leaks at skylights to determine extent of repair.
8 Window screens		\$77,000.00				Remove and reinstall windows.
9 Vinyl siding		\$20,000.00				Clean vinyl siding throughout.
Architectural Interior						
10 Wood flooring				\$63,000.00		Replace wood flooring at raised platform.
11 Rubber sheet flooring				\$33,750.00		Replace rubber sheet flooring at stair towers, particularly at door thresholds.
12 Vinyl composition tile			\$145,800.00			Full replacement in corridors.
13 Carpet				\$147,000.00		Full replacement of carpet.
14 Acoustical tile ceilings				\$486.00		Replace select damaged and stained tiles, particularly in corridors.
Division 21 - Fire Protection						
15 Fire Alarm System					\$270,000.00	Upgrade fire alarm system.
16 Fire Protection - Sprinklers					\$630,000.00	Prepare for replacement of sprinklers.
17 Fire Protection - Tanks & Pumps					\$50,000.00	Prepare for replacement of fire pump.
Division 22 - Plumbing						
18 Plumbing Equipment				\$7,500.00		Prepare for replacement water heater and mixing valve.
19 Plumbing Fixtures					\$360,000.00	Prepare for replacement of fixtures original to building.
20 Plumbing Piping					\$1,400,000.00	Prepare for replacement of plumbing piping and valves.
Division 23 - Mechanical						
21 HVAC	\$3,315,000.00					Refer to Appendix for HVAC information.
Division 26 - Electrical						
22 General Lighting					\$1,080,000.00	Upgrade light fixtures.
23 Electrical Distribution					\$900,000.00	Prepare for electrical distribution upgrade.
24 Rewiring					\$900,000.00	Prepare for rewiring of distribution system.
25 Generator					\$250,000.00	250kw Generator is in Good condition.
Technology Improvements						
26 Access controls upgrade					\$80,000.00	Replace access controls throughout.
TOTAL	\$3,315,000.00	\$1,491,800.00	\$270,170.00	\$251,736.00	\$5,920,000.00	

- 
- Our Process
 - **The Feedback Loop**
 - Where We Landed & Why
 - Hillcrest M.S. Grant Application
 - Discussion

Community Conversation #1



Topics:

Conditions, Utilization
and Thinking Big!

 Booth Hill
School

Community Conversation #2



Topics:

Opportunities and
Options

 Frenchtown
School

Community Conversation #3



Topics:

Refined and
Preferred Option


 Madison
Middle School

Community Conversation #4



Topics:

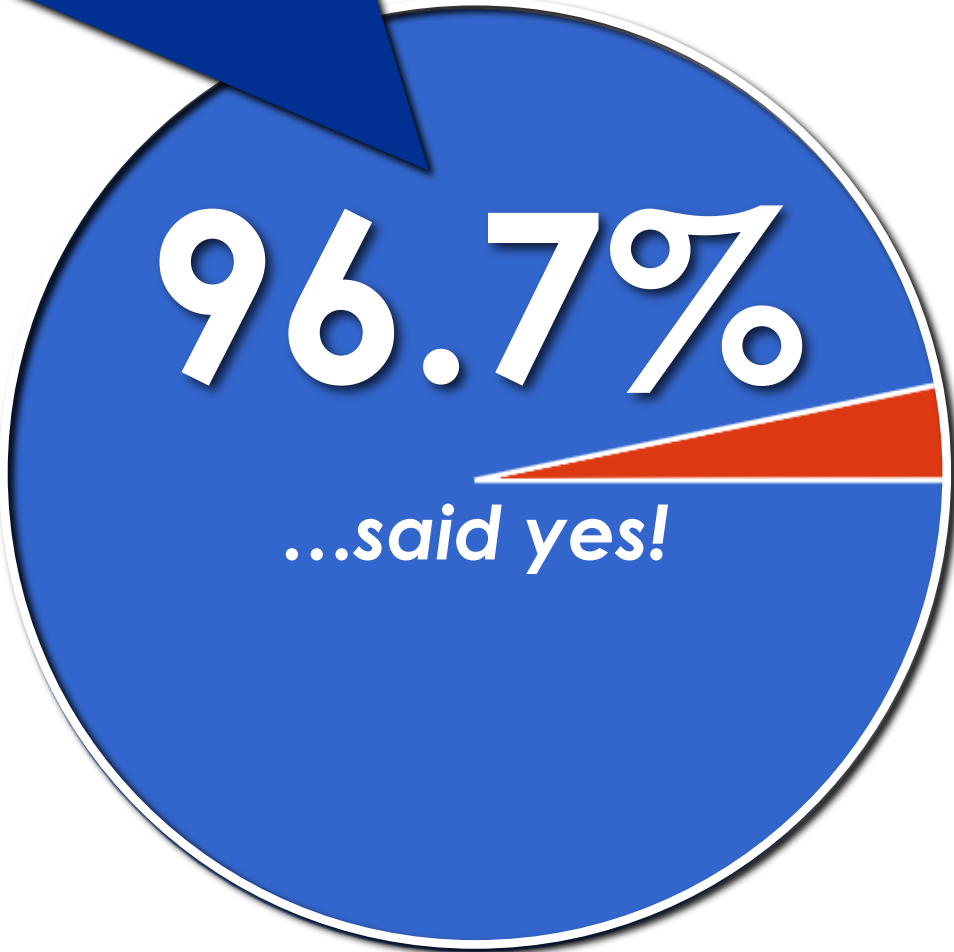
Finalizing the Plan
and Next Steps

 Trumbull
High School

Your voice matters! We hope you can join us.

Do you believe there is a need to improve the physical condition of Trumbull’s public schools?

- Yes
- No



390+
Responses!



Where We've Been – Community Conversation #1 (11/17/22)



- Internet access at THS is so bad
 - Pool on campus. Although, I know there are bigger priorities. But if we can get a pool, it should be at the high school. Kids should have the priority. I don't know why anyone other than the students/kids have any say in this. They are not the priority!
- from someone with large kid existing school system.*

Outdoor Program use Shade / electrical

Community Access

What are your priorities?

Trumbull Board of Education
District-Wide Master Plan



21st Century Environment



Sustainability & Efficiency



Safety & Security



Vehicular Circulation & Parking



Outdoor Learning & Play



Alignment & Equity District-Wide



Fiscally Responsible



Community Use After Hours



Others? Write them here:

Pool - ON CAMPU!
planatorium - ramparts
sunlight
platform seating

Maker Space

Air Conditioning!!

Booth Hill Teacher

(Written by a teacher 😊)
We are very focused on student achievement. Our air quality in the buildings is very poor. There are unbearable working and learning conditions. It is over 100 degrees in my classroom very often during the summer.

months (May, June, Sept., Oct.). I have parents @ students complain often. Several students asleep each year are sweating un-engaged. Specials rooms terrible for learning.

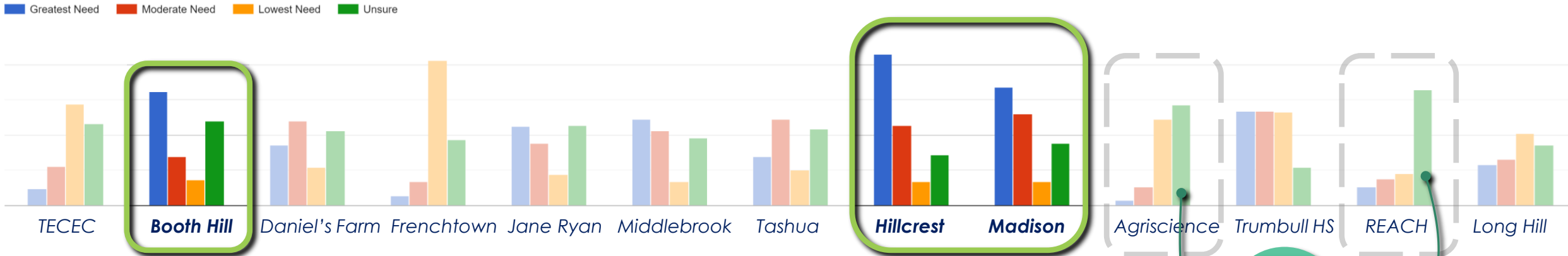
I have students who have bad asthma in these conditions. Please, this needs to change!

Ventilation
Particularly air conditioning
Specials rooms



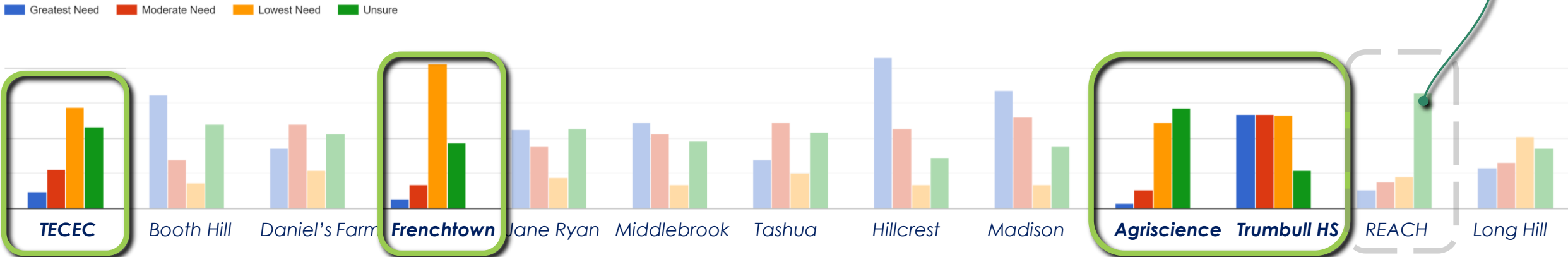
Comments from the BOE Workshop on 9/20/2022

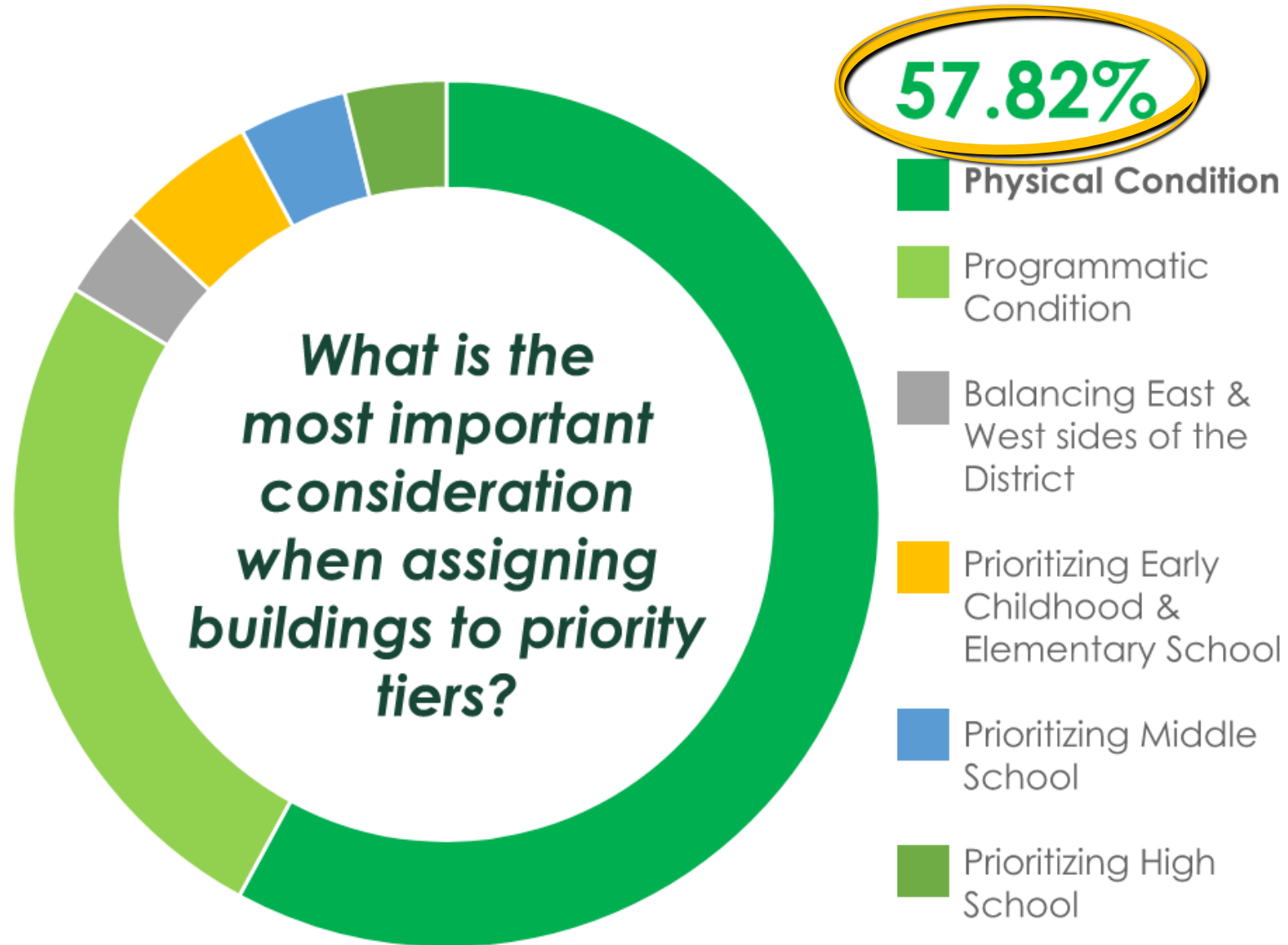
Your feedback...greatest need *(Booth Hill, Hillcrest & Madison)*

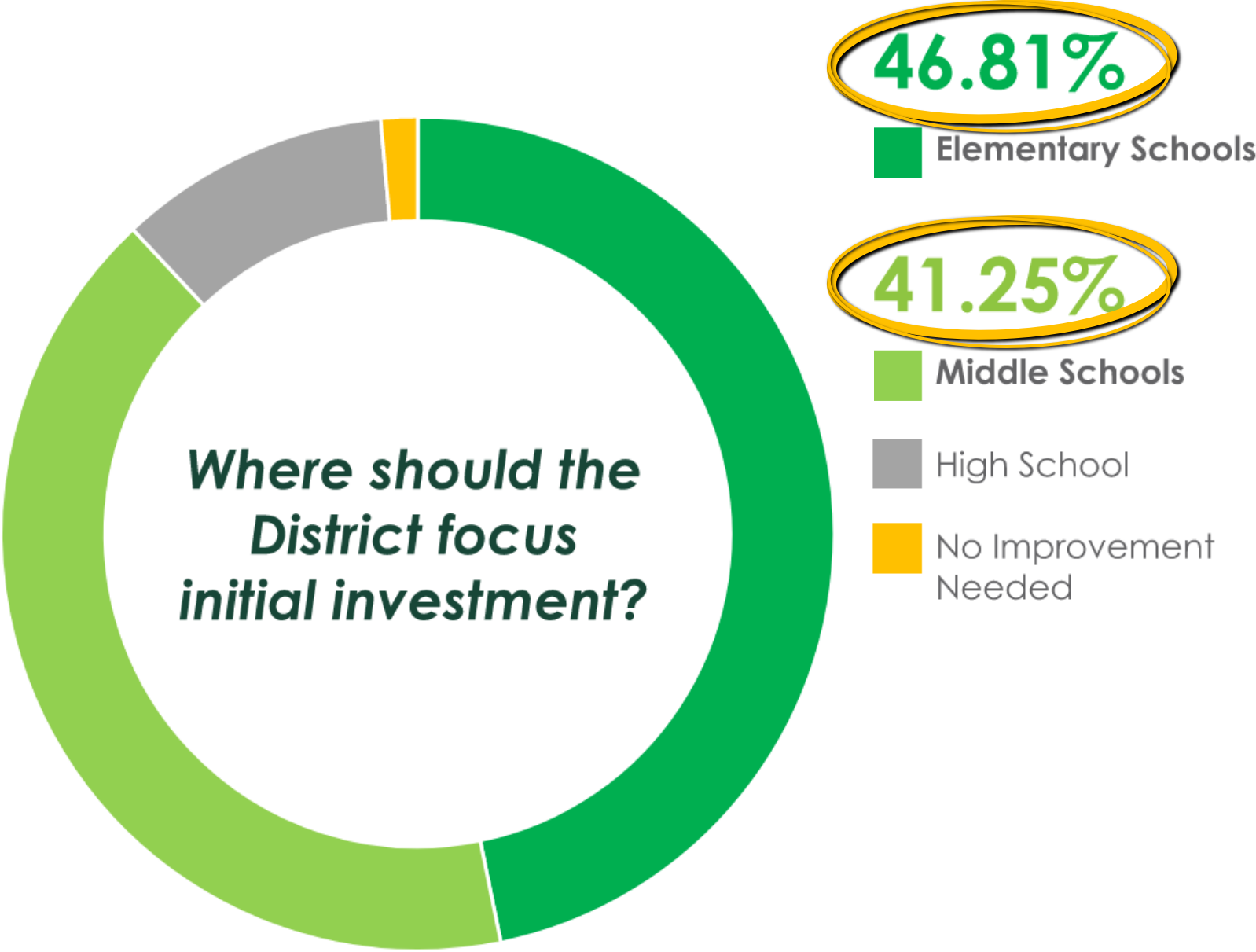


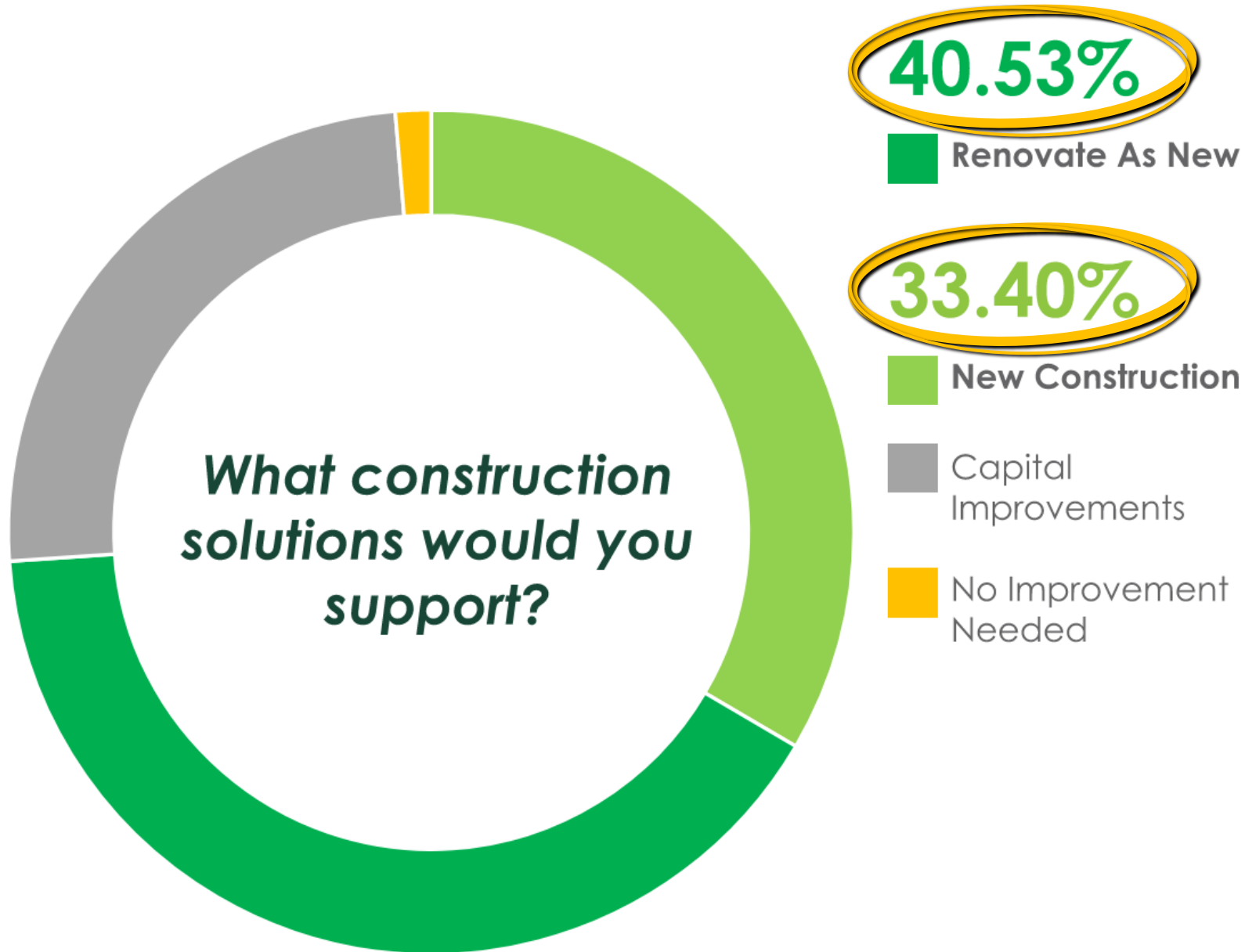
Unsure?

Your feedback...lowest need *(TECEC, Frenchtown, Agriscience, Trumbull HS)*







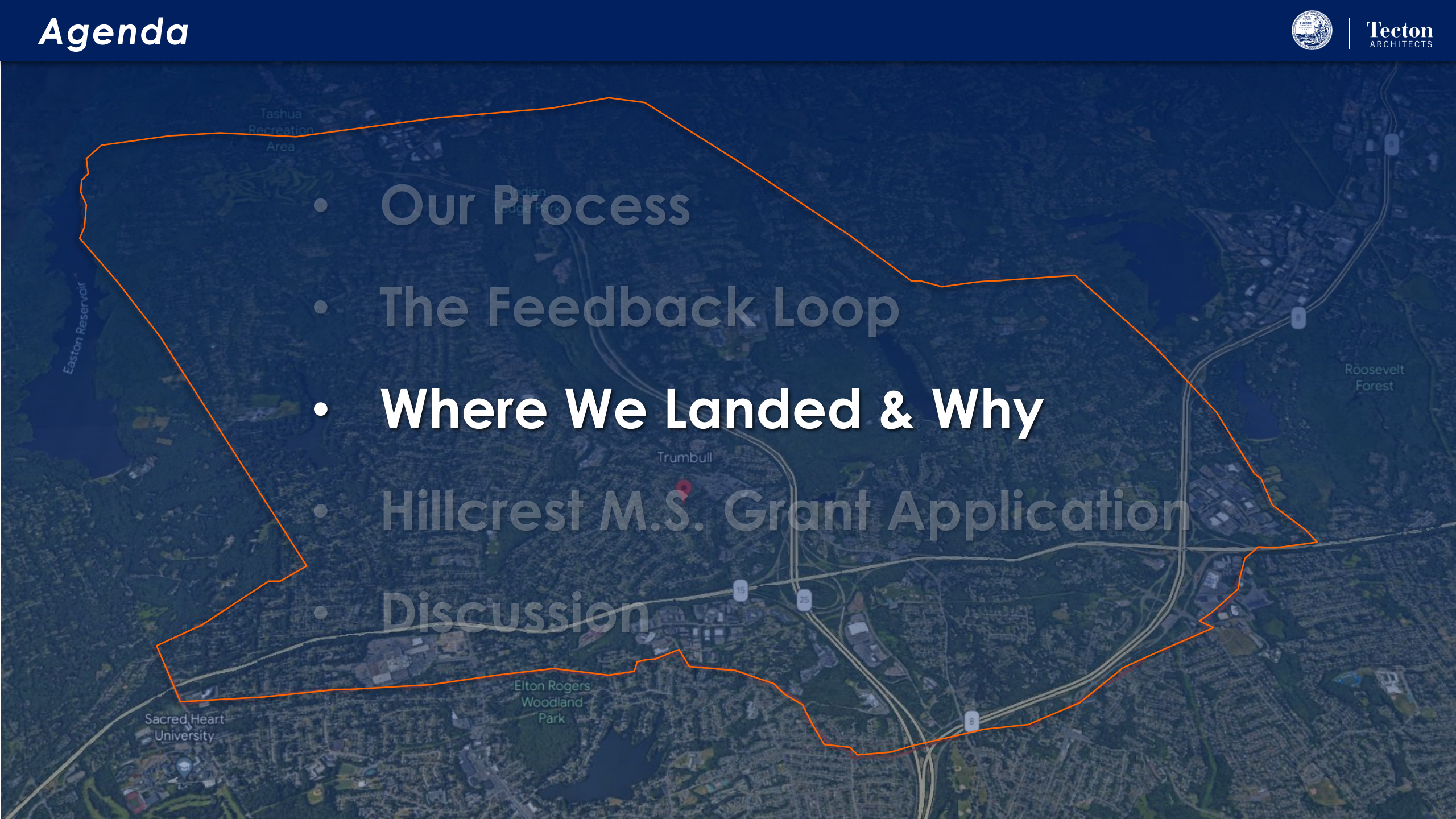


Considerations: (based on final data. 817 survey responses. Survey closed on 7/10/2023.)

- **Most agree with current Tiers rankings**, except for Long Hill which is viewed as having a lower need
- **Hillcrest, Madison and Trumbull High School** had more than 20% say that while they agree with the Tier ranking, there is greater need at these locations
- **Physical condition is the most important consideration** when assigning buildings to priority tiers (58%)
- **Keeping the current grade configuration** received the most support (44%)
- **Keeping the current number of transitions** received the most support (46%)

Other Factors:

- Based on capacity analysis, Jane Ryan will see the greatest increase in enrollment (+31) followed by Middlebrook (+18), Booth Hill (+14), and Daniels Farm (+11)
- Both Hill and Jane Ryan are least capable of accommodating this growth (based on capacity analysis) but Middlebrook and Daniels Farm are also at capacity
- **Based on a benchmark with the allowable area by the state, Hillcrest should grow by 16%, Booth Hill by 25% and Jane Ryan by 31% to meet the needs of forecasted enrollment**

- 
- Our Process
 - The Feedback Loop
 - **Where We Landed & Why**
 - Hillcrest M.S. Grant Application
 - Discussion

- 1** *Addresses priority buildings in first step & directly responds to community input*
- 2** *Provides New Hillcrest Middle school, allows opportunity to improve campus, & provides possible swing space.*
- 3** *Forward thinking approach to Reach (Regionalize, optimize with H.M.S., creates possible revenue, reuse of former building as central storage)*
- 4** *Relocates portions of Central Administration to M.M.S. (optimizes use of existing space & frees up space at Long Hill bldg.)*

Overall Sequence of the Work									
	BUILDINGS (in sequential order of the work)				METHODOLOGY		TIMELINE (address with CIP until Start Year)		
	Highest Enrollment	Tier	Grade Configuration	School Name	Construction Solution	Location	Used as Swing Space?	Year of Construction Start	Year of Construction End
STEP 1	826	1	6-8	Hillcrest Middle School	NEW	Current site	YES <i>(Booth Hill)</i>	2025	2027
	~30-40	1	6-8, 9-12	REACH <i>(Build for Regional)</i>	NEW	Hillcrest site	NO		
STEP 2	528	1	K-5	Booth Hill Elementary School	NEW/RNV	Current site	NO	2027	2029
STEP 3	479	2	K-5	Jane Ryan Elementary School	NEW/RNV	Current site	NO	2029	2032
STEP 4	506	1	K-5	Daniels Farm Elementary School	NEW/RNV	Current site	NO	2032	2034
STEP 5	834	2	6-8	Madison Middle School	NEW/RNV	Current site	If New <i>(Middlebrook)</i>	2034	2036
	~24	1	-	Portion of Long Hill Admin. <i>(Transportation, Technology, etc....)</i>	NEW/RNV	Madison site	NO		
STEP 6	537	2	K-5	Middlebrook Elementary School	RNV	Current site	NO	2036	2039
STEP 7	452	2	K-5	Tashua Elementary School	RNV	Current site	NO	2039	2042
STEP 8	2,268	3	9-12	Trumbull High School	RNV	Current site	NO	2042	2045
STEP 9	518	3	K-5	Frenchtown Elementary School	RNV	Current site	NO	2045	2048
STEP 10	243	3	Pre-K	TECEC	RNV	Current site	NO	2048	2050/51
	(part of H.S. #)	3	9-12	Agriscience	RNV	Current site	NO		
	~24	1	-	Portion of Long Hill Admin. <i>(Superintendent & Staff, Dir. SPED...)</i>	RNV	Current site	NO		

Phase 1 ~ Sequence of the Work

Assumes the design process has overlapped with prior project construction



	BUILDINGS (in sequential order of the work)				METHODOLOGY		TIMELINE (address with CIP until Start Year)		
	Highest Enrollment	Tier	Grade Configuration	School Name	Construction Solution	Location	Used as Swing Space?	Year of Construction Start	Year of Construction End
STEP 1	826	1	6-8	Hillcrest Middle School	NEW	Current site	YES <small>(Booth Hill)</small>	2025	2027
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	(part of H.S. #)	3	9-12	Agriscience	RNV	Current site	NO		
	~24	1	-	Portion of Long Hill Admin. <small>(Superintendent & Staff, Dir. SPED...)</small>	RNV	Current site	★ ELITE program will likely continue to lease space near other businesses in the center of Town.		

Step 1: **\$148.4 M**
(\$106.7 M)



Step 2: **\$64.3 M**
(or 3) (\$49.5 M) Or... **New**

\$60.3 M
(\$41.1 M) **RNV**



Step 3: **\$62.0 M**
(or 2) (\$47.7 M) Or... **New**

\$58.5 M
(\$39.9 M) **RNV**

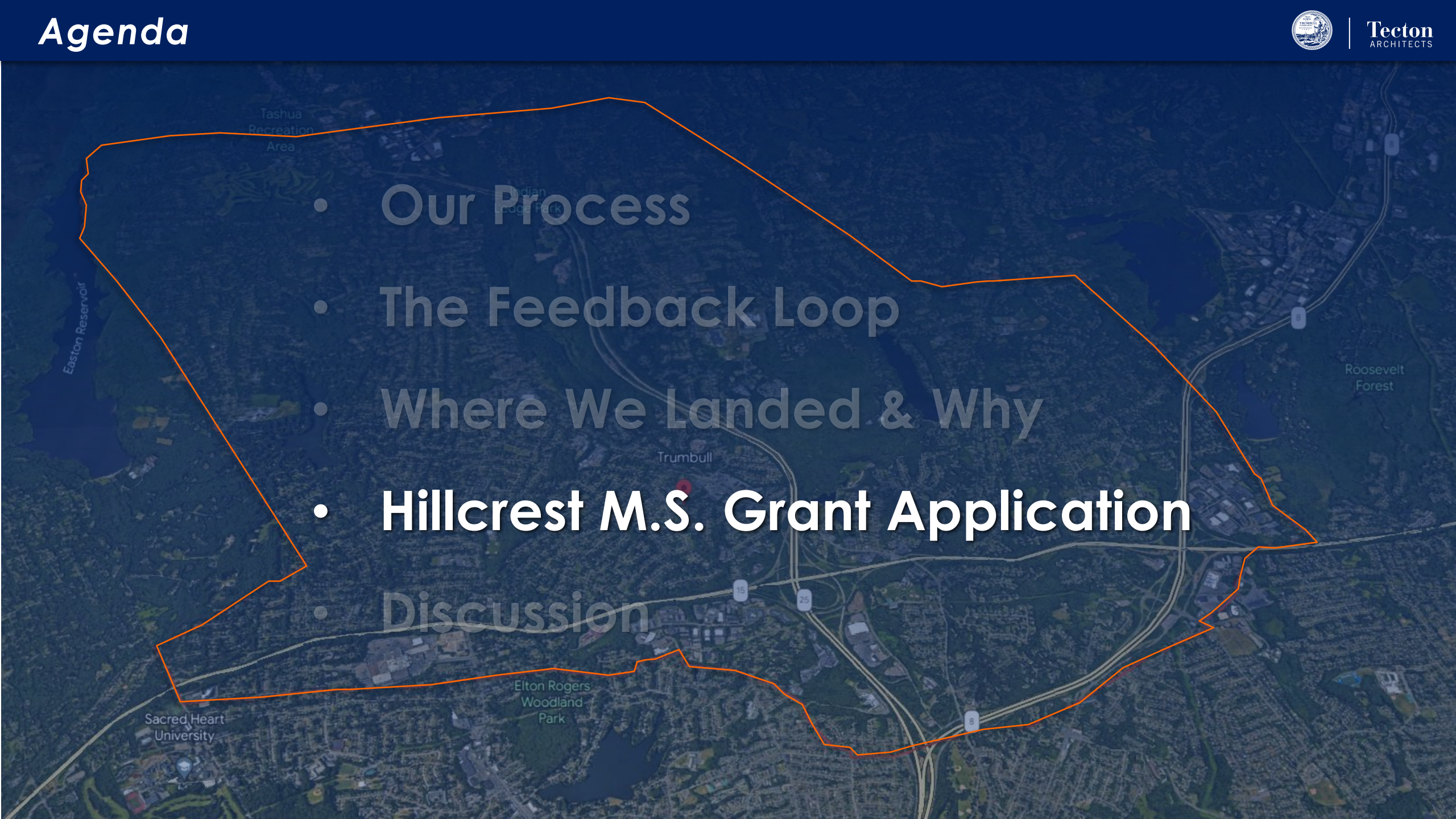


Steps 1-3 Total:
(if New for Booth Hill & RNV for Jane Ryan)

\$271.2 M
(\$196.1 M)

Total Project Costs

Cost to Trumbull

- 
- Our Process
 - The Feedback Loop
 - Where We Landed & Why
 - **Hillcrest M.S. Grant Application**
 - Discussion

**Grant Application
due: June 30th**

Tecton & Team	Enrollment Projections (highest in 8-year period)* Space Standards Worksheet (SCG-2500) Site Analysis SCG-053 (Site impacts, FMC, Phase I*, geotechnical, CT Gen Stat § 8-24) Cost Estimate (SCG-2000, Uniformat online)
Schools & Tecton	Educational Specifications* School Safety and Security Letter SCG-9000, Approval from DEMHS Approval for Renovation Status (As appropriate) (SCG-3500)
Town of Trumbull	BOE Approval of Educational Specifications Certified Resolutions (building committee, filing of grant, SD drawings) Approval of funding (certified vote count)

*By others and/or in coordination with Owner's consultants

Draft Education Specification (Updated 3.15.24)



Tecton
ARCHITECTS

TRUMBULL PUBLIC SCHOOLS

HILLCREST MIDDLE SCHOOL

530 DANIELS FARM RD, TRUMBULL, CT 06611

EDUCATIONAL SPECIFICATIONS



MARCH 2024

Report Prepared By: Tecton Architects, PC
34 Sequassen St Suite 200, Hartford, CT 06106



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	District Mission	1.1
	District Core Values and Beliefs	1.2
	Vision of a Graduate	1.3
	Strategic Priorities	1.4
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	Rationale	2.2
	Construction Grant Bonus Requests	2.3
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	School Facility Summary	2.5
	Overall Instructional Design	2.6
PART 3	SPACE PROGRAM & ACTIVITY PAGES	
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	Space Program	3.2
	Activity Pages (Room Data Sheets)	3.3
PART 4	BUILDING SYSTEMS & SITE	
	Building Systems	4.1
	Site Development	4.2
PART 5	COMMUNITY USES	
	Community Uses	5.1

PART 1

PURPOSE & VISION

Rationale	1.1
School Mission	1.2
• Middle School Philosophy	
• Core Values and Beliefs	
Long Range Educational Plan	1.3
• Vision of a Graduate	
• Strategic Priorities	

PART 2

PROCESS & OUTCOMES

Projected Student Enrollment	2.1
Proposed Project Capacity	2.2
Learning / Educational Activities	2.3
• Introduction to Trumbull	
• School Facility Summary	
Overall Instructional Design	2.4

PART 3

SPACE PROGRAM & ACTIVITY PAGES

Building Space Requirements	3.1
Educational Supporting Spaces	3.2
Detailed Description (Room Data Sheets)	3.3

PART 4

BUILDING SYSTEMS & SITE

Building Systems	4.1
Site Development	4.2
Construction Grant Bonus Requests	4.3

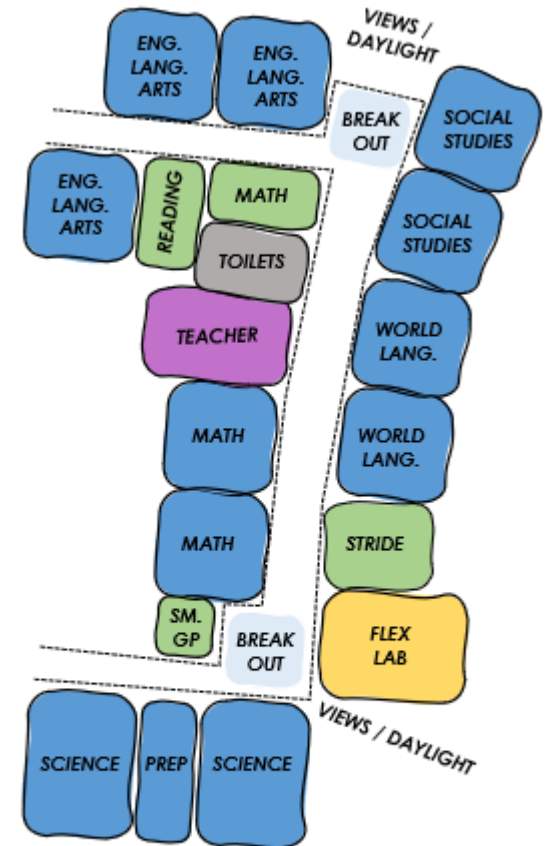
PART 5

COMMUNITY USES, FURNITURE & EQUIPMENT

Community Uses	5.1
Furniture, Fixtures & Specialized Equipment	5.2

PART 6

LIST OF EDUCATIONAL SPACES



SMALL LEARNING COMMUNITY - "L" SCHEME GRADE LEVEL NEIGHBORHOOD

MAR. | TRUMBULL PUBLIC SCHOOL DISTRICT, HILLCREST MIDDLE SCHOOL
2024 | Educational Specifications

PART 3: SPACE PROGRAM & ACTIVITY PAGES

PLANETARIUM (Tech Ed, E-Sports, Cyber, Digital Lab)

Room Area (SF)	2,000 SF
Number of Staff	4
Capacity (Seating)	40-50

OBJECTIVES

A technologically advanced, all-purpose, interdisciplinary learning environment that serves the middle school curriculum, the district and community at large. The classroom fosters hands-on learning through the sciences, arts, and technology. The space will support the growing E-Sports program, music technology, astronomy, as well as clubs, assembly, field trips and community programs. This dynamic learning environment supports authentic learning experiences for students and allows them to leverage resources in real-world settings.

USERS

- Students
- Teachers
- Personnel/Instructors
- Guests/Visitor/Community

ACTIVITIES/PROGRAMS

- E-Sports
- Science
- Art & Music
- Language Arts

ENVIRONMENTAL CHARACTERISTICS

Accessibility / Location

- Proximity to Main Entry
- Proximity to Toilets

Windows

- Operable windows
- Room darkness control

Floors

- Art studio carpet tile
- Art studio carpet tile
- Art studio carpet tile

SPECIALIZED SYSTEMS

Lighting

- Advanced LED fixtures, dimmable, advanced DMX controls
- LED color lighting, all areas of room
- Neutral and blue light (if applicable)

Power, Data & Communications

- Multiple electrical outlets of walls with USB charging modules
- Power/data/video connection of ceiling
- Intermittent cable system

Acoustics

- Soundproof room for recording
- Soundproof room for recording
- Soundproof room for recording

Room Features

- Recessed track lighting (optional)
- Mobile computer workstation
- Mobile computer workstation

Room Features

- Recessed upper and lower cabinets (connected with tall variable for machine storage)
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MAR. | TRUMBULL PUBLIC SCHOOL DISTRICT, HILLCREST MIDDLE SCHOOL
2024 | Educational Specifications

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Room Features

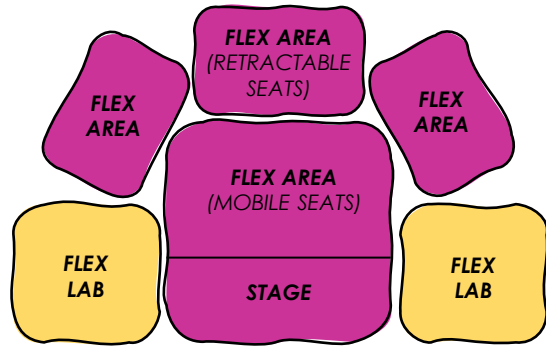
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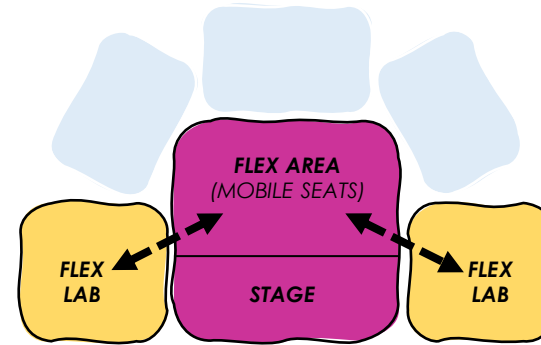


135,706
Allowable SF*
(826 Students)
(Grades 6-8)

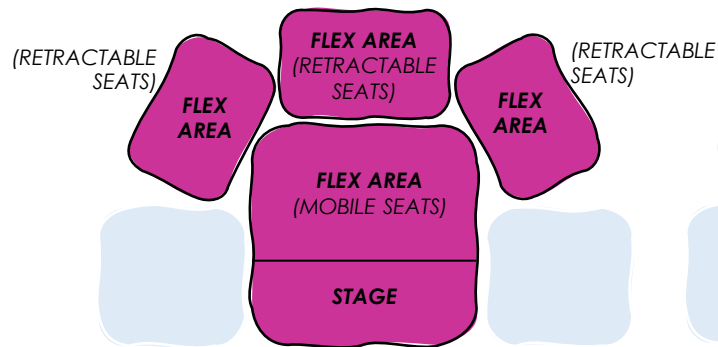
*As measured by OGA



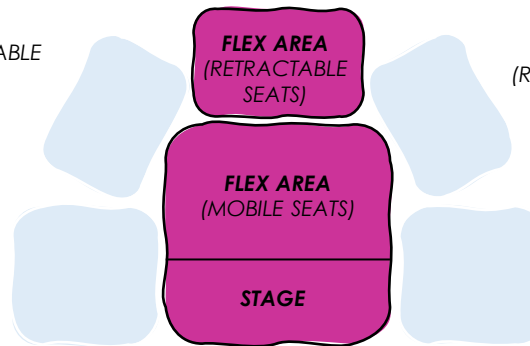
BLACK BOX DIAGRAM
OVERALL



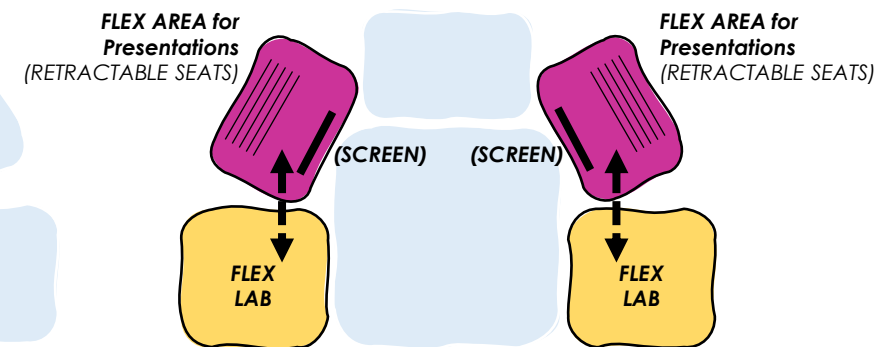
BLACK BOX DIAGRAM
PROFESSIONAL DEVELOPMENT/
FAIR/



BLACK BOX DIAGRAM
LARGE PERFORMANCE SETTING

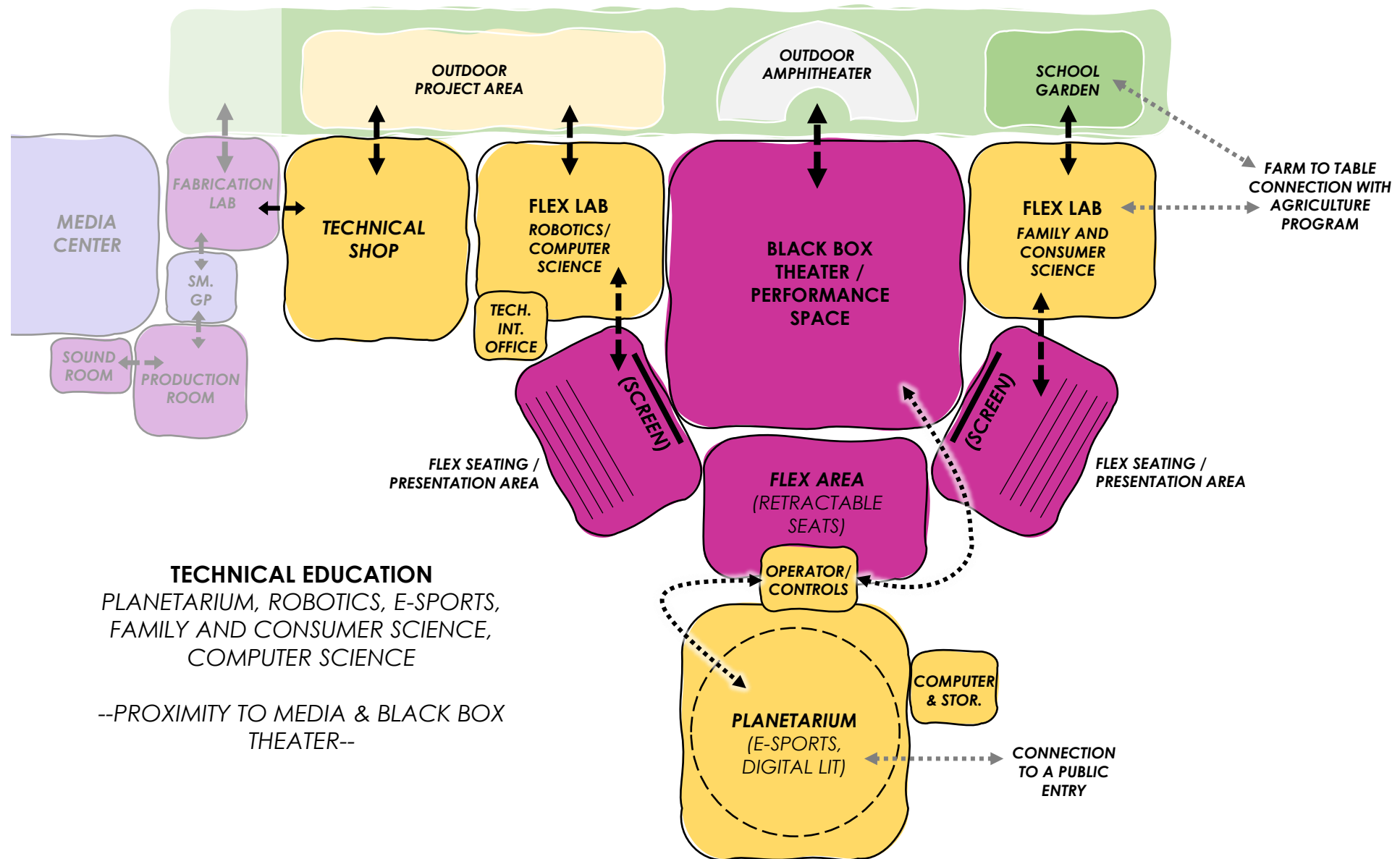


BLACK BOX DIAGRAM
SMALL PERFORMANCE/ LECTURE
SETTING



BLACK BOX DIAGRAM
FLEX TECH. LABS WITH BREAKOUT
& PRESENTATION

Program Diagrams (Black Box, Planetarium)



Costs Analysis New vs. Renovate Like New

Hillcrest Middle School

826 +/- Students



Tecton
ARCHITECTS

Topic for Consideration	Value Delta	Renovate Like New With Addition	New Building
Construction Costs	\$6,704,015	\$108,793,979	\$115,497,994
Possibility of unforeseen conditions, conflicts, and cost increases	-\$2,041,799	Somewhat Likely, est. 3-5% of const. \$4,351,759	Somewhat limited, est. 1-3% of const. \$2,309,960
General Conditions Analysis (Typically range between 5-10% of construction)	-\$2,928,619	48 Months (uses 8%) \$8,703,518	24 Months (uses 5%) \$5,774,900
Temp. Facilities, Field Off., Admin. exp. (Typically between \$25,000 ~ \$35,000 per/month)	-\$720,000	48 Months \$1,440,000	24 Months \$720,000
Temporary Modulares & Swing Space	-\$1,176,000	(8 Modular Classrooms) \$24,500/mth x 48 mths.	\$0
Multiple Move Costs	-\$328,750	(6 Total phased moves) 6 @ 65,750 each	1 Move @ 65,750
Subtotal of Value Lost	-\$7,195,168	+7,195,168	Less than or equal to!
Delta in Resultant Value	(\$491,153)	\$115,989,147	115,497,994

Chapter 173, Sec. 10-285a. Percentage determination for school building project grants.

for grants approved pursuant to section 10-283 for which application is made on and after June 1, 2022, (i) each town shall be ranked in descending order from one to one hundred sixty-nine according to the adjusted equalized net grand list per capita, as defined in section 10-261, of the town two, three and four years prior to the fiscal year in which application is made, and (ii) based upon such ranking, (I) a percentage of not less than ten nor more than seventy shall be determined for new construction or replacement of a school building for each town on a continuous scale, and **(II) a percentage of not less than twenty nor more than eighty shall be determined for renovations, extensions, code violations, roof replacements and major alterations of an existing school building and the new construction or replacement of a school building when a town or regional school district can demonstrate that a new construction or replacement is less expensive than a renovation, extension or major alteration of an existing school building for each town on a continuous scale.**

If costs between New and RNV are similar....consider requesting higher reimbursement rate for New (34.29%)

Budget Summary (Updated 3.18.24)



New Hillcrest Middle School - Budget Summary				Updated: 2/28/2024
Grade Levels	Proj. Enr.		Highest 10 Yr . (Projected Enrollment)	
6-8	826		2029-30	
Max. Area Allowed	135,706		with 1% mechanical factor	
New Building GSF	145,884	7.50%	Typical gross up factor	
Existing Building	117,000			
Proposed Building (New Construction)		145,884		
Project Cost Summary				
Site Improvements	21.97	Acre	\$425,000	\$9,337,250
Paving Lot & Vehicular Circulation	200	SF	\$9,250	\$1,850,000
Building Environmental Remediation	117,000	SF	\$30	\$3,510,000
Whole Building Demolition	117,000	SF	\$20	\$2,340,000
New Construction	145,884	SF	\$575	\$83,883,271
Geothermal Bore Field & Systems Premium	145,884	SF	\$22.50	\$3,282,389
Carbon Neutral & Netzero Premium	145,884	0	\$18.50	\$2,698,853
Construction Cost Subtotal		Avg/sf	\$732.79	\$106,901,763
Soft Costs	19.50%			\$20,845,844
Phasing & Logistics Costs (Contemplates occupied Site)	1.25%			\$1,336,272
Project Cost + Construction Cost Subtotal		Avg/sf	\$884.84	\$129,083,879
Cost Escalation	9.2%	Mid 2026	4.5%/year	\$11,878,944
Total Project Cost (With Escalation)			\$966.27	\$140,962,823
Total Project Costs			\$966.27	\$140,962,823
State Reimbursement (Assumes higher %, most econ. sol. CGS 10-285a)			34.29%	(\$48,336,152)
Ineligible Allowance (Offsite, Auditorium, etc.)			2.00%	\$2,819,256
Estimated Total Cost to Trumbull				\$95,445,927

Note: The intent of the opinion of probable costs is for budgeting purposes only, each line item requires refinement and costs will be adjusted as scope is further refined.

Hillcrest Middle School

New

Total Population: 826P
Allowable Area: 135,706 SF
New Building GSF: 145,884

Site Improvements: 200 parking spaces, athletic fields, outdoor educational space, bus/parent drop off

Building: Whole building demolition and abatement, new construction and NetZero/Carbon neutral premiums

Total Project Costs: \$140,962,823
Cost to Trumbull: \$95,445,927

ENERGY GOAL (EUI)	SIZE OF PV ARRAY	ARRAY SIZE (kW)	# OF PANELS	COST
Code Minimum 40	79,945 SF	1,360	2,386	\$3.09M
30	59,958 SF	1,020	1,789	\$2.32M
Path 1 25	49,965 SF	850	1,491	\$1.93M
22	43,970 SF	748	1,312	\$1.69M
Net-Zero 20	39,972 SF	680	1,193	\$1.55M
BASED ON HMS ~145,884 GROSS SF (570W PV Panels)				



Path 1 vs Path 2

Project Eligibility Requirements*

1. Commit to a ZNE, ZNE ready or Passive House (as a path to zero) project
2. Target a goal of 25 EUI or less **
3. Building must be a minimum of 20,000 square feet (sf) of heated and cooled space
4. Must anticipate year-round occupancy
5. Engage us before 50% schematic design
6. Include ZNE or ZNE ready goal and EUI target in project documents
7. Commit to building commissioning

* Please refer to MOU document for full eligibility requirements

** If 25 EUI is not possible due to project type or hours of operation, contact your Sponsor to discuss an alternative EUI target

Table 1: EUI Targets & Incentives

Site Specific	Site EUI	Incentives				
		Payable at end of construction		Payable at end of 1 year post-occupancy		
		Construction Incentive \$/sf	Heat Pump Adder*	Post-Occupancy Incentive \$/sf	Adder for getting under Net Zero EUI target	Certification Incentive
Net Zero level	25 or less (or site-specific target)	\$2.50	Air Source Heat Pumps: \$640/ton capped at \$100,000 Variable Refrigerant Flow (VRF): \$1000/ton capped at \$150,000 Ground Source Heat Pumps: \$4,000/ton capped at \$200,000	\$ 1.50	\$0.05/ EUI point reduction/sf	\$3,000

EVERSOURCE



Possible Incentive Cap

\$4.25 per SF plus Heat Pump adder
Hillcrest MS ~ \$688K

Inflation Reduction Act (IRC Section 48)

- Currently navigating for public & private clients – Madison, Cheshire, Trumpf, Inc.
- Early phases of development
 - Electronic portal application
 - Work together & identify possibilities



Dynamic Glass – 30% Rebate
Saves \$\$ on energy, window treatments

ELIGIBILITY	FEDERAL TAX CREDIT
Property Owners/Developers	Transferable, One Time
Government Buildings Owners	Paid Directly by the IRS
Tax Exempt Building Owners	

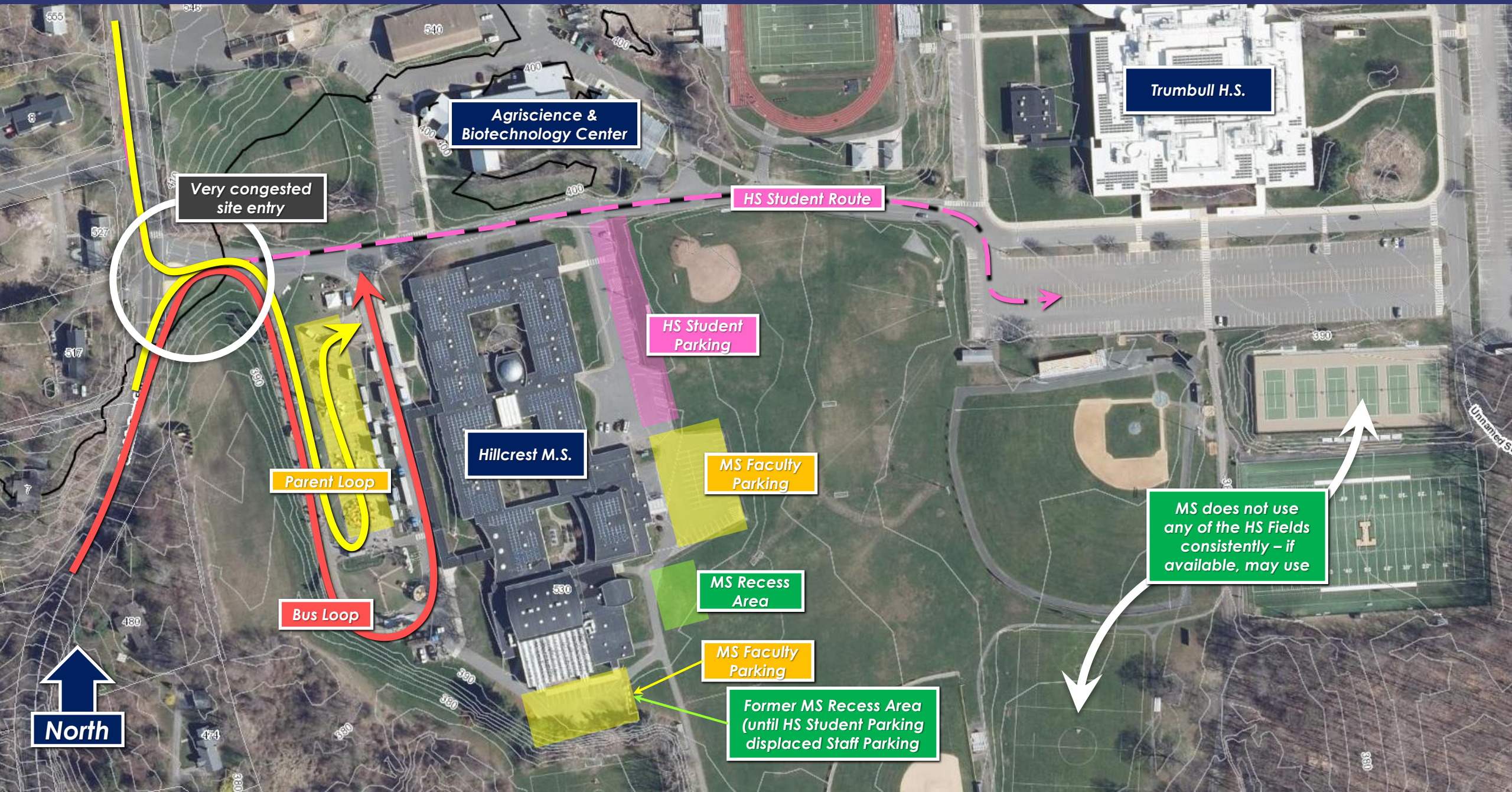
ENERGY %	QUALIFICATION
6%	Base Credit
+24%	Bonus - for projects started before 01/29/23, or meeting prevailing wage req
+10%	Domestic Content Bonus - 100% US steel/iron & 40% US manufactured products
+10%	Energy Community Bonus - located in brownfield, coal, oil, or natural gas site
+10 or 20%	Low-Income Bonus - located in low-income or tribal lands, low-income housing

Federal tax credit for:

- Solar
- Geothermal
- Combined heat & power system
- Waste Energy Recovery Properties

- Dynamic glass
- Fiber-optic Solar
- Fuel cells
- Small wind energy
- Standalone energy storage
- Qualified biogas property
- Microgrid controllers

Existing Site Conditions





OPT 1: Not Preferred

- Too close to Daniels Farm Rd., shared campus entry, and existing building (possibly used for elem. swing space)
- Would displace existing necessary parking

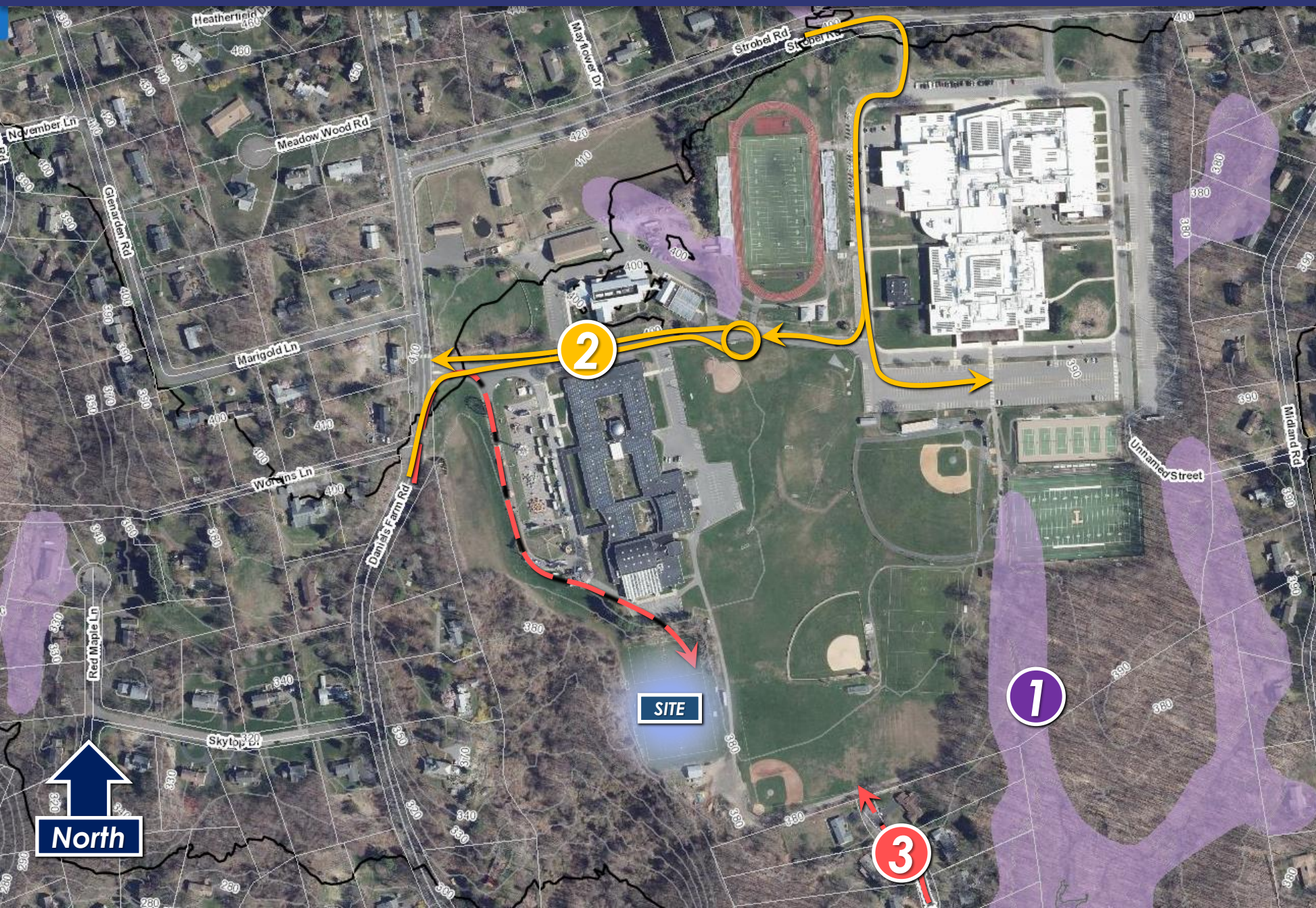
OPT 2: Not Preferred

- Field is used by the H.S. for JV baseball
- Close to other campus buildings, not enough separation

OPT 3: Preferred

- Creates distance from shared campus entry and other campus buildings
- Flat area to build (but...lower than surrounding grade, area called "the Pit")

Existing Aerial View to North



1 GIS identified wetland soils

2 Consider alternate traffic pattern (one-way loop with roundabout)

3 Consider alternate entry points?

Existing Aerial View to North



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Building Site
Option #1, Parking
Dropoff Area

Building Site
Option #2: Existing
JV Baseball Field

Building Site
Option #3: Existing
Soccer Field

Existing Aerial View to North



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ARCHITECTS



Existing Aerial View to North



Building Site
Option #1, Parking
Dropoff Area

Building Site
Option #2: Existing
JV Baseball Field

Building Site
Option #3: Existing
Soccer Field

View of Existing Soccer Field



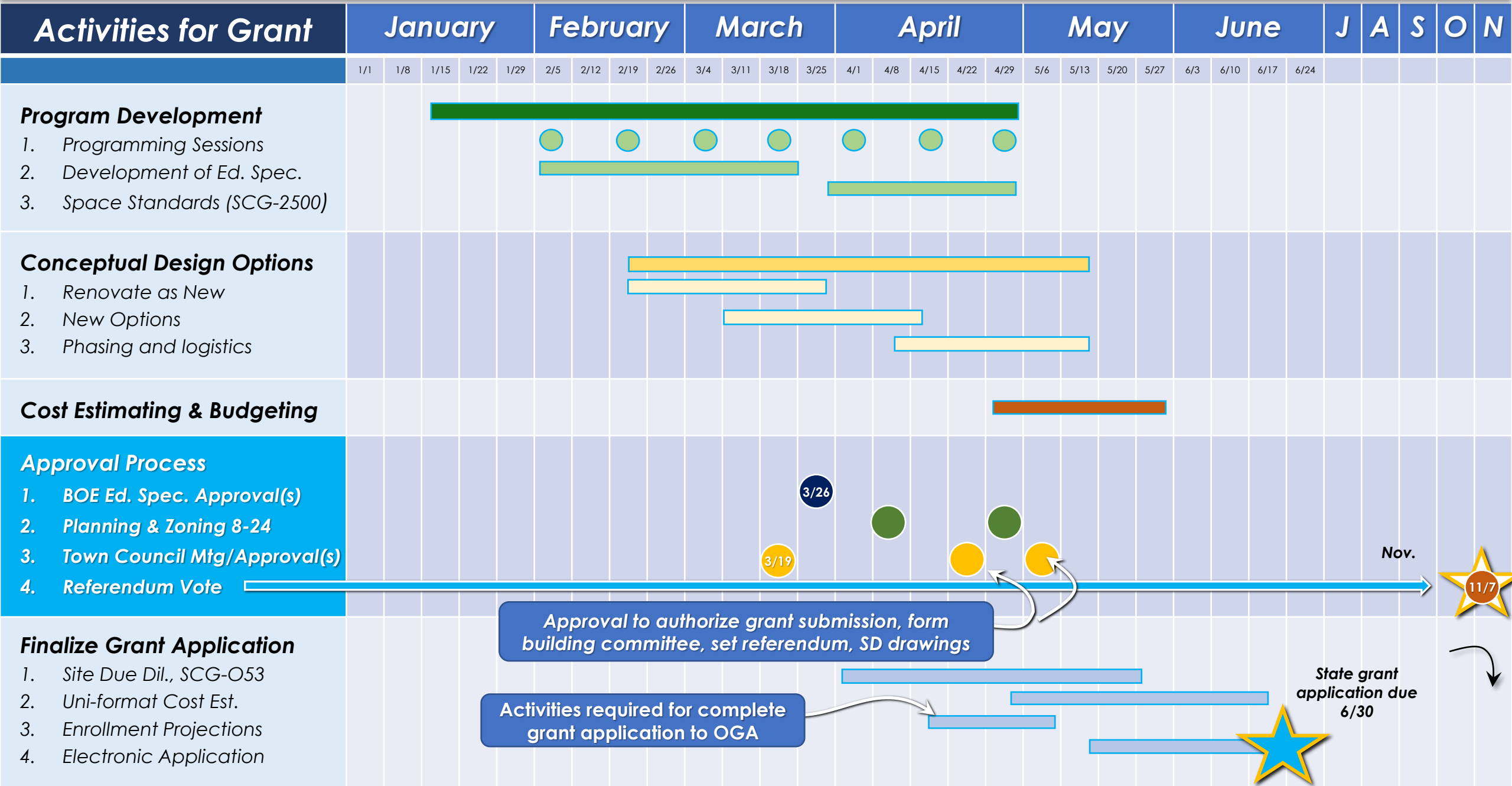
Tecton
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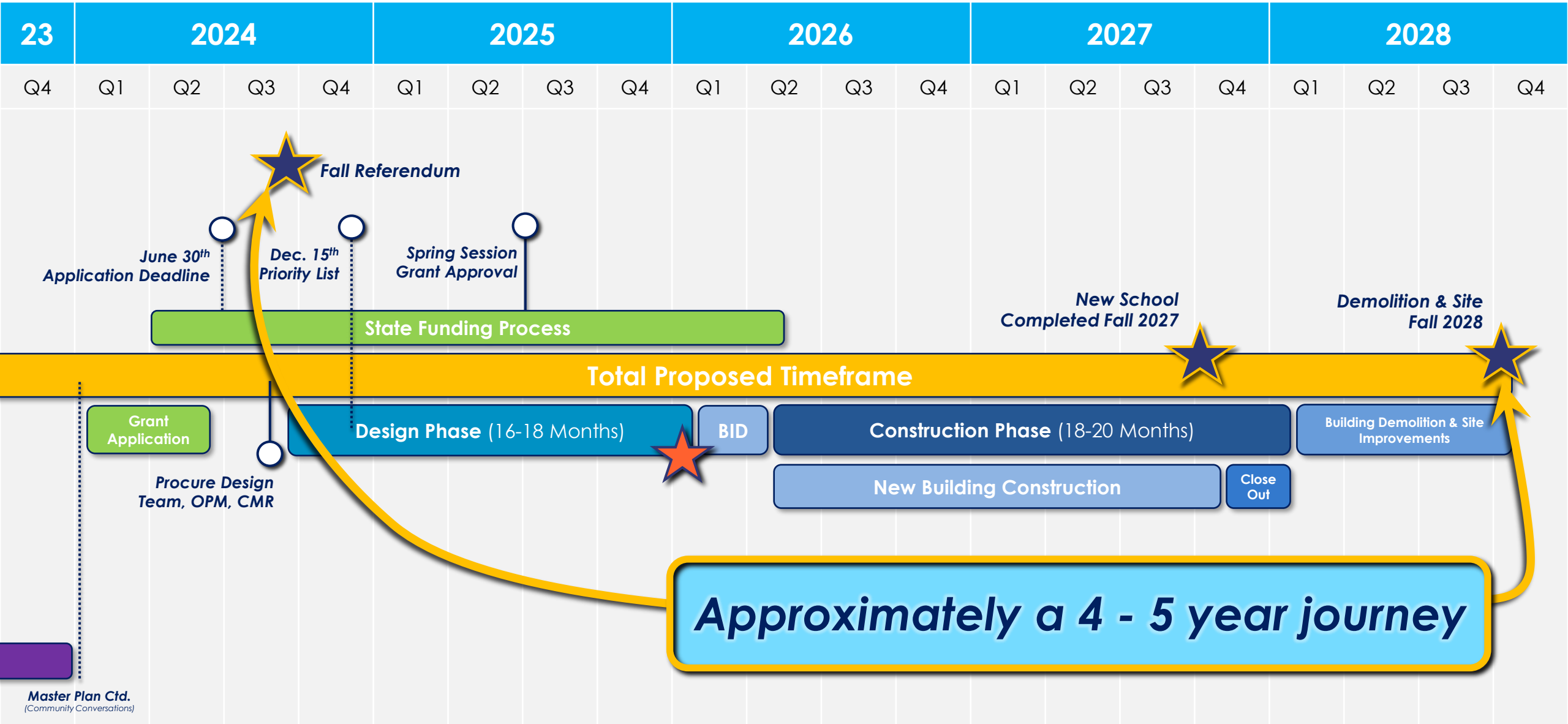
Building Site
Option #3: Existing
Soccer Field

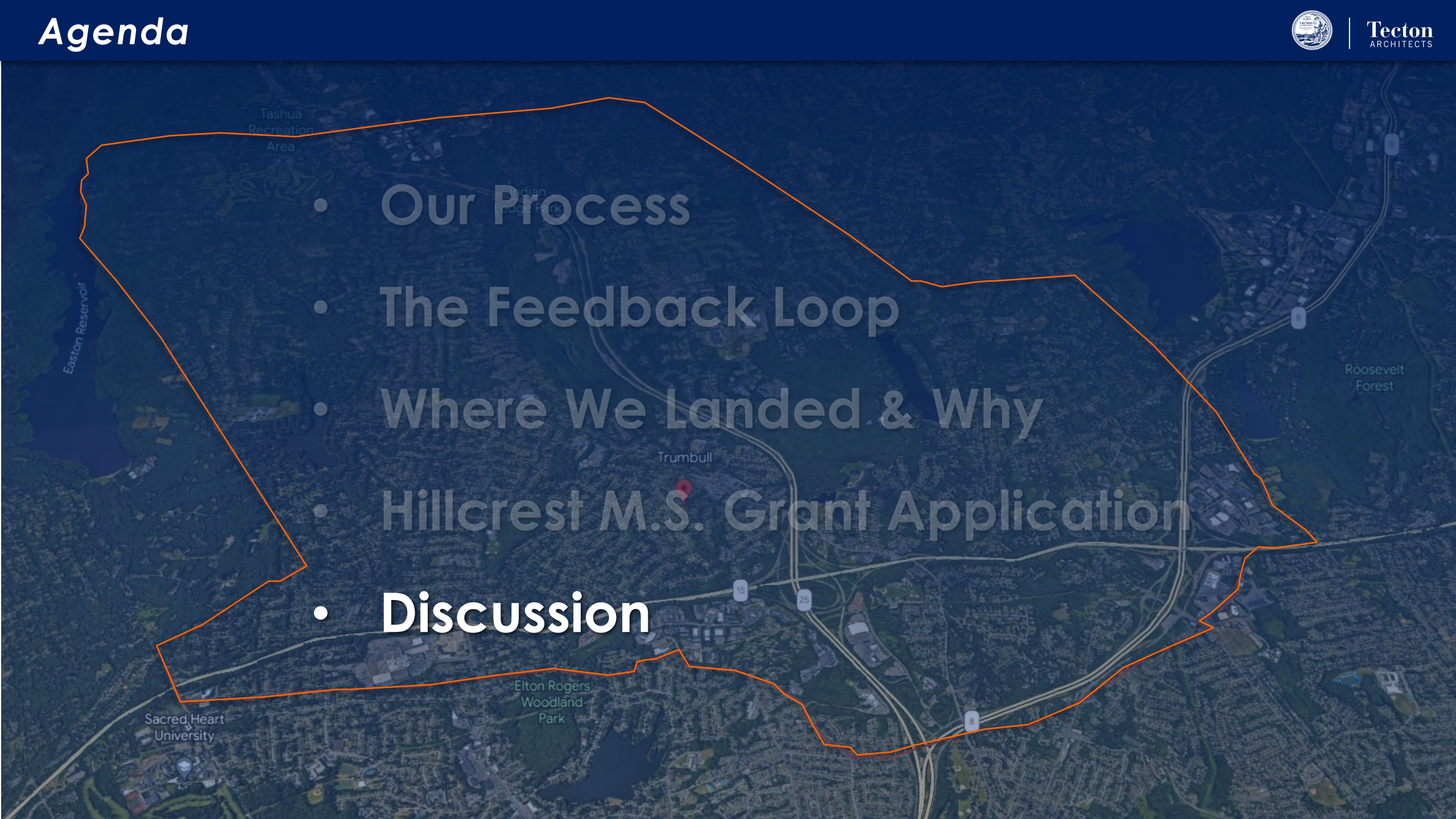
- **3.19.24 - Town Council Meeting: General Summary of Master Plan + Hillcrest M.S. Update**
- **3.20.24 - Final Educational Specification due to BOE**
- **3.26.24 - Board of Education: Special Meeting – Educational Specification Approval**
- **Other Meetings**
 - 8-24 Approval, Planning and Zoning Commission
 - Town Council authorizations (SD, Referendum, Authorize to submit Grant Application to OGA)
 - Food Service, Facilities Review, Park & Recreation

PROPOSED MICRO SCHEDULE



New



- 
- Our Process
 - The Feedback Loop
 - Where We Landed & Why
 - Hillcrest M.S. Grant Application
 - Discussion

Project Email:

DistrictPlan@trumbullps.net

Project Website:

<https://www.trumbullps.org/boe/district-wide-master-plan>



Tecton
ARCHITECTS

SUMMARY PRESENTATION FOR TRUMBULL PUBLIC SCHOOLS
**MASTER PLAN & HILLCREST MIDDLE
SCHOOL GRANT APPLICATION**

for

Trumbull Town Council Meeting

Town Hall

March 19, 2024