





1
OUTLINE THE
PROBLEM

2
ADDRESS
SOLUTIONS

3
ESTABLISH
PLAN TO
IMPLEMENT

**ASSESSMENT STUDY
+ LONG-RANGE VISIONING**

PROCESS UPDATE

- Surveyed Each School Site's Buildings, Finishes, & Systems
- Analyzed **Enrollment** Data & Future **Growth**; Identified Program Deficiencies, Capacity Needs & Project Options
- Completed existing **energy usage** analysis; Established EUI for all existing facilities
- Met with maintenance, food service, + transportation staff to understand how various **school operations** might be affected by future projects

PROCESS UPDATE

MEETINGS

Feb 09	Principal Meetings & Facilities Tours
Feb 16	Principal Meetings & Facilities Tours
April 13	School Board Meeting
April 27	Facilities Committee Meeting
May 16	Public Meeting
May 31	Meeting with Elementary Staff
May 31	Meeting with Middle & High Staff
July 20	Maintenance & Transportation Meeting
July 25	Food Service Meeting
Aug 03	Public Meeting
Aug 10	School Board Meeting

- Every school approaching or over **CAPACITY**
- Every school lacking **QUALITATIVE PROGRAM** space to support education
- Middle School + High School **KITCHEN + DINING** spaces insufficient for current and growing enrollment; most kitchen equipment in district is nearing replacement
- Every school has **TRAFFIC + PARKING** issues

WHAT WE PROPOSE (SITE)

- **Vehicular Flows + Pedestrian Safety** must be addressed
- **Outdoor** learning, recreation + athletic space must be increased
- **School Identity** can be improved through site moves
- A **new school** is needed to alleviate density issues on all other school sites
- **Remove bus parking** from school sites

WHAT WE PROPOSE (BUILDING)

- High School and Middle School Kitchen + Cafeteria deficiencies must be addressed
- Another school is needed to provide capacity relief
- A Central Operations Facility is an innovative solution to a number of issues (building and site)
- Qualitative Space to be found or created at all schools

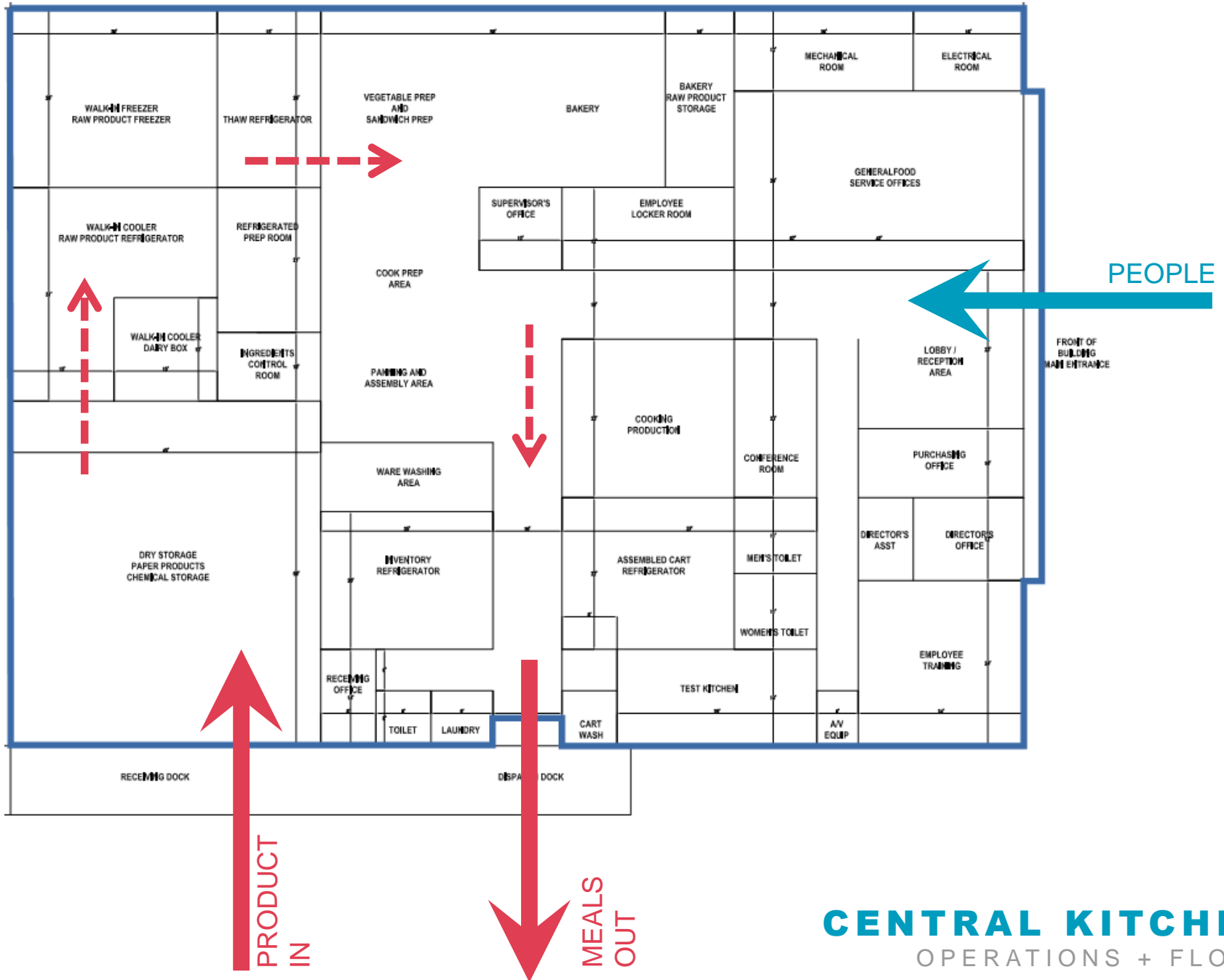
CENTRAL KITCHEN

- Four (4) **aging kitchens** on same site, all of which are undersized for the growing enrollments
 - Since Aug 8th, there have been **39 help desk requests related to kitchens** in 27 days (~ 1.5 per day)
- **Cook/Chill system** would prepare food 3-5 days in advance, and hold it (refrigerated) until delivery
- Close **proximity** of all schools makes **transport** relatively easy

COST - RELATED

- **Equipment** required at school sites significantly **reduced**; along with associated operational costs
- **Reduced energy costs** to district overall, in reducing number of kitchens that require a full daily start-up to (1)
- **Wholesale/bulk orders** for district vs. individual
- **Single point of delivery** and stocking (reduced vehicle trips to schools); likely **reduced shipping costs** than to multiple locations
- Better **control of inventory**; less redundancy

- Opportunities for **increased menu options**
- Potential for **farm-to-table**, local grown ingredients to be part of menu
 - Tie to student programs?
- **Equipment needs reduced** at schools to refrigeration, warming and serving
- More space at schools can be **devoted to serving**, perhaps of a more **diverse menu**
 - traditional hot meals
 - cold and/or a la carte options (pre-packaged salads, sandwiches, etc)
- Potential to provide **lunch to Tech Center**, alleviating some stress at high school (and possibly increasing instruction time)
- Potential for **apprenticeships** with existing CTE programs at Tech Center

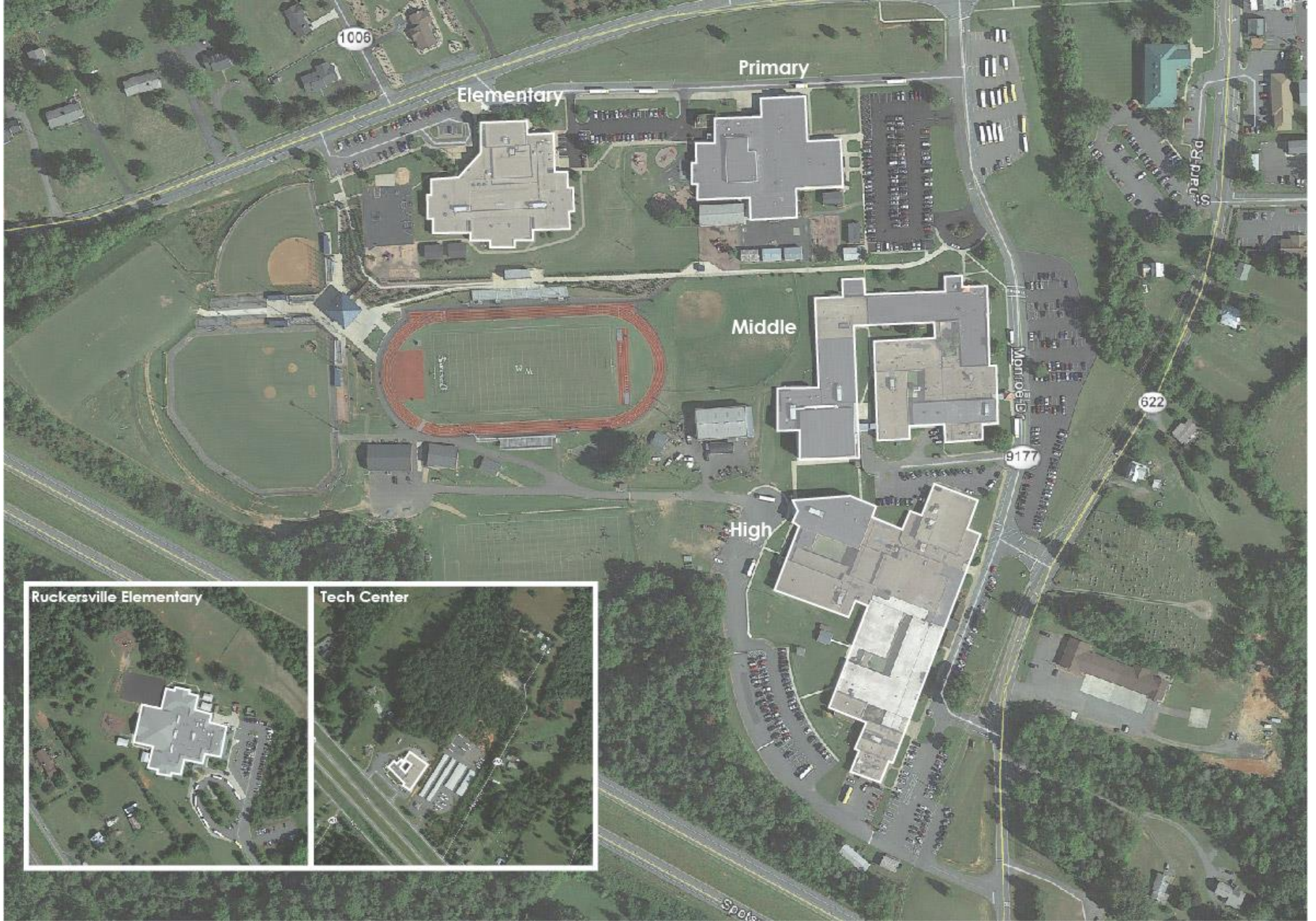


Kitchen Staff	Mgr.	Workers	Total
Existing	5	19	24
Central Kitchen (FTE)	2	12	14
Facility Mgr	1		
Warehouse Mgr	1		
Bakery		2	
Production		2	
Miscellaneous Staff		2	
Packaging + Assembly		4	
Washing (cart, ware, misc.)		2	
Part-time Serving (at individual schools)		15-20	15-20

Food Transport

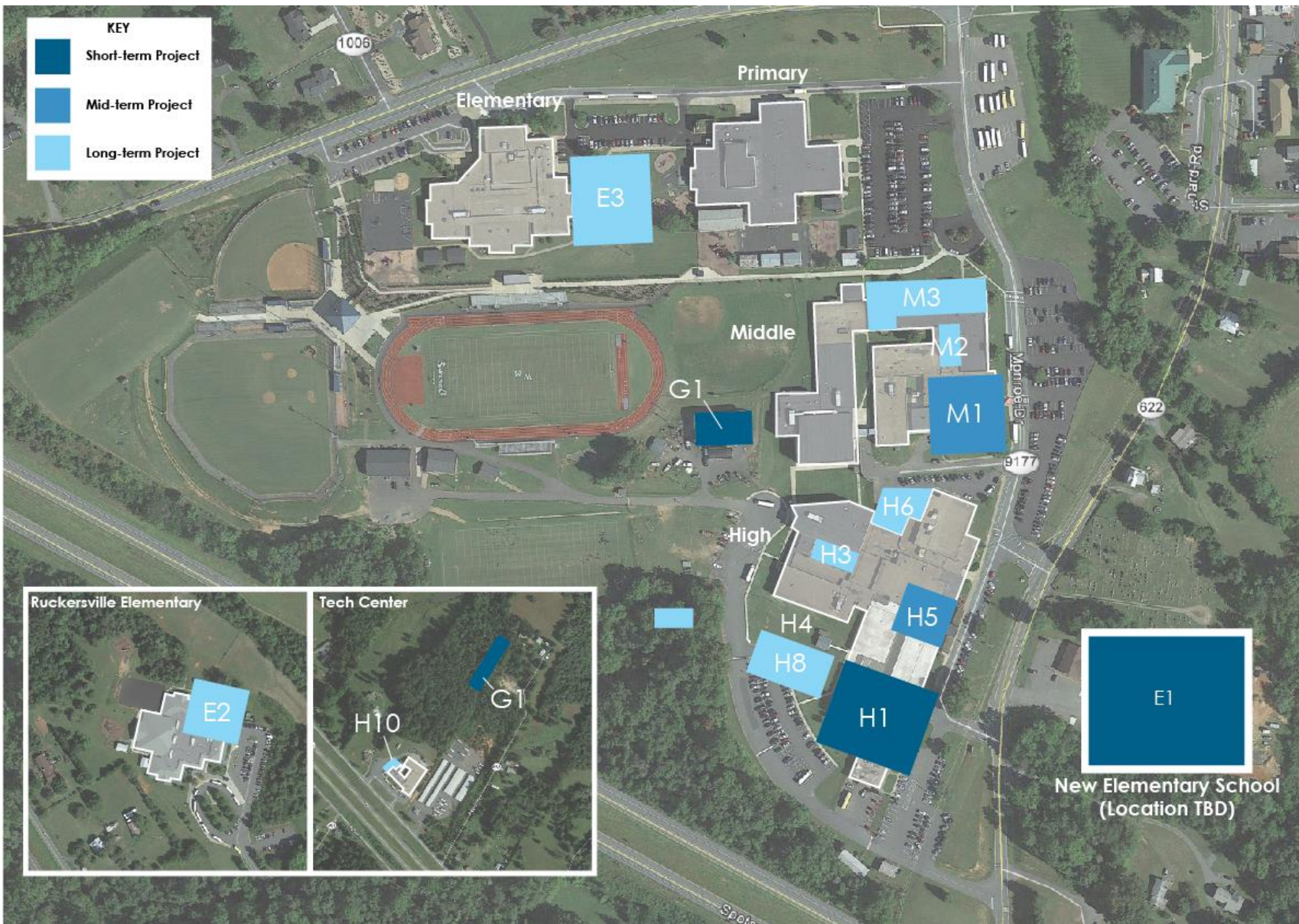
# of refrigerated trucks	1	(Est. \$33,000 – \$73,300)
# of vans	1- 2	(Est. \$5,000 – \$30,000)
# of drivers; part-time?	1	
# of deliveries	1 trip to each school per day	
	transport carts delivered at end of day	
	placed in walk-in for next day	
	used carts picked up when new ones delivered	

*Dining-related trash could be brought back to central facility for centralized composting, pulping, compaction, and pick-up



EXISTING SITE

STANARDSVILLE CAMPUS



PROJECT OPTIONS
BUILDING

COST PROJECTIONS

COST PROJECTIONS

Best use of the following cost estimates is to understand the **relative value of each project**, as compared to the other projects, in hopes of **assisting prioritization** of project needs and timelines.

Cost estimates will ultimately reflect **ranges of possible costs**, in most cases. There are a number of **variables** for each project type and final scopes of each project are not thoroughly defined yet.

Projects can always be done cheaper. However, these estimates represent funding assumptions that will result in **quality projects over the life of the buildings** – [construction](#), [operation](#), [maintenance](#), [education](#).

Variations of the plan are always possible. The **masterplan approach** is critical to providing **flexibility** in choices and decisions in the future, so that you can adapt as circumstances change – [enrollment](#), [available funds](#), [etc.](#)

PROJECT TIMELINES

Project timelines provided are **another metric** that can be used to **comparatively consider projects**.

The project timelines **are not the answer**. However, they are variables that can help you **balance cost and need**, both now and in the future.

CONSTRUCTION COSTS

PAVING
COST



Landscape
COST



PROJ
COSTS



INFLATION



TOTAL
COST

\$10 / SF

\$250,000 - \$300,000
(per acre)

20%

4.25% Annually

New paving
Stormwater
Bio-retention

Lawn
Plantings
Walks / Paths

Site Furnishings
Survey / Testing
Utility Costs / Rights-of-Way
Architecture / Engineering Fees
Permits
Legal Fees
Financing Costs
Contingency

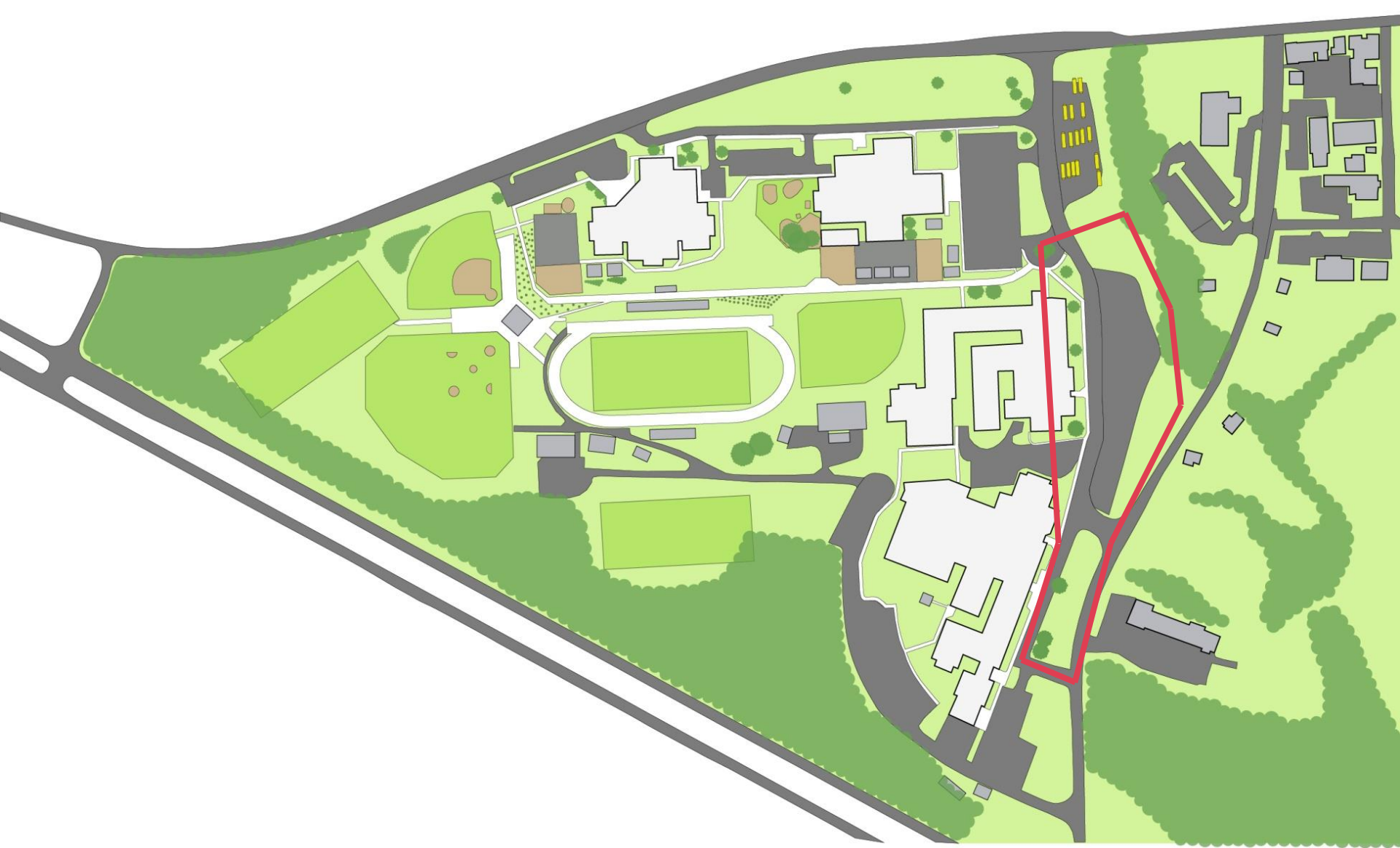
*Does not include
large quantity
Storage (ponds)

PROJECT NAME
(PROJECT DESCRIPTION)

\$1

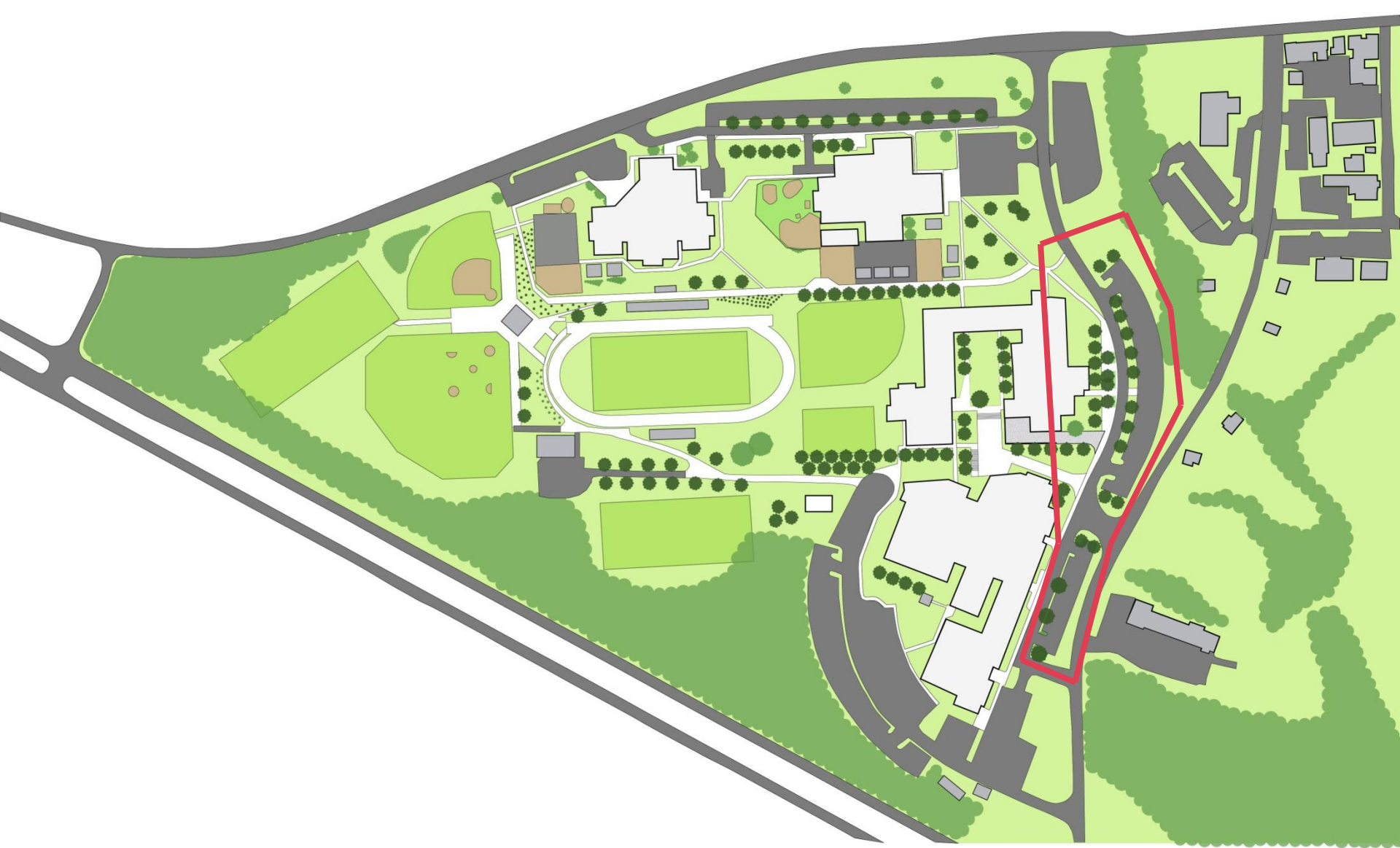
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$5	1,000	\$5,000		
Paving	\$10	10,000	\$100,000		
Landscape	\$300,000 (per acre)	38,465 (0.88 acres)	\$264,000	20%	
Contingency		25%	\$300,887		
Total 2016			\$1,504,434	\$300,887	\$1,805,321
		2017	\$1,568,373	\$313,675	\$1,882,047
		2018	\$1,635,029	\$327,006	\$1,962,034
		2019	\$1,704,517	\$340,903	\$2,045,421
		2020	\$1,776,959	\$355,392	\$2,132,351
		2021	\$1,852,480	\$370,496	\$2,222,976

RANGE:



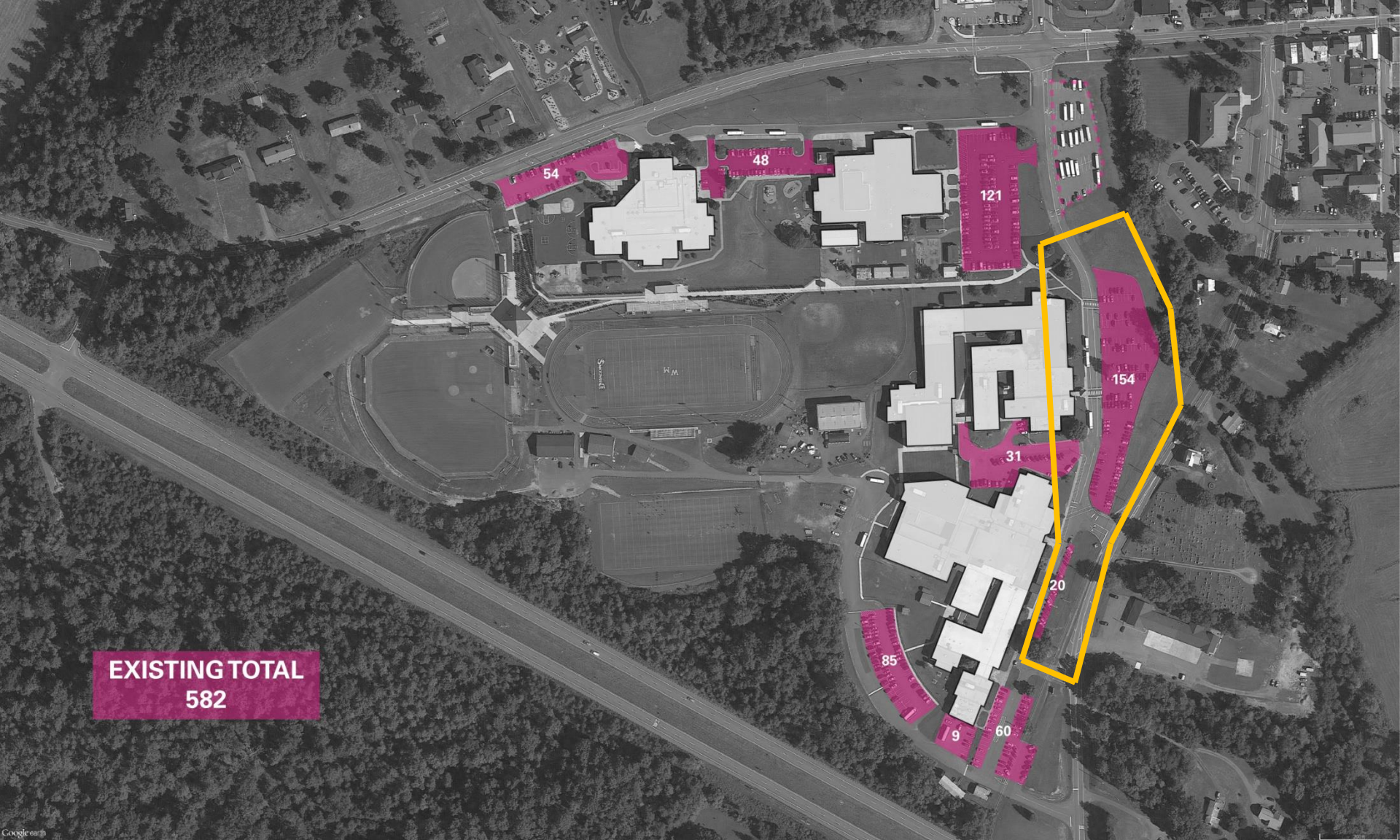
TRAFFIC + SAFETY

STANARDSVILLE CAMPUS - EXISTING



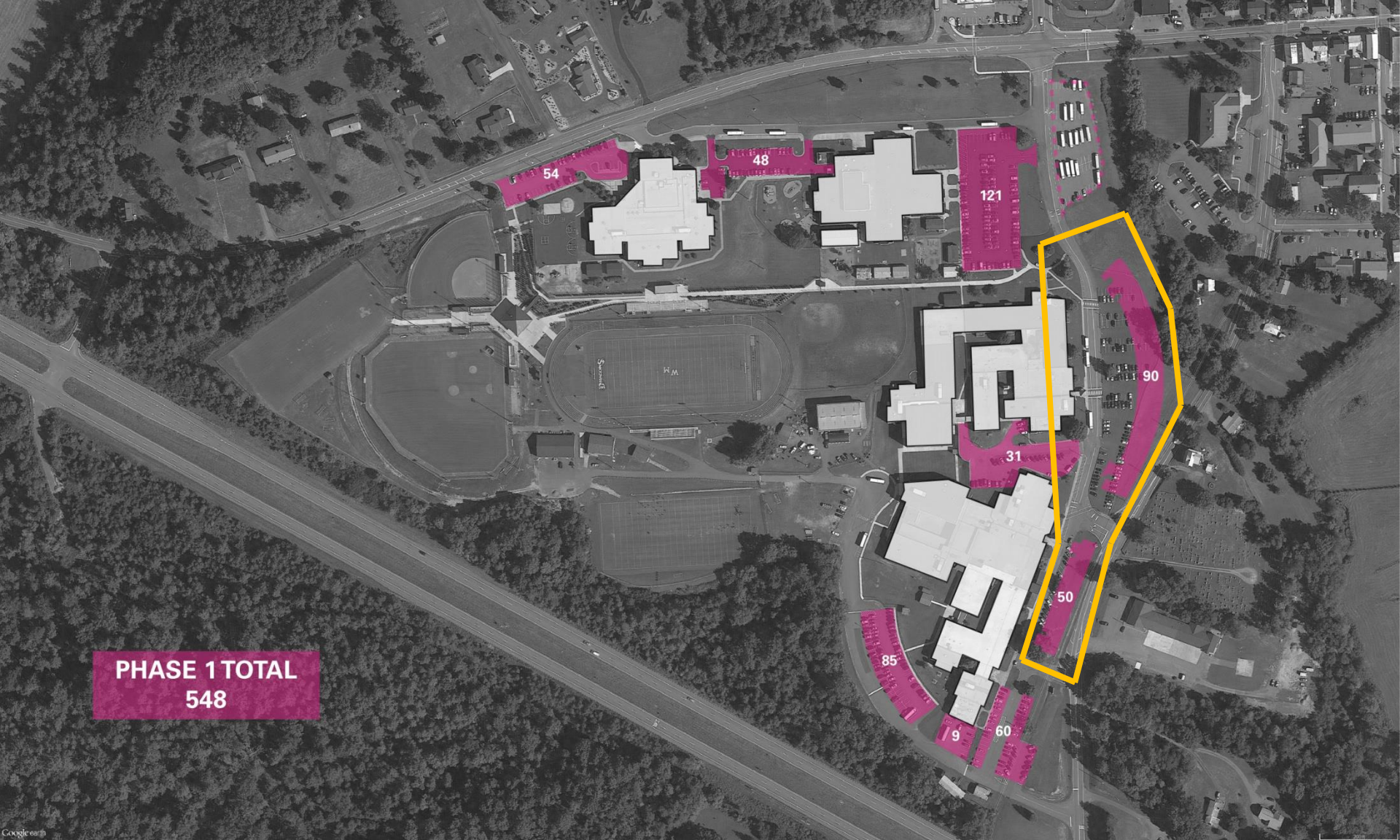
TRAFFIC + SAFETY

STANARDSVILLE CAMPUS – S1



EXISTING TOTAL
582

TRAFFIC + SAFETY
STANARDSVILLE CAMPUS - EXISTING



PHASE 1 TOTAL
548

TRAFFIC + SAFETY
STANARDSVILLE CAMPUS - EXISTING

SITE MASTERPLAN

(Traffic + Safety, Parking, Landscaping)

S1 Monroe Drive

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$4.50	78,295	\$352,328		
Paving	\$10	58,722	\$587,220		
Landscape	\$300,000 (per acre)	38,465 (0.88 acres)	\$264,000	20%	
Contingency		25%	\$300,887		
Total 2016			\$1,504,434	\$300,887	\$1,805,321
		2017	\$1,568,373	\$313,675	\$1,882,047
		2018	\$1,635,029	\$327,006	\$1,962,034
		2019	\$1,704,517	\$340,903	\$2,045,421
		2020	\$1,776,959	\$355,392	\$2,132,351
		2021	\$1,852,480	\$370,496	\$2,222,976

RANGE:

\$1.8M - \$2.07M

1. Due to uncertainty of final scope of improvements
2. Landscape number could be as much as \$500,000 per acre to account for unknown requirements of SWM system and/or existing issues.

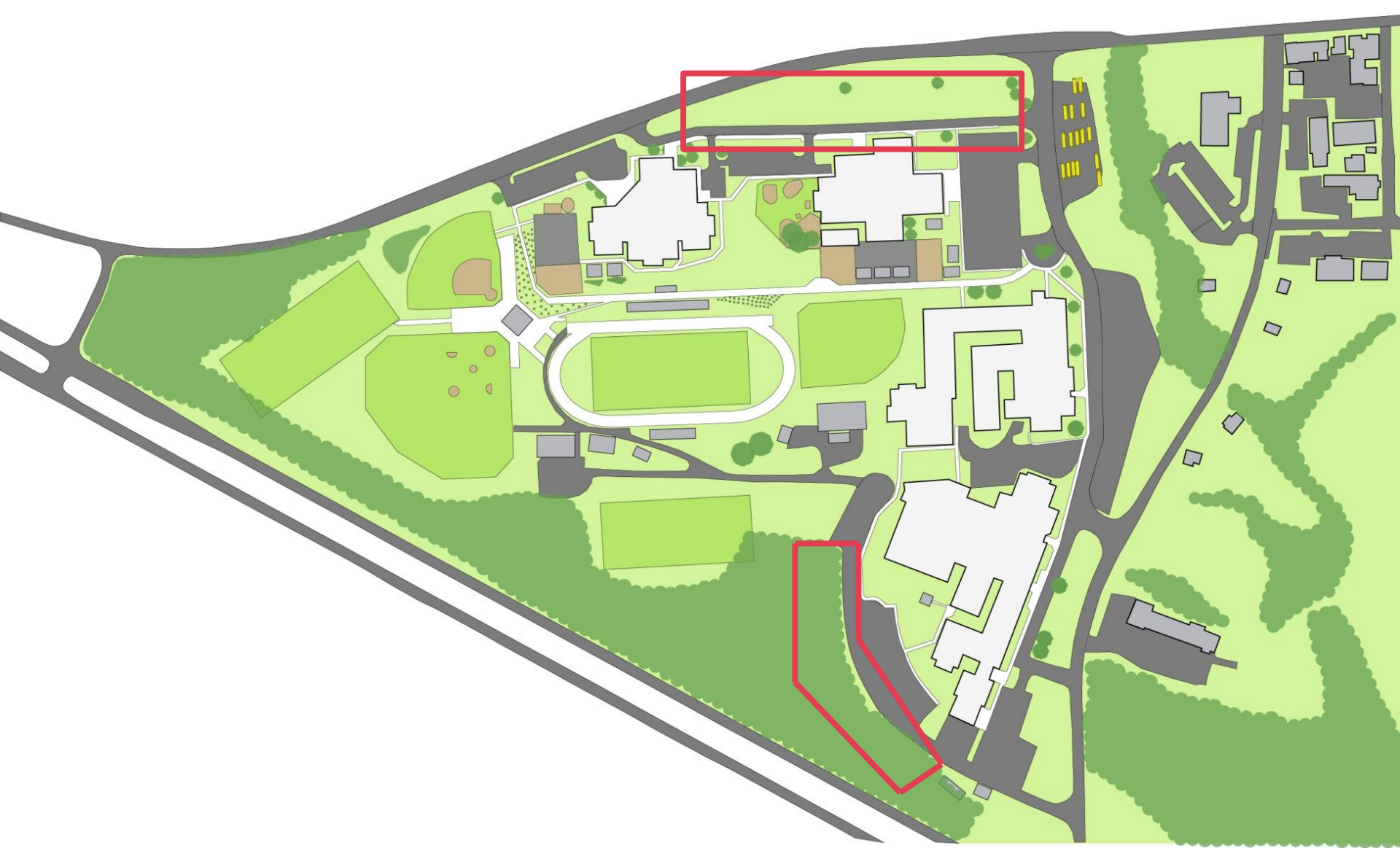
* Majority of this project involves reorienting Monroe Dr. and converting it to One-Way (south), and reorganizing the parking to the east to free up space within for pedestrian and student use, new landscaping, and more generous main entry plaza for Middle School.

** Paving costs include any new or reworked asphalt areas, stormwater management with bio-retention.

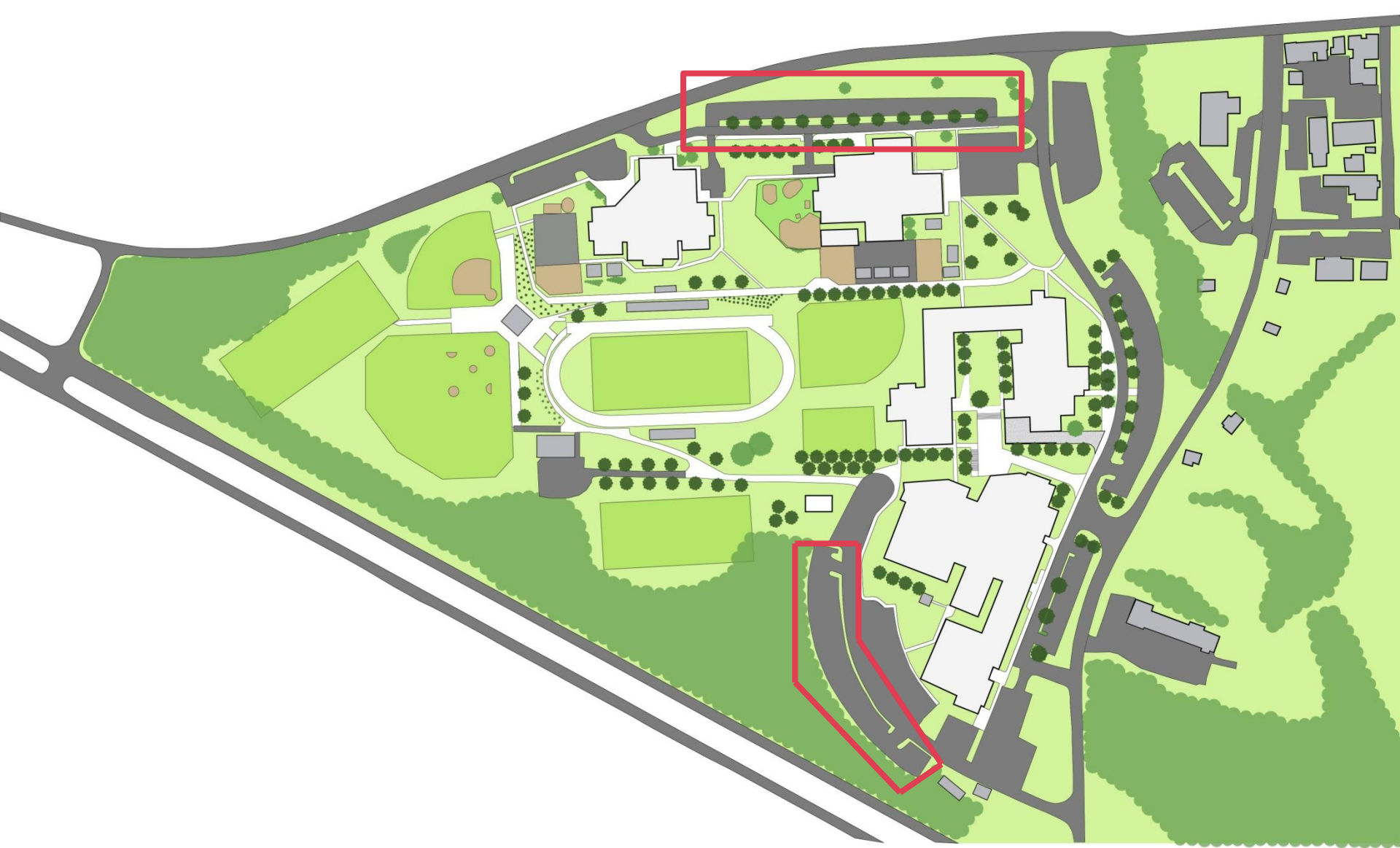
*** Contingency provided to account for potential of utility conflicts with new stormwater designs.

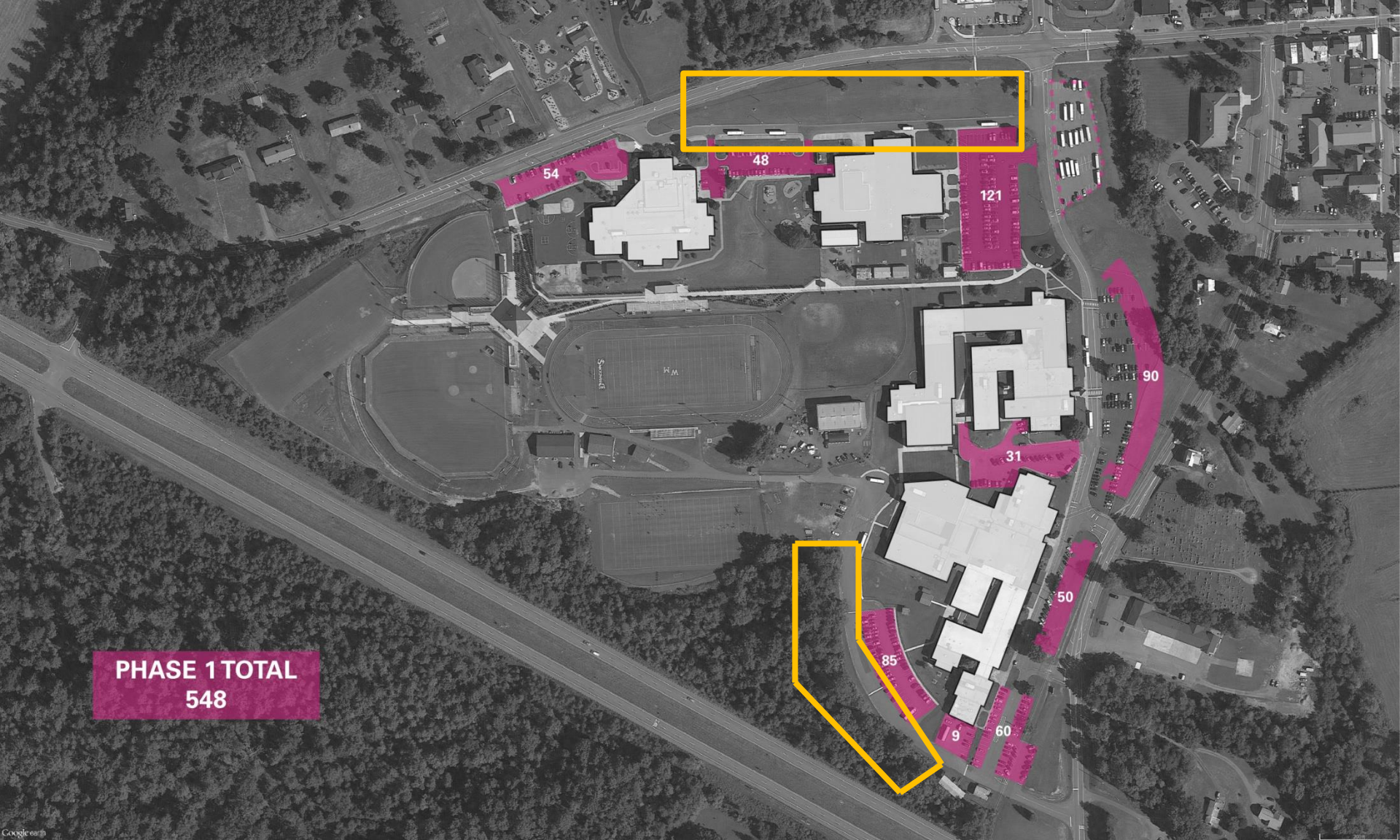
COST PROJECTIONS

STANARDSVILLE CAMPUS TRAFFIC + SAFETY

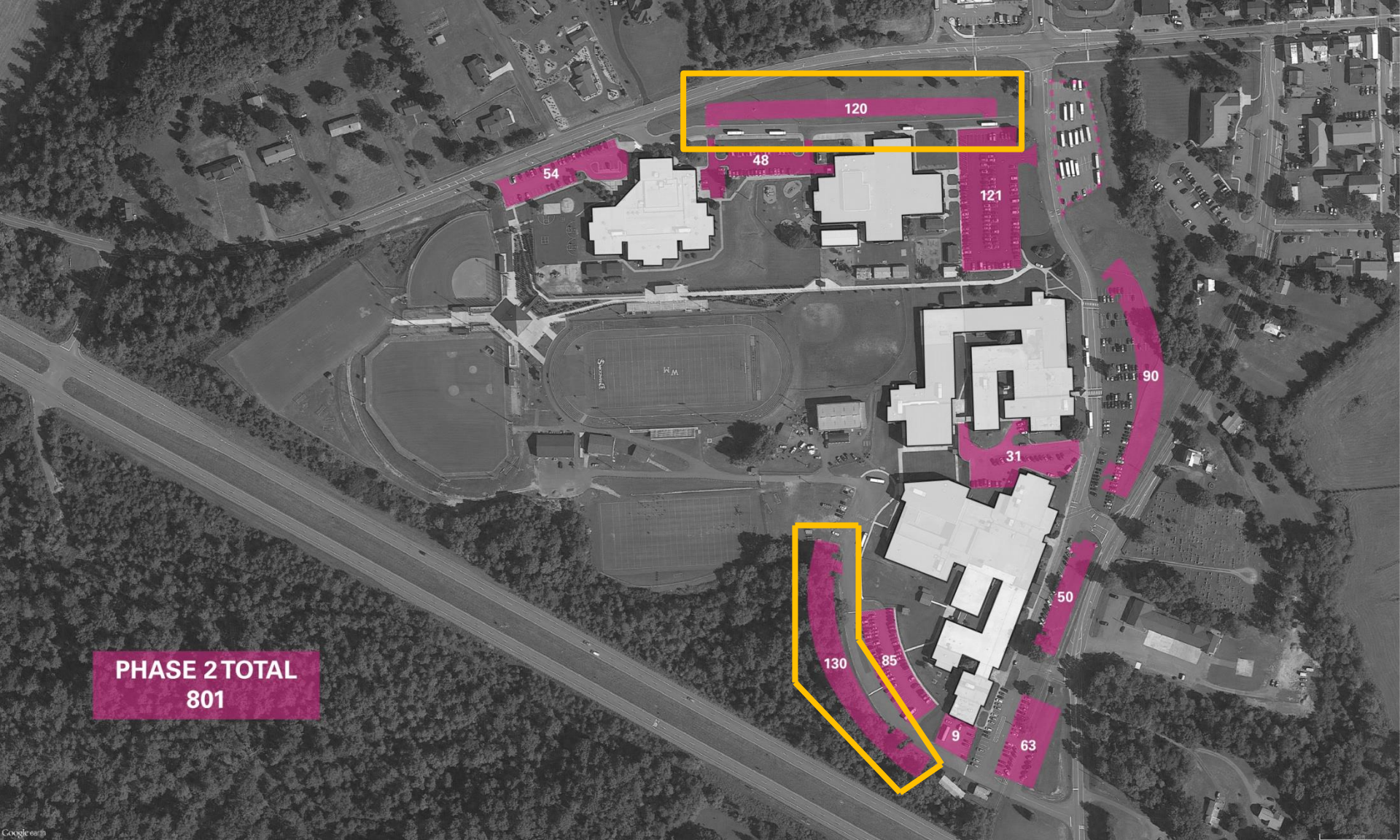


TRAFFIC + SAFETY
STANARDSVILLE CAMPUS – EXISTING





PHASE 1 TOTAL
548



PHASE 2 TOTAL
801

SITE MASTERPLAN

(Traffic + Safety, Parking, Landscaping)

S2 New Parking (WMHS, NGPS/NGES)

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$4.50	-			
Paving	\$10	69,843	\$698,430		
Landscape	\$300,000 (per acre)	-		20%	
Contingency		25%	\$174,608		
Total 2016			\$873,038	\$174,608	\$1,047,645
		2017	\$910,142	\$182,028	\$1,092,170
		2018	\$948,823	\$189,765	\$1,138,587
		2019	\$989,148	\$197,830	\$1,186,977
		2020	\$1,031,186	\$206,237	\$1,237,424
		2021	\$1,075,012	\$215,002	\$1,290,014

RANGE:

\$1.05M - \$1.26M

1. Due to uncertainty of final scope of improvements
2. Paving number could be as high as \$12/sf to account for unknown requirements of SWM system and/or existing issues.

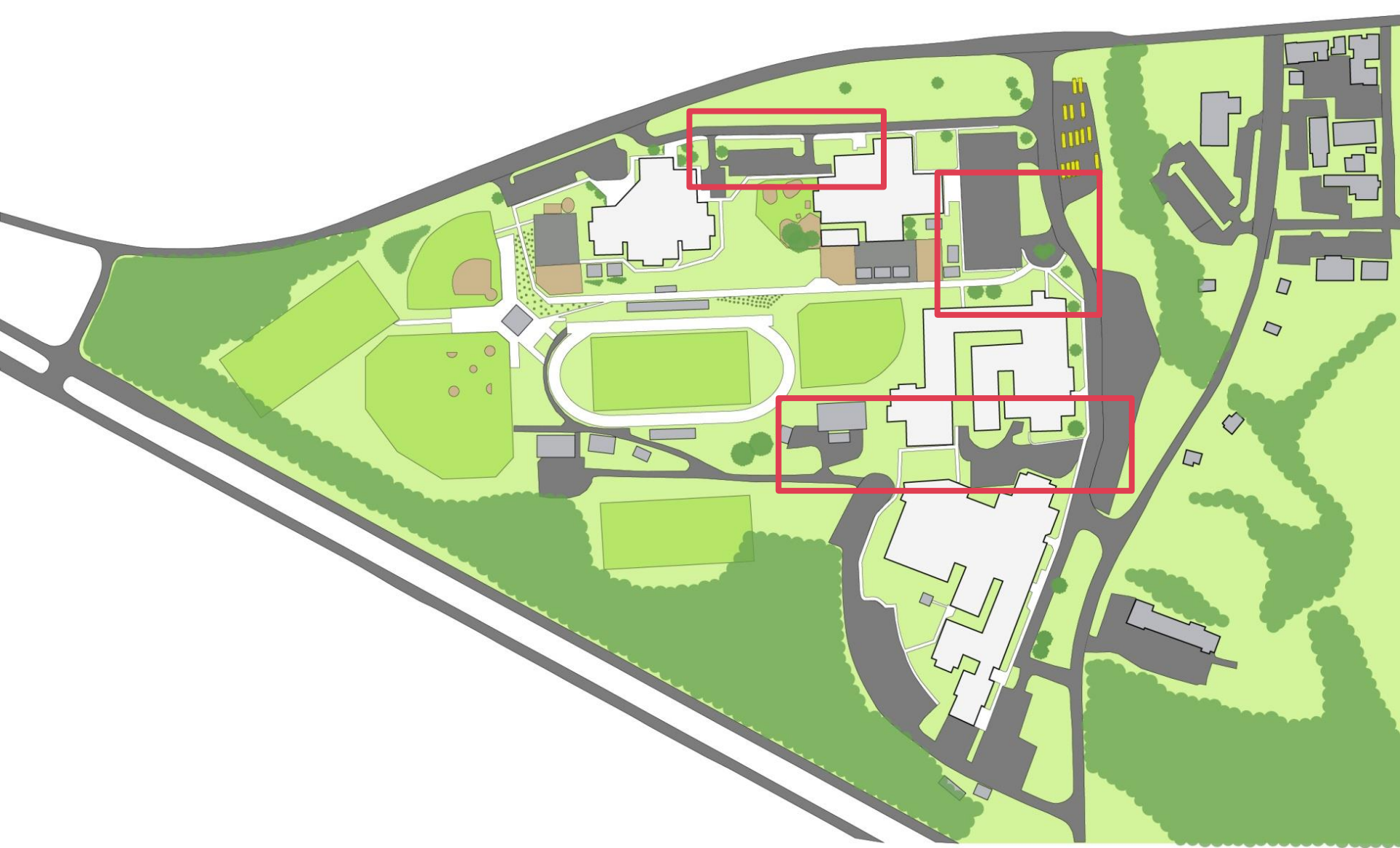
* This project provides additional parking (outside the main pedestrian zone) SW of high school rear drive and North of Wetsel Drive @ NGPS/NGES.

** Paving costs include any new or reworked asphalt areas, stormwater management with bio-retention.

*** Contingency provided to account for potential of utility conflicts with new stormwater designs.

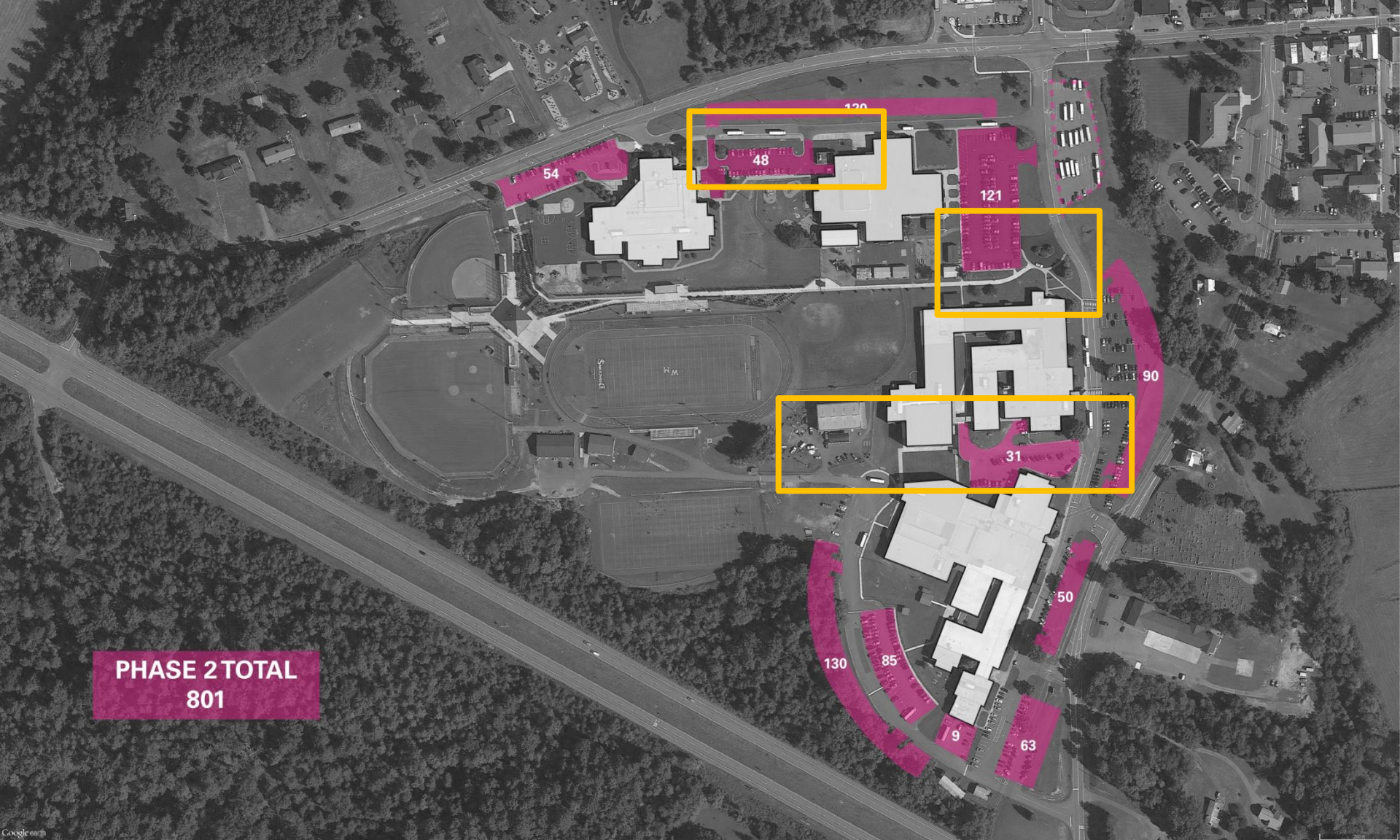
COST PROJECTIONS

STANARDSVILLE CAMPUS TRAFFIC + SAFETY

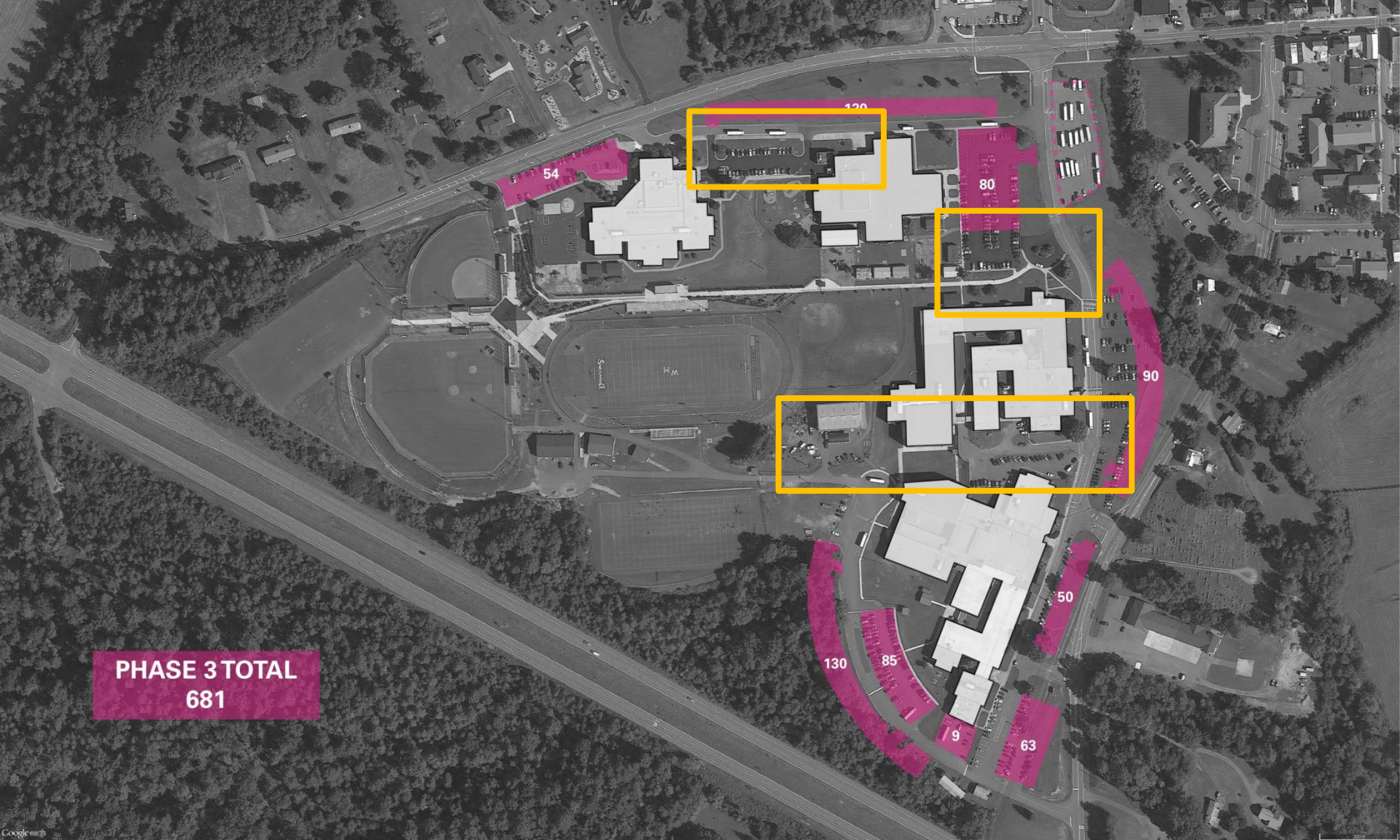


TRAFFIC + SAFETY
STANARDSVILLE CAMPUS – EXISTING





PHASE 2 TOTAL
801



PHASE 3 TOTAL
681

SITE MASTERPLAN

(Traffic + Safety, Parking, Landscaping)

S3 Convert Interior Parking Areas to Landscape

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$4.50	60,111	\$270,500		
Paving	\$10	-			
Landscape	\$250,000 (per acre)	139,075 (3.19 acres)	\$797,500	20%	
Contingency		25%	\$199,375		
Total 2016			\$1,267,375	\$253,475	\$1,520,849
		2017	\$1,321,238	\$264,248	\$1,585,485
		2018	\$1,377,391	\$275,478	\$1,652,869
		2019	\$1,435,930	\$287,186	\$1,723,116
		2020	\$1,496,957	\$299,391	\$1,796,348
		2021	\$1,560,577	\$312,115	\$1,872,693

RANGE:

\$1.52M - \$1.76M

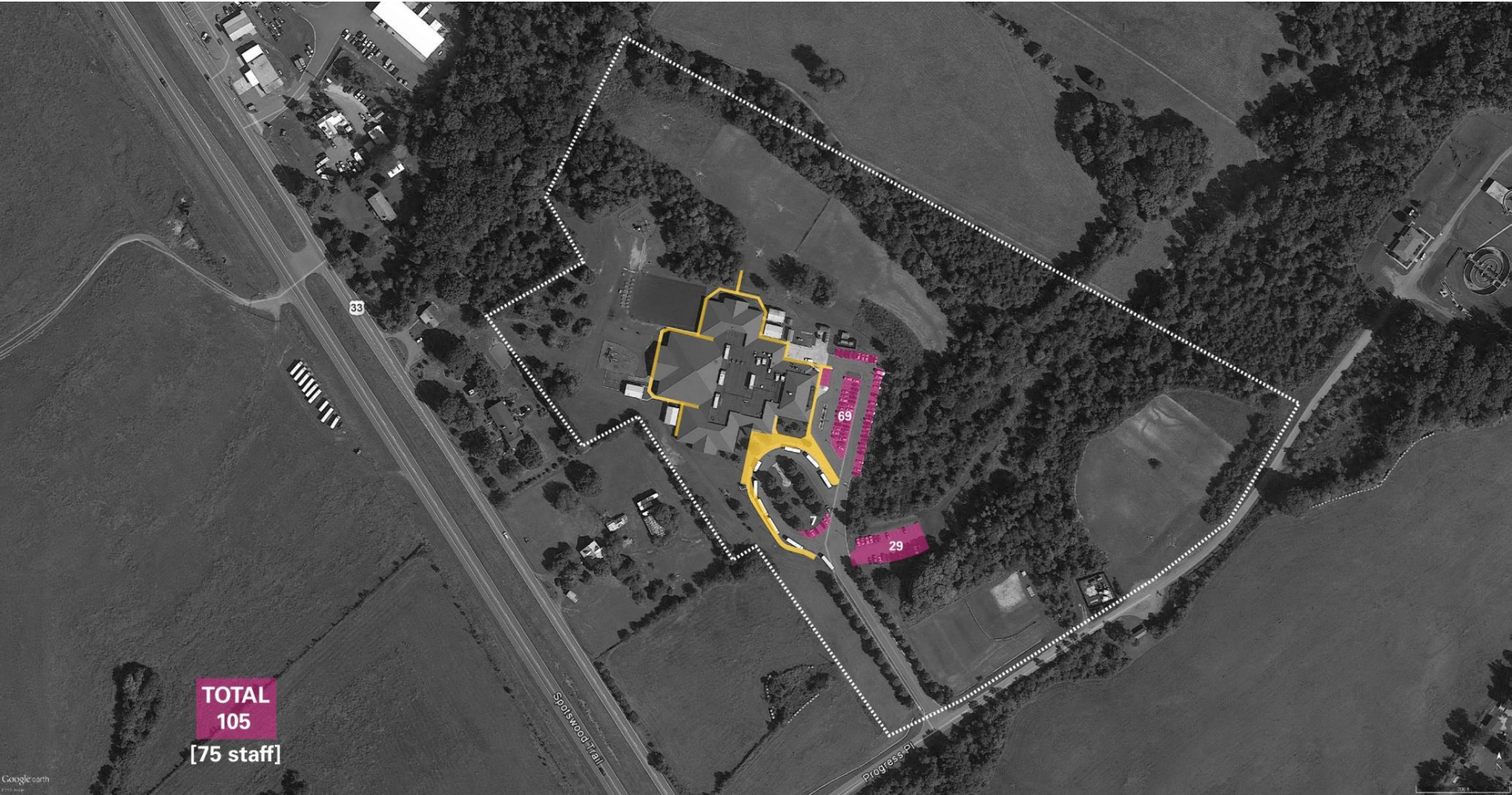
1. Due to uncertainty of final scope of improvements
2. Landscape number could be as much as \$300,000 per acre to account for unknown requirements of SWM system and/or existing issues.

* This project is the final move in the campus masterplan to create a green, park-like campus. Parking areas on the interior side of the loop roads are converted to landscape spaces for pedestrian, outdoor learning, and athletic use. Contingency provided to account for potential of utility conflicts with new stormwater designs.

** Contingency provided to account for potential of utility conflicts with new stormwater designs.

COST PROJECTIONS

STANARDSVILLE CAMPUS TRAFFIC + SAFETY



TOTAL
105

[75 staff]

TRAFFIC + SAFETY
RUCKERSVILLE – EXISTING



TOTAL
165
[75 staff]

TRAFFIC + SAFETY
RUCKERSVILLE - S4

SITE MASTERPLAN

(Traffic + Safety, Parking, Landscaping)

S4 Ruckersville

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$4.50	-	\$0		
Paving	\$10	30,000	\$300,000		
Landscape	\$300,000 (per acre)	2,500 (0.05 acres)	\$15,000	20%	
Contingency		25%	\$78,750		
Total 2016			\$393,750	\$78,750	\$472,500
		2017	\$410,484	\$82,097	\$492,581
		2018	\$427,930	\$85,586	\$513,516
		2019	\$446,117	\$89,223	\$535,340
		2020	\$465,077	\$93,015	\$558,092
		2021	\$484,843	\$96,969	\$581,811

RANGE:

\$472K - \$533K

1. Due to uncertainty of final scope of improvements
2. Landscape number could be as much as \$500,000 per acre to account for unknown requirements of SWM system and/or existing issues.

* This project adds parking on the existing play field - location TBD. Parking could be accessed directly off of Progress Pl., in lieu of the entry road to the school to limit number of vehicle crossings.

** Landscape cost accounts for any plantings, as well as walks from the parking area to the school.

*** Contingency provided to account for potential of utility conflicts with new stormwater designs.

Site improvement project schedules are difficult to predict

Surveys, Utility Mapping + other testing

Studies – traffic, stormwater

Design

Agency Reviews + Approvals

Could Site Improvement Projects start in Summer 2017

Conceivable that **S1** could be done over the Summer 2017
(schedule would be very tight)

Likely best approach is to fully study, design, and obtain agency approval for full masterplan – then construct in phases starting Summer 2018 (depending on the first project targeted)

Requires more design fees up front, but ensures that each piece is related, preventing any need to revise recent work in subsequent phases.

CONSTRUCTION COSTS

SF
PER
PUPIL



COST
PER SF



PROJ
COSTS



INFLATION



TOTAL
COST

E: 125 sf
M: 150 sf
H: 170 sf

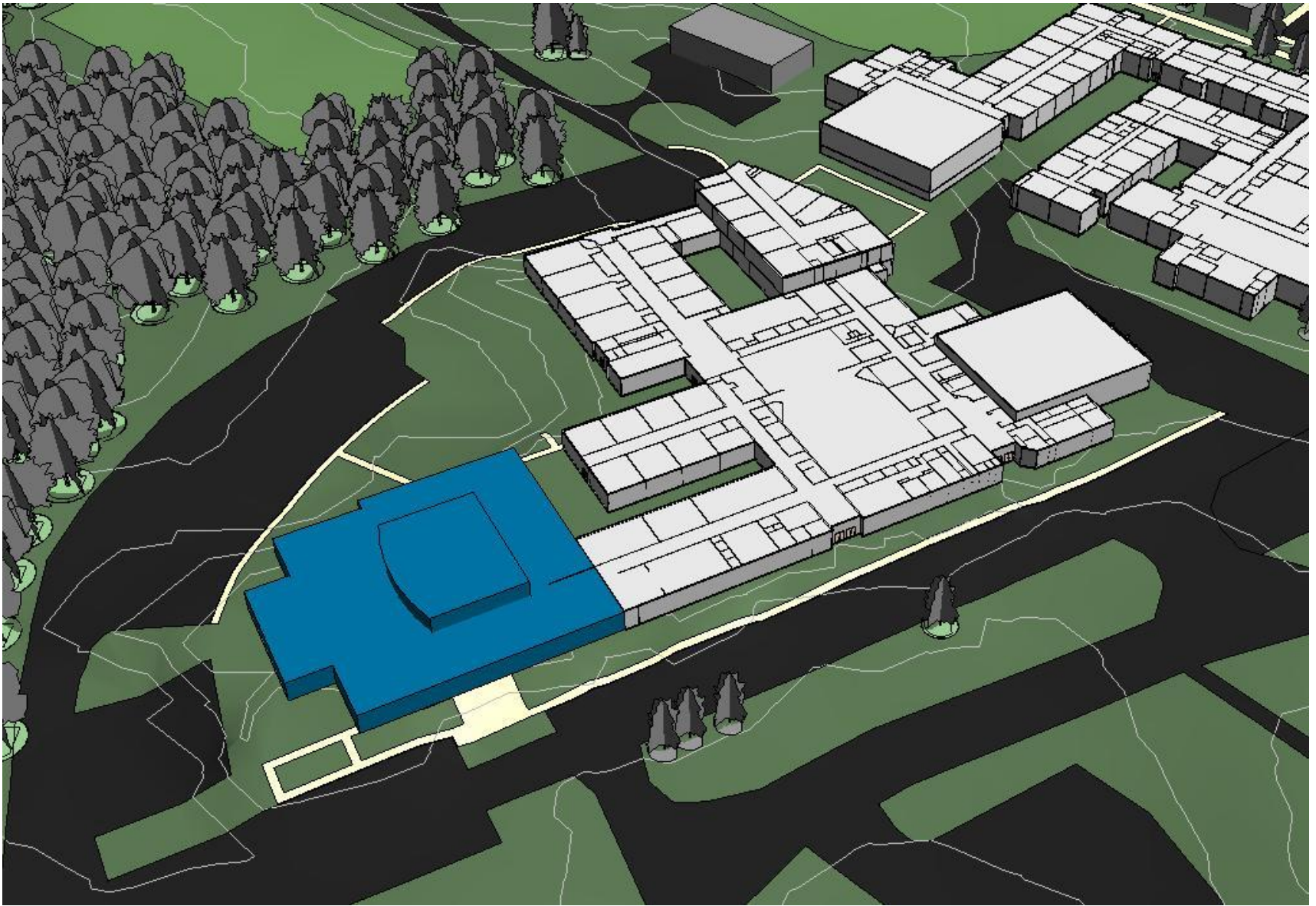
E: \$225
M: \$250
H: \$250

20% renovation
30% new construction

Furniture, Fixtures, Equip
Technology / AV
Survey / Testing
Utility Costs / Rights-of-Way
Building Commissioning
Architecture / Engineering Fees
Permits
Legal Fees
Financing Costs
Contingency

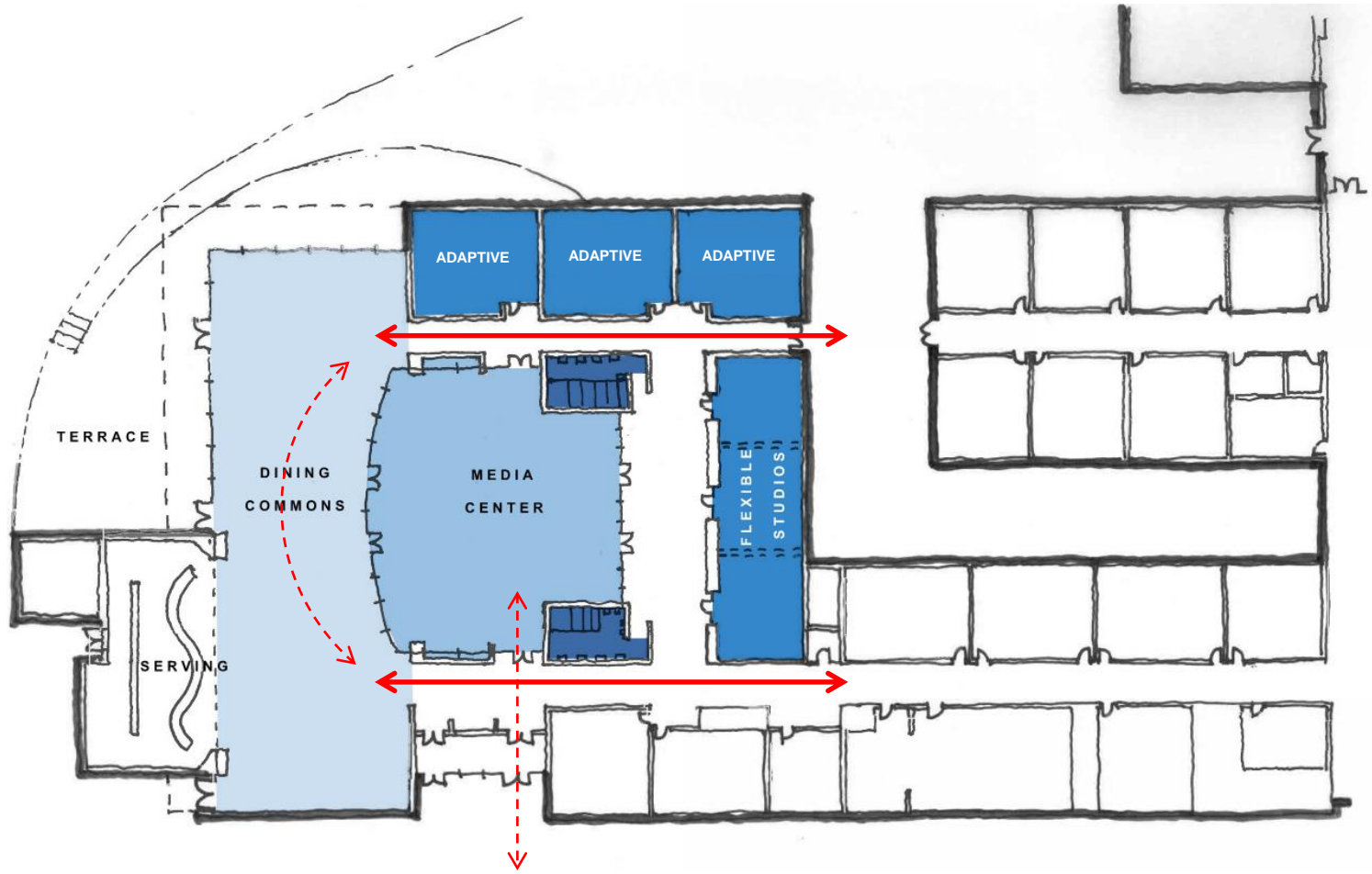
4.25% Annually

*Land costs not included in typical project cost estimates



PROPOSED DINING/MEDIA CENTER RENOVATION

WILLIAM MONROE HIGH SCHOOL



370 Seats Dining, 630 Seats Assembly
(340 fixed seats currently)

PROPOSED DINING/MEDIA CENTER RENOVATION

WILLIAM MONROE HIGH SCHOOL



VMDO Precedent - DINING

DISCOVERY ELEMENTARY | ARLINGTON, VA

WMHS RENOVATION / ADDITION
(Cafeteria, Media Center, Flexible Learning)

H1					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$20	11,341	\$226,820		
Renov	\$160	11,970	\$1,915,200	30%	
New	\$250	17,342	\$4,335,500		
Total 2016		29,312	\$6,477,520	\$1,943,256	\$8,420,776
		2017	\$6,752,815	\$2,025,844	\$8,778,659
		2018	\$7,039,809	\$2,111,943	\$9,151,752
		2019	\$7,339,001	\$2,201,700	\$9,540,701
		2020	\$7,650,909	\$2,295,273	\$9,946,181
		2021	\$7,976,072	\$2,392,822	\$10,368,894

* Option assumes any new equipment costs are in the Central Kitchen costs.

H1A without Central Kitchen					
	\$ /sf	GSF *	Construction Cost	Project Cost	Total Cost
Demo	\$20	11,341	\$226,820		
Renov	\$160	11,970	\$1,915,200	30%	
New	\$250	19,092	\$4,773,000		
**Equip			\$400,000		
Total 2016		31,062	\$7,315,020	\$2,194,506	\$9,509,526
		2017	\$7,625,908	\$2,287,773	\$9,913,681
		2018	\$7,950,009	\$2,385,003	\$10,335,012
		2019	\$8,287,885	\$2,486,365	\$10,774,250
		2020	\$8,640,120	\$2,592,036	\$11,232,156
		2021	\$9,007,325	\$2,702,198	\$11,709,523

* Gross square footage (GSF) difference a result of additional kitchen/serving area required to store, prepare, and serve food to growing enrollment, without the Central Kitchen.

** Equipment costs required to upgrade existing equipment (based on age) and supplement with more equipment to address growing enrollment.

RANGE:

\$8.42M - \$10.13M

* Due to potential for higher \$/sf for demolition scope

RANGE:

\$9.51M - \$11.2M

* Due to potential for higher \$/sf for demolition scope

WMHS RENOVATION / ADDITION
(Cafeteria, Media Center, Flexible Learning)

Design	19 SEP 2016	6 mo.*
Bidding + Negotiation	17 MAR 2017	2 mo.
Construction Mobilization	15 MAY 2017	2 wk.
Demolition/Construction Start	05 JUN 2017	12 mo.
Substantial Completion	01 JUN 2018	
GCPS Move-in / Setup	JUN-JULY 2018	1-2 mo.

* Tight design schedule based on assumption that addition/renovation opening needs to coincide with beginning of school year.



VMDO PRECEDENT - INFILL

JOHN HANDLEY HIGH SCHOOL | WINCHESTER, VA

WMHS COURTYARD INFILL

(Satellite Dining, Flexible Meeting, Student Gathering)

6

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo					
Renov				30%	
New	\$200	3,800	\$760,000		
Total 2016		3,800	\$760,000	\$228,000	\$988,000
		2017	\$792,300	\$237,690	\$1,029,990
		2018	\$825,973	\$247,792	\$1,073,765
		2019	\$861,077	\$258,323	\$1,119,400
		2020	\$897,672	\$269,302	\$1,166,974
		2021	\$935,823	\$280,747	\$1,216,570

* Project includes glass roof and supporting structure, floor infill, MEP, AV, and window replacement of surrounding classrooms for acoustics.

RANGE:

\$988K - \$1.24M

* Due to small size of this project, \$/sf could be higher (\$250/sf)

WMHS COURTYARD INFILL

(Satellite Dining, Flexible Meeting, Student Gathering)

MULTI-PURPOSE SPACE

Satellite dining area

Flexible meeting space

Student gathering

Break-out instructional / project space

FLEX SPACE (during construction)

Reduce size and cost of temporary facilities needed during Dining/Media Center Project

Temporary dining space (192 seats min.)

BIDDING + CONSTRUCTION

Potential cost savings (general conditions) if combined with Dining/Media Center project

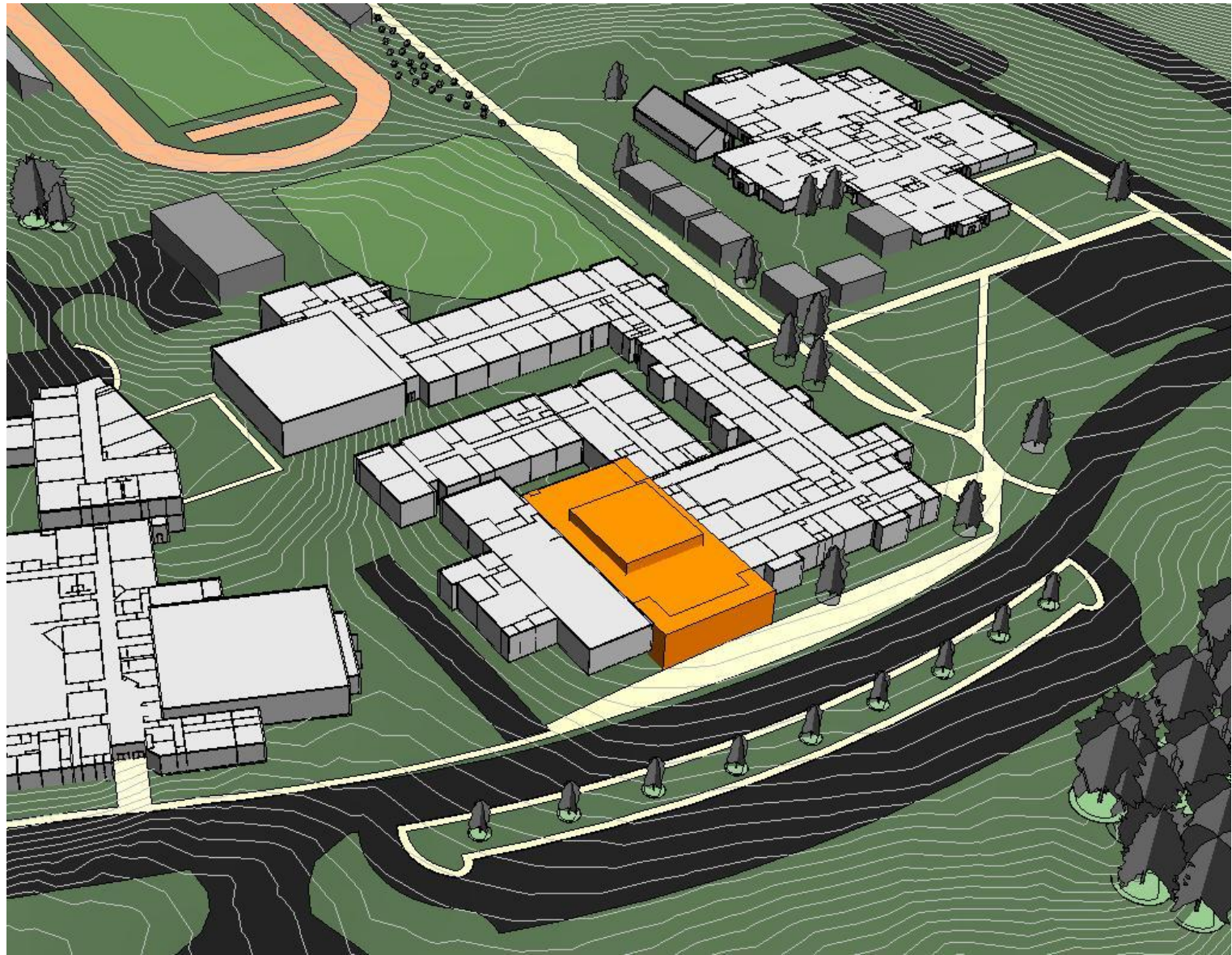
WMHS COURTYARD INFILL

(Satellite Dining, Flexible Meeting, Student Gathering)

Design	19 SEP 2016	4 mo.*
Bidding + Negotiation	15 JAN 2017	2 mo.**
Construction Mobilization	13 MAR 2017	5 mo.
Substantial Completion	07 AUG 2017	
GCPS Move-in / Setup		2 wk.

* Tight design schedule based on assumption that addition/renovation opening needs to coincide with beginning of school year, and potential desire to use the new space as temporary space during addition/renovation of Dining / Media Center.

** Aligning the design and bid period of this project with the Dining / Media Center project could result in some bidding efficiencies and reduced costs, as well as minimizing number of potential contractors working with.



RENOVATE DINING/MEDIA + RELOCATE ADMIN
MIDDLE SCHOOL



RENOVATE DINING/MEDIA + RELOCATE ADMIN

MIDDLE SCHOOL



CSO Architects

MIDDLE SCHOOL - NEW IDENTITY

WMMS RENOVATION / ADDITION

(Cafeteria, Media Center, Admin)

M1					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$12	7,465	\$89,580		
Renov	\$160	13,922	\$2,227,520	30%	
New	\$200	1,496	\$299,200		
Total 2016		15,418	\$2,616,300	\$784,890	\$3,401,190
		2017	\$2,727,493	\$818,248	\$3,545,741
		2018	\$2,843,411	\$853,023	\$3,696,435
		2019	\$2,964,256	\$889,277	\$3,853,533
		2020	\$3,090,237	\$927,071	\$4,017,308
		2021	\$3,221,572	\$966,472	\$4,188,044

* Option assumes any new equipment costs are in the Central Kitchen costs.

M1A without Central Kitchen					
	\$ /sf	GSF *	Construction Cost	Project Cost	Total Cost
Demo	\$12	7,465	\$89,580		
Renov	\$160	13,922	\$2,227,520	30%	
New	\$200	2,996	\$599,200		
**Equip			\$300,000		
Total 2016		16,918	\$3,216,300	\$964,890	\$4,181,190
		2017	\$3,352,993	\$1,005,898	\$4,358,891
		2018	\$3,495,495	\$1,048,648	\$4,544,143
		2019	\$3,644,053	\$1,093,216	\$4,737,270
		2020	\$3,798,926	\$1,139,678	\$4,938,603
		2021	\$3,960,380	\$1,188,114	\$5,148,494

* Gross square footage (GSF) difference a result of additional kitchen/serving area required to store, prepare, and serve food to growing enrollment, without the Central Kitchen.

** Equipment costs required to upgrade existing equipment (based on age) and supplement with more equipment to address growing enrollment.

RANGE:

\$3.4M - \$3.48M

* Due to potential for higher \$/sf for demolition scope

RANGE:

\$4.18M - \$4.26M

* Due to potential for higher \$/sf for demolition scope

WMMS RENOVATION / ADDITION

(Cafeteria, Media Center, Admin)

Design

9-12 months

Bidding + Negotiation

2 months

Construction

12-15 months

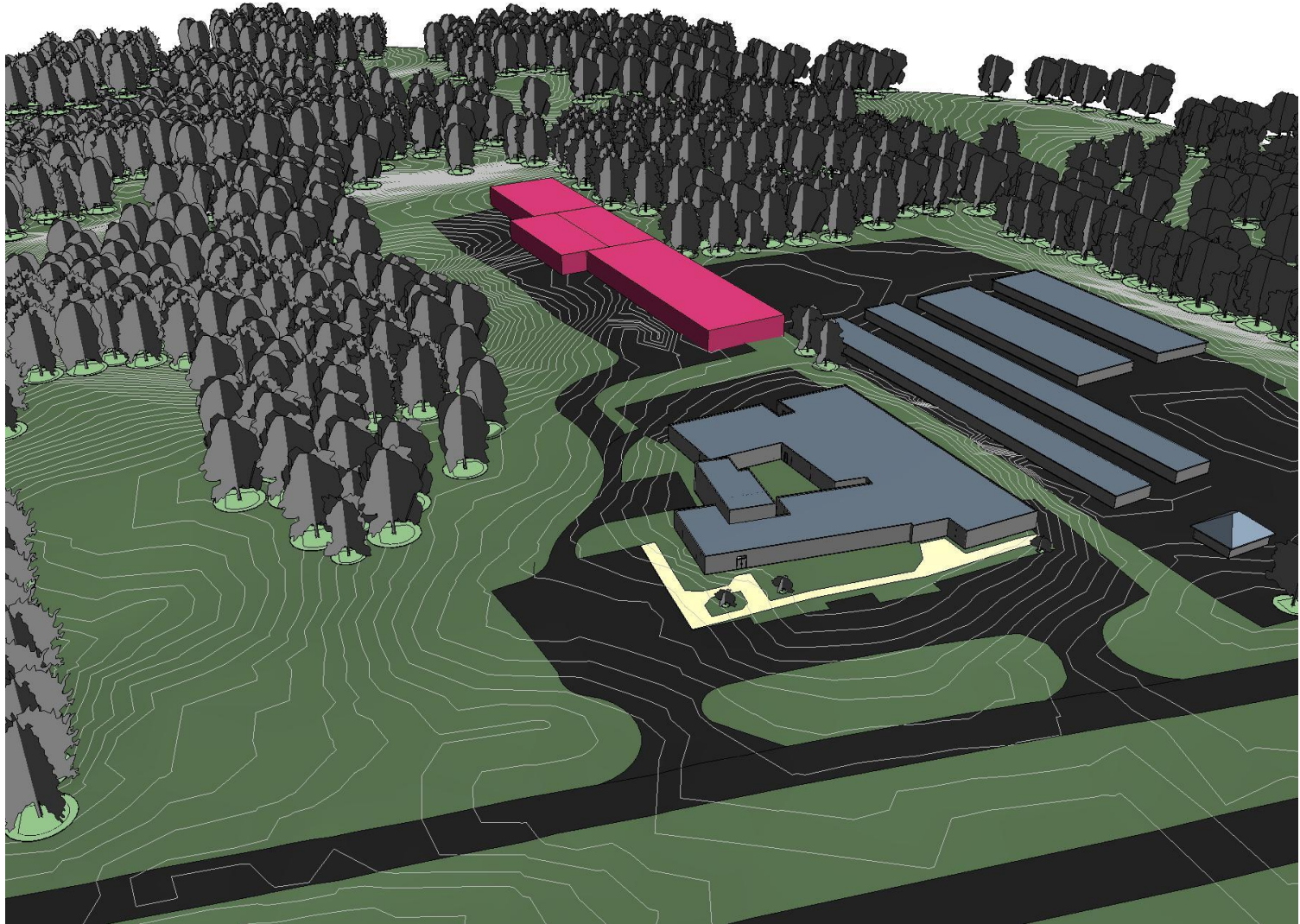
GCPS Move-in / Setup

1-2 months

24-31 months

PROJECT TIMELINE

MIDDLE SCHOOL



CENTRAL OPERATIONS FACILITY

CENTRAL KITCHEN, MAINTENANCE, STORAGE + TRAINING

CENTRAL OPERATIONS FACILITY

(Kitchen, Maintenance, Training + Storage)

G1 Central Kitchen Only

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo					
Renov				20%	
New	\$180	15,500	\$2,790,000		
*Equip			\$3,000,000		
Total 2016		15,500	\$5,790,000	\$1,158,000	\$6,948,000
		2017	\$6,036,075	\$1,207,215	\$7,243,290
		2018	\$6,292,608	\$1,258,522	\$7,551,130
		2019	\$6,560,044	\$1,312,009	\$7,872,053
		2020	\$6,838,846	\$1,367,769	\$8,206,615
		2021	\$7,129,497	\$1,425,899	\$8,555,396

G1A Full Facility

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo					
Renov				20%	
New	\$180	32,800	\$5,904,000		
*Equip			\$3,000,000		
Total 2016		32,800	\$8,904,000	\$1,780,800	\$10,684,800
		2017	\$9,282,420	\$1,856,484	\$11,138,904
		2018	\$9,676,923	\$1,935,385	\$11,612,307
		2019	\$10,088,192	\$2,017,638	\$12,105,830
		2020	\$10,516,940	\$2,103,388	\$12,620,328
		2021	\$10,963,910	\$2,192,782	\$13,156,692

* Equipment costs include necessary equipment replacement at each of the (5) existing school kitchens to facilitate re-warming and serving. Existing refrigeration assumed to be sufficient at each school.

RANGE:

\$6.95M - \$7.55M

* Due to potential cost range for kitchen equipment (at Central Facility and existing schools)

RANGE:

\$10.68M - \$11.28M

* Due to potential cost range for kitchen equipment (at Central Facility and existing schools)

COST PROJECTIONS

CENTRAL KITCHEN / OPERATIONS FACILITY

CENTRAL OPERATIONS FACILITY

(Kitchen, Maintenance, Training + Storage)

Design

9-12 months

Bidding + Negotiation

2 months

Construction

12 months

GCPS Move-in / Setup

1-2 months

24-28 months

PROJECT TIMELINE

CENTRAL KITCHEN / OPERATIONS FACILITY

ANALYSIS

	BLDG	EQUIP
Difference in HS project cost without Central Kitchen	\$437,500	\$400,000
Difference in MS project cost without Central Kitchen	\$300,000	\$300,000
Equipment Upgrades/Replacement at other (3) schools		\$525,000
TOTAL ADDITIONAL COST (without Central Kitchen)	\$737,500	\$1,225,000

Central Kitchen – Building	\$2,790,000	\$3,000,000
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EQUIPMENT

Central Kitchen	\$2,050,000
HS Warming/Serving	\$260,000
MS Warming/Serving	\$210,000
ES Warming/Serving	\$480,000

\$950,000

Total School Equip

\$275,000

Equip Savings
w/ Central Kitchen

All future kitchens are cheaper with a Central Kitchen

New HS Kitchen **\$650,000**

New MS Kitchen **\$450,000**

New ES Kitchen **\$350,000**



NEW ELEMENTARY SCHOOL

SITE TBD

NEW ELEMENTARY

(650 students VDOE; 550 students actual)

E1					
	\$ /sf	GSF *	Construction Cost	Project Cost	Total Cost
Demo					
Renov				30%	
New	\$220	81,250	\$17,875,000		
Site	\$40		\$3,250,000		
Total 2016		81,250	\$21,125,000	\$6,337,500	\$27,462,500
		2017	\$22,022,813	\$6,606,844	\$28,629,656
		2018	\$22,958,782	\$6,887,635	\$29,846,417
		2019	\$23,934,530	\$7,180,359	\$31,114,889
		2020	\$24,951,748	\$7,485,524	\$32,437,272
		2021	\$26,012,197	\$7,803,659	\$33,815,856

(750 students VDOE; 630 students actual)

E1					
	\$ /sf	GSF *	Construction Cost	Project Cost	Total Cost
Demo					
Renov				30%	
New	\$220	93,750	\$20,625,000		
Site	\$40		\$3,750,000		
Total 2016		93,750	\$24,375,000	\$7,312,500	\$31,687,500
		2017	\$25,410,938	\$7,623,281	\$33,034,219
		2018	\$26,490,902	\$7,947,271	\$34,438,173
		2019	\$27,616,766	\$8,285,030	\$35,901,795
		2020	\$28,790,478	\$8,637,143	\$37,427,622
		2021	\$30,014,074	\$9,004,222	\$39,018,296

* Gross square footage (GSF) assumes 125 sf / student (VDOE).

*Land costs not included in typical project cost estimates

RANGE:

\$27.5M - \$31.7M

* Due to unknowns of site development costs and size of school needed

NEW ELEMENTARY

(650 students VDOE; 550 students actual)

Design

12 months

Bidding + Negotiation

2 months

Construction

18 months

GCPS Move-in / Setup

2 months

34 months

*Land costs not included in typical project cost estimates

ELEMENTARY

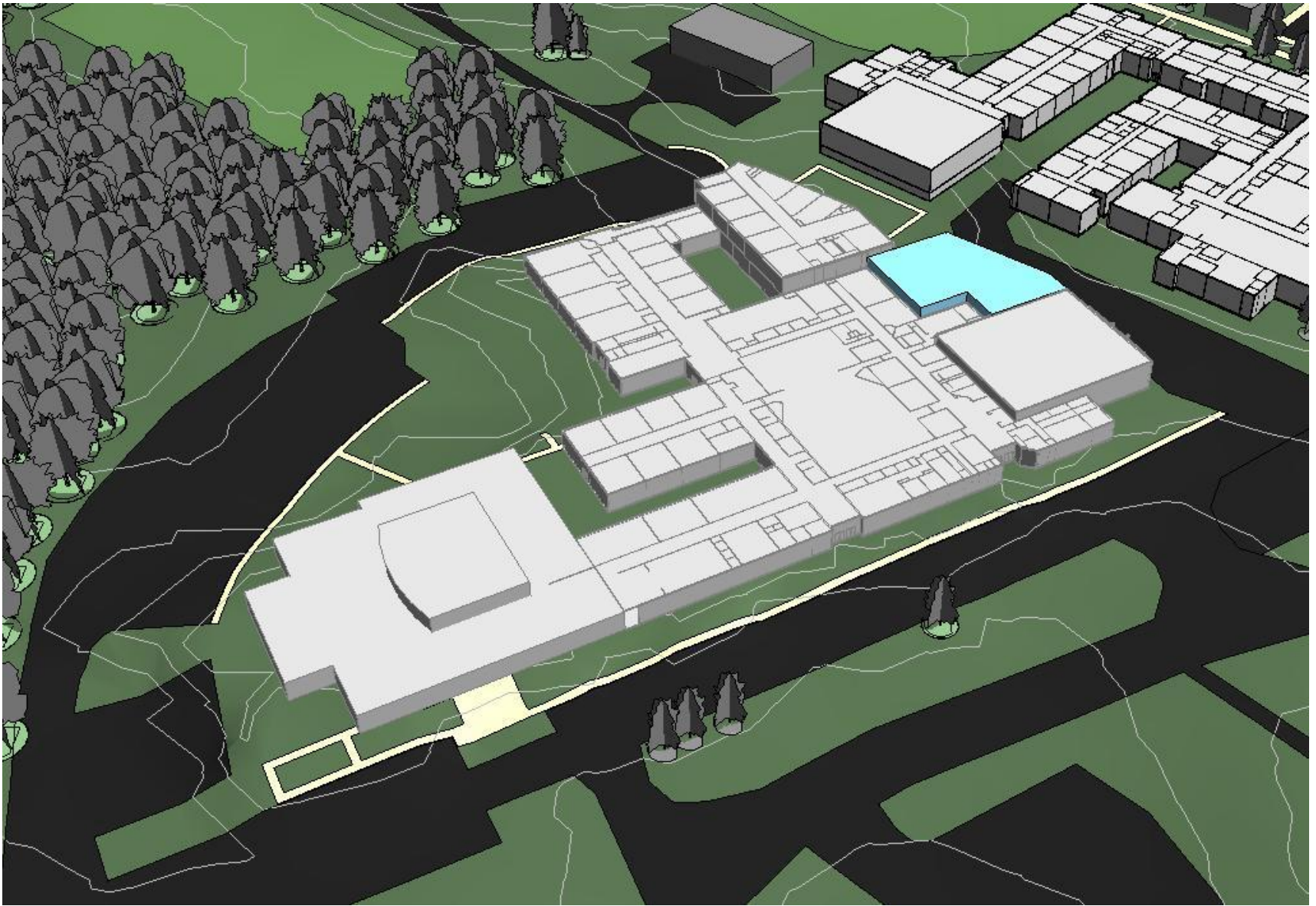
750 students (630 actual)	93,750 GSF
125 sf / student	\$220 per sf
	\$20,625,000 Building
	\$3,750,000 Site (\$40/sf)
	\$24,375,000 Total Construction
	\$7,312,500 Project Costs (30%)
	\$31,687,500 TOTAL PROJECT (2016)

MIDDLE

1100 students (900 actual)	165,000 GSF
150 sf / student	\$250 per sf
	\$41,250,000 Building
	\$6,600,000 Site (\$40/sf)
	\$47,850,000 Total Construction
	\$14,355,000 Project Costs (30%)
	\$62,205,000 TOTAL PROJECT (2016)

HIGH

1500 students (1200 actual)	255,000 GSF
170 sf / student	\$250 per sf
	\$63,750,000 Building
	\$10,200,000 Site (\$40/sf)
	\$73,950,000 Total Construction
	\$22,185,000 Project Costs (30%)
	\$96,135,000 TOTAL PROJECT (2016)



AUXILIARY GYM ADDITION
WILLIAM MONROE HIGH SCHOOL

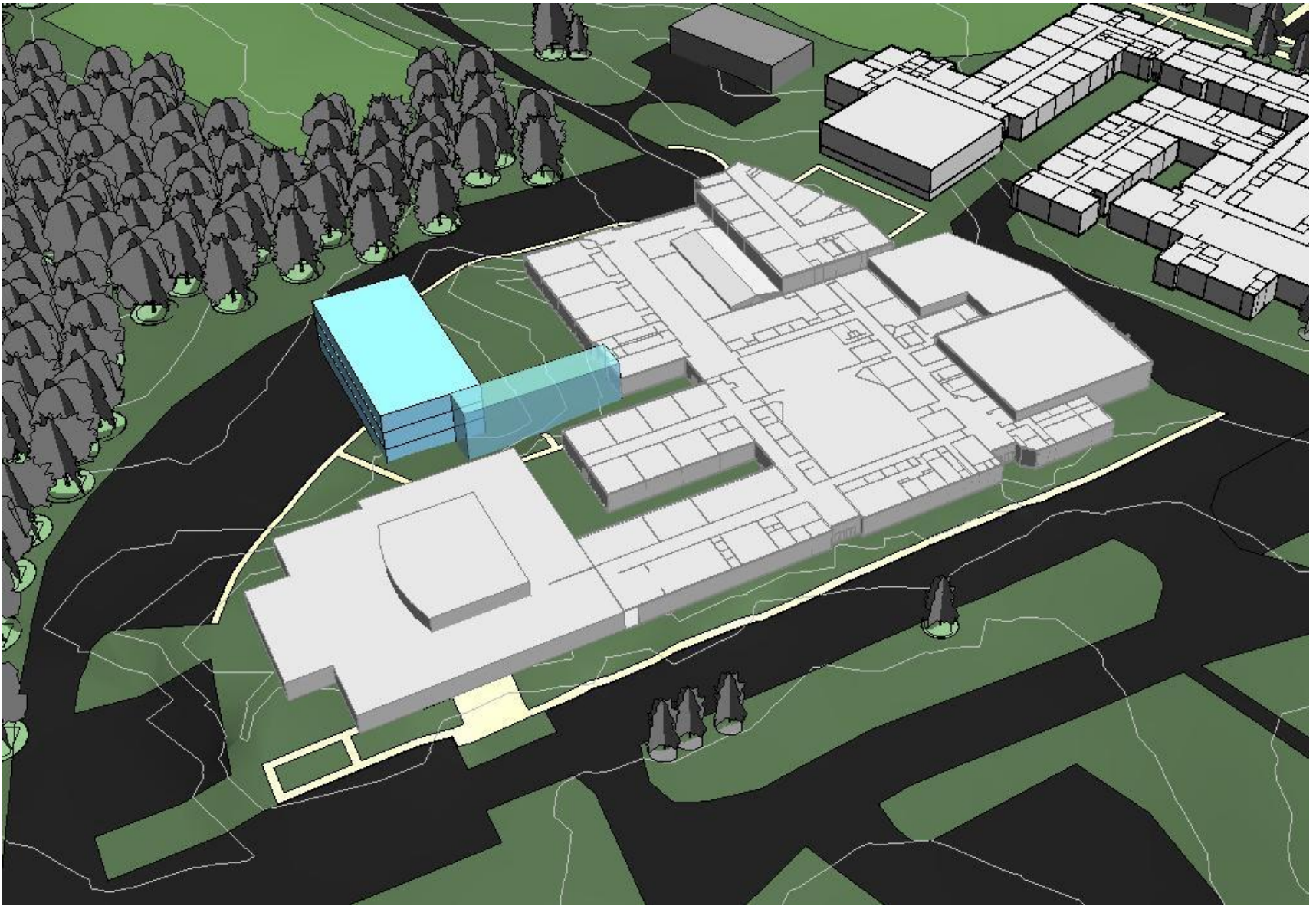
WMHS AUXILIARY GYM ADDITION
 (Satellite Dining, Flexible Meeting, Student Gathering)

H6					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo					
Renov					
New	\$200	7,731	\$1,546,100	30%	
Total 2016		7,731	\$1,546,100	\$463,830	\$2,009,930
		2017	\$1,611,809	\$483,543	\$2,095,352
		2018	\$1,680,311	\$504,093	\$2,184,404
		2019	\$1,751,724	\$525,517	\$2,277,242
		2020	\$1,826,173	\$547,852	\$2,374,024
		2021	\$1,903,785	\$571,135	\$2,474,920

RANGE:

\$2.0M - \$2.51M

* Due to small size of this project, \$/sf could be higher (\$250/sf)



CLASSROOM ADDITION (+300 students)
WILLIAM MONROE HIGH SCHOOL

WMHS CLASSROOM ADDITION

(375 students VDOE; 300 students actual)

H8					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo					
Renov					
New	\$225	63,750	\$14,343,750	30%	
Total 2016		63,750	\$14,343,750	\$4,303,125	\$18,646,875
		2017	\$14,953,359	\$4,486,008	\$19,439,367
		2018	\$15,588,877	\$4,676,663	\$20,265,540
		2019	\$16,251,404	\$4,875,421	\$21,126,826
		2020	\$16,942,089	\$5,082,627	\$22,024,716
		2021	\$17,662,128	\$5,298,638	\$22,960,766

* Gross square footage (GSF) assumes 170 sf / student (VDOE).

RANGE:

\$18.6M - \$20.7M

* \$/sf could be higher (\$250/sf) based on final programming and site location

WMHS CLASSROOM ADDITION

(375 students VDOE; 300 students actual)

Design

12 months

Bidding + Negotiation

2 months

Construction

12-18 months

GCPS Move-in / Setup

1-2 months

27-34 months

PROJECT TIMELINE

HIGH SCHOOL CLASSROOM ADDITION



VERTICAL CLASSROOM ADDITION & QUAD
MIDDLE SCHOOL



BUILDING SECTION

- 1 ENTRY & COMMONS
- 2 MEDIA CENTER
- 3 FALCON ROOM
- 4 MONUMENTAL STAIR
- 5 LEARNING HUB
- 6 NEW ACADEMIC WINGS
- 7 NEW COURTYARDS
- 8 EXISTING BUILDING

VMDO PRECEDENT - VERTICAL ADDITION

FAUQUIER HIGH | WARRENTON, VA

WMMS CLASSROOM ADDITION

Demolish Central Wing for Quad
Addition/Renovatino of North Classroom Bar

M3					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo *	\$20	16,400	\$328,000		
Renov	\$160	18,077	\$2,892,320	30%	
New **	\$250	49,575	\$12,393,750		
Site *			\$264,000		
Total 2016		67,652	\$15,878,070	\$4,763,421	\$20,641,491
		2017	\$16,552,888	\$4,965,866	\$21,518,754
		2018	\$17,256,386	\$5,176,916	\$22,433,301
		2019	\$17,989,782	\$5,396,935	\$23,386,717
		2020	\$18,754,348	\$5,626,304	\$24,380,652
		2021	\$19,551,408	\$5,865,422	\$25,416,830

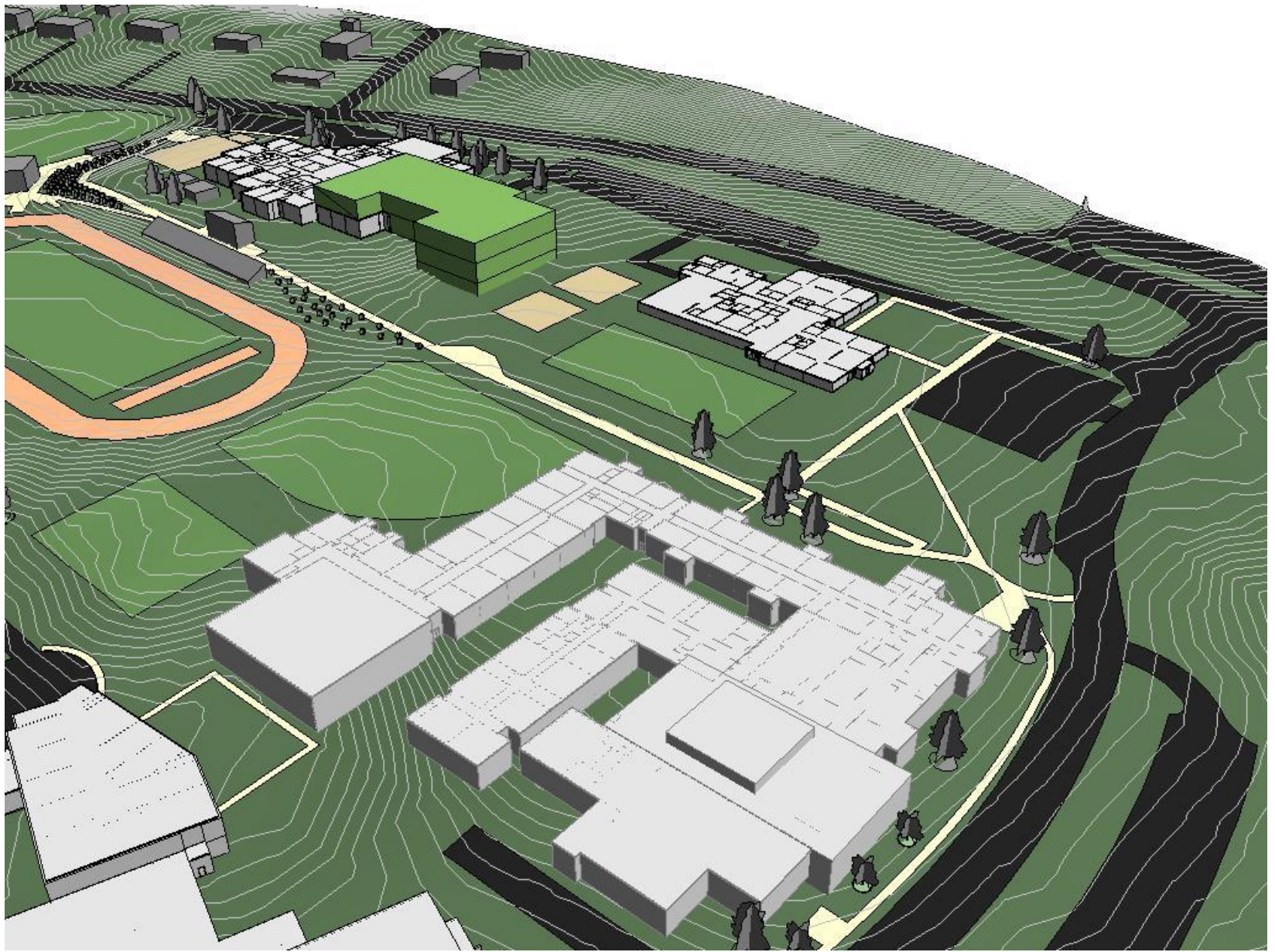
* Central classroom wing demolished to create Middle School-specific outdoor space. Open space also creates a more coherent circulation strategy for the school. Multi-story approach allows for improvements without occupying valuable land on Main Campus.

** Addition seeks to bring middle school classroom sizes up to state recommended minimum (800 sf) for the majority of classrooms in building. Addition will also create wider corridors and provide more flexible student and learning space.

RANGE:

\$20.6M - \$23.2M

* Due to unknown amount of north wing that would be demolished vs. renovated.



COMBINED NATHANAEEL GREENE ELEMENTARY

STANARDSVILLE CAMPUS

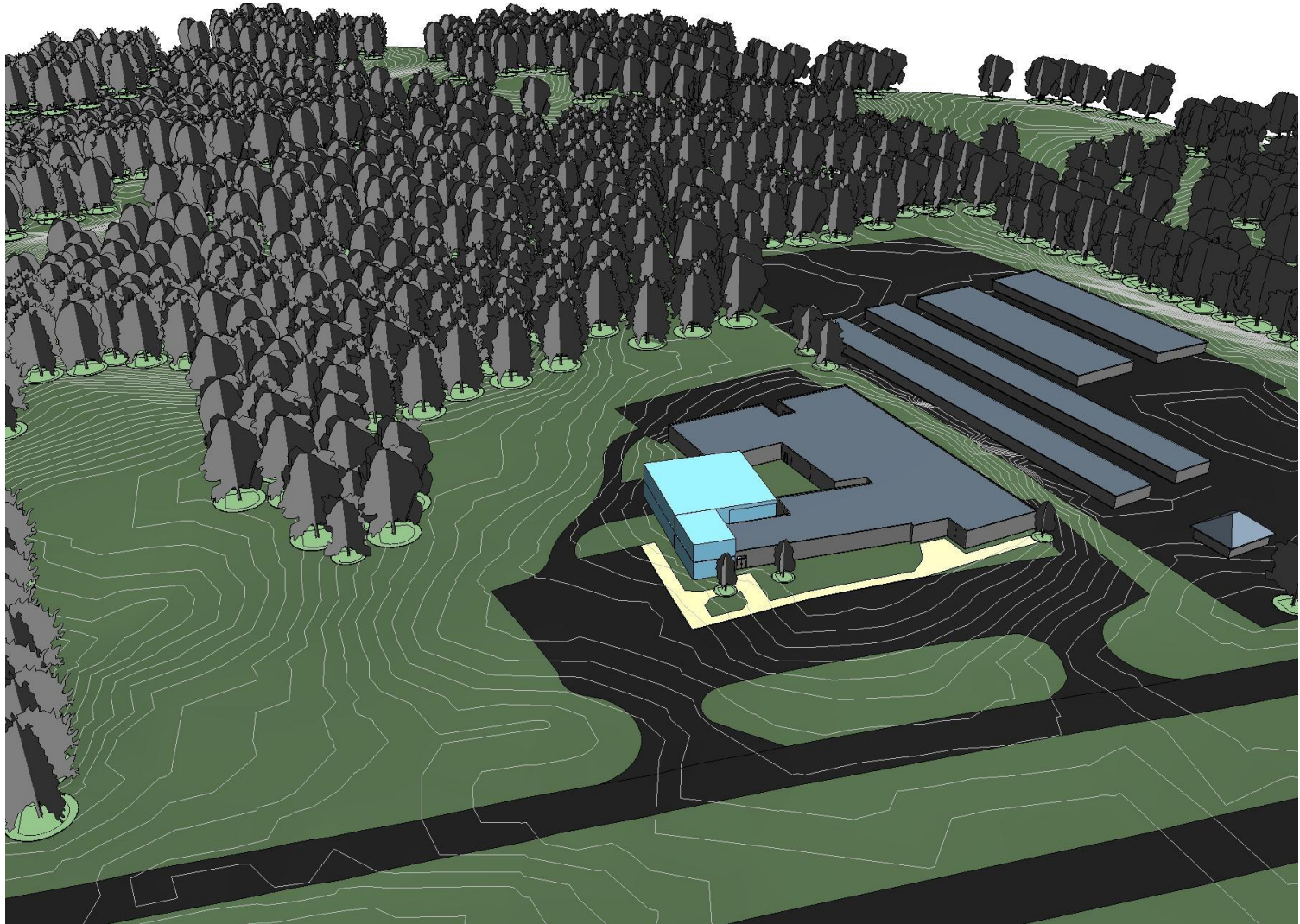
COMBINED NGES

(Combine NGPS/NGES as an addition to NGES)

E3					
	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$12	2,000	\$24,000		
Renov **	\$160	6,500	\$1,040,000	30%	
New *	\$220	46,875	\$10,312,500		
Total 2016		53,375	\$11,376,500	\$3,412,950	\$14,789,450
		2017	\$11,860,001	\$3,558,000	\$15,418,002
		2018	\$12,364,051	\$3,709,215	\$16,073,267
		2019	\$12,889,523	\$3,866,857	\$16,756,381
		2020	\$13,437,328	\$4,031,198	\$17,468,527
		2021	\$14,008,415	\$4,202,524	\$18,210,939

* Assumes (5) classes for each grade K-2 at state capacity of 25/classroom (375 students x 125 sf/student). This option assumes PK program remains at NGPS.

** Some demolition and renovation will be required within existing building to create a seamless connection of the addition and new student population.



TECHNOLOGY HUB/CLASSROOM ADDITION
TECH CENTER



TECHNOLOGY HUB/CLASSROOM ADDITION

TECH CENTER

TECH CENTER RENOVATION / ADDITION

(Identity + Entry, Classrooms, Student Life)

H10

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$20	4,455	\$89,100		
Renov	\$160	1,580	\$252,800	30%	
New	\$220	10,816	\$2,379,520		
Total 2016		12,396	\$2,721,420	\$816,426	\$3,537,846
		2017	\$2,837,080	\$851,124	\$3,688,204
		2018	\$2,957,656	\$887,297	\$3,844,953
		2019	\$3,083,357	\$925,007	\$4,008,364
		2020	\$3,214,399	\$964,320	\$4,178,719
		2021	\$3,351,011	\$1,005,303	\$4,356,315

* Project reconfigures entry and administrative areas to create greater building identity.

** Renovation creates shared space for all programs and building occupants for technology, gathering and potentially dining.

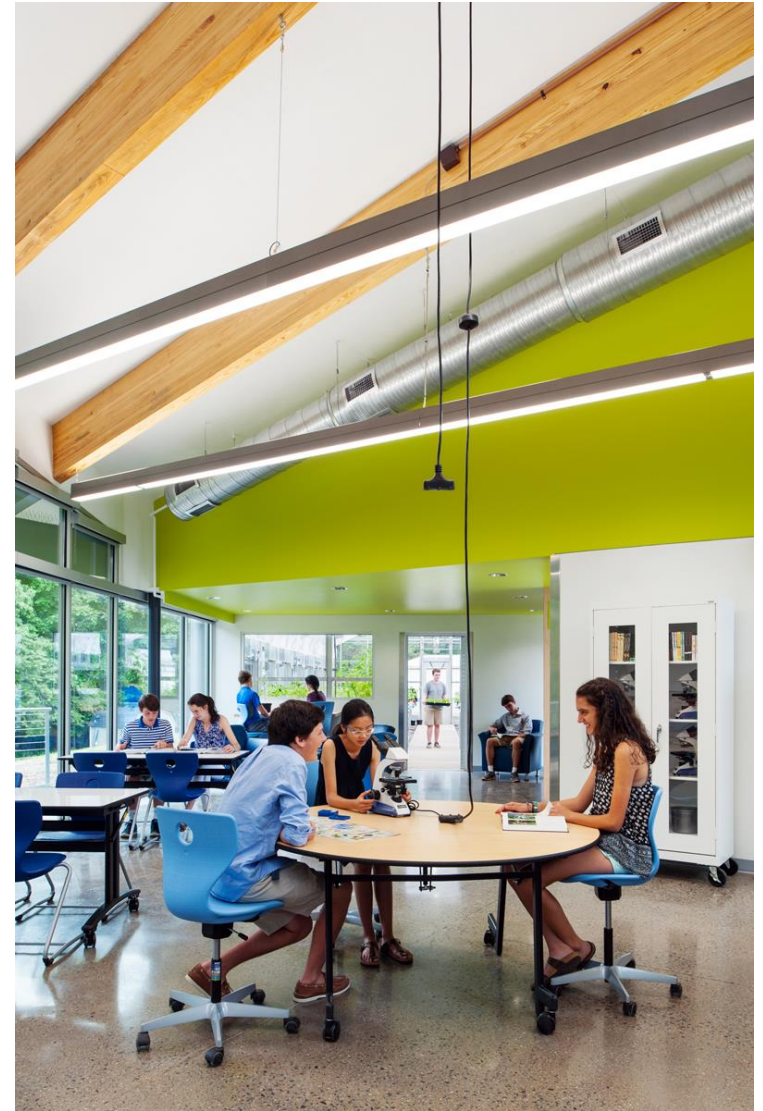
*** Classrooms associated with renovation/addition would increase High School capacity by 140-160 pupils.

RANGE:

\$3.54M - \$3.96M

* Due to small size of this project, new construction \$/sf could be higher (\$250/sf)

**Scope of project is not yet defined and sf of new construction could be larger.



VMDO Precedent – ENVIRONMENTAL SCIENCE ACADEMY

WESTERN ALBEMARLE HIGH | CROZET, VA

AG / SHOP RELOCATION

Relocate Greenhouse
Construct New classroom/shop
demolish existing building

H4

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$15	8,000	\$120,000		
Greenhouse	\$55	1,000	\$55,000	20%	
New	\$400	1,500	\$600,000		
Total 2016		2,500	\$775,000	\$155,000	\$930,000
		2017	\$807,938	\$161,588	\$969,525
		2018	\$842,275	\$168,455	\$1,010,730
		2019	\$878,072	\$175,614	\$1,053,686
		2020	\$915,390	\$183,078	\$1,098,467
		2021	\$954,294	\$190,859	\$1,145,152

* Masterplan project to relocate support buildings on the interior of the site, in order to free up outdoor space for student and athletic purposes (particularly for Middle School).

** Demolition includes demolition of existing maintenance/shop buildings, existing slab underneath greenhouse.

*** Greenhouse costs include \$25/sf for new footings and slab at new location and \$30/s for disassembly and reassembly of greenhouse in new location.

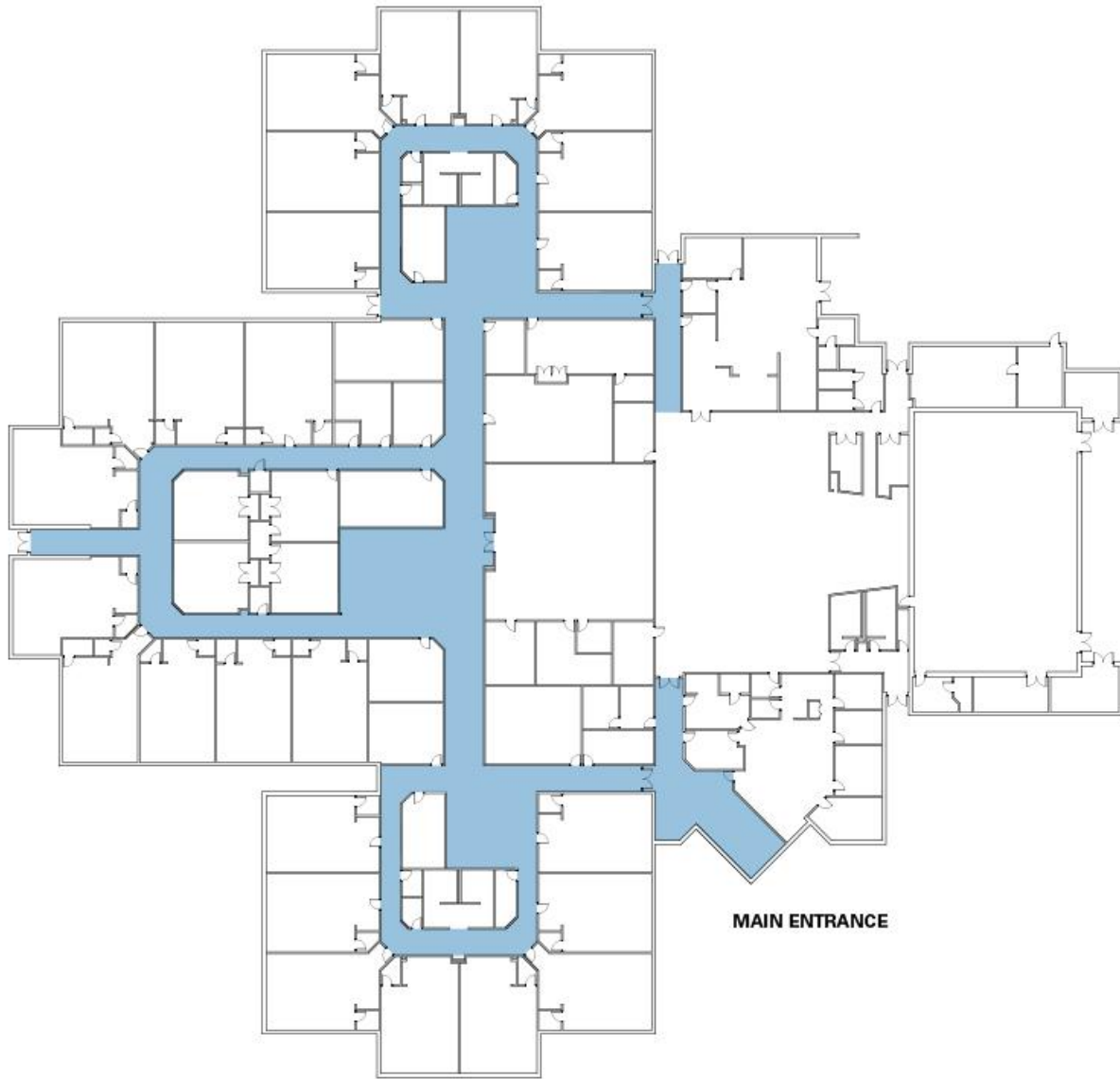
**** New construction would be a classroom/workshop associated with the greenhouse to serve the Shop functions the previous maintenance building served. A high \$/sf has been attributed to this project due to its small relative size.



Scale: 1" = 40'

CORRIDOR EXPANSION (STUDENT LIFE)

MIDDLE SCHOOL



MAIN ENTRANCE



VMDO PRECEDENT- BREAKOUT SPACES

FAUQUIER HIGH | WARRENTON, VA



VMDO PRECEDENT- BREAKOUT SPACES
BUCKINGHAM ELEMENTARY | DILLWYN, VA



VMDO Precedent – ELEMENTARY SCHOOL BREAKOUT
DISCOVERY ELEMENTARY | ARLINGTON, VA

BREAKOUT SPACE / STUDENT LIFE

(applicable at ALL schools)

E2 / H5

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$20	1,000	\$20,000		
Renov	\$120	1,000	\$120,000	20%	
New					
Total 2016		1,000	\$140,000	\$28,000	\$168,000
		2017	\$145,950	\$29,190	\$175,140
		2018	\$152,153	\$30,431	\$182,583
		2019	\$158,619	\$31,724	\$190,343
		2020	\$165,361	\$33,072	\$198,433
		2021	\$172,389	\$34,478	\$206,866

* Strategic classrooms near intersections of corridor demolished and renovated to become enlarged corridor space, breakout learning spaces, teacher centers, student life areas, etc.

** Strategy and costs applicable to all schools.

RANGE:

\$168K - \$216K

* Due to small size of this project, renovation \$/sf could be higher (\$160/sf)



VMDO PRECEDENT- INTERIOR ENVIRONMENT
BUCKINHAM ELEMENTARY | DILLWYN, VA

INTERIOR ENVIRONMENT RENOVATIONS

(repurpose existing locker bays)

M5 / H12

	\$ /sf	GSF	Construction Cost	Project Cost	Total Cost
Demo	\$12	50	\$600		
Renov	\$120	50	\$6,000	20%	
New					
Total 2016		50	\$6,600	\$1,320	\$7,920
		2017	\$6,881	\$1,376	\$8,257
		2018	\$7,173	\$1,435	\$8,608
		2019	\$7,478	\$1,496	\$8,973
		2020	\$7,796	\$1,559	\$9,355
		2021	\$8,127	\$1,625	\$9,752

* Project idea involves removing lockers from selected bays to create flexible areas within the corridors that will enhance the overall interior environment. Scope could include bench seating, white boards or display for breakout learning, AV displays for information, display or learning, and potentially new power locations to serve as charging stations.

** Project type is applicable at the middle and high school.

RANGE:

\$8K - \$16K

* Range a result of final scope variability (electrical, AV, and IT)

Important to do what you can do really well

We will work with GCPS to focus the best use of funds on students & building occupants, educational opportunities, and long-term benefit

NEXT STEPS

- **School Board Meeting – Sept 14th**
 - Present recommendations to Board, with costs + project timelines
 - Obtain final comments
 - Obtain Board priorities for projects
- **Board of Supervisors Worksession – Sept 27th**
 - Present projects options, costs, timelines to Board of Supervisors
 - Present GCPS recommendations of priority and need
 - VMDO will work to match project recommendations and priorities with information regarding available funding that may come out of this meeting.
- **School Board Meeting – Oct 12th**
 - Finalization of Project Plan

As projects are established to move forward, VMDO will work with GCPS to more fully define the scope of each project. Revised scopes will receive further cost estimates that will be more accurate to the actual scope of each project. More accurate timelines for design/construction will be established at that time.

NEXT STEPS

V A M D O