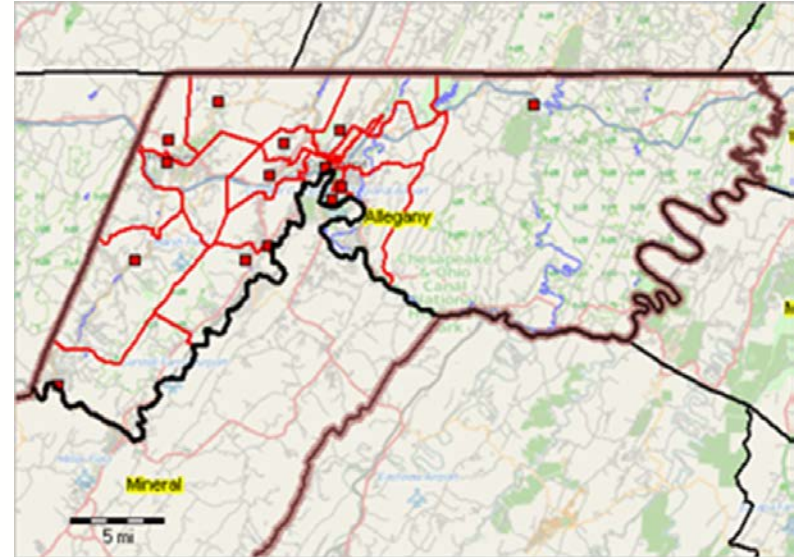
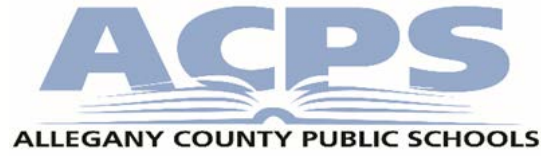


# Utilization Study and Analysis of Elementary Schools

PRELIMINARY REPORT

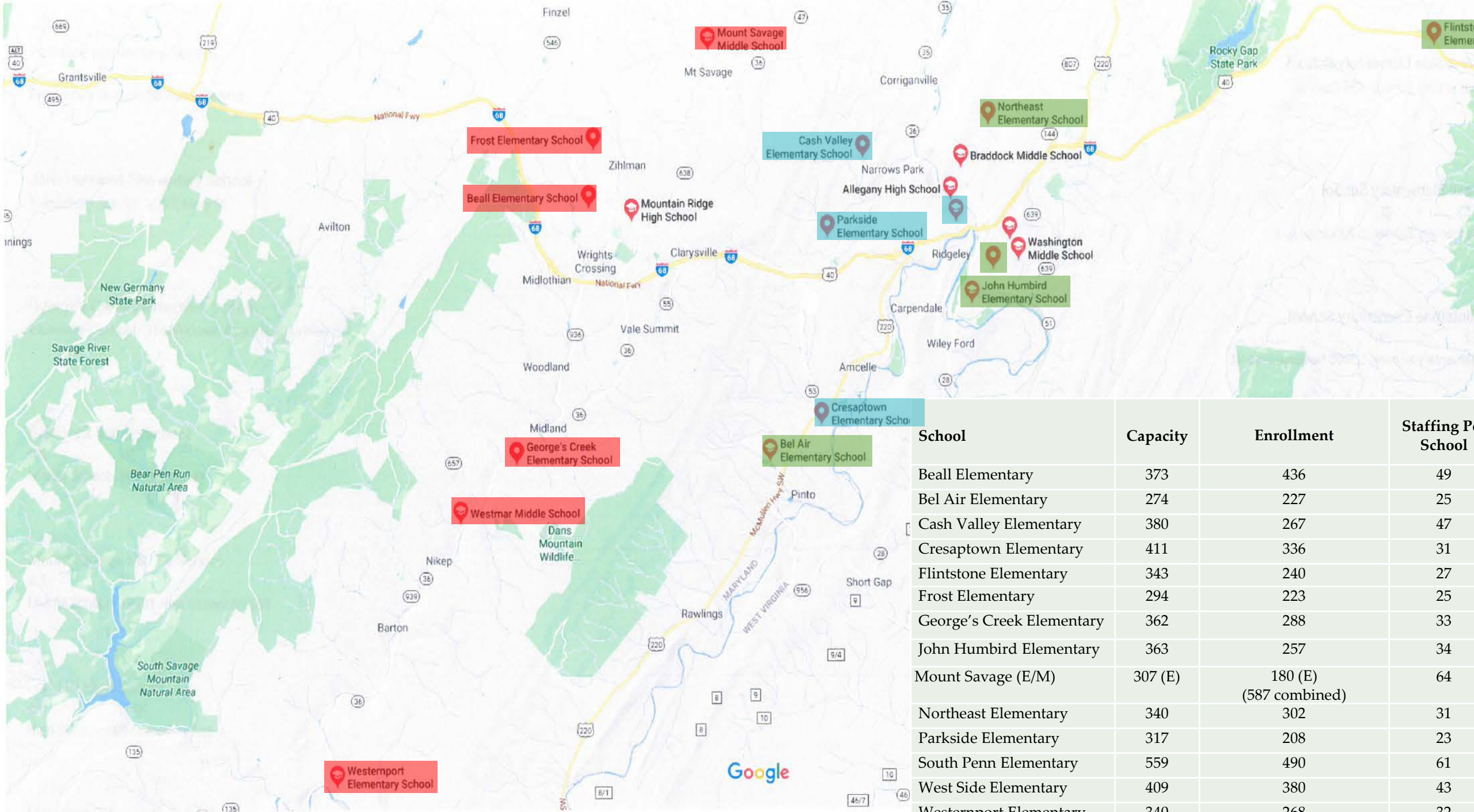
APRIL 4, 2018



# Scope of Services

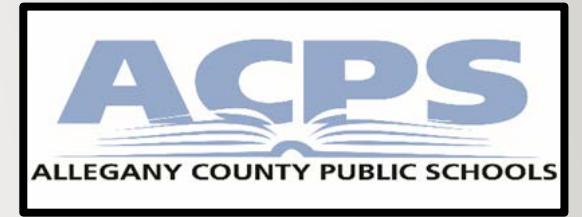
- Phase 1: Data review and analysis
- Phase 2: Facility Condition and needs assessments
- Phase 3: Educational Adequacy Appraisal and Enrollment vs. Capacity Analysis
- Phase 4: Creation of School Attendance Area Options
- Phase 5: Stakeholder and Public Meetings





School	Capacity	Enrollment	Staffing Per School
Beall Elementary	373	436	49
Bel Air Elementary	274	227	25
Cash Valley Elementary	380	267	47
Cresaptown Elementary	411	336	31
Flintstone Elementary	343	240	27
Frost Elementary	294	223	25
George's Creek Elementary	362	288	33
John Humbird Elementary	363	257	34
Mount Savage (E/M)	307 (E)	180 (E) (587 combined)	64
Northeast Elementary	340	302	31
Parkside Elementary	317	208	23
South Penn Elementary	559	490	61
West Side Elementary	409	380	43
Westernport Elementary	340	268	32

Considerations:  
Blue Ribbon Commission  
February 8, 2018



- Equitable distribution of changes across all regions, schools
- Encourage walking environment where possible
- Consider transportation challenges; changing buses, travel time, families without cars
- Structure boundaries to encourage/recognize school loyalty
- District level programs; special needs
- Programs that lead to over-capacity; Daycare (Beall), Northeast (after-school)
- Impact on health/wellness programs; accessible areas for fitness
- Safety/Security (not in scope)

# Considerations: Facility Utilization Study



- School Condition
  - Age
  - FCI
  - CEFPI
- School Capacity and Utilization
  - Using ACPS Standards
  - Using CEFPI Standards
- Geographic Considerations
  - School Bus Capacity and Utilization
  - School Bus Driving Times
  - OOD Students (Out of District)
- Costs
  - Operational
  - Staffing
  - Transportation



# Facility Condition Index (FCI)

**FCI = Deferred Maintenance / Current Replacement Value**

## MS%

Based on Uniformat and R.S. Means Data. Modified based on actual conditions.

System	MS%	System	MS%
A Substructure	11%	E Equipment	5%
B Structure and Shell	18%	F Specialty Construction	5%
C Interiors	26%	G Site Work	N/A
D Services	35%	H Accessibility Issues	N/A

## RC%

Based on Generalized Condition Level

Rating	Condition	Repair Cost
5	Excellent	2% of CRV
4	Good	10% of CRV
3	Fair	33% of CRV
2	Poor	75% of CRV
1	Failure/Crisis	100% of CRV

**BMAR = [Sum (MS%)\*(RC%)] CRV**

- MS% = major system percentage of CRV
- RC% = repair cost percentage of CRV
- CRV = current replacement value of the building

Figure 1: Calculation of Deferred Maintenance Costs and FCI

# Council of Educational Facility Planners International (CEFPI)

CEFPI Rating*	
1.0 The School Site	Incl. in CFPI Rating
2.0 Structural and Mechanical Features	Incl. in FCI Rating
3.0 Plant Maintainability	
4.0 Building Safety and Security	Not Included
5.0 Educational Adequacy	Incl. in CFPI Rating
6.0 Environment for Education	

<b>1.1 Site accessibility</b>	Yes	How does the maximum walking and bus commute compare to recommendations of one mile and 30 minutes?	Walking - 1 mile; Bus trip - 30 minutes
<b>1.2 Location</b>	Yes	How many site concerns are present?	Traffic, odors, noise hazards.
<b>1.3 Site Landscaping</b>	No	On a scale from 1 - 5, how attractive is the site landscaping?	Aesthetics of plantings
<b>1.4 Playground</b>	Yes	How many factors are present on the playground?	Fencing, isolated from traffic, separated areas for ages, varied equipment type
<b>1.5 Topography</b>	No	How many factors are present on the school site?	Steep inclines, drainage issues, fault areas, mine subsistence areas, etc.
<b>1.6 Site Stability &amp; Drainage</b>	Yes	How much of the site is unaffected by drainage issues?	Evaluation based on portion of site unaffected by drainage conditions.
<b>1.7 Site outdoor learning</b>	Yes	How many outdoor features are present at the school?	Ball field, nature walk, picnic area
<b>1.8 Pedestrian access</b>	Yes	How many of the pedestrian and vehicular features are present?	On-site sidewalks, off-site sidewalks, curb cuts, safe crossing areas/turnout for unloading
<b>1.9 Surface Parking</b>	Yes	How many of the parking features are present at the school?	Good pavement, parking for each staff member, community parking, ADA parking features.

\*Adapted from the Guide for School Facility Appraisal (1998)

## School Condition

- Age
- FCI
- CEFPI



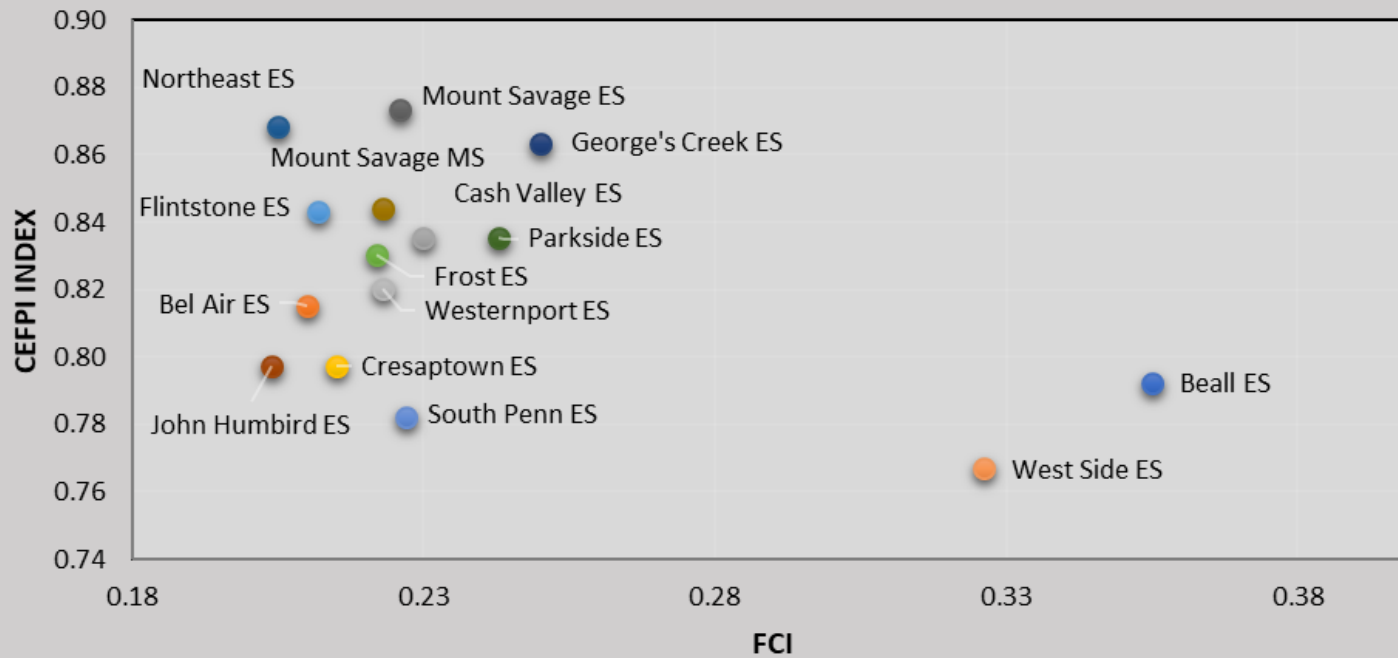
School	CEFPI Rating	FCI	Square Footage (GSF)	Age (Last Renovated)
<b>Eastern</b>				
Bel Air ES	0.82	0.21	44,789	1974
Flintstone ES	0.84	0.21	68,108	1978
John Humbird ES	0.80	0.20	42,451	1974
Northeast ES	0.87	0.21	34,335	1994
South Penn ES	0.78	0.23	67,802	1978 (2012 addn)
<b>Central</b>				
Cash Valley ES	0.84	0.23	49,666	1978
Cresaptown ES	0.80	0.22	63,084	1997
Parkside ES	0.84	0.24	34,601	1954 (1962 addn)
West Side ES	0.77	0.33	49,300	1976
<b>Western</b>				
Mount Savage MS/ES	0.84	0.22	116,623 (E/M)	1999
Beall ES	0.79	0.36	57,290	1976
Frost ES	0.83	0.22	36,864	1967
George's Creek ES	0.86	0.25	44,560	1975
Westernport ES	0.82	0.22	47,091	1992

# School Condition

- Age
- FCI
- CEFPI



## ACPS CEFPI Index vs. FCI



- |                |                     |                   |                   |                   |
|----------------|---------------------|-------------------|-------------------|-------------------|
| ● Beall ES     | ● Bel Air ES        | ● Cash Valley ES  | ● Cresaptown ES   | ● Flintstone ES   |
| ● Frost ES     | ● George's Creek ES | ● John Humbird ES | ● Mount Savage ES | ● Mount Savage MS |
| ● Northeast ES | ● Parkside ES       | ● South Penn ES   | ● West Side ES    | ● Westernport ES  |





# School Capacity and Utilization

- Using MD/ACPS Standards
- Using CEFPI Standards

MD/ACPS  
Capacity Standard:

(3) The approved capacity for an elementary school classroom is:  
 (a) Prekindergarten classroom—20;  
 (b) Kindergarten classroom—22;  
 (c) Grades 1 through 5 classroom—23;  
 (d) Grade 6 classroom—25; and  
 (e) Special education classroom—10.

CEFPI Capacity Standard: 30 GSF of Classroom per Student

## ACPS Elementary Schools Utilization

Region	GSF	Classroom GSF	Enrollment	ACPS Cap.	CEFPI Cap.	Current Utilization			11th Year Utilization			Highest Utilization			Current Available Capacity (Students)
						ACPS	CEFPI	AVG.	ACPS	CEFPI	AVG.	ACPS	CEFPI	AVG.	
Eastern	257,485	73,068	1,516	1,879	2,436	81%	62%	71%	76%	60%	75%	82%	64%	81%	350+
Central	196,651	54,627	1,191	1,517	1,821	79%	65%	72%	74%	62%	72%	79%	66%	76%	300+
Western	302,428	82,347	1,802	2,132	2,745	85%	66%	75%	79%	58%	68%	84%	63%	73%	300+
<b>TOTAL/AVERAGE</b>	<b>756,564</b>	<b>210,042</b>	<b>4,509</b>	<b>5,528</b>	<b>7,001</b>	<b>81%</b>	<b>64%</b>	<b>73%</b>	<b>76%</b>	<b>60%</b>	<b>68%</b>	<b>82%</b>	<b>64%</b>	<b>73%</b>	<b>Overall: 1 School per Region</b>

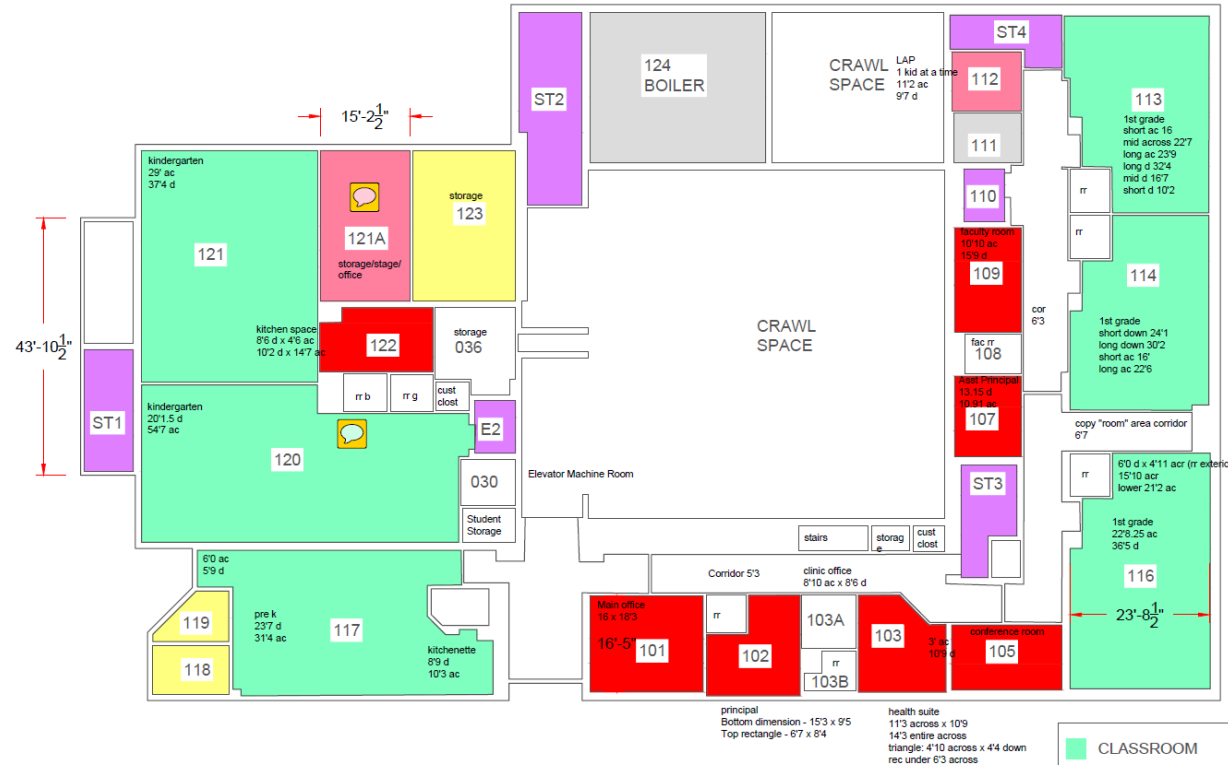
# School Capacity and Utilization

- Using MD/ACPS Standards
- Using CEFPI Standards



FACILITY ENGINEERING ASSOCIATES, P.C.  
12701 FAIR LAKES CIRCLE, SUITE 101  
FAIRFAX, VIRGINIA 22033

JOHN HUMBERT ELEMENTARY SCHOOL  
ALLEGANY COUNTY SCHOOL DISTRICT  
120 E MARY STREET  
CUMBERLAND, MARYLAND 21502



### LEGEND

<span style="color: green;">■</span> CLASSROOM	<span style="color: blue;">■</span> PHYSICAL EDUCATION
<span style="color: orange;">■</span> LABORATORY	<span style="color: red;">■</span> ADMINISTRATION
<span style="color: pink;">■</span> INSTRUCTIONAL SUPPORT	<span style="color: yellow;">■</span> ASSIGNED STORAGE
<span style="color: lightgreen;">■</span> LIBRARY/MEDIA CENTER	<span style="color: brown;">■</span> PUBLIC RESTROOMS
<span style="color: lightorange;">■</span> ASSEMBLY	<span style="border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> HORIZONTAL CIRCULATION
<span style="color: grey;">■</span> STUDENT DINING	<span style="color: purple;">■</span> VERTICAL CIRCULATION
<span style="color: lightgrey;">■</span> BUILDING SUPPORT	<span style="color: teal;">■</span> OPEN SPACE
<span style="color: blue;">■</span> COVERED WALKWAYS	<span style="color: lightblue;">■</span> COURTYARDS
<span style="color: darkblue;">■</span> UNASSIGNED SPACE	<span style="border-bottom: 1px dashed black; display: inline-block; width: 20px;"></span> HALLWAY DIVIDER



NORTH

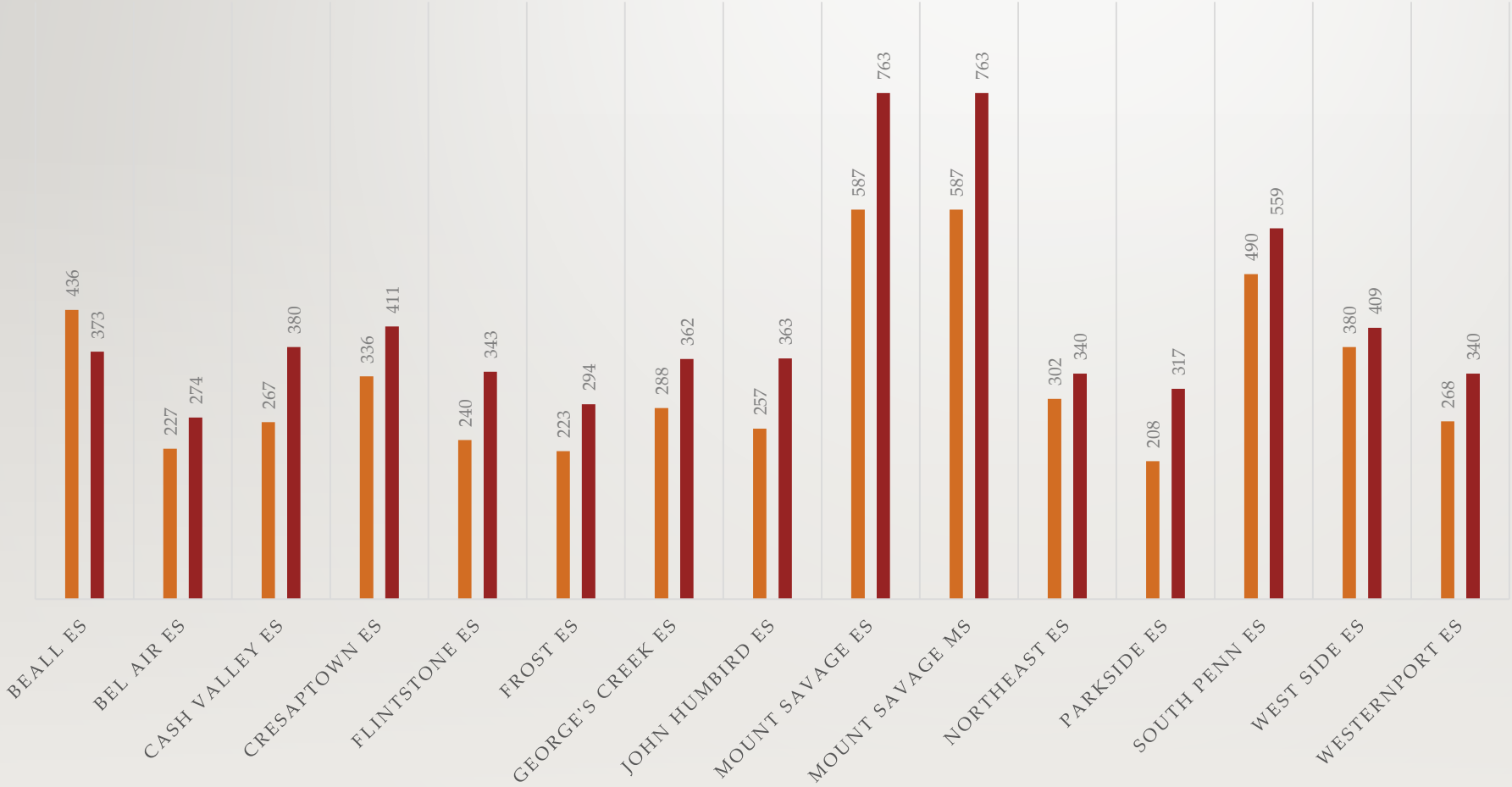
DRAWN BY: SAJ	CHECKED BY: XXX
APPROVED BY: XXX	ISSUE DATE: 1/8/2018
FEA PROJECT NO: REL 2017.005111	SCHOOL ASSET NO: 0000-00000000
DRAWING FILE NAME: JOHN HUMBERT ES.dwg	
<small>WRITTEN DIMENSIONS, WHERE PROVIDED, GOVERN OVER SCALED DIMENSIONS. THE INFORMATION IN THIS PLAN SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF ANY NEW CONSTRUCTION OR THE FABRICATION OF ANY NEW MATERIALS. THE CONTRACTOR SHALL NOTIFY THE OWNER AND FACILITY ENGINEERING ASSOCIATES, P.C. UPON DISCOVERY OF ANY DISCREPANCIES.</small>	
FLOOR:	<b>FIRST FLOOR</b>

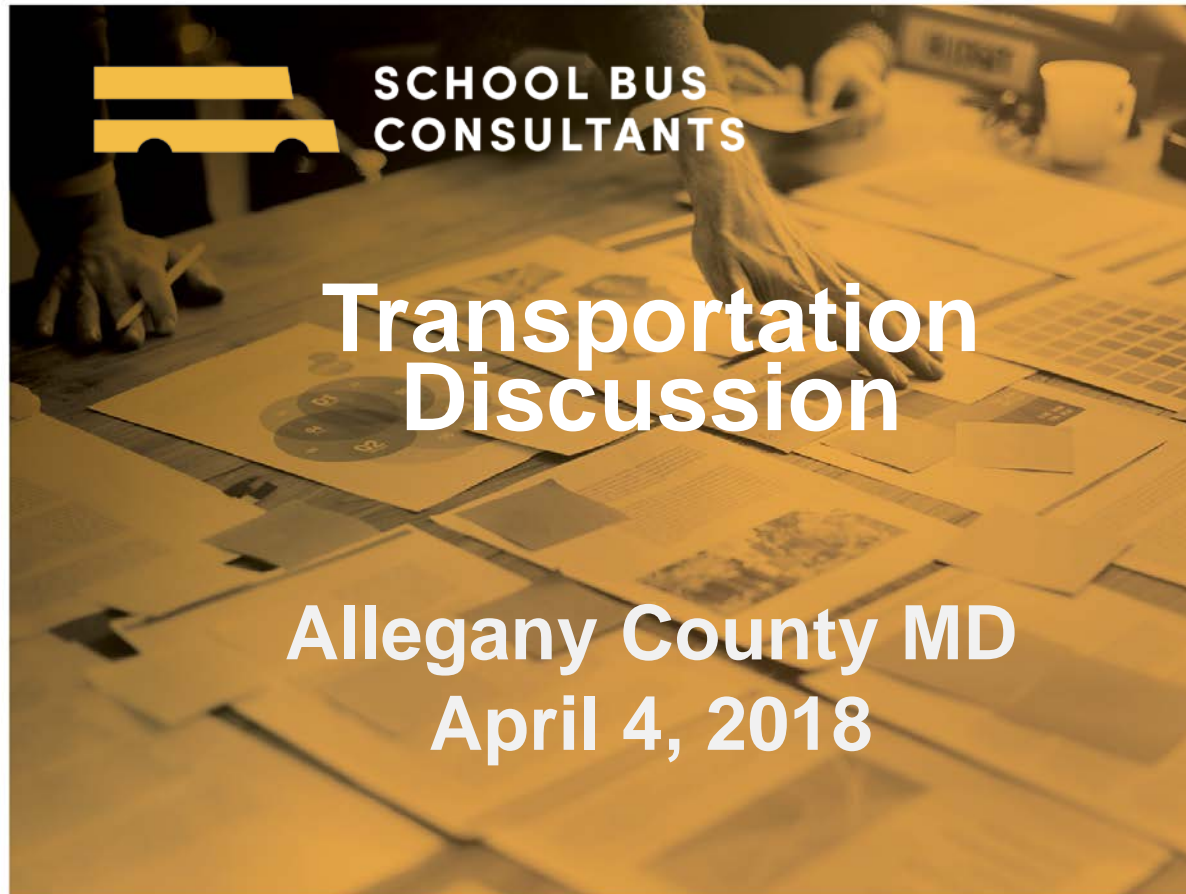
# School Capacity and Utilization

- Using MD/ACPS Standards
- Using CEFPI Standards

## ACPS ENROLLMENT VS. CAPACITY

■ ACPS Schools Enrollment ■ ACPS Schools Capacity





## Geographic Considerations

- School Bus Capacity and Utilization
- School Bus Driving Times
- OOD Students



- Geographic Considerations

- OOD Students

## Summary Stats from Transfinder

Summary Data	Value	Notes
Students in the Transfinder Database (PK to 12)	8,626	Includes all riders and non-riders
Elementary Students (K to 5)	3,848	
Students with Transportation Record (PK to 12)	5,367	196 students receive specialized transportation
Total Route Buses	105	18 are special education only
Total Trips	184	18 are special education only
Trips per Bus	1.9 regular education	Indicates a two tier system, first tier with MS and HS, second tier ES
Average Ride Length (minutes)	26 minutes	
Count of Trips > 45 min	20 (12%)	
Count of Trips < 20 min	69 (41%)	
Average Ridership	31 student riders	
Count of Trips > 50 riders	12 (7%)	
Count of Trips < 30 riders	71 (42%)	

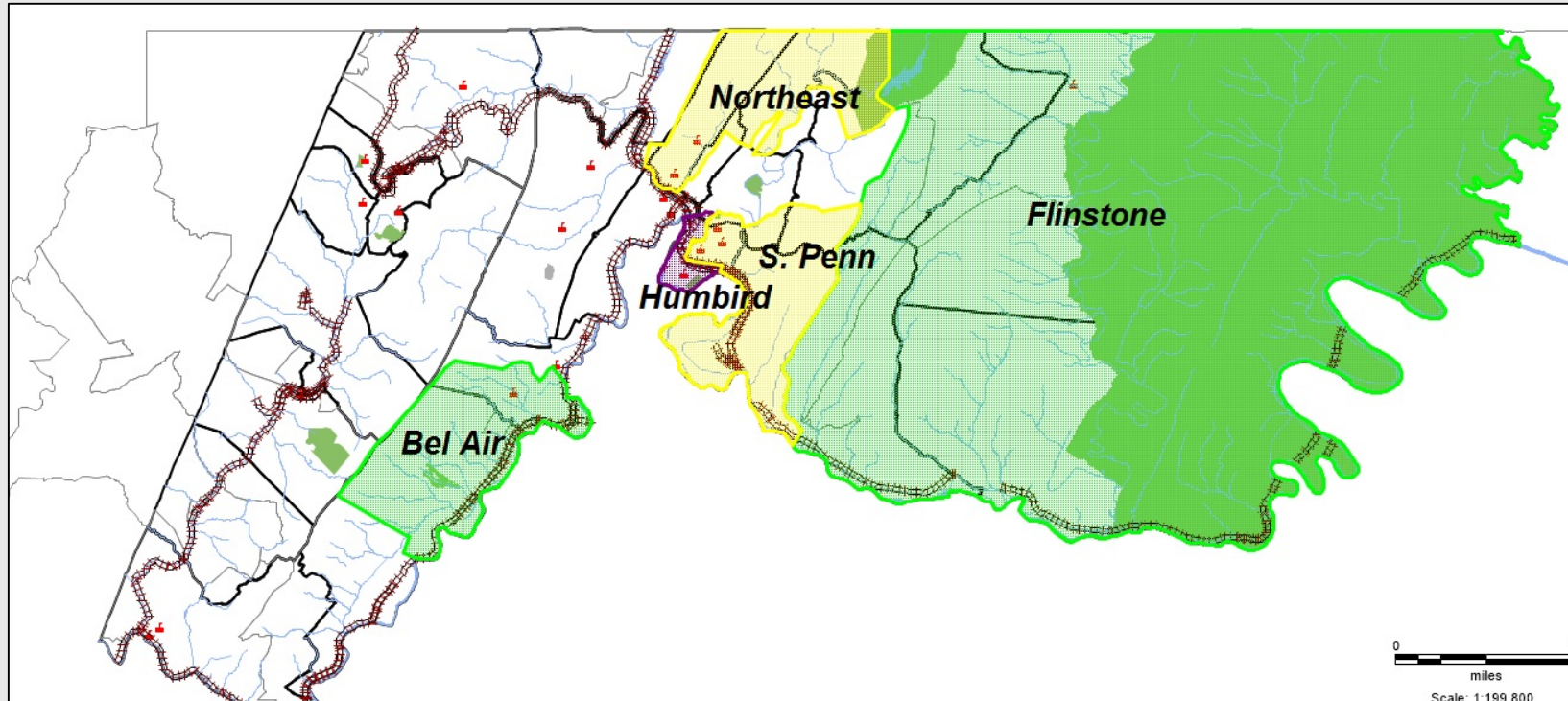
# Initial Findings from Data Review

- Capacity exists throughout the system
  - Many trips are less than 20 minutes with fewer than 30 riders
- Many MS & HS buses are shared across two schools
  - Fort Hill HS & Washington MS
  - Mountain Ridge HS & Westmar MS
- Significant percentage of student population does not receive transportation
  - Only 62% of students are registered for a bus
  - Are they riding but are unregistered?
- No indication of boundary overlap

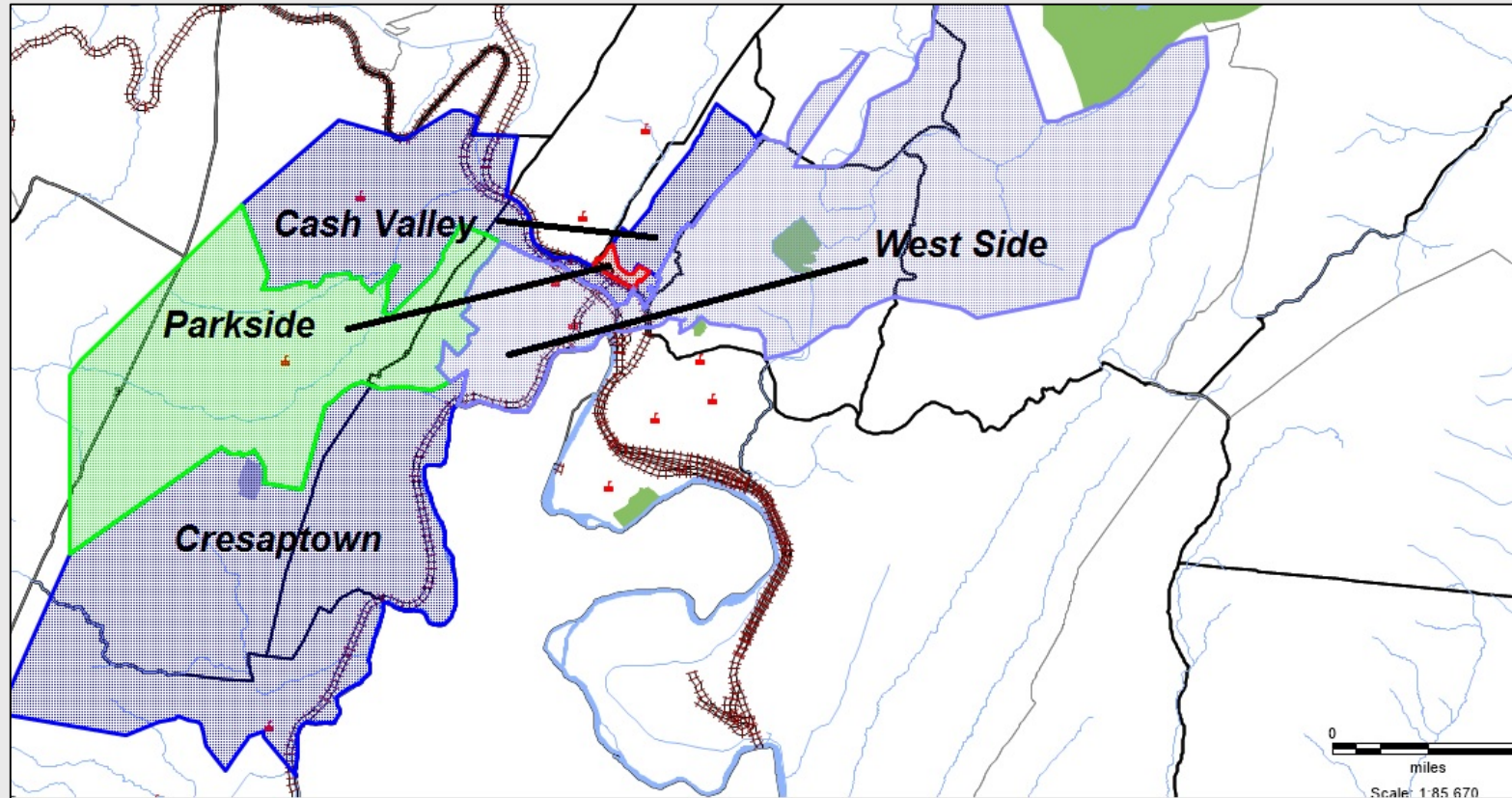
## Geographic Considerations

- School Bus Capacity and Utilization
- School Bus Driving Times
- OOD Students

# Boundary Discussion - Eastern

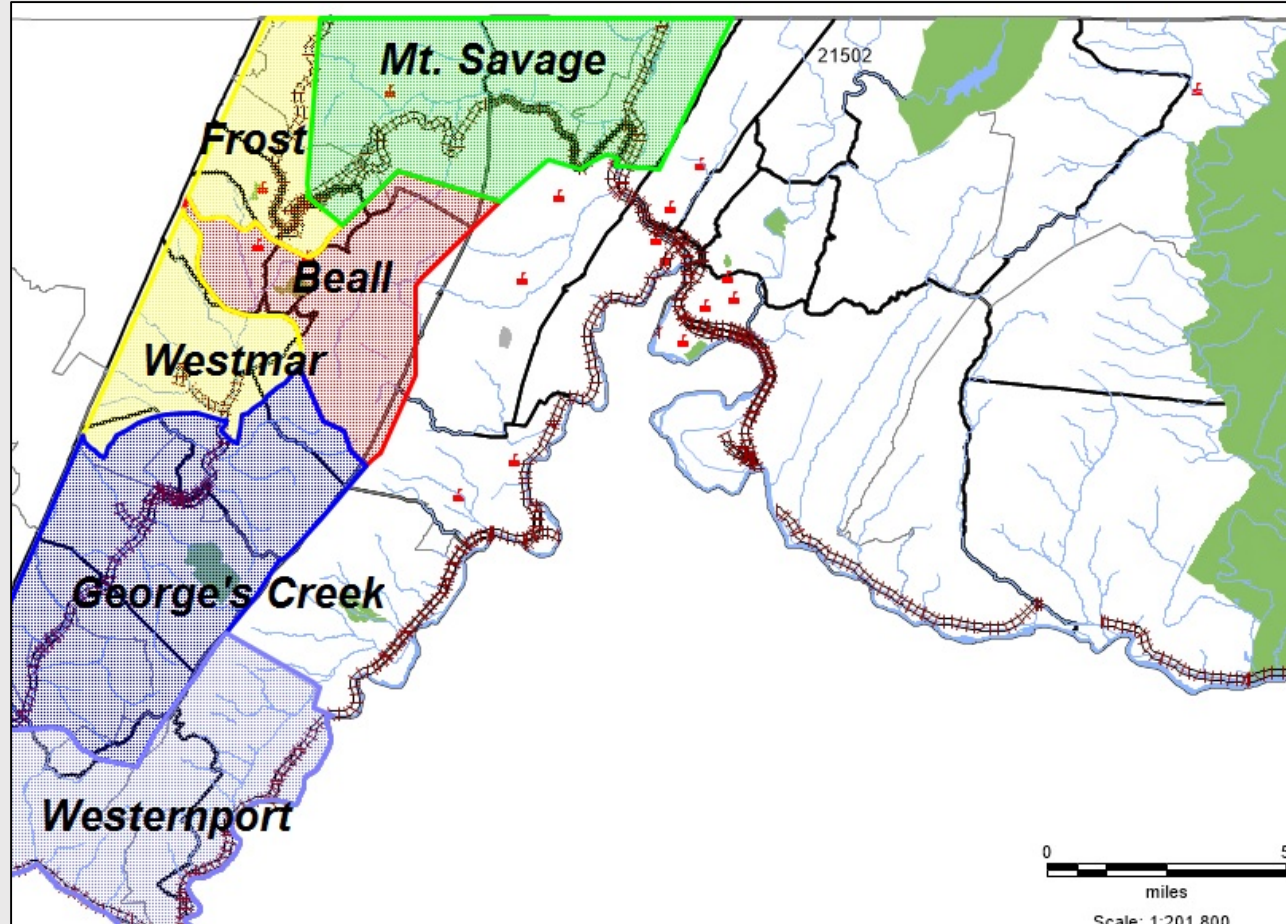


# Boundary Discussion – Central

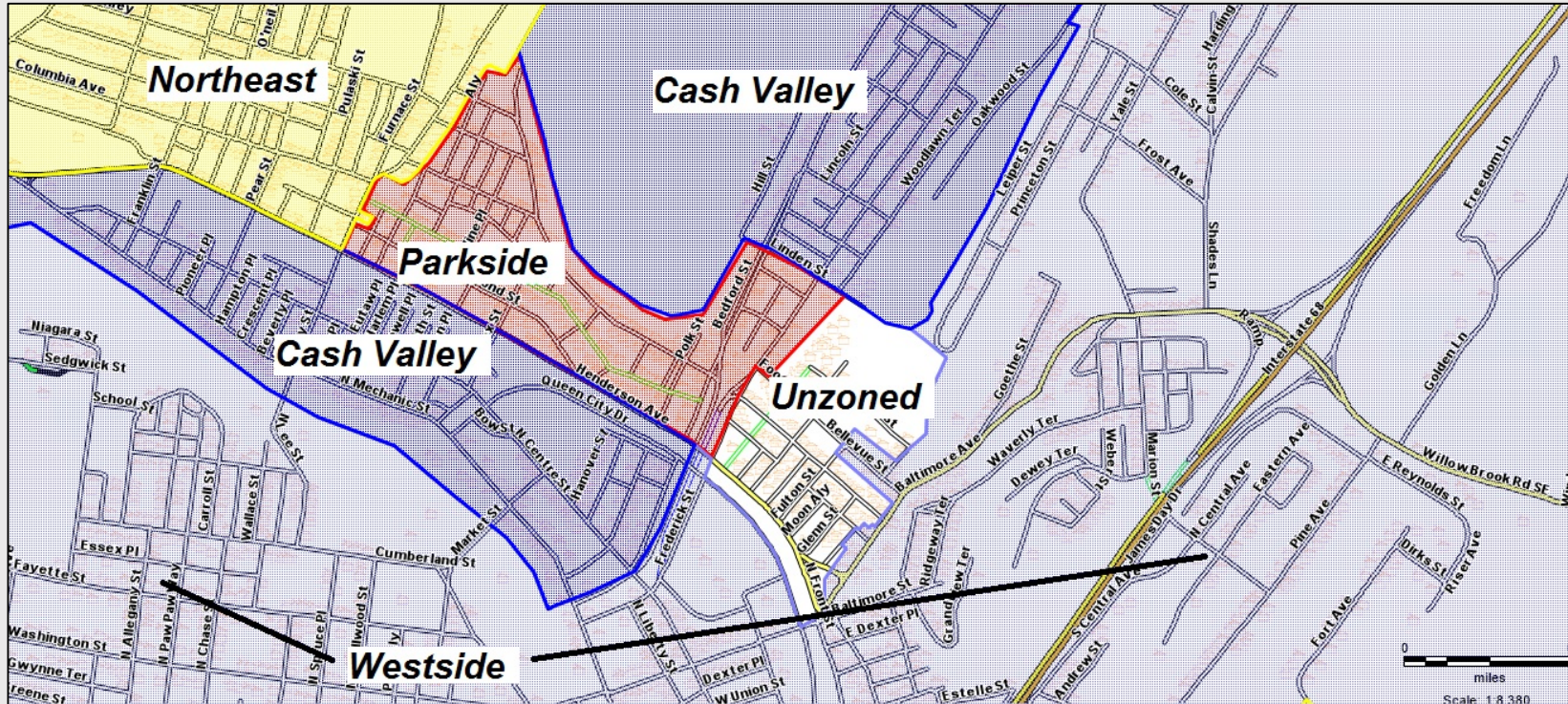




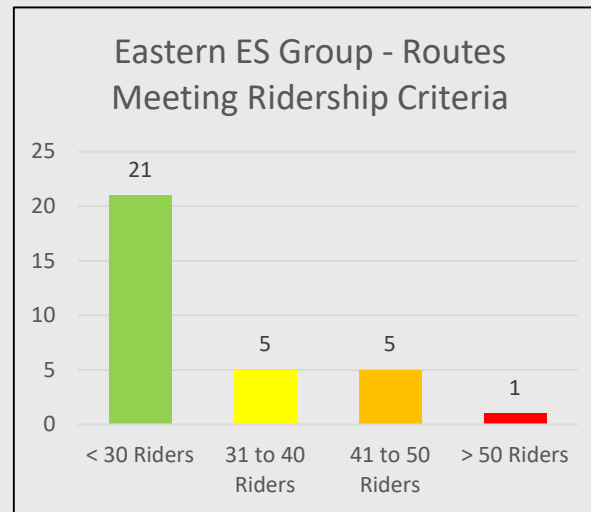
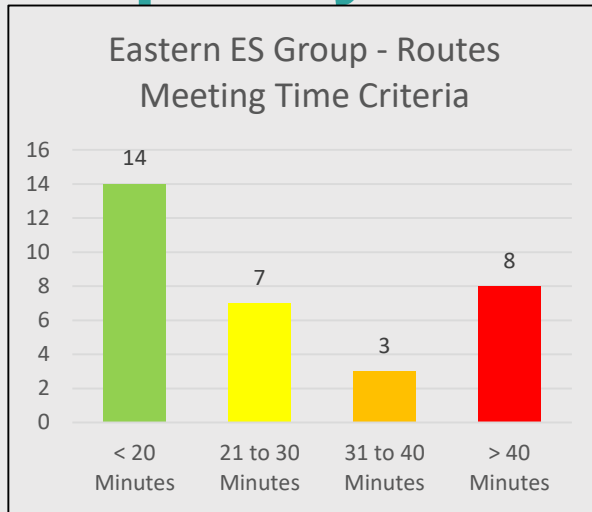
# Boundary Discussion - Western



# Boundary Discussion - Cumberland

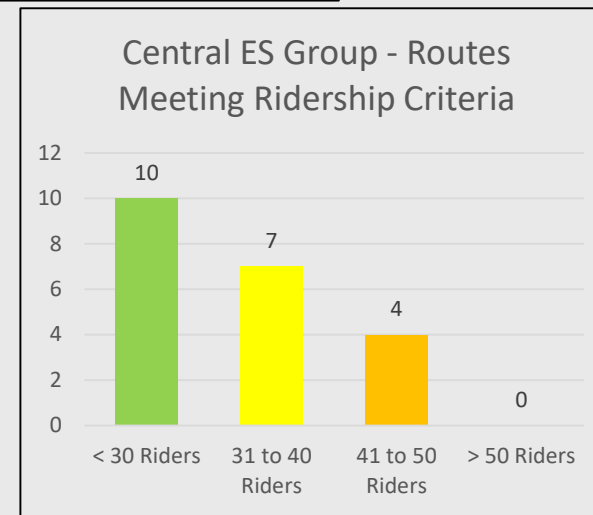
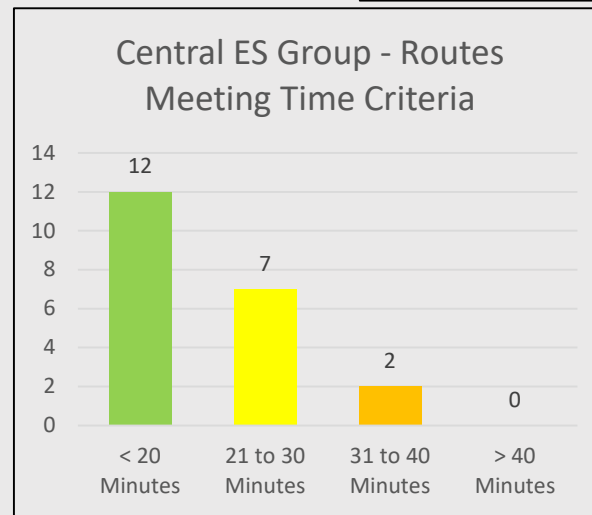


# Capacity Discussion



## Geographic Considerations

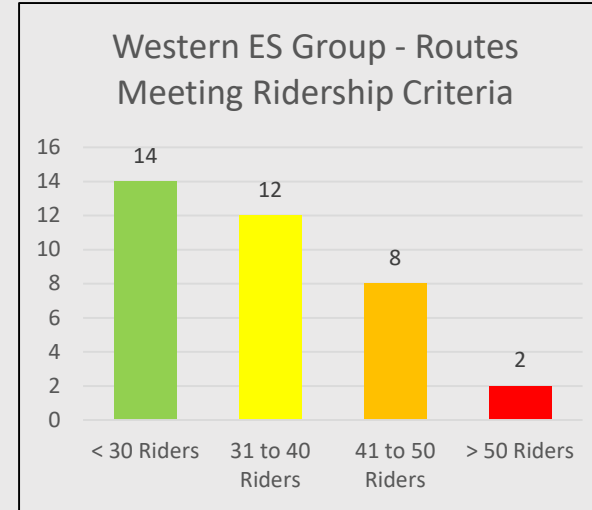
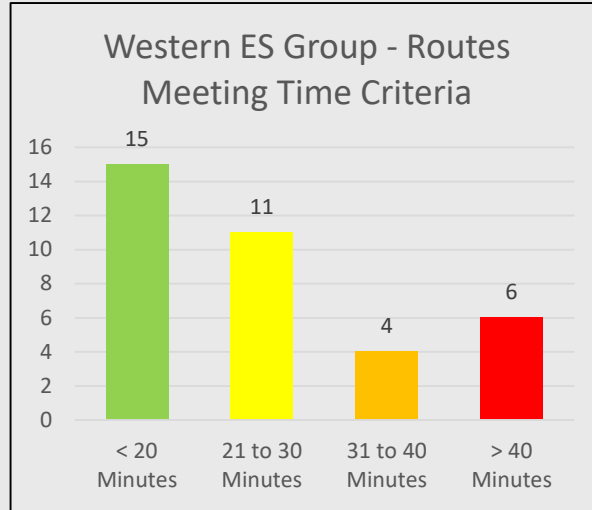
- School Bus Capacity and Utilization
- School Bus Driving Times
- OOD Students



- Geographic Considerations

- OOD Students

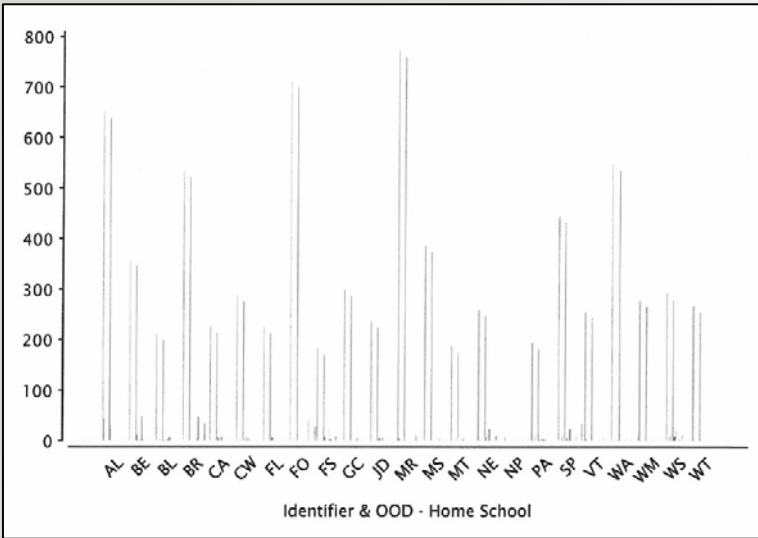
# Capacity Discussion



## Geographic Considerations

- School Bus Capacity and Utilization
- School Bus Driving Times
- OOD Students

- Capacity Discussion: Across elementary districts, many routes are less than 20 minutes long and have less than 30 riders
  - Suggests that capacity exists, analysis can be extended into scenario building...



# Evaluation of Out-of-District Impacts

## Geographic Considerations

- School Bus Capacity and Utilization
- School Bus Driving Times
- OOD Students

Chart				
Data Set	Identifier	OOD - Home School	Number	Percent
	AL	Blank	651	7.57%
	AL	FO	42	0.49%
	AL	MR	6	0.07%
	BE	Blank	359	4.17%
	BE	BL	1	0.01%
	BE	CA	1	0.01%
	BE	CW	2	0.02%
	BE	FS	60	0.70%
	BE	GC	16	0.19%
	BE	MT	10	0.12%
	BE	NE	1	0.01%
	BE	PA	4	0.05%
	BE	SP	1	0.01%
	BE	WS	3	0.03%
	BL	Blank	211	2.45%
	BL	BE	1	0.01%
	BL	CA	2	0.02%
	BL	CW	5	0.06%
	BL	GC	1	0.01%
	BL	MT	1	0.01%
	BL	SP	2	0.02%
	BL	WS	3	0.03%
	BL	WT	5	0.06%
<b>Totals</b>			<b>1388</b>	<b>16.13%</b>

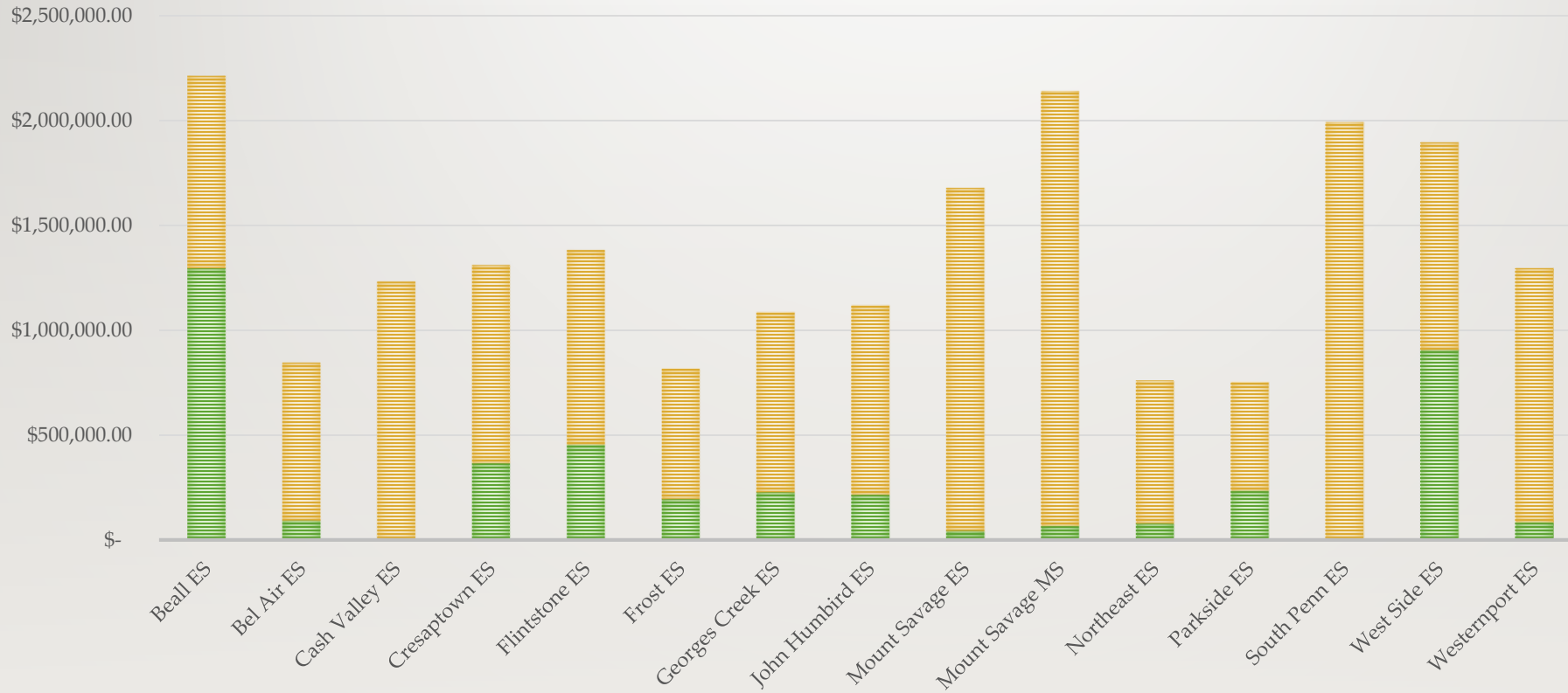


# Costs

- Operational
- Staffing
- Transportation

## SHORT AND LONG TERM DM \$

Short Term DM (0 - 3 Years)    Long Term DM (4 - 7 Years)



# Next Steps:

Continue with data analysis and recommended potential options for Elementary School consolidations based on the considerations described within.

- Cost Analysis
- Potential boundary adjustment
- Transportation impacts

*We are committed to following the ACPS School Consolidation Policies and COMAR standards. Future reorganization plans should:*

- *Be comprehensive of the entire county and project over several years for systematic implementation*
- *Provide for generous involvement and input from school community committees*
- *Develop (plan) and carry out in accordance with COMAR/ACPS published procedures*

