# **DETERMINING CAPACITY OF YOUR FACILITIES**

- Idaho Dept of Ed does not have a standard
  - International Building Code
    - Classroom Areas 20sf/occ
    - Shops and Other Voc. Rooms 50sf/occ
  - International Mechanical Code
    - Occupants < or = 9 yrs: 40sf/occ
    - Occupants > 9 yrs: 28sf/occ



# **DETERMINING CAPACITY OF YOUR FACILITIES**

- Other State Standards
  - North Dakota Department of Instruction
  - Wyoming School Facilities Department
  - California Department of Education
  - Texas Education Agency
  - Universal Child Care Licensing Standards
- National Medians
  - School Planning and Management
    - Annual School Construction Report



# **DETERMINING CAPACITY OF YOUR FACILITIES**

- Elementary Schools
  - Classrooms = 35 sf/occ
  - School = 129 sf/occ
- Middle Schools
  - Classrooms = 37 sf/occ x 0.85 Utilization Rate
  - School = 138 sf/occ
- High Schools
  - Classrooms = 40 sf/occ x 0.8 Utilization Rate
  - School = 165 sf/occ



# **Determining the Capacities of Your Facilities**

(2012 Data Provided by TSD401)

Facilities	Year Built	Sq. Ft.	Classrooms	Student Body
Teton High School/Vo-Ag	1998	90,000	25/4	413
Teton Middle School	2009	70,000	20	381
Rendezvous Upper Elementary School/Modular	1958	26,036	13/2	256
Driggs Elementary/Basin High School	1972	46,538	18/4	280
Driggs Elementary School	1952	34,368	18	250
Victor Elementary/Modular	1941	22,382	9/2	187
Tetonia Elementary School	1953	15,158	8	86



# **Teton High School**

Total Number of Classrooms (TC)	29	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	1,475
Total Building Sq. Ft. (TBSF)	90,000	IMC Maximum Occupancy [TCSF/(28 sq. ft./occ)]	1,054
Total Classroom Sq. Ft. (TCSF)	29,512	Widely Accepted Standard Method [TCSF/(40 sq. ft./occ) x 0.8 Utilization Rate]	590
Student Body	413	2011 National Median Method [TBSF/(165 sq. ft./occ)]	545

**Teton High School Maximum Capacity Range: 545-590 Students** 

413 Students is 70-76% of this Maximum Capacity Range





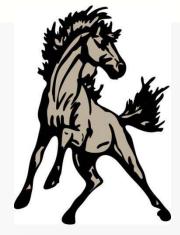
### **Teton Middle School**

Total Number of Classrooms (TC)	*22	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	975
Total Building Sq. Ft. (TBSF)	*61,773	IMC Maximum Occupancy [TCSF/(28 sq. ft./occ)]	696
Total Classroom Sq. Ft. (TCSF)	19,512	Widely Accepted Standard Method [TCSF/(37 sq. ft./occ) x .85 Utilization Rate]	448
Student Body	381	2011 National Median Method [TBSF/(138 sq. ft./occ)]	447

**Teton Middle School Maximum Capacity Range: 447-448 Students** 

### 381 Students is 85% of this Maximum Capacity

<sup>\*</sup>Figures deviate from District provided numbers





# **Rendezvous Upper Elementary School**

Total Number of Classrooms	13	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	454
Total Building Sq. Ft.	26,036	* IMC Maximum Occupancy [TCSF/(34 sq. ft./occ)]	267
Total Classroom Sq. Ft.	9,083	Widely Accepted Standard Method [TCSF/(35 sq. ft./occ)]	259
Student Body	256	2011 National Median Method [TBSF/(129 sq. ft./occ)]	201

Rendezvous Upper Elementary School Maximum Capacity Range: 201-259 Students

256 Students is 99-127% of this Maximum Capacity Range





<sup>\*</sup>Figure modified to accommodate mix of student ages

# **Driggs Elementary School/Basin High School**

Total Number of Classrooms (TC)	22	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	689
Total Building Sq. Ft. (TBSF)	46,538	*IMC Maximum Occupancy [TCSF/(38 sq. ft./occ)]	362
Total Classroom Sq. Ft. (TCSF)	13,781	Widely Accepted Standard Method [TCSF/(35 sq. ft./occ)]	393
Student Body	280	2011 National Median Method [TBSF/(129 sq. ft./occ)]	360

**Driggs Elementary/Basin High School Maximum Capacity Range: 360-393 Students** 

### 280 Students is 71-78% of this Maximum Capacity Range







<sup>\*</sup>Figure modified to accommodate mix of student ages

# **Driggs Elementary School**

Total Number of Classrooms (TC)	18	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	471
Total Building Sq. Ft. (TBSF)	42,368 *34,368	IMC Maximum Occupancy [TCSF/(40 sq. ft./occ)]	235
Total Classroom Sq. Ft. (TCSF)	9,423	Widely Accepted Standard Method [TCSF/(35 sq. ft./occ)]	269
Student Body	250	2011 National Median Method [TBSF/(129 sq. ft./occ)]	328 *266

**Driggs Elementary School Maximum Capacity Range: 266-269 Students** 

### 250 Students is 93-94% of this Maximum Capacity Range

<sup>\*</sup>Figures modified to account for non-utilized space





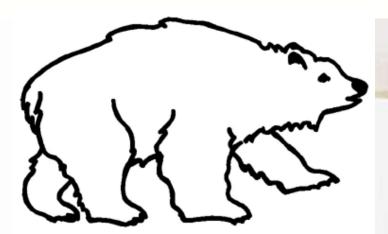


## **Victor Elementary School**

Total Number of Classrooms (TC)	9	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	335
Total Building Sq. Ft. (TBSF)	22,382	IMC Maximum Occupancy [TCSF/(40 sq. ft./occ)]	167
Total Classroom Sq. Ft. (TCSF)	6,703	Widely Accepted Standard Method [TCSF/(35 sq. ft./occ)]	191
Student Body	187	2011 National Median Method [TBSF/(129 sq. ft./occ)]	173

**Victor Elementary School Maximum Capacity Range: 173-191 Students** 

187 Students is 98-108% of this Maximum Capacity Range







# **Tetonia Elementary School**

Total Number of Classrooms (TC)	8	IBC Maximum Occupancy [TCSF/(20 sq. ft./occ)]	215
Total Building Sq. Ft. (TBSF)	15,158	IMC Maximum Occupancy [TCSF/(40 sq. ft./occ)]	107
Total Classroom Sq. Ft. (TCSF)	4,300	Widely Accepted Standard Method [TCSF/(35 sq. ft./occ)]	122
Student Body	86	2011 National Median Method [TBSF/(129 sq. ft./occ)]	117

**Tetonia Elementary School Maximum Capacity Range: 117-122 Students** 

86 Students is 70-74% of this Maximum Capacity Range





# TSD401 Facility Capacities 2012

Facilities	Year Built	Student Body	Max. Occ. Range	% of Max. Capacity
Teton High School	1998	413	545-590	70-75%
Teton Middle School	2009	381	447-448	85%
Rendezvous Upper Elementary School	1958	256	201-259	99-127%
Driggs Elementary/Basin High School	1972	280	360-393	71-78%
Driggs Elementary School	1952	250	266-269	93-94%
Victor Elementary	1941	187	173-191	98-108%
Tetonia Elementary School	1953	86	117-122	70-74%



# TSD401 Facility Capacities 2014

Facilities	Year Built	Student Body	Max. Occ. Range	% of Max. Capacity
Teton High School	1998			
Teton Middle School	2009			
Rendezvous Upper Elementary School	1958	255	201-259	98-127%
Driggs Elementary/Basin High School	1972			
Driggs Elementary School	1952	277	266-269	103-104%
Victor Elementary	1941	204	173-191	107-118%
Tetonia Elementary School	1953	82	117-122	67-70%



# WHAT TO DO...

 Renovate and/or Add onto Facilities or

Add Modular Buildings
 or

Build New/Replace Facilities



# **FACTORS TO CONSIDER...**

- Safety of Existing Facilities
- Security of Existing Facilities
- Accessibility of Existing Facilities
- Age of Existing Facilities/Useful Life
- Operating Costs of Existing Facilities
- Maintenance Costs of Existing Facilities
- Cost of Renovation/Additions vs. New
- Locations of Facilities with Changing Demographics
- Staff/User/Community Input
- Others...



# **FACTORS TO CONSIDER...**

- Safety of Existing Facilities
- Security of Existing Facilities
- Accessibility of Existing Facilities
- Age of Existing Facilities/Useful Life
- Operating Costs of Existing Facilities
- Maintenance Costs of Existing Facilities
- Cost of Renovation/Additions vs. New
- Locations of Facilities with Changing Demographics
- Staff/User/Community Input
- Others...



### **TSD401 Facility Service Life**

\*Survey on Actual Service Lives of North American Buildings 2004
\*\*Capital Assets of Local Governments Suggested Useful Lives

Expected Service Life of Facilities	Years
Masonry	*77
Wood	*51
Concrete	*87
Steel	*77
Portable Structures	**25



### **TSD401 Facility Service Life**

Survey on Actual Service Lives of North American Buildings 2004

Facilities	Year Built	Age	Expected Service Life	(Years Past) Years Remaining
Teton High School	1998			
Teton Middle School	2009			
Rendezvous Upper Elementary School	1958	56	51	(5)
Driggs Elementary School	1952	62	77	15
Victor Elementary	1941	73	77	4
Tetonia Elementary School	1953	61	77	16



### **Addition/Renovation Costs**

# **RENDEZVOUS ELEMENTARY**

- Total Existing Building Size = 26,036 sf
- Recommended Building Size = 42,390 sf
- Addition Size = 16,354 sf
- Additions might include 4 new Classrooms, Media Center, Restrooms, Administration, Special Education, etc.
- Estimated Cost of Additions \$3,349,136
- Estimated Cost of Renovations \$650,900
  - \$25/sf
- \$43,909 is spent on major maintenance items at this facility annually. (Averaged over the past three years)



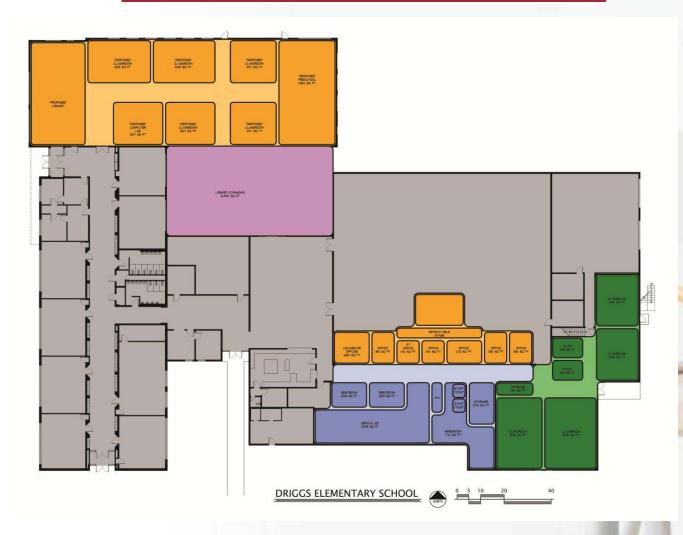
### **Addition/Renovation Costs**

# **DRIGGS ELEMENTARY SCHOOL**

- Total Existing Building Size = 34,368 sf
- Recommended Building Size = 45,107 sf
- Addition/Renovation Size = 10,739 sf
- Additions/Renovations might include new Classrooms,
   Special Education, Pre-K, Restrooms, Administration, etc.
- Estimated cost of Renovations \$2,121,183
- \$28,064 is spent on major maintenance items at this facility annually. (Averaged over the past three years)



# **DRIGGS ELEMENTARY RENOVATIONS**





### **Addition/Renovation Costs**

# **VICTOR ELEMENTARY SCHOOL**

- Total Existing Building Size = 22,382 sf
- Recommended Building Size = 35,887 sf
- Addition Size = 13,505 sf
- Additions/Renovations might include new Classrooms,
   Special Education, Restrooms, Administration, etc.
- Estimated Cost of Additions \$2,765,689
- Estimated Cost of Renovations \$559,550
  - \$25/SF
- \$42,440 is spent on major maintenance items at this facility annually. (Averaged over the past three years)



### **Addition/Renovation Costs**

# **TETONIA ELEMENTARY SCHOOL**

- Total Existing Building Size = 15,158 sf
- Recommended Building Size = 16,812 sf
- Addition Size = 0 sf
- No Additions Necessary
- Estimated Cost of Renovations \$378,950
  - \$25/sf
- \$34,228 is spent on major maintenance items at this facility annually. (Averaged over the past three years)



# **PROJECTED UPGRADES**

- Upgrading the boiler at DES
- Paving parking areas north of DES, East of DES, south of RUES
- Upgrading old phone systems to VOIP
- Upgrading old fire alarm systems to sensor/monitored systems (4 Elementary)
- Upgrading security access systems (video, possible buzzer systems at entry ways)
- Increasing WiFi



# **Estimated Costs to Renovate/Add Onto Existing Facilities**

Facility	Existing Building Size	Recommended Building Size with 10% growth	Addition/ Renovation Size	Estimated Cost of Additions	Estimated Cost of Renovations	Major Maintenance Cost Annually
RUES	26,036 sf	42,390 sf	16,354 sf	\$3,349,136	\$650,900	\$43,909
DES	34,368 sf	45,170 sf	10,739 sf		\$2,121,183	\$28,064
VES	22,382 sf	35,887 sf	13,505 sf	\$2,765,689	\$559,550	\$42,440
TES	15,158 sf	16,812 sf	0 sf		\$378,950	\$34,228
Total				\$6,114,825	\$3,710,583	\$148,641



### **New School Costs**

Size of School		Square Feet	SF. Student	Estimated Cost	Cost \$/Student
K-5 for 900 Students	Current District K-5 Enrollment +10%	119,151	*132.4	\$24,043,480	\$27,112
K-5 for 818 Students	Current District K-5 Enrollment	108,295	*132.4	\$22,177,733	\$27,112
K-3 for 619 Students	Current District K-3 Enrollment +10%	81,949	*132.4	\$16,782,336	\$27,112
K-3 for 563 Students	Current District K-3 Enrollment	74,536	*132.4	\$15,264,227	\$27,112
K-3 for 529 Students	Current VES + DES Enrollment +10%	70,034	*132.4	\$14,342,262	\$27,112
K-3 for 481 Students	Current VES + DES Enrollment	63,680	*132.4	\$13,041,027	\$27,112
K-3 for 305 Students	Current DES Enrollment +10%	45,107	147.9	\$9,237,463	\$30,287
K-3 for 280 Students	Current RUES Enrollment +10%	42,390	151.4	\$8,681,048	\$31,004
K-3 for 277 Students	Current DES Enrollment	42,058	151.8	\$8,613,058	\$31,094
K-3 for 255 Students	Current RUES Enrollment	39,567	155.2	\$7,984,225	\$31,311
K-3 for 224 Students	Current VES Enrollment +10%	35,887	160.2	\$7,241,638	\$32,329
K-3 for 204 Students	Current VES Enrollment	33,392	163.7	\$6,738,172	\$33,030
K-3 for 90 Students	Current TES Enrollment +10%	16,812	186.8	\$3,392,493	\$37,694
K-3 for 82 Students	Current TES Enrollment	15,469	188.6	\$3,121,490	\$38,067

## **Typical Cost Allocations for a New K-12 School Project**

34th Annual Construction Report , American School and University, v80 n9, May 2008

Project Component	% of Overall Cost	
Site Purchase	2%	
Construction	67%	
Site Development	9%	
Furnishings and Equipment	14%	
Fees/Other	8%	

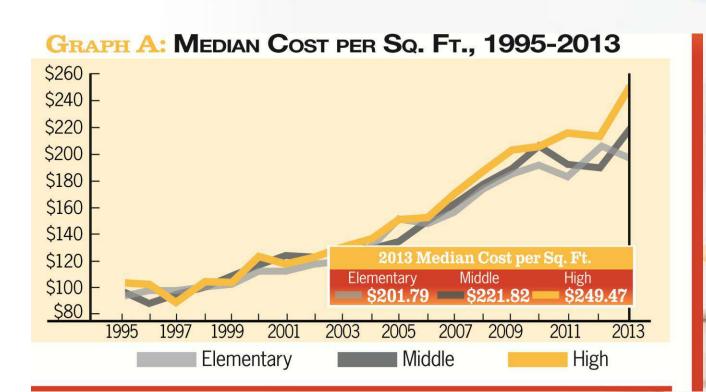


### **National Median Costs for New Elementary Schools**

School Planning & Management 9<sup>th</sup> - 19<sup>th</sup> Annual Construction Reports

Schools Completed /Year of Publication	Cost/SF	Delta
2003/2004	\$120.83	
2004/2005	\$131.82	\$10.99
2005/2006	\$152.94	\$21.12
2006/2007	\$148.15	-\$4.79
2007/2008	\$157.15	\$9.00
2008/2009	\$178.77	\$21.62
2009/2010	\$184.65	\$5.88
2010/2011	\$190.48	\$5.83
2011/2012	\$181.00	-\$9.48
2012/2013	\$204.79	\$23.79
2013/2014	\$201.79	-\$3.00

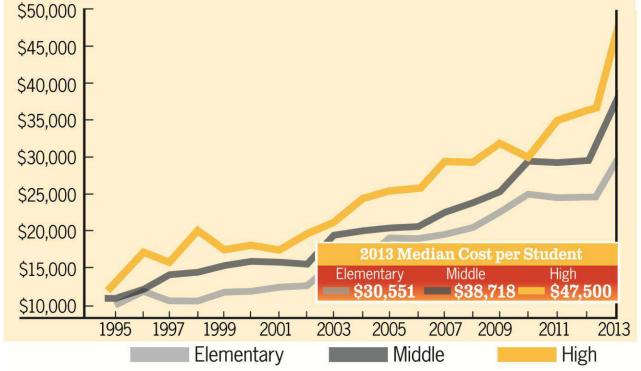
**Cost per Square Foot** 





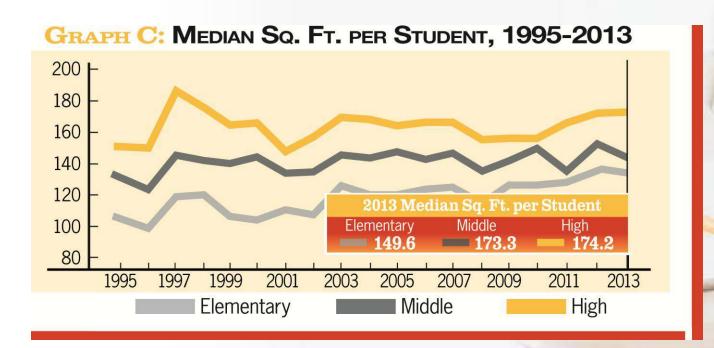
**Cost per Student** 







### **Square Feet per Student**





### **Ideal Schedules for Major School Projects**

Based on Bond Dates per Idaho Statutes

