GOVERNMENT OF GUAM
DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIPATTAMENTON SALUT PUPBLEKO YAN SETBISION SUSIAT

LOURDES A. LEON GUERRERO
GOVERNOR, MAGA'HÅGA'

JOSHUA F. TENORIO
LT. GOVERNOR, SIGUNDO MAGA'LÅHI

LINDA UNPINGCO DENORCEY, MPH
ACTING DIRECTOR

LAUREN SF DUENAS, MPH, BSN.
DEPUTY DIRECTOR

MAR 13 2019

35GL-19-0236
Speaker Tina Rose Muña Barnes
MAR 15 2019
Time 326 ( )AM ( )PM
Received By:

2019 MAR 15 PM 3:48

Honorable Tina Muña Barnes
Speaker, Thirty-Fifth Guam Legislature
Guam Congress Building
163 Chalan Santo Papa
Hagatna, Guam 96921

Via: Secretary of the Legislature
The Honorable Amanda L. Shelton

Dear Speaker Barnes:

This is a transmittal to *I Liheslaturan Guåhan* of the proposed rules and regulations governing school building sanitation pursuant to the Administrative Adjudication Law.

The Division of Environmental Health (DEH) of the Department of Public Health and Social Services (DPHSS) held a public hearing to receive comments from the community on the proposed *Rules and Regulations for School Building Sanitation*, which is enclosed with this letter. The public hearing was held on March 9, 2017 from 3:00 p.m. to 5:00 p.m. The procedures provided in the Administrative Adjudication Law (Title 5 GCA Chapter 9, Article 3) were followed in notifying and conducting the hearing. A total of sixteen private individuals attended the hearing; six provided oral testimonies. One written testimony was received by our office after the public hearing. The minutes of the public hearing is also enclosed.

The proposed rules and regulations were posted on the website of DPHSS (www.dphss.guam.gov) on February 23, 2017, accompanied by press releases seeking public comments on the proposal. Five copies of the proposed rules and regulations have been on file at the DEH since its posting.

The Department anticipate an economic impact of over $500,000 to the general public as a result of the implementation of the *Rules and Regulations for School Building Sanitation.* The determination of economic impact is strictly confined to the implementation of these regulations.

The proposal was reviewed by the Office of the Attorney General and approved by the Acting Governor of Guam (copy enclosed).

A copy of the letter posted on the webpage of the Compiler of Laws, which states, "Compliance with the recommended format will be de facto indication that the submission is in a format approved by the Complier of Laws," is also enclosed. The proposal is in compliance with the recommended format.

We have further enclosed the following materials for your reference:

123 CHALAN KARETA, MANGILAO, GUÅHAN 96913-6304
www.dphss.guam.gov • Ph.: 1.671.735.7102 • Fax: 1.671.473.5910

- A copy of the public hearing notice that was printed in the Guam Daily Post on February 23, 2017 and March 8, 2017;
- Copies of the proposed *Rules and Regulations for School Building Sanitation* and the accompanying Economic Impact Statement, as well as an electronic copy;
- An audio copy of the Minutes of the March 9, 2017 public hearing;
- A copy of the written testimony from the Guam Department of Education;
- A copy of the letter regarding format from the Office of the Compiler of Law;
- A copy of the memo of approval from the Office of the Attorney General; and
- A copy of the letter of approval from the Acting Governor of Guam.

For any questions you may have in this matter, please contact Mr. M. Thomas Nadeau, the Chief Environmental Public Health Officer of the Division of Environmental Health, at 735-7221, or via his email at masatomo.nadeau@dphss.guam.gov.

Senseramente,

LINDA UNPINGCO DENORCEY, MPH
Acting Director

Enclosures

PUBLIC HEARING NOTICE

PRINTED IN THE GUAM DAILY POST ON FEBRUARY 23,2017 AND MARCH 8, 2017

Sen. Thomas Ada
Committee on Land

Public Hearing
Tuesday, February 28, 2017
Barrigada Community Center

AGENDA

6:00pm

Bill No. 13-34 (COR) - T.C. Ada and J.V. Espaldon
An act to add a new § 61218 to Article 2 of Chapter 61, Title 21, Guam Code Annotated, relative to rezoning Lot Naval Air Station Agaña 17 (EDC parcel 1) and Lot Naval Air Station Agaña 20 (EDC parcel 2) from Agricultural (A) to Light Industrial Zone (M1).

Bill No. 18-34 (COR) - T.C. Ada
An act to transfer a portion of Lot No. 5412-R11, Municipality of Mangilao, from the Chamorro Land Trust inventory to the University of Guam, for expansion of the GADTC.

Individuals requiring special accommodations should submit request to Rick Salas at 473-3301.
Paid for by funds of the Committee on Land.
www.senato.ada.org

NOTICE OF PUBLIC MEETING

The Public Defender Service Corporation Board of Trustees will conduct its regular scheduled board meeting on **Monday, February 27, 2017 at 12:30 p.m.** at the Conference Room of the Public Defender Service Corporation, located at the MVP Sinajana Commercial Building, Unit B, 779 Route 4, Sinajana, Guam 96910.

Copies of the agenda will be available prior to the meeting at the Public Defender Service Corporation.

Individuals requiring special accommodations are asked to contact Ms. Cathy Gogue at 475-3100.

/s/ KATHERINE A. MARAMAN
Chairman

This public notice is paid for with government funds.

EAGLE GOLF CLUB

INCOME STATEMENT
For the year ending December 31, 2016

Revenues		
Beginning balance	$ 8,035.49	
Membership dues	$ 6,334.00	
Tournament fees	$ 9,890.00	
Greenies Fund	$ 1,053.00	
Members' contributions	$ 3,386.00	
Sponsor	$ 150.00	
Proceeds from fundraising	$ 58,825.00	
Gross Income	$ 87,673.49	$ 87,673.49
Expenses		
Tournament expenses	$ 35,299.94	
Fundraising expenses	$ 32,584.04	
Professional fee/Publication	$ 230.00	
Charitable contributions	$ 6,903.00	
Total Expenses	$ 75,016.98	$ 75,016.98
Net Income		$ 12,656.51

BALANCE SHEET
For the year ending December 31, 2016

ASSETS	
Cash	$ 12,656.51
TOTAL ASSETS	$ 12,656.51
LIABILITIES	
Accounts payable and other liabilities	$ 11,000.00
Net assets, unrestricted	$ 1,656.51
TOTAL LIABILITIES AND NET ASSETS	$ 12,656.51

PUBLIC NOTICE

The Guam Developmental Disabilities Council (GDDC) will hold its General Membership Meeting on Wednesday, March 8, 2017, 11:00 am to 2:00 pm at the Hilton Guam Resort & Spa, Chuchuku Room. All Council members are urged to attend. The meeting is open to the public. For persons requiring special accommodations, please contact 735-9127 to make arrangements with the hotel.

This Ad was paid by the Developmental Disabilities Assistance and Bill of Rights Act, Federal Law 106-402.

GOVERNMENT OF GUAM
DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIPATTAMENTON SALUT PUPBLEKO YAN SETBISION SUSIAT
123 Chalan Kareta, Mangilao Guam 96913-6304

NOTICE OF PUBLIC HEARING

PURSUANT TO § 9301, DIVISION 1, CHAPTER 9 TITLE 5 GCA, ALL AGENCIES OF THE GOVERNMENT OF GUAM ARE REQUIRED TO PUBLISH A NOTICE OF PUBLIC HEARING ON THE ADOPTION, PROMULGATION, REPEAL, RECISSION, OR AMENDMENT OF RULES. THE DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES WILL BE ACCEPTING PUBLIC COMMENTS ON THE PROMULGATION OF RULES AND REGULATIONS GOVERNING THE FOLLOWING:

SCHOOL BUILDING SANITATION
DATE: Thursday, March 9, 2017
TIME: 3:00 P.M. TO 5:00 P.M.
PLACE: DIVISION OF SENIOR CITIZENS CONFERENCE ROOM
CASTLE MALL, MANGILAO

Copies of the proposed rules and regulations are available for inspection at the Division of Environmental Health (DEH) on the 2nd floor of the Department of Public Health and Social Services in Mangilao, and on the DPHSS webpage at dphss.guam.gov. Please call DEH at 735-7221 for questions and assistance

JAMES W. GILLAN, Director

Guam Memorial Hospital Authority
Aturidått Espetåt Mimunåt Guåhan
850 Gov. Carlos Camacho Road
Tamuning, Guam 96913

INVITATION FOR BID

GMHA IFB No. 012-2017
Professional Services for the Construction of SNU's Emergency Walkway

Submission Time: 10:00 a.m. / Opening Time 10:30 a.m.

A mandatory preliminary bid conference and site inspection is required and will be conducted on March 02, 2017 @ 9:00 hours at GMHA SNU (Skilled Nursing Unit) located at Sabana Barrigada Heights.

All bids must be sealed and submitted in duplicate to the Materials Management Department by March 09, 2017. Bidding documents are available at the same office for a non-refundable fee of $20.00 per set.

For procurement opportunities, please visit our public information page at www.gmha.org.

/s/ Peter John D. Camacho, M.P.H.
Hospital Administrator/CEO

MONGMONG TOTO MAITE COMMUNITY WELFARE ASSOCIATION

P.O. Box 785 . Hagatna, Guam . 96932 • Tel: (671) 477-9090 Fax: (671) 472-6494

Statement of Financial Position
December 310 2016

ASSET	
Cash	$ 3,042.21
LIABILITIES	-0-
TOTAL ASSET & LIABITLITIES	$ 3,042.21

Statement of Activity
For the year ended December 31, 2016

Balance at the beginning of the year	$ 3,042.31
Income for the year	$11.221.31
TOTALINCOME	$14,263.52
EXPENSES	
Comrnunity activities and assistance	$13,650.00
TOTAL ASSET AT TIIE END OF THE YEAR	$ 613.52

Verified & correct to the best of my knowledge:

/s/ SONYA A.U. NAPUTI SANCHEZ
President

/s/ PATRICIA C. MANIBUSAN
Secretary

Climate scientists, weather forecasters outraged by proposed cuts to NOAA

By Jason Samenow
The Washington Post

The Trump administration has proposed a 17 percent cut to the budget of the National Oceanic and Atmospheric Administration, according to a four-page budget document obtained by The Washington Post and reported on Friday. Several leaders in the weather and climate community have since expressed exasperation, arguing such cuts would profoundly set back advances in weather prediction and climate science. Some said they could even cost lives.

Weather satellite division would be hardest hit

NOAA, which is part of the Department of Commerce, houses the National Weather Service and the divisions responsible for weather satellites and atmospheric research.

The weather satellite division, known as the National Environmental Satellite, Data and Information Service, would be hardest hit by the proposed cuts. The administration proposes slashing its budget by $513 million in the 2018 fiscal year, which starts Oct. 1.

Data from weather satellites are indispensable for models used to predict the weather. NOAA has conducted experiments that show forecasts for costly and deadly storms would be far less accurate without such information.

"NOAA satellites save lives and protect our country. It's time to stop apologizing that they cost a lot of money," said Jonathan Malay, a past-president of the American Meteorological Society, who worked in the satellite industry.

Sea Grant program would be eliminated

As a cost-savings measure, the administration's proposal said it would like to "revisit conversations" about using commercial or international satellites to supplement or replace NOAA's satellite systems. That's a "very high risk" strategy, said David Titley, a professor of meteorology at Pennsylvania State University who served as NOAA's chief operating officer in the Obama administration. "It is like landing on a new island and burning your ships before you know if your new home can sustain life," he said.

The administration's proposal would slash NOAA's Office of Oceanic and Atmospheric Research (OAR) office by $126 million, including the proposed elimination of the Sea Grant program.

On his blog, University of Washington atmospheric researcher Cliff Mass explained the office funds important research to improve the nation's weather models, which have fallen behind the Europeans in their prediction capabilities. "Such a large cut would greatly undermine current activities to replace the problematic current generation of U.S. global [weather] models," Mass said. "It would undermine the development of new approaches to data assimilation of observational data. And much more."

In addition to funding weather research, the office houses NOAA's Climate Program Office which manages the agency's climate research programs and connects the research findings with stakeholders, such as state and local officials and resource managers. "I see this as the undeclared war on climate research," Titley told Climate Central.

National Weather Service would see the smallest cuts

Broadly speaking, the cuts could set atmospheric research back years, said Marshall Shepherd, a past president of the American Meteorological Society and professor at the University of Georgia. "Research cuts compromise our ability to sustain and develop new capabilities in the future," he wrote in a column at Forbes. "Even 1-4 year lags or reductions can cause long-term damage because of erosion of technical skills, scientific expertise, and industry contracts."

Of NOAA's various divisions, the administration proposes the smallest cuts, at around 5 percent, for the National Weather Service, along with the National Marine Fisheries Service. But Dan Sobien, president of the National Weather Service Employees Organization, a labor union, called the proposed $53 million cut for the Weather Service "devastating."

"There's not a whole lot of discretionary spending in the Weather Service budget," Sobien said. "It would leave a huge hole in our ability to warn people and could even cost lives."

GUAHAN ANCESTRAL LANDS COMMISSION
Kumision I Tåno' Saina-Ta

EDDIE BAZA CALVO, Governor
RAY TENORIO, Lieutenant Governor

MICHAEL J.B. BORJA, Director
DAVID V. CAMACHO, Deputy Director

NOTICE OF BOARD MEETING

The **GUAM ANCESTRAL LANDS COMMISSION (GALC)**
Board Meeting will be held on **Wednesday, March 15, 2017** at **2:00pm,** Department of Land Management conference room, 3rd Flr. of the ITC Building, 590 S. Marine Corps Drive, Tamuning
Individuals requiring special accommodations, auxiliary aids or services.
may contact Karen 649-5263 ext 432.

This ad paid for by Government funds.

FILIPINO COMMUNITY OF GUAM

P.O. Box 315905, Tamuning, Guam 96931

Statement of Financial Condition
December 31, 2016

	Dec 31, 16	Dec 31, 15	$ Change	% Change
ASSETS				
Current Assets				
Checking/Savings				
10000 · BOG General Fund	8,209.45	36,399.73	-28,190.28	-77.45%
11100 · BOG Welfare Fund	13,489.51	1,320.72	12,168.79	921.38%
11200 · BOG Calamity Fund	17,984.58	17,973.58	11.00	0.06%
11300 · BOG ClubHouse Fund	115,637.35	1,536.59	114,100.76	7,425.58%
Total Checking/Savings	155,320.89	57,230.62	98,090.27	171.4%
Total Current Assets	155,320.89	57,230.62	98,090.27	171.4%
Fixed Assets				
15000 · Clubhouse-Macheche	0.00	386,801.03	-386,801.03	-100.0%
Total Fixed Assets	0.00	386,801.03	-386,801.03	-100.0%
TOTAL ASSETS	155,320.89	444,031.65	-288,710.76	-65.02%
LIABILITIES & EQUITY				
Equity				
30000 · Opening Balance Equity	421,274.09	421,274.09	0.00	0.0%
32000 · Unrestricted Net Assets	23,815.54	15,267.70	8,547.84	55.99%
Net Income	-289,768.74	7,489.86	-297,258.60	-3,968.81%
Total Equity	155,320.89	444,031.65	-288,710.76	-65.02%
TOTAL LIABILITIES & EQUITY	155,320.89	444,031.65	-288,710.76	-65.02%

LINDA CAASI, Treasurer
ELIZABETH D. CENA, Assistant Treasurer

NOTICE OF GOVERNMENT MEETING

The Contractors License Board will hold a regular board meeting on Wednesday, **March 15, 2017 at 10:00 a.m.** at the Contractors License Board conference room, located at 542 North Marine Corps Drive in Upper Tumon.

For any special accommodations, please contact our office at 649-2211/9676.

EDDIE BAZA CALVO, Governor
RAY TENORIO, Lieutenant Governor

GOVERNMENT OF GUAM
DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIPATTAMENTON SALUT PUPBLEKO YAN SETBISION SUSIAT
123 Chalan Kareta, Mangilao, Guam 96913-6304

JAMES W. GILLAN, Director
LEO B. CASIL, Deputy Director

NOTICE OF PUBLIC HEARING

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DATE: Thursday, March 9, 2017
TIME: 3:00 P.M. TO 5:00 P.M.
PLACE: DIVISION OF SENIOR CITIZENS CONFERENCE ROOM
CASTLE MALL, MANGILAO

Copies of the proposed rules and regulations are available for inspection at the Division of Environmental Health (DEH) on the 2nd floor of the Department of Public Health and Social Services in Mangilao, and on the DPHSS webpage at dphss.guam.gov. Please call DEH at 735-7221 for questions and assistance.

JAMES W. GILLAN, Director

DRAFT PROPOSED RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

DATED OCTOBER 1, 2018

AS SUBMITTED TO THE OFFICE OF THE GOVERNOR

I MINA 'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
2019 (FIRST) Session

Bill No. _____

Introduced by: _____

AN ACT TO ESTABLISH RULES AND REGULATIONS OF THE DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES UNDER ARTICLE 7 OF CHAPTER 4, DIVISION 1, TITLE 26, GUAM ADMINISTRATIVE RULES AND REGULATIONS, RELATIVE TO SCHOOL BUILDING.

BE IT ENACTED BY THE PEOPLE OF GUAM:

Section 1. Legislative Findings and Intent. Title 10 Guam Code Annotated, Chapter 25 ("Institutional Facilities"), mandates the Director of the Department of Public Health and Social Services to adopt regulations as necessary to implement the chapter. *I Liheslaturan Guåhan* recognizes that there is a need to update the regulations on the sanitary operation and standards for school building to protect and promote the health and safety of all students and employees in schools on Guam.

Furthermore, *I Liheslaturan Guåhan* finds that there are some provisions in the existing regulations, which was adopted in 1984, that need to be expanded and clarified.

Much of the requirements in the existing regulations have been retained, and some of the most significant changes are: needing to provide adequate playground area for students; establishing standards for temperature, ventilation, and humidity; requirements and exemptions of colleges and universities; and providing sufficient number of toilet facilities and handwashing units. The proposed regulations also detail how compliance inspections by the Department of Public Health and Social Services will be conducted.

10.01.18

Section 2. Adoption of Rules. Notwithstanding any other provision of law, rule, regulation, and executive order, the rules and regulations of the Department of Public Health and Social Services for school building sanitation, and attached hereto as Exhibit "A," to be codified under Chapter 4, Division 1, Title 26, Guam Administrative Rules and Regulations, is hereby adopted by *I Mina 'Trentai Sinko Na Liheslaturan Guåhan.*

Section 3. Effective Date. The administrative rules and regulations adopted pursuant to Section 2 of this Act shall become effective immediately upon enactment.

Section 4. Severability. If any provision of this law or its application to any person or circumstance is found to be invalid or contrary to law, such invalidity shall not affect other provisions or applications of this law which can be given effect without the invalid provisions or application, and to this end the provisions of this law are severable.

EXHIBIT "A"

RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

Article 7
26 Guam Administrative Rules and Regulations
Division 1
Chapter 4

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIVISION OF ENVIRONMENTAL HEALTH
123 Chalan Kareta
Mangilao, Guam 96913-6304
(671) 735-7221

10.01.18

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§4701. Purpose.

The purpose of these rules and regulations is to protect and promote the health and safety of all employees and students in schools on Guam.

§4702. Authority.

Title 10 Guam Code Annotated, Chapter 21, Section 21102 authorizes the Director of the Department of Public Health and Social Services to establish rules and regulations to carry out the provisions of Chapter 25, Title 10 Guam Code Annotated.

§4703. Title.

These rules and regulations shall be known as the *"Rules and Regulations for School Building Sanitation."*

§4704. Definitions.

As used in these rules and regulations, the following definitions shall apply:

(a) *American Society of Heating, Refrigerating, and Air-Conditioning Engineers* (also known as *ASHRAE*) means the building technology society that focuses on building systems, energy efficiency, indoor air quality, and sustainability within the industry.

(b) *American Society for Testing and Materials* (also known as *ASTM*) means the international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

(c) *Campus* means the grounds and buildings of a school found on a property that is owned, leased, rented, or otherwise occupied by the operator on single, continuous property.

(d) *Department, or DPHSS,* means the Guam Department of Public Health and Social Services.

(e) *Director* means the Director of Public Health and Social Services or his/her designated representative.

(f) *Elementary School* means a school attended by students in kindergarten to fifth grade.

(g) *Handwashing Unit* means an area that includes a sink, a soap dispenser, and a sanitary paper towel dispenser.

(h) *High School* means a school attended by students in ninth to twelfth grade.

(i) *Imminent Health Hazard* means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury based on the number of potential injuries, and the nature, severity, and duration of the anticipated injury.

(j) *Middle School* means a school attended by students in sixth to eighth grade.

(k) *Operator* means a person, governmental agency, firm, association, corporation, or business entity, who owns, leases or manages, or proposes to own, lease, or manage, a school, and includes any person designated in the application for a Sanitary Permit to operate a school or having authority to administer day-to-day operation of the facility and to respond to complaints, orders, and other matters as set forth in these rules and regulations.

(l) *Restroom* means an area that includes a toilet, toilet paper dispenser, and handwashing unit.

(m) *Sanitary Permit* means the official document issued by the DPHSS authorizing the establishment to operate its business.

(n) *School* means any establishment, public or private, for the care and education of students from kindergarten through grade twelve and any college or university or institution of higher learning.

(o) *Shower Facilities* means a shower room and locker room are combined into one area.

(p) *Storm Drainage System* means piping within a public or private premises that carries rainwater, surface water, subsurface water, and similar liquid wastes to a point of disposal.

(q) *Variance* means a written document issued by the Director that authorizes a modification or waiver of one or more requirements of these rules and regulations if, in the opinion of the Director, a health hazard or nuisance will not result from the modification or waiver.

§4705. Sanitary Permit.

(a) No operator shall directly or indirectly in any manner, conduct, control, manage, maintain, or operate a school unless a valid Sanitary Permit issued by the Department to operate such a facility has been obtained and posted. Any operator, before constructing a new school, or making an addition to, or major alteration of, an existing facility shall first submit plans and specifications of such building or changes to the Director for approval.

(b) An application for a Sanitary Permit to operate all new or existing schools, whether public, private, or vocational, shall be made in writing on a form prescribed by the Department, signed by the applicant or his authorized agent, and shall contain such information that will determine that the facility and its operation are in compliance with the applicable provisions of these regulations.

(c) Every campus shall obtain a separate Sanitary Permit, and the transfer of that permit to another person, operator, school, campus, or location shall be prohibited.

(d) Before the application for a Sanitary Permit shall be approved, the Department shall verify that the facility meets the minimum sanitary requirements and standards by means of a pre-operation inspection. This shall include the access onto premises, inspection, and investigation.

(e) Before a pre-operation inspection is conducted, plans and specifications shall be submitted to the Director in accordance with the requirements established in these regulations, which shall include the following:

(1) The dimensions of the proposed establishment;

(2) The location, number, and type of plumbing fixtures, including all water supply fixtures and toilet fixtures, and other fixtures and equipment; and

(3) If a newly-constructed building, the general layout of water supply lines, wastewater lines, or methods of wastewater disposal.

(f) If upon inspection, the Director is satisfied that the school meets the qualifications and standards prescribed in these rules and regulations, a nontransferable Sanitary Permit shall be issued. The Sanitary Permit shall be posted in a conspicuous area designated by the Director.

(g) An application for renewal of Sanitary Permit shall be submitted no earlier than 30 days prior to its expiration date with its applicable fees.

(h) The school shall adhere to the most recently adopted building, plumbing, fire, and other pertinent regulatory codes for Guam.

(i) The school shall have an updated floor plan readily available and shall present it to the Director upon request. Such floor plan shall show the arrangement of all rooms, buildings, and areas in the school.

(j) Compliance with this section does not absolve the school from obtaining other permits and licenses required by law.

§4706. School Location and Premises.

(a) The school shall not permit activities that will increase the intensity of noise on the school premises. Noise level at the site should not exceed seventy (70) decibels.

(b) The school site shall be located so that it is as remote as possible from sources of air pollution such as manufacturing plants, abattoirs, refineries, open-burning dumps, sanitary landfill operations, polluted streams, and any sources of smoke, dust, fumes, or objectionable odors.

(c) Once a school site has been established, no source of objectionable conditions as detailed in Section 4706 (a) and (b) above shall be permanently located near enough to a school site so as to create conditions objectionable to the school.

(d) The school site, which includes the area used for a playground as well as that immediately adjacent to the school building, shall be evenly graded and sloped so as to provide adequate surface drainage.

(e) Playgrounds shall be constructed and maintained to permit maximum utilization of sites, with elimination of sanitary and health hazards, including depressions, fragments of glass, stone, and similar obstructions.

(f) Outdoor recreational area shall be required of schools occupied by kindergarten through grade twelve and shall comprise a minimum of 100 sq. ft. of accessible space per student

using that area at any given period. The outdoor recreational area shall be either fenced or properly isolated from vehicular traffic.

(g) The school site shall be free of potential pest breeding sites, such as open dumps, swamps, etc., and shall be located away from low lying swampy areas where mosquitoes breed.

(h) The school site shall be kept clean and free of rubbish and overgrown vegetation.

(i) No school shall be located in a private family residence unless that portion of the residence to which students have access is physically separated from the usual living quarters of the family. A solid, doorless partition from the floor to the ceiling and between such walls shall be available to provide complete physical separation of the school from such other business or dwelling.

(j) Exterior of buildings, walkways, awnings, picnic tables, benches, and other outside structures shall be kept clean and in good repair.

(k) All storm drainage systems shall include a gutter, leader, downspout, splash block, and/or drain opening. The gutter/downspout grading and/or discharge point shall be such that water will not pool.

(l) All equipment, structures, and fixtures that are no longer being used shall be removed from the building and properly disposed.

§4707. School Building.

(a) Room Requirements.

(1) The classroom shall be of sufficient size to provide at least 25-30 square feet of space per student in elementary schools, 20-25 square feet of space per student in middle schools, and at least 18-20 square feet of space per student in high schools, colleges, and universities.

(2) Rooms shall be kept clean, neat, and orderly with approved waste container that is durable, easily cleanable, and appropriately sized for its use.

(3) All dining areas that are used for purposes other than dining shall be kept clean, neat, and orderly, with adequate seating and lighting.

(4) The janitorial rooms, and any storage area used to store hazardous materials, shall be locked to prevent student access.

(5) Rooms or areas unsafe for use shall be closed or cordoned off to prevent access. Readily visible signs shall be posted in conspicuous locations to prohibit unauthorized access.

(6) Use of scented products such as air fresheners, candles, deodorizers, and plug-ins shall be prohibited in rooms.

(b) Floor Requirements.

(1) Floors of all rooms shall be of such construction as to be easily cleanable, non-absorbent, light in color, and shall be kept clean and in good repair.

(2) Floors shall be made from materials approved by the Department.

(3) Floors without carpeting shall be sealed with a satisfactory floor sealer.

(4) Area carpets and rugs shall be easily cleanable, have friction backings or underlayment when placed on smooth floor surfaces, and shall not be used in areas where contamination with bodily fluids or food is likely. Carpets and rugs shall be kept clean and in good repair.

(c) Wall Requirements.

(1) Walls shall be smooth, have surfaces light in color, be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

(2) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(d) Ceiling Requirements.

(1) Ceilings shall have flat surfaces, light in color, be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

(2) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(e) Door Requirements.

(1) School building exits shall be provided, which are easily accessible and plainly indicated. Exit signs shall be posted at the interior side of the exit door.

(2) Rolling, sliding, revolving, and double swinging doors are prohibited. Doors leading to the outside of the building shall be tight-fitting, self-closing, and shall open outward.

(3) Doors shall be kept clean and in good repair.

(4) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(f) Window Requirements.

(1) Windows shall be kept clean and in good repair.

(2) All openings to the outer air shall be screened effectively, unless other effective means are provided to prevent the entrance of pests. Plastic or wire screen shall be not less than 16 mesh to the inch.

(g) Classroom Equipment Requirements.

(1) The classroom equipment such as chalkboards, whiteboards, erasers, desks, chairs and other furniture shall be kept clean and in good repair.

(2) Chalkboards shall be of black or green, dull finish, and shall have smooth, even surfaces with no cracks and as few seams as possible.

(3) Chalkboards and whiteboards shall be located so as to be easily seen by the intended users and opposite windows so as not to create areas of high light contrast near or behind chalkboards.

(4) Use of equipment, such as crayon or chalk containing lead, lead compounds, and other hazardous materials is prohibited.

(5) Art and craft materials shall be labeled in accordance with the chronic hazard labeling standard, ASTM D4236-94(2005).

(h) Seating Requirements.

(1) Each student shall have an individual seating unit with writing table attached or adjacent to the seat and so constructed as to provide comfortable seating and convenient writing without undue strain.

(2) Where windows are the primary source of illumination, the desks shall be so arranged as to minimize the effects of glare and shadow.

(3) When the student is erectly seated with feet squarely on the floor, there must be no pressure from the forward edge of the seat under the knees.

(4) Writing tables shall be smooth, easily cleanable, maintained, and in good repair.

(i) Maintenance and Housekeeping Requirements.

(1) There shall be sufficient space for the storage of outdoor clothing, raincoats, maintenance equipment, ground equipment, and instructional equipment to prevent cluttering of classrooms, walkways, or other areas.

(2) All areas, facilities, furniture, and equipment shall be maintained in a clean, safe, and sanitary condition and kept in good repair. Furniture and equipment no longer being used shall be removed and disposed of properly.

(3) The building shall be free of pests and conditions which attract, provide harborage, and promote breeding of such.

(4) Cleaning materials, tools, and maintenance equipment shall be provided and shall be safely stored and secured in a locked area.

§4708. Ventilation.

(a) Ventilation shall be a minimum of fifteen cubic feet per minute per student (15 cfm/student) to provide proper circulation of needed air within a room by either windows or mechanical ventilators (ASHRAE Standard 62-1999). Ventilation rate requirements may be increased by the Department for rooms where the ventilation rate is insufficient.

(b) Ventilation system filters shall be cleaned or replaced regularly to prevent excessive accumulation of dust or debris.

(c) All rooms, areas, and equipment from which contaminated aerosols, obnoxious odors, or noxious fumes, or vapors may originate shall be effectively vented to the outside air.

(d) Windows, including louvers opened from the bottom, which cause direct currents of air on students nearby, shall be provided with window ventilators or deflectors.

(e) Windows, including louvers shall be adjustable at the top and bottom, and when this is the only means of ventilation, at least one-half (1/2) of the windows shall open from both top and bottom.

(f) Ducts and fans in connection with mechanical ventilation shall be so arranged and controlled as to eliminate objectionable air currents directly on the students.

(g) When mechanical ventilation is provided, it shall be kept clean and in good repair.

§4709. Temperature and Humidity.

(a) Indoor air temperature of rooms occupied by students and faculty shall be in the range of 75°F – 83°F (ASHRAE Standard 55-2004).

(b) Indoor relative humidity shall be in the range of 30% - 60% (ASHRAE Standard 62-1999).

§4710. Lighting.

(a) Availability of natural light is highly recommended in all rooms occupied by students. When adequate natural light is not available, artificial light shall be provided to promote a comfortable visual environment.

(b) All classroom windows shall be provided with shades or blinds which shall be kept clean and in good repair and so used or adjusted so that glare and excessive light intensities are reduced to a minimum.

(c) Minimum acceptable levels for school lighting in the following areas shall be:

(1) Lecture rooms, study halls, laboratories, offices, libraries, art rooms, and electronic and machine shops: 50 foot-candles at all levels.

(2) Reception rooms, gymnasiums, and swimming pools: 30 foot-candles at all levels.

(3) Auditoriums, restrooms, locker rooms, corridors and stairways, storage, and any other rooms: 20 foot-candles at all levels.

(d) Artificial lighting in all areas except storage areas shall be diffused, indirect, and glare-free, and shall be provided with light shields.

(e) Window panes shall not be used for decorations or objects which shut out the light.

§4711. Plumbing.

Plumbing shall be sized, installed, and maintained to carry adequate quantities of water to required locations throughout the school, to prevent contamination of the water supply, to properly convey sewage and liquid wastes from the school building to the public sewage system or to a sewage disposal system approved by the regulatory agencies so as not to create an unsanitary condition or nuisance.

§4712. Water Supply.

(a) Each school building shall be provided with an ample supply of water from an approved public water system. Water supply shall be safe and of sanitary quality.

(b) Drinking water dispensed by means of drinking fountains, cups, and water coolers shall conform to the following:

(1) Drinking fountains shall be kept clean and in good repair.

(2) Drinking fountains shall be provided in the ratio of one per 75 students.

(3) Drinking fountains shall be constructed of impervious material, such as stainless steel, vitreous china, porcelain, enamel, or stoneware.

(4) The jet of the drinking fountain shall dispense from a nozzle of non-oxidizing, impervious material set at an angle from the vertical so as to prevent the return of the water to the orifice or orifices from where it is dispensed.

(5) The end of the nozzle shall be protected by a non-oxidizing guard to prevent the mouth and nose of a person using the fountain from coming into contact with the nozzle.

(6) The bowl of a drinking fountain shall be free from corners so as to be easily cleanable and to avoid collection of dirt and other contaminants.

(7) The waste opening pipe shall be provided with a strainer and be of sufficient size to carry off the water promptly.

(8) Single service cups shall be used when dispensing drinking water from bottled water or water coolers. Single service cups shall be stored, handled, and dispensed in a sanitary manner.

(9) Water coolers used for dispensing drinking water shall be provided with a cover, and shall be kept clean. Dipping of water from a water cooler is prohibited.

(10) Other cups, such as individually owned cups, shall be used only by one owner.

(c) The school water supply system shall be in good working order at all times so as to adequately supply the water demand of the school.

(d) All water outlets shall be protected from back-flow either by air gap or back-flow prevention devices. There shall be no cross-connection, or existing or potential conditions to cause back-siphonage, anywhere in the school building or its premises.

(e) Any water outlet with a threaded, serrated, or quick coupling nozzle shall be provided with a vacuum breaker.

§4713. Handwashing Unit.

(a) Handwashing units shall be located in all classrooms for grade two and below, and in other rooms which require frequent handwashing, such as laboratories, art and cooking classes, and other classrooms as determined by the Department.

(b) Handwashing units shall be kept clean, maintained, and shall be adequate in size and number to serve the total population of the school. Elementary schools, middle schools, high schools, colleges, and universities shall have at least one (1) handwashing unit for every 50 students.

(c) Handwashing sinks shall be provided with cold water at a minimum. If hot water is also provided at handwashing sink, it must be combined with the cold water through a mixing faucet. The hot water shall have a maximum temperature of 110°F.

(d) Soap, sanitary paper towels, and waste containers shall be provided at all handwashing units.

(e) Liquid soap dispenser shall be of a type that uses a replacement pouch or sealed-soap cartridge. If a non-mounted refillable liquid soap dispenser is used, it shall be discarded when empty (shall not be refilled). Soap dispensers shall be provided and placed so that the user does not have to move away from the handwashing sink to obtain the soap.

(f) Sanitary paper towels shall be placed inside the sanitary paper towel dispenser. Dispensers shall be installed near the handwashing sink. A heated air hand-drying device may be used in place of sanitary paper towels. Common use towels are prohibited.

(g) Handwashing units shall be conveniently located to or in restrooms.

(h) Soap dispensers and sanitary paper towel dispensers that are no longer being used shall be removed and disposed of properly.

§4714. Shower Facilities.

(a) Shower facilities shall be provided in all middle schools, high schools, colleges, and universities where physical education is a required subject in the curriculum.

(b) Lockers or cubicles shall be provided in a separate room when shower rooms are required.

(c) There shall be a minimum of one showerhead for every four (4) females and one showerhead for every five (5) males based upon maximum demand in any one period.

(d) There shall be a minimum of one locker or cubicle for each student based upon maximum demand in any one period.

(e) The floors of the shower facilities shall be of smooth, finished material with non-slip surface impervious to moisture and sloped to the floor drain. Junctions between walls and floors shall be covered and sealed. Shower rooms and stalls shall have floors, partitions, and walls to a minimum height of six (6) feet, finished with dense non-absorbent and non-corrosive materials having a smooth impervious surface.

(f) Shower facilities shall be kept clean, free of mildew or mold, and well ventilated; and the lockers, showerheads, and floors shall be kept in good repair.

(g) The temperature of water at the shower head shall not exceed 110°F.

§4715. Restrooms.

(a) The following establishes the minimum number of toilets and urinals for schools:

(1) Elementary schools:

(A) Female toilets – one for each 35 females

(B) Male toilets – one for each 50 males

(C) Boys' Urinals - one for each 30 males

(2) Secondary schools, and colleges and universities:

(A) Female toilets - one for each 45 females

(B) Male toilets - one for each 50 males

(C) Boys' Urinals - one for each 30 males

(b) For each toilet added in excess of the minimum required, one urinal may be deducted. The number of urinals shall not be reduced to less than two-thirds of the minimum requirement.

(c) Toilets and urinals shall be of appropriate height for the students.

(d) Separate restrooms for each gender shall be conveniently located. Restrooms found in classrooms may accommodate both genders provided the required toilet ratios have been met.

(e) Restrooms shall be provided in conjunction with shower or locker rooms.

(f) Restrooms shall be completely enclosed.

(g) Restrooms that open directly to the outdoors shall have entrance doors that are tight fitting, self-closing, and open outward.

(1) Restroom entrance doors shall be provided with signs designating the gender for which such room is intended.

(2) Doors shall be kept clean and in good repair.

(h) Floors in the restroom shall be of material impervious to moisture and floor drains shall be provided. Junctions between walls and floors shall be covered and sealed.

(i) Toilet stall partitions and toilet stall doors shall begin not more than one (1) foot from the floor and extend to a height of not less than five (5) feet for elementary, and not less than six (6) feet for middle schools, high schools, and colleges and universities. Each toilet stall door shall be equipped with a latch or lock to secure the door to ensure privacy when using the toilet.

(j) Each restroom shall be provided with a waste container that is durable, easily cleanable, and appropriately sized for its use.

(k) All restrooms shall be kept in good repair, clean, and free from foul odor.

(l) All toilet paper shall be placed in the toilet paper holder/dispenser and be available and conveniently located adjacent to each toilet.

§4716. Garbage, Trash, and Recycling Disposal.

(a) Every school shall provide an adequate number of garbage and trash containers, which shall be located at a place suitable for their use. When recycling programs are in place, recycling containers shall be provided and located at a place suitable for their use.

(b) Watertight and non-absorbent containers with tight-fitting lids shall be used for storing garbage, trash, and recycling. Containers shall be washed and treated with a disinfectant as often as necessary to prevent nuisances. The disinfectant used in such containers shall contain at least 100 ppm of chlorine or its equivalent of an acceptable sanitizer.

(c) Garbage, trash, recycling, and other solid wastes shall be disposed of regularly.

(d) Trash and solid waste shall be disposed of in an approved manner so as not to create a nuisance or health hazard.

(e) Bulk refuse containers shall be located on impervious asphalt or concrete surfaces sloped to drain into an approved sewage disposal system, elevated at least six inches from the ground surface.

(f) Garbage intended for use as animal feed shall be stored according to regulations separately established for feeding of garbage to livestock.

§4717. Food Protection.

For classes that require cooking as part of the curriculum, written procedures shall be maintained and made available to the Department upon request, which address the minimum critical requirements of food safety including, but not limited to, demonstration of food safety knowledge by the class instructor, student health and hand hygiene, temperature control, preventing cross-contamination, and obtaining food from safe sources.

§4718. Safety.

(a) Each school shall have adequate type and number of first aid material as determined by the individual school's health care professional.

§4719. Existing Facilities.

School facilities in existence at the time that these regulations take effect shall be given five years from the date that these rules become effective to come into full compliance with the requirements of these rules unless a school facility or operator files a written statement of exception with the Director and receives a variance as provided in §4721.

§4720. Inspection and Grading.

(a) Access.

An employee or representative of the Department shall, after proper presentation of credentials, have access to any school building at any reasonable time for the purpose of making

inspections to determine compliance with these rules and regulations. Denial of access shall be cause for suspension of the Sanitary Permit.

(b) Report of Inspections.

Whenever an inspection of a school building is conducted, the findings shall be recorded on a form authorized by the Director, shall summarize the requirements of these rules and regulations, and shall set forth a demerit value for each requirement. Demerit value assignments shall be from one through six. Inspection remarks shall be written to reference, by section number, the section violated and shall state the correction to be made. The rating score of the establishment shall be the total of the demerit values for all violations. A copy of the completed inspection report form shall be issued to the operator of the establishment at the conclusion of the inspection. The completed form is a public document that shall be made available for public disclosure to any person who requests it according to law.

(c) Appeal.

The report of inspection of a school building shall state that an opportunity for appeal from any notice or inspection findings will be provided if a written request for a hearing is filed with the Director within the period of time established in the notice for correction.

(d) Grading.

(1) Grades of a school building shall be as follows:

(i) Grade A: An establishment having a demerit score of not more than ten;

(ii) Grade B: An establishment having a demerit score of more than ten but not more than twenty;

(iii) Grade C: An establishment having a demerit score of more than twenty but not more than forty; and

(iv) Grade D: An establishment having a demerit score of more than forty.

(2) Whenever two or more similar violations of the same item are observed during the same inspection, the demerit value for that item violation shall only be counted once.

(3) The Department shall issue a placard reflecting the letter grade of the most recent inspection.

(4) The Department shall establish a specific and reasonable period of time for correction of the violations found, in accordance with the following provision:

(i) When the demerit score of the establishment is twenty or less, all violations of one through five demerits must be corrected within a period of time not to exceed 30 days; or

(ii) When the demerit score of the establishment is more than twenty but less than forty-one, all items of one through five demerit points must be corrected within a period of time not to exceed 15 days; or

(iii) When one or more six demerit point items are in violation, regardless of demerit score, such items must be corrected within a period of time not to exceed 10 days; and

(iv) When the demerit score of the establishment is more than forty, the Sanitary Permit shall be immediately suspended.

(e) The operator shall ensure that he/she, or a designee, be present during inspections of a school building by the Department.

(f) The Inspection Report and Letter Grade Placard shall be posted in a conspicuous area designated by the Director.

(g) Except as specified in (h) of this section, an operator shall immediately discontinue operations and notify the Department if an imminent health hazard may exist because of an emergency such as a fire, flood, extended interruption of electrical or water service, sewage backup, misuse of poisonous or toxic materials, gross insanitary occurrence or condition, or other circumstance that may endanger public health.

(h) An operator need not discontinue operations in an area of a school that is unaffected by the imminent health hazard.

(i) Failure to report an imminent health hazard to the Department may result in immediate suspension of the permit.

§4721. Administrative Penalties.

(a) The Director may impose a fine payable to the "Treasurer of Guam" for any operator that operates without a valid Sanitary Permit. The monetary fine for this administrative violation shall be charged to the operator based on the following:

(1) A fine not less than One Thousand Dollars ($1,000) per violation, but not exceeding Five Thousand Dollars ($5,000), for operating without a valid Sanitary Permit.

(2) For §4720 (a) (l) above, the Department shall treat each additional day as a separate violation per day of continuing violation.

(b) The Director shall issue a notice of violation and administrative penalty against an operator and provide an opportunity to request a hearing on the proposed penalty. The request must be made within 10 days of the date that the notice is served upon the operator.

(c) Any operator may seek review of any administrative penalty imposed before the Superior Court of Guam. Such review shall be upon the record established before the Director and not de novo. The Superior Court may sustain, modify or vacate any administrative penalty it reviews.

(d) If any operator fails to comply with an administrative penalty order after it has become final, the Attorney General shall bring a civil action to enforce the order and to recover the amount ordered or assessed, plus current interest from the date of the final order or decision. To prevail in such an action, the Director need establish only that:

(1) Notice was given as required;

(2) A hearing was granted to the defendant or that the defendant requested no hearing; and

(3) The penalty was imposed and has become final either because the administrative order was not appealed to the Superior Court, or that after judicial review the administrative order remains an unsatisfied obligation.

§4721. Variance.

In the event that a school or an operator is unable to comply with certain requirements of these rules and regulations, upon a showing of good cause which is not the result of negligence or malfeasance, the Director may grant a variance from the requirements of a particular rule by making a written determination. Before a variance from a requirement of these rules is approved, the school or the operator shall first submit a written statement of the proposed variance from the requirement citing relevant rule section numbers. The written statement shall include an alternate plan to address the potential public health hazards and nuisances under the

relevant rule sections. The Director, not his/her representative, is delegated the authority to approve such variance.

§4722. Severability.

If any provision or the application of any provision of these regulations is held invalid, that invalidity shall not affect other provisions or applications of these rules and regulations.

Annex 1

Public Health Reasons

Acronym List

ACGIH – American Conference of Governmental Industrial Hygienists

ADA – Americans with Disabilities Act

ASHRAE – American Society of Heating, Refrigeration & Air-conditioning Engineers

DPHSS – Department of Public Health and Social Services

IAQ – Indoor Air Quality

IESNA – Illuminating Engineering Society of North America

IPM – Integrated Pest Management

IQ – Intelligence Quotient

NFPA – National Fire Protection Association

NIOSH – National Institute for Occupational Safety and Health

RH – Relative Humidity

US CDC – United States Centers for Disease Control and Prevention

US CPSC – United States Consumer Product Safety Commission

US EPA – United States Environmental Protection Agency

Annex 1

Public Health Reasons

§4705. Sanitary Permit.

A valid Sanitary Permit issued by the Department of Public Health and Social Services (DPHSS) is required for the lawful operation of a school as stated in Title 10 Guam Code Annotated Chapter 21, Section 21107. Issuance of such permit confirms that the facility has been inspected by DPHSS and meets the minimum sanitary requirements and standards. This is to protect the students and other occupants of Guam schools from various environmental hazards. Furthermore, the Sanitary Permit authorizes DPHSS to enter the permitted school to conduct an inspection of the facility as required by law. By applying for a Sanitary Permit, knowing that such an inspection may be called for, the operator gives implied consent to the inspection and is considered to have surrendered the right to object to an inspection in return for the grant of the Sanitary Permit.

An updated floor plan, not necessarily drawn to scale, shows the relationship between rooms, spaces, and other physical features at each level of a school building. This is necessary to facilitate ease of inspection and egress.

All schools are expected to comply with other regulatory codes.

§4706. School Location and Premises.

§4706(a). Noise.

Excessive noise is disruptive to both students and staff. Noise detracts from the teacher's ability to teach and the student's ability to learn. Recent studies have shown that student

performance on standardized tests is inversely correlated with noise levels – as noise increases, performance decreases.[1]

Individuals, particularly the hearing-impaired, are greatly affected by excessive background noise. In addition, 13 out of 100 students have some level of hearing loss that affects their ability to hear instruction in the presence of background noise.[2] The most frequent sources for noise in the school environment are outside noise, such as traffic, and noise from within the school, such as gymnasium and music rooms. A standard threshold for residential noise and what is usually recommended in the school environment is 70 decibels. Some examples of this noise level include busy traffic, vacuum cleaner, and alarm clocks.[3]

§4706(b) and (c). Air Pollution.

Air pollutants are commonly produced by manufacturing plants, abattoirs, refineries, open-burning dumps, sanitary landfill operations, polluted streams, and any sources of smoke, dust, and fumes. Children are more vulnerable to many toxic environmental pollutants than adults because "their lungs are still developing and they breathe more air per pound of body weight than adults do."[4] Some of the effects of air pollution are decreased lung function, asthma, bronchitis, emphysema, and even some types of cancer. As such, a more conservative approach to minimizing childhood exposures to pollutants is needed.

§4706(d), (i), and (j). Premises.

The school site should be evenly graded and sloped to provide adequate drainage. The ground immediately adjacent to the building exterior should receive all of the water that impacts and cascades down the walls. Large quantities of water pour onto the ground from the walls during periods of heavy rain. If the ground near the wall is inadequately sloped to enable water to

effectively drain away from the building, the potential for water movement through the foundation is greatly increased. Water accumulation or ponding near the building perimeter may eventually moisten the interior wall surfaces. This will greatly increase the probability of mold growth and structural degradation of these surfaces.

Significant water ponding also constitutes a potential site for mosquito breeding. Mosquitoes go through four distinct stages during their life cycle:[5]

- Egg: hatches when exposed to water
- Larva: "wriggler" lives in the water; molts several times; most species surface to breathe air
- Pupa: "tumbler" does not feed; stage just prior to emerging as adult; stays in water
- Adult: flies a short time after emerging and after its body parts have hardened

The first three stages occur in water, but the adult (female) is an active flying insect that feeds upon the blood of humans and/or animals. The female mosquito lays eggs directly on water, or on moist substrates that may be flooded with water. The egg later hatches into the larva, the elongated aquatic stage most commonly observed as it swims in the water. The larva transforms into the pupa where internal changes occur and the adult mosquito takes form. After two days to a week in the pupal stage, the adult mosquito emerges onto the water's surface and flies away. By eliminating water ponding sites, we can effectively control mosquito infestations near the school building.

Areas or facilities that are not compatible with school institutions, such as the living quarters of a private family residence, must be physically separate and distinct from other areas of the school to minimize the presence of improperly designed facilities and equipment, and the traffic of unauthorized and/or unnecessary persons or pets.

The requirements concerning exteriors of buildings, walkways, awnings, picnic tables, benches, and other outside structures are intended to facilitate maintenance and minimize the accumulation of dust and mud on walking and driving areas, provide durable exterior building surfaces for the safety of students and staff, and prevent the attracting, harboring, or breeding of insects, rodents, and other pests.

§4706(e) and (f). Recreational Area.

Playgrounds that are properly constructed and maintained may reduce the risk of accidents and injuries. Trip hazards such as holes, fragments of glass, stones, and similar obstructions must be eliminated for the safety of the students. The United States Centers for Disease Control and Prevention (CDC) recommends that resources should be allocated to develop and use safer playground equipment and surfaces.[6] Each year, many children are sent to the emergency room for injuries that occurred on the playground. According to the United States Consumer Product Safety Commission (CPSC), 76% of these injuries occur on public playgrounds. Approximately 15% of the injuries are severe and can result in hospitalization or death. The most prevalent injuries are fractures, which account for 39% of all injuries.[7]

The requirement for a minimum of 100 sq. ft. per student of outdoor recreational area to be occupied by grades kindergarten through twelfth grade allows for freedom of movement without collisions among active children. Providing more square feet per child may correspond to a decrease in the number of injuries associated with gross motor play equipment,[8] such as swings and climbers.

Furthermore, sufficient outdoor play space is needed in order to meet the Americans with Disabilities Act (ADA) outdoor play area requirements for accessible routes.[9] The ADA requires that "each service, program or activity conducted by a public entity, when viewed in its entirety,

be readily accessible to, and usable by, individuals with disabilities." This means that whenever play areas are available, such as those in schools, they must come into compliance with the requirements of this Act.

The space requirement of 100 sq. ft. per student is only applicable during certain periods such as recess or playtime when a portion of the school population makes use of the recreational area. Compliance to this requirement will be determined by the total number of students using that area at a given time, and not by the total school population.

§4706(g) and (h). Vector Control.

Open dumps and swamps serve as an attractive haven for animals and insects, and also a nuisance for people. Food, food products, and food wastes can attract such environmental pests as roaches, rodents, and other insects and their larva. Likewise, trees and bushes that are allowed to grow next to the school building provide shelter for animals to build their nests. There are several diseases that can be transmitted to humans by rodents and other vectors. Items stored on the ground can inhibit proper and thorough cleaning. Clutter will contribute to pest infestations by providing them shelter.

§4706(k). Storm Drainage.

Downspouts are designed to direct storm water collected by overhead gutters into storm water drains or directly to grade, provided they are adequately sloped to effectively channel water away from the foundation. Because all components comprising the storm water collection and drainage system may become clogged with leaves, sticks and other debris, they shall be kept clean. Any obstruction in this system increases the likelihood of water overflow and seepage in the vicinity of the building foundation.

Storm drains, typically located on the ground immediately below each downspout and adjacent to the foundation, receive rain water collected from downspouts and direct that water into below-grade storm sewers or away from the building. A poor connection between downspout and storm drain or drainage system may cause storm water to miss the drain, and instead, pour directly onto the ground adjacent to the foundation. Obstructions in the sewer system may lead to storm water backups and overflows at the storm drain. Both outcomes often result in foundation water issues.

Splash plates are generally manufactured concrete pads placed beneath downspouts where no storm drain exists. Because the amount of water directed onto these plates during stormy periods is so significant, it is imperative that they be installed with sufficient slope to prevent water accumulation near the foundation.

Improperly sloped or obstructed gutters and downspouts may cause rain water overflow, leading to uncontrolled ponding and seepage on the ground below. Should such spill-over occur in an area lacking adequate slope to effectively drain this water away from the building, seepage may occur at the foundation.

Finally, leaves, nests, or other debris permitted to accumulate in gutters, downspouts, or drains will invariably result in water accumulation and, over time, the decay of such debris. Standing water can also provide a favorable breeding ground for mosquitoes, while the decaying plant material will harbor a variety of bacterial and fungal species. These pests and contaminants pose a health hazard to building occupants and maintenance workers.

§4707. School Building.

§4707(a)(1), (2), and (6). Classrooms.

Numerous studies have explored space requirements that are necessary to:

a) Provide an environment that is highly functional for program delivery and to encourage strong, positive staff-to-student relationships;

b) Accommodate the recommended group size and staff-to-student ratio; and

c) Efficiently use space and incorporate ease of supervision.

Students' cognitive, social, and emotional developments are greatly impacted by the quality of the physical designed environment of schools.[4] In addition to meeting the needs of students, teachers require space to implement programs and facilitate interactions with them.

Student behavior tends to be more constructive when sufficient space is organized to promote developmentally appropriate skills. Crowding has been shown to be associated with increased risk of developing upper respiratory tract infections.[4] Also, having sufficient space will reduce the risk of injury from simultaneous activities.

It is important to keep the rooms clean and organized for the health and safety of the occupants. Appropriate number and size of trash cans encourage proper clean-up and help in integrated pest management (IPM). Though not required, separate, plastic-lined waste receptacles that do not require touching with contaminated hands or objects are recommended. These prevent students from coming into contact with body fluids. Anything that increases handling increases the potential for contamination.

Fragrance products, such as air fresheners, deodorizers, candles, and plug-ins are used to mask odors and to create a pleasing scent to the air. However, these products emit potentially hazardous chemicals and volatile organic compounds that can impair indoor air quality (IAQ), according to the U.S. Environmental Protection Agency (EPA). A recent national survey indicated that 20.4% of the U.S population experience health problems such as migraine headaches, asthma attacks, and dermatitis when exposed to air fresheners and deodorizers.[10] A severe type of fragrance sensitivity, called multiple chemical sensitivity, is considered a disability

under the ADA.[11] As a result, use of fragrance products is prohibited in schools. Adequate ventilation and removal of sources of odors should be done instead to eliminate noxious odors in the school building.

§4707(a)(3). Multi-Purpose Rooms.

When dining areas are used for other purposes, it is important to keep them sanitary and uncluttered to minimize attracting pests and to prevent contamination of food and equipment when these areas are eventually used for dining. Sufficient lighting is also necessary to aid in thorough cleaning.

§4707(a)(4) to (5). Janitorial Rooms.

Many of the chemicals and supplies commonly found in the janitorial rooms pose fire, safety, and health hazards to students. Such chemicals may also represent an attractive nuisance to students inclined toward their misuse. Access to all janitorial rooms should be restricted and doors kept locked while not physically occupied by school janitorial staff. Such controls will significantly reduce the likelihood of accidental chemical exposures, other accidents, or intentional misuse by students. In addition, rooms or areas deemed unsafe for use shall be closed or cordoned off to prevent injuries.

(b) **Floor Requirements.**

§4707(b)(1) to (4).

Floors that are of smooth, durable construction and that are nonabsorbent are more easily cleaned. Requirements for floor and floor sealers are intended to ensure that effective cleaning is possible and will minimize attraction for insects and rodents.

A seal is a chemical that protects floors by soaking into the pores found naturally in highly absorbent materials.[12] The deep pores and flexible surface attract soil and bacteria. Floor sealer fills in the pores and makes cleaning much easier.

Carpets or similar fabrics are difficult to clean and sanitize properly. In addition, these items absorb moisture and can serve as a place for microorganisms to grow. Dust mites are microorganisms that live in carpets and may cause allergy to some students. These microorganisms can be easily killed by frequent washing and drying.

Carpets and other surfaces that trap particles are not allowed in toilet rooms, and food preparation and service areas. Area carpets and rugs may be used for activities that do not involve food or contact with body fluids. Washable rugs and carpets shall be secured with a non-slip mat or other method to prevent tripping hazards.

(c) and (d) **Wall and Ceiling Requirements.**

§4707(c) and (d).

Walls and ceilings shall have surfaces light in color to facilitate proper cleaning. Smooth or flat surfaces prevent accumulation of dirt, dust, and debris. When walls and ceilings are stained, it is important to identify the source and type of the stains since stains that are caused by food or drink can attract pests. Water stains can be an indication of water intrusion from the outside or an internal leak of some sort (roof, restrooms, other classroom plumbing, etc.). Rust stains, on the other hand, may indicate that condensation is accumulating on pipes. Water damage or stains can grow mold if the surfaces are not dried promptly. Mold can exacerbate allergies and trigger an asthma episode in sensitive individuals. Asthma is the leading chronic illness among children and adolescents in the United States, and the number one cause of school absences associated with chronic illness. Data from U.S. CDC's National Center for Health

Statistics in 2015 indicate that approximately 10.2 million children were diagnosed with asthma in the United States.

If mold is present, the source of the water should be determined, the problem corrected, and the mold removed by thorough cleaning. It is recommended that ceiling tiles that have become wet and/or have mold on them be thrown away and replaced with new ceiling tiles.

Acoustical ceiling tiles are acceptable provided that they are easily cleanable or replaceable, and no accumulation of dirt or moisture will occur.

Outside air intakes should be protected from animal and insect entry via screens or grills. Screens prevent the entry of insects, which may bite, sting, or carry disease. Bees, wasps, and other stinging pests pose a great risk in the school environment; some individuals are allergic to the stings from these insects. Allergic reactions should be taken seriously as they can be life threatening.

Birds build their nests in areas where their young will be protected, such as roof spaces of buildings when accessible. Bird droppings are commonly found in large quantities around the nesting area. When bird droppings dry they can become aerosolized and inhaled. Bird droppings in close proximity to the outside air intakes of the school building can enter the school's ventilation system and be dispersed throughout the building.

(e) **Door Requirements.**

§4707(e)(1) to (4).

Unobstructed exit routes that are plainly visible are essential for prompt evacuation during emergencies. As soon as children can learn to recognize exit signs and pathway markings, they will benefit from having these paths of egress clearly marked. Adults who come into the building as visitors need these markings to direct them as well.

Proper door swings provide easy, quick passage and prevent injuries. The *NFPA 101: Life Safety Code* from the National Fire Protection Association (NFPA) requires that doors serving an area with fifty or more people swing in the direction of egress travel. If not, this can be a safety issue when a large number of persons might push against each other, leaving those up against a door without the ability to step back and allow the door to swing back into the room.

Properly installed doors are important to the health and safety of school occupants. Doors should not admit pests and rain when shut and fit tightly in their frames to minimize draft and loss of temperature control.

(f) **Window Requirements.**

§4707(f)(1) to (2).

Windows that are not properly screened and maintained allow pests into the school building, make thermal comfort for the occupants more challenging, and create safety concerns. Screens not less than 16 mesh to the inch will prevent the intrusion of most insects. Furthermore, poorly maintained window systems with cracks or openings may cause injuries and allow for water intrusion into the school environment. When moisture is allowed to collect and remain, mold will start to grow. For sensitive individuals, mold exposure can result in an allergy or asthma episode.

(g) **Classroom Equipment Requirements.**

§4707(g)(1) to (3). Chalkboards.

Chalkboards with smooth, even surfaces facilitate easy cleaning and maintenance. Excessive chalk or marker dust on chalkboard or whiteboard trays can be dispersed into the air. The dust generated by these products can be inhaled and may trigger an allergy or asthma episode

in sensitive individuals. Cleaning the trays of these boards on a daily basis when the room is not occupied by students may help prevent or reduce the number of adverse respiratory episodes.

Likewise, the proper placement of chalkboards is important to ensure that the students are able to see it properly, without any glare or shadows.

§4707(g)(4) to (5). Lead.

All classroom equipment shall also be free from lead or other hazardous substances. Lead is a neurotoxin. Even at low levels of exposure, lead can cause reduction in a person's intelligence quotient (IQ) and attention span and result in reading and learning disabilities, hyperactivity, and behavioral difficulties. These effects cannot be reversed once the damage is done, affecting a child's ability to learn, succeed in school, and function later in life. Other symptoms of low levels of lead in a person's body are subtle behavioral changes, irritability, low appetite, weight loss, sleep disturbances, and shortened attention span.[13]

Labels are required on art supplies to identify any hazardous ingredients, precautions, and first aid.

(h) **Seating Requirements.**

§4707(h)(1) to (4).

Student chairs and writing tables that are properly constructed and are comfortable for the users facilitate reading, comfort, completion of projects, and safety. Undue pressure from the forward edge of the seat under the student's knees will affect the student's comfort and ability to concentrate.

Likewise, student desks that are dirty, rough, and in poor condition are not conducive to learning. Unclean desks can be an attraction for pests and can harbor bacteria and viruses. Desks

that are cracked, missing portions of the surface, or are wobbly could cause injury to students from sharp, protruding edges, or a fall.

Proper illumination on desks is also important for occupants to be able to comfortably and accurately see their tasks, such as reading and writing.

(i) **Maintenance and Housekeeping Requirements.**

§4707(i)(1) to (4).

Clutter will contribute to pest infestations by providing them shelter and food. Dust collection on clutter may contribute to asthma and allergy episodes in sensitive individuals.

A lack of storage space will contribute to clutter in the classroom. All storage containers should be kept on shelving or in cabinets so that floors and other horizontal surfaces can be cleaned. Storage containers should not be stored outside of cabinets, when cabinets are available. Keeping storage to a minimum allows for proper cleaning of the classroom and provides less of an attraction for pests. Nothing should be stored long-term that will inhibit proper and thorough cleaning of the floor or other horizontal surfaces. Teaching supplies should be stored in containers that can be easily moved and cleaned. Educational staff should keep only materials that are necessary for instruction and will be used during the school year in the classroom. Storage containers placed in locations that block air flow, such as on or around ventilators, can reduce the quality of the indoor air and the thermal comfort of the occupants.

One of the substances most commonly involved in poison exposures of children are cleaning substances. Therefore, proper storage of cleaning materials and maintenance equipment is very important. These should be properly secured at all times to limit access and prevent injuries to students and staff.

§4708. Ventilation.

§4708(a) to (g).

Adequate ventilation in a classroom is important for the comfort and health of the occupants. The presence of dirt, moisture, and warmth encourages the growth of mold and other contaminants, which can trigger allergic reactions and asthma. Incidents of acute asthma episodes among children have doubled in the past 10 years, and asthma is currently the No. 3 reason American children under the age of 15 are hospitalized.[14]

Poor IAQ has been linked to headaches, sore throats, sleepiness, lethargy, dizziness, and asthma.[15] Good IAQ can increase productivity and a sense of comfort for all school occupants.

The American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Standard 62 prescribes ventilation rates for acceptable indoor air quality. The 15 cubic feet per minute per student (cfm/student) recommended by ASHRAE 62-1999 was found to be "the minimum ventilation rate necessary to maintain the levels of important airborne contaminants below recognized guidelines set by United States Environmental Protection Agency (EPA), National Institute for Occupational Safety and Health (NIOSH), American Conference of Governmental Industrial Hygienists (ACGIH), and CDC."

Objectionable odors in the science, laboratory, and art rooms may contain toxic ingredients, including possible human carcinogens, creating a significant risk to the health and well-being of the occupants. Thus, a higher ventilation rate may be required for these rooms. Toxic chemicals can produce fumes that trigger asthma, allergies, headaches, and nausea. When mechanical ventilation is necessary, it must have adequate capacity to ensure that soiling of walls, ceilings, and other equipment is minimized, obnoxious odors or toxic fumes are effectively removed, and no hazards or nuisances involving accumulation of dust and similar wastes are created.

Dust or debris shall not be allowed to collect on the ventilation system filters to prevent allergy or asthma attack on certain people. Routine maintenance of the filters also ensures that the equipment is working efficiently.

§4709. Temperature and Humidity.

§4709(a). Temperature.

Temperature cannot be overlooked in the school environment because thermal comfort is vital for school occupants. In addition, temperature impacts indoor contaminant levels.[16] The higher the temperature, the more likely it is for molds, fungi, bacteria, and other indoor pollutants to proliferate.

A number of factors interact to determine whether people are comfortable with the temperature of the indoor air. These factors include the amount of clothing, activity level, age, and physiology of people. The ASHRAE Standard 55-2004 describes the temperature ranges that are comfortable for most people. Using the adaptive method of this standard, the acceptable temperature for 90% of people is in the range of 75°F – 84°F based on Guam's monthly mean temperature of about 81°F.[17]

§4709(b). Humidity.

Humidity is a factor in the thermal comfort of the occupants and the growth of mold. Excessively high or low relative humidity can produce discomfort. High relative humidity reduces a person's ability to lose heat through perspiration and evaporation, so that the effect is similar to raising the temperature. In addition, RH of 70% and above can promote the growth of mold and mildew which may cause allergy to sensitive people. Low relative humidity, on the other hand,

can cause dry eyes, dry skin, and respiratory irritation to occupants. ASHRAE Standards 55-2004 and 62-1999 require that relative humidity (RH) should be between 30% - 60%.

Humidity also impacts indoor contaminant levels.[16] As previously mentioned, an increase in relative humidity has the same effect as increased temperature. This makes it easier for microbes and other contaminants to thrive in the air.

§4710. Lighting.

§4710(a) to (e).

Adequate lighting is important for health and learning. For good visual performance and comfort, occupants need to see their visual tasks accurately and quickly. Every school should have enough light for students to learn and see all areas of the classroom, for teachers to use different media for instruction, and for custodial staff to properly clean. The Illuminating Engineering Society of North America (IESNA) Lighting Design Guide specifies the foot-candle requirements for different areas of educational institutions.

Shades and blinds help control levels of illumination to facilitate cleaning, reading, completion of projects, comfort, and safety. Too little light, too much glare, and confusing shadows can cause eyestrain and headaches.

The safety of lighting fixtures also has to be ensured by providing some type of shielding to the exposed bulbs to protect occupants from glass shards in the event it is shattered.

§4711. Plumbing.

Improper installation and maintenance of the plumbing system can cause problems such as back-siphonage, cross-connections, and leakage. To ensure proper sanitation and good hygiene,

plumbing fixtures in schools need to be working properly. Wastewater must be collected, contained, transferred, and disposed of properly because it may contain pathogenic microorganisms and poisonous chemicals that may threaten the health and comfort of students and teachers. All drains should be able to receive water and waste for release into the sanitary sewer system. When drains become clogged, they can overflow onto the floor creating an unsanitary environment.

Water leaks, on the other hand, can be costly because of increased water usage, cause property damage, and result in an increased potential for mold growth and pest infestation. Plumbing fixtures that become broken or inoperable should be fixed immediately. The affected areas should also be promptly dried and cleaned.

§4712. Water Supply.

§4712(a) and (c). Clean Water Supply.

Water from an unsafe source may become a vehicle for transmission of disease-causing organisms. Water can also become contaminated with natural or man-made chemicals. Therefore, for the protection of students, teachers, and employees, water must be obtained from a source regulated by law and must be used, transported, and dispensed in a sanitary manner. The water supply system should also be sufficient to meet the demands of the school population.

When water supply is inadequate or unsanitary, as may happen during natural disasters, the school shall find alternative means of water supply, such as a portable water tank or bottled water. Another alternative may be for school operations to temporarily cease until adequate water supply is restored.

§4712(b)(1) to (10). Drinking Fountains.

Access to water provides for fluid maintenance that is essential to body health. The provision of one drinking fountain per 75 students aims to ensure access of potable drinking water throughout the day.[18]

A smooth, nonporous surface prevents deterioration and mold, and is easier to clean and sanitize. This helps prevent the spread of infectious diseases. Water containers should also be covered and kept clean to avoid contamination of the drinking water.

The human mouth contains a multitude of microorganisms that could possibly be transmitted to others, especially from saliva on the basin from spittle. The water stream coming out of the spout should be projected at an angle from the vertical. To prevent students from touching the mouth guard while taking a drink, the water should stream at least one inch above the mouth guard, but not so high that the floor beneath the fountain becomes wet.

To prevent cross-contamination, the use of sanitary single service cups is needed when providing water from a dispenser. The reuse of the same cup between individuals promotes disease transmission, and thus, should not be practiced.

§4712(d) and (e). Back-Flow Prevention.

Pressure differentials may allow contamination of drinking water if cross-connections or submerged inlets exist.[18] Whenever a condition is established for the continuous flow of water between a potable water supply and a source of contaminated water, a cross-connection has been made. This cross-connection will convert the intended inlet to become a siphon if the pressure in the water supply is reversed. A typical example of a cross-connection caused by the submerged inlet principle is a short hose often attached to the faucet of janitorial and/or laundry sinks that extends below the top edge of the basin. The end of such hose is often found in a pool of potentially contaminated water. If the water faucet is not completely closed, a loss of pressure in the water

system could result in the contaminated water being drawn up the hose like dirt is drawn into a vacuum cleaner, thus contaminating the drinking water supply. To prevent this, vacuum breakers shall be installed as part of the plumbing fixtures.

§4713. Handwashing Unit.

§4713(a) to (h).

Proper hand hygiene is the most important way to reduce the spread of infection. Many studies have shown that improperly cleaned hands are the primary carriers of infections. In order to encourage people to wash their hands, hand washing units should be readily accessible and available to them. The 2009 International Plumbing Code, which was adopted by Guam, sets a minimum ratio of one student per fifty handwashing stations.

Nothing must block the approach to a hand-washing facility and thereby discouraging its use. In addition, the temperature of the water should be comfortable in order to promote proper rinsing. If hot water is available, the thermostat must be adjusted to 110°F or less to prevent students from scalding themselves.

Lack of supplies discourages necessary and proper hand-washing. Some people are unlikely to wash their hands unless properly equipped hand-washing facilities are accessible in the immediate area. Supplies must be within arm's reach for easy access and use. Liquid soap dispenser and paper towels must also be protected from contamination. This explains the need for paper towel dispensers and tamper-resistant soap dispensers. Shared cloth towels can transmit germs and illness from person to person; thus, their use is prohibited.

§4714. Shower Facilities.

§4714(a) to (g).

There are many types of diseases transmitted through lack of good hygiene. Good hygiene in the schools is promoted through the provision of showers and faucets. A sufficient number of age-appropriate showers must be available to permit separate bathing for every student per period. The water temperature must also be comfortable to encourage proper bathing and washing. The shower facilities shall also be made of smooth, non-slip floors that are sloped to drain to minimize accumulation of moisture on floors, walls, and ceilings. Mold and mildew grow on wet surfaces. Mold can cause allergy, difficulty breathing, and infection.[19] This is also the reason why all areas of the shower facilities must be kept clean, well-ventilated, and in good repair. The height requirement for shower rooms and stalls partitions are put in place to facilitate privacy and sanitation. It is likewise important that the numbers of lockers or cubicles be adequate for the students to keep their personal belongings and to prevent transmission of disease from sharing of personal items.

§4715. Restrooms.

§4715(a) to (l).

Adequate, sanitary toilet facilities are necessary for the proper disposal of human waste, which carries disease-causing microorganisms, and for preventing the spread of diseases. The requirement for minimum ratio of male toilets in secondary schools, colleges, and universities was updated from 1:100 to 1:50 to reflect the ratio required by the 2009 International Plumbing Code, which is the standard adopted by Guam for plumbing systems. These restroom requirements are put in place to help ensure that such facilities will be readily available and accessible to students when the need arises.

Toilet facilities must be of sanitary design and kept clean and in good repair to prevent contamination. To motivate students to use sanitary practices in the school, toilets and urinals

must be of proper height and must be completely enclosed. Toilet stall partitions and doors must also meet height requirements to ensure privacy when in use. In addition, clean supplies such as toilet paper must be readily available and within reach.

Soiled floors are unsanitary and promote the spread of disease. Staff or students who walk on contaminated floors may spread contamination throughout the building. The floors in the restrooms should be cleaned daily or more frequently, as needed. Restroom floors should also be kept dry to prevent slipping or falling.

To minimize unpleasant odors, all restrooms must be well-ventilated and kept clean and must have an appropriately-sized waste container.

§4716. Garbage, Trash, and Recycling Disposal.

§4716(a) to (f).

Outside trash and recycling dumpster areas are attractants for animals and insects, and also a nuisance for people. On school grounds, the trash and recycling areas should be located away from the school buildings, inaccessible to students, and kept clean. The dumpsters should be large enough to accommodate all trash and recyclables without overflowing. Proper and regular disposal is also an essential part of IPM. The entire area should be cleaned as often as necessary to prevent the accumulation of waste on the dumpster pad. Waste containers shall be constructed of durable material, designed and used so that wild and domesticated animals and pests do not have access to the contents, and so they do not leak or absorb liquids. Such containers shall also be regularly washed and sanitized using the appropriate disinfectant. This practice provides proper sanitation and protection of health; inhibits infestations by rodents, insects, and other pests; and prevents odors. Bulk containers shall be placed on concrete surfaces that are sloped to drain into

an approved disposal system to prevent the formation of breeding sites, becoming a source of foul odor, and the creation of pest attractant.

§4717. Food Protection.

Outbreaks of foodborne illness have occurred in schools. Many of these diseases can be prevented through appropriate hygiene and sanitation methods provided in the Guam Food Code.

The development and effective implementation of a food safety policy may help in preventing foodborne illness associated with contamination of food by sick students, improper hand hygiene, and inadequate temperature control, among others. The person in charge, usually the class instructor, needs to know and understand food safety practices so that he/she can monitor and verify that safeguards are in place to prevent contamination of food.

§4718. Safety.

Facilities must place emphasis on safeguarding each student and ensuring that the staff members are able to handle emergencies by providing adequate type and number of first aid kits.

1

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ECONOMIC IMPACT STATEMENT FOR THE PROPOSED RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

ECONOMIC IMPACT STATEMENT

Title 5 Guam Code Annotated, Chapter 9, Article 3

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10.01.18

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EXECUTIVE SUMMARY

The Division of Environmental Health (DEH) of the Department of Public Health and Social Services (DPHSS) is seeking to repeal and replace the existing *Rules and Regulations Pertaining to School Sanitation* with the proposed, *School Building Sanitation Regulations*. The proposal revises and updates the current regulations for the sanitary operation of Guam's school buildings. As defined in Title 10 GCA, Chapter 25, schools are any public and private establishment for the care and education of students from kindergarten through grade twelve, and any college and university, regulated by DEH.

The primary goal of the proposed regulations is to protect and promote the health and safety of every occupant in Guam schools. In Fiscal Year 2017, there were a total of 66 schools regulated by DEH. If adopted, the proposed regulations will govern the operation of these schools, and thus, affect the health and safety of about 40% of Guam's population (65,323 students and staff) who occupy these institutional facilities.

To aid in the economic impact assessment of the proposed regulations, DEH analyzed available data from the Centers for Disease Control and Prevention (CDC), several national research studies, and survey results from affected local, regulated institutions. Both direct and indirect economic impacts are presented here. Direct costs include medical expenses incurred to treat or alleviate illnesses, while indirect costs are earnings loss by school personnel who take time off from work due to illness, or by parents who have to take care of the sick child. The analysis represents DEH's best estimate of these economic impacts. Other possible impacts, such as long-term health consequences, pain and suffering of sick students and staff, time lost from class or work, and possible lawsuits, are not quantified in this analysis, but mentioned because the economic impact these factors can play when regulating school buildings.

To determine the anticipated, direct economic impact the adoption of the proposed regulations may have on Guam schools, two survey questionnaires were distributed to all 66 schools on island that would be affected by the proposed regulations. These educational institutions included all Guam Department of Education schools, private schools, Guam Community College, and the University of Guam. DEH attempted to conduct a census survey, but because not every school responded, a sample survey was conducted instead. The first survey focused on the five new provisions in the proposed regulations that were deemed by DEH to have the greatest economic impact: (1) playground; (2) ventilation, temperature, and humidity; (3) hand washing units and supplies; (4) lockers; and (5) toilets. Forty-one responses (62%) were received for this survey. The second survey assessed the maintenance cost of four areas in school buildings to determine the financial impact of the existing requirements: (1) school site; (2) school building exterior; (3) school building interior; and (4) school building systems. Fourteen responses (21%) were received for the second survey.

Results of the first survey relating to the proposed changes indicated that the adoption of the regulations will have a direct total financial impact of $485,065 to the schools in the first five years of its implementation, which included one-time costs for the replacement or modification of structures and the purchase of additional supplies and equipment. The projected cost, based on survey results:

- Playground (Projected one-time cost = $56,000)
- Ventilation, temperature, and humidity (Projected one-time cost = $7,000)
- Handwashing units and supplies (Projected one-time cost =$291,866)
- Lockers (Projected one-time cost = $57,199)
- Toilets (Projected one-time cost = $73,000)

Meanwhile, the cleaning, repair, and maintenance of four major areas in the school building, which is mandated by the existing requirements, and the proposal, have a direct financial impact of $4,036,116 on Guam schools annually based on second survey responses:

- School site (Projected annual cost = $1,271,000)
- School building exterior (Projected annual cost = $720,000)
- School building interior (Projected annual cost = $1,047,116)
- School building systems (Projected annual cost = $998,000)

The proposed regulations allow five years, from the date of its effectivity, for all existing schools to come into compliance with the new requirements; therefore, the amount of $485,065 derived from the first survey can be spread over a period of five years. If the costs are equally distributed to all the affected schools, the economic impact of the new requirements to the industry would be $4.03/day for the first five years. On the other hand, the estimated cost of $4,036,116 to comply with the existing requirements, as derived from the second survey, is not a new cost to the schools. In fact, this is the amount these schools have already been expending on a yearly basis as these requirements have been in effect since 1984.

While the increased costs that will result from the adoption of the proposed regulations may be deemed as an adverse impact to the affected institutions, the overall impact will be beneficial to the economy and the health of the population from the expected reduction in the number of sick students and school staff on island and its associated economic burden. The collective reduction of the economic burden derived from illnesses through the implementation of preventive measures mandated in the proposed regulations will outweigh the actual and imagined costs that the schools will experience in the adoption of the proposed regulations.

Asthma is one of the illnesses that the proposed regulations aim to prevent with the updated provisions on ventilation, temperature, and humidity. Poor indoor air quality results from inadequate ventilation, air temperature, and relative humidity by promoting the growth and proliferation of molds and other allergens, which may cause asthma to sensitive individuals. According to CDC, 1 in 11 children had asthma in 2010 with the average annual cost of care of $1,039 for a child with asthma. If these figures are applied to the student population of approximately 59,667 in Guam's schools for school year 2016-2017, the economic burden of asthma in Guam is estimated to be $5,635,819 annually. While the implementation of the proposed regulations is not expected to prevent all asthma cases in schools, it should decrease the incidence of asthma. The projected annual cost of asthma alone, ($5.6 million), offsets the annual compliance cost ($4,133,129) to implement the proposed regulations.

Respiratory infections, such as pneumonia and influenza, are two diseases that can be spread via casual contact in classrooms. Good personal hygiene, including regular handwashing, is an important factor in preventing the spread of these types of infection and is addressed by the toilet,

handwashing, and locker room provisions in the proposed regulations. CDC's National Center for Health Statistics (NCHS) reports that 27 per 10,000 children under 15 years of age were hospitalized in 2010 due to pneumonia. Applying this rate to the 2015 Census projection for this age group in Guam, about 111 hospitalizations can be attributable to pneumonia for this age group. According to the American Lung Association, hospitalization due to pneumonia in 2013 costs $13,319 per case. This means that the annual economic burden of pneumonia in Guam for children less than 15 years old is $1,478,409. The proposed regulations are not expected to curb all pneumonia cases on island, but a significant reduction may be achieved by the implementation of provisions for hand washing and toilet ratios.

Another childhood health problem that may be addressed by some provisions in the proposed regulations is unintentional injury, which includes poisoning. The proposed regulations require that school structures and equipment be maintained in good repair, and janitorial rooms be secured to minimize physical and chemical hazards to students. A 2010 report by the NCHS estimates that hospitalization rate due to injury and poisoning for children under 15 years of age is 31%. The U.S. Congress' Office of Technology Assessment (OTA) said that about 10% to 25% of injuries sustained by school-aged children occur at school. If this data is applied to the 2015 Census projection in Guam for children younger than 15 years of age, about 1,274 children could be hospitalized annually due to unintentional injuries using the lower range of OTA's reported rate. According to a study conducted in Maryland, the medical cost for unintentional injury in 1996 was roughly $13,800 per injury. Thus, it can be inferred that the cost of unintentional injuries to school-aged children in Guam is about $17,581,200 annually.

Based on the calculations above, the combined annual medical cost of childhood asthma, pneumonia, and unintentional injury on Guam is approximately $24.7 million. It should be emphasized that this figure does not include long-term health consequences and productivity costs associated with these illnesses, which DEH expects to result in significant economic burden to the community. Presumably, the benefits of the proposed regulations outweigh the anticipated costs of its implementation. As an illustration, the compliance cost can be offset by medical savings from asthma, pneumonia, and injury if the proposed regulations is able to prevent 877 cases of these illnesses, or if about 1.5% of the total student population on Guam.

I. Purpose and Need

Pursuant to Title 10 GCA Chapter 21, a Sanitary Permit from the Division of Environmental Health (DEH) of the Department of Public Health and Social Services (DPHSS) is required for the lawful operation of certain businesses. The issuance of a Sanitary Permit enables DEH to regulate the applicable establishments to ensure that these facilities are sanitary and operate in such a manner as to protect the public from environmental hazards. Businesses possessing a Sanitary Permit are required to allow the access and inspection of its regulated facility by DEH. One type of regulated businesses is institutional facilities, which include school buildings.

DEH conducts compliance inspections of schools to ensure these establishments operate in a manner, and possess the physical assets, to protect the health and safety of Guam's people. These regulatory inspections are conducted through the implementation of adopted rules and regulations that provide the sanitary operation and physical requirements, which establishments must comply with, such as:

- Construction and maintenance of the facility
- Outdoor space
- Grounds and playground equipment
- Water supply and plumbing of the facility
- Hand-washing and toilet facilities
- Lighting and ventilation
- Waste removal
- Insect and rodent control

Currently, DEH imposes the "*Rules and Regulations Pertaining to School Sanitation*" for the regulatory control of schools. This document was adopted in 1984. DEH determined that there are some provisions in the existing regulations that need to be expanded and clarified to further protect the health and safety of school occupants on Guam.

The U.S. Congress' Office of Technology Assessment (OTA) noted that in 1992, children ages 5 to 17 suffered 13 million injuries and about 55 million respiratory infections. This resulted in more than 214 million missed school days, or roughly 460 days for every 100 students.[1] Although the source of infectious diseases is usually unknown and cannot be directly linked to the school environment, schools can act as breeding grounds for the spread of these diseases from school occupants to families and the community. Additionally, outbreaks of food-borne diseases and meningitis have been directly associated to some schools. These outbreaks often result in substantial economic burden to the afflicted and the government.

One major factor in school buildings that affect student's health is indoor air quality (IAQ). IAQ is impacted by thermal conditions such as temperature, humidity, and ventilation. Poor IAQ results in increased airborne contaminants that may trigger asthma in sensitive individuals. The National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC) reported that 8.5% of children had asthma between 2013 and 2015.[2] Asthma results in pain and suffering for the sick child, time lost from class instruction, medical costs, and work loss by parent needing to take care of the ill child.

About one third of U.S. schools are considered to be afflicted with sick building syndrome (SBS).[3] SBS is caused by poor IAQ and its symptoms include eye, nose, throat, or lung irritations, and drowsiness. These symptoms usually go away when the building occupant leaves the premises. SBS may also be considered a significant public health concern as its annual nationwide cost is estimated to be about $76 billion.[4]

With the adoption of the revised "*Rules and Regulations for School Building Sanitation,*" DPHSS seeks to prevent and reduce the number of environmental hazards in Guam schools. Many of these hazards are addressed in the proposed regulations. For example, by updating the ratio of handwashing units and toilets, as provided in the proposed regulations, the spread of infectious diseases caused by poor personal hygiene would be better controlled.

II. Financial Impact

A. Financial Impact of the New Provisions

The most significant provisions that would likely have the greatest financial impact to schools are playground; ventilation, temperature, and humidity; hand washing units/supplies; lockers; and toilets.

1. Existing regulations is silent in the requirement, and thus the size, of outdoor recreational space in schools. In the proposed regulations, schools occupied by kindergarten through grade twelve will be required to provide such open area for students, and such area must be a minimum of 100 sq. ft. of accessible space per student who are utilizing the area at any given period. As a result, schools will need to provide adequate outdoor space during certain periods such as recess, physical education, and playtime when a portion of the school population makes use of the recreational area. To comply with this requirement, schools may need to add or modify landscaping structures, or acquire additional space, which may come at a significant cost to them.

2. Although "adequate ventilation" is required of all schools in the existing rules and regulations, it does not provide any standards or conditions to meet such requirement. The proposed regulations will require that circulation of needed air, within a room by either windows or mechanical ventilators, be of air temperature of 75°F to 83°F and relative humidity of 30% to 60%. To meet this requirement, some schools may need to purchase, repair, or install windows, fans, and/or air conditioning units. These improvements will cause additional expenses to the affected facilities. It is important to note here that DEH had adopted a policy in defining "adequate ventilation" for regulatory enforcement, which used air temperature standards of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 55-2004 and relative humidity in controlling mold growth (< 70%). As a result, Guam public schools, which have been inspected most often by DEH, have been complying with these standards. Consequently, the proposed regulations should not cause additional economic burden to the 35 public schools.

3. Current regulations require the number of handwashing sinks to the number of students in the ratio of 1:60 for elementary schools and 1:100 for secondary schools. In addition,

one sink is required for each classroom in kindergarten to grade two, and for other rooms which require frequent handwashing. However, the proposed regulations increased the ratio to 1:50, and one for every room where laboratory, art, and cooking classes are taught. These ratios were updated to mirror the requirements in the 2009 International Plumbing Code, which is the plumbing code currently in effect on Guam. In addition, these handwashing units will be required to be provided with soap, sanitary paper towels, and waste containers. The cost of compliance will most likely derive from the construction, repair, and installation of these handwashing units, as well as the purchase of additional handwashing supplies.

4. Existing regulations do not specify the number and placement of lockers. The proposed regulations will require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum. This may result in the facilities having to construct, renovate, or repair their locker rooms to come into compliance with the proposed regulations. Such costs will impact the affected schools.

5. The proposed regulations contain provisions which require a minimum toilet to student ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in middle schools, high schools, colleges, and universities, which are consistent with the International Plumbing Code and the International Building Code, which Guam had adopted. Consequently, schools may need to purchase and install additional toilets, or repair existing ones, which may result in additional costs.

To assess the direct financial impact the proposed regulations may have on the 66 schools on island as a result of the adoption and implementation of the five provisions noted above, DPHSS attempted to conduct a census survey. However, not all schools responded; eighty-three percent of total schools provided a response. Thus, a sample survey was conducted instead. This survey, which was prepared in the form of a questionnaire (**Appendix A**), asked the following fifteen questions to schools possessing a Sanitary Permit with the Department:

Part I: Playground

1. *The proposed regulations contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used. Will your school be able to comply with this requirement?*
2. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement?*

Part II: Ceiling

3. *The proposed regulations contain a provision which requires the ceilings of the school building to be smooth, easily cleanable, and maintained in good repair and in a clean, sanitary condition. Will your school be able to comply with this requirement?*
4. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement?*

Part III: Ventilation, Temperature, and Humidity

5. *The proposed regulations contain provisions which require proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60%. Will your school be able to comply with this requirement?*
6. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, how do you plan to provide the required ventilation, temperature, and relative humidity in your school?*
7. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur to repair, purchase, or install louvers and/or mechanical devices?*

Part IV: Handwashing Units

8. *The proposed regulations contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities. In addition, the proposed regulations contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units. Does your school need additional handwashing units to meet the proposed required ratio?*
9. *What is the total cost your school will likely incur to purchase and install additional handwashing units?*
10. *Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?*
11. *What is the total cost your school will likely incur to purchase and install additional soap and sanitary paper towels, and waste containers?*

Part V: Lockers

12. *The proposed regulations contain provisions which require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum. Will your school be able to comply with this requirement?*
13. *What is the total cost your school will likely incur to purchase and install lockers to meet this requirement?*

Part VI: Toilets

14. *The proposed regulations contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities. Does your school need additional toilets to meet the minimum required ratio as proposed?*
15. *What is the total cost your school will likely incur to install additional toilets?*

The schools were afforded two months to submit their completed survey; DPHSS received a total of 41 responses during that time period. Six months later, the Guam Department of Education (GDOE) submitted a survey response for the remaining schools under their authority, which brought the total number of responses to 55. Not all of the respondents answered every question or followed the instructions given. Graphical results of the survey are provided in **Appendix B**.

Questions regarding the proposed ceiling requirements were initially included in the survey. However, DPHSS later removed such from provision from the proposal, thus, the economic impact for the said provision is not included in the analysis.

Part I. Playground

- Ten respondents (18%) indicated that they will not be able to comply with the proposed requirements.
  - When asked what the anticipated cost their school may incur to comply with the playground requirements, all ten respondents selected the cost-range of $5,000 and above.
- Sixteen respondents (29%) did not provide an answer to this question. Fourteen of those that did not provide an answer are operated by GDOE.

Based on the results of the survey, 25% of schools will be able to comply with the playground requirement. DEH suspects that most respondents misunderstood the requirement to mean that they would need to provide 100 sq. ft. of outdoor area for every student enrolled in school as opposed to the actual requirement of 100 sq. ft. per student using that space during certain periods. It has been the observation of DPHSS' compliance officers that most, if not all, of the schools that have been inspected have adequate play areas that are able to meet the new requirement. Ten out of the 55 respondents indicated that they will need to incur expenses to effectuate this provision. It was not made clear in the responses if such costs were monthly, yearly, or other date-related expenses, or if this is a one-time cost; DEH assumes it would be a one-time cost.

In determining the projected direct economic impact the schools would sustain in the implementation of this particular provision, the anticipated cost (Question 2 of Part I) was multiplied by the number of affected schools, which was determined by the number of respondents for each type of school and its corresponding percentage of the total number of surveyed schools. As a result, the estimated compliance cost for this provision would be $56,000 based on the survey responses (Table 1).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Public Elementary School	7 = (7/26) = 26.9%	26.9% x 26 = 7.0	7.0 x $5,000 = $35,000
Public Middle School	0/8 = 0%	0% x 8 = 0	0
Public High School	1 = (1/5) = 20%	20% x 7 = 1.4	1.4 x $5,000 = $7,000
Catholic School	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $5,000 = $14,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$56,000**

Table 1. Estimated financial impact to Guam's schools to implement the playground provision of the proposed *Rules and Regulations for School Building Sanitation.*

Part II. Ceiling

- Responses received for this part of the survey were not included in the economic impact assessment as the original proposal of requiring smooth, easily cleanable ceiling was later removed from the proposal after the survey was conducted.

Part III. Ventilation, Temperature, and Humidity

- GDOE responses were excluded, as noted above (II. Financial Impact).
- Only one out of 16 respondents (6%) revealed that they will not be able to comply with the proposed requirements.
    - The school that responded that it will not be able to comply with the provisions further indicated that the school would need to expend $5,000 and above to come into compliance with this requirement.
- Fifteen respondents (94%) answered "yes" to this question.

Based on the survey, almost all of the schools would be able to comply with the proposed requirements. Because DEH had adopted a policy that established the standards for "adequate ventilation" in the existing regulations in 2008, which have been enforced since then during compliance inspections of all GDOE schools, the public school system has already been complying with these requirements. Consequently, these are not new requirements for GDOE, and thus, their survey responses for this part was not included. However, because non-GDOE schools have yet to be inspected with these ventilation standards, the requirements would be new to them, and therefore, their responses were included in the financial impact assessment.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the anticipated cost (Question 3 of Part III) was multiplied by the number of affected institutions, which was determined by the number of respondents for each range and its corresponding percentage of the total number of institutions. As a result, it is estimated that the cost would be $7,000 based on the survey responses (Table 2).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Public Elementary School	Not Applicable	Not Applicable	0
Public Middle School	Not Applicable	Not Applicable	0
Public High School	Not Applicable	Not Applicable	0
Catholic School	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $5,000 = $7,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$7,000**

Table 2. Estimated financial impact to Guam's schools to implement the ventilation, temperature, and humidity provisions of the proposed *Rules and Regulations for School Building Sanitation.*

Part IV. Handwashing Units and Supplies

- Twenty-eight of the respondents (51%) indicated that they need additional handwashing units to meet the proposed ratio.
    - All 28 said that it would cost them $5,000 and above to come into compliance with the requirement.
- Twenty-seven respondents (49%) answered "no" to Question 1, Part IV.
- Thirty-three respondents (60%) said that they need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement.
- Two respondents (4%) did not provide an answer to Question 3, Part IV.

The direct financial impact that will be borne by the schools from this provision will most likely derive from the repair or installation of handwashing units, and the purchase of additional

handwashing supplies. The cost among schools may differ depending on how many handwashing units and supplies they need to meet the requirement. Additional costs may occur as a result of routine maintenance of handwashing units. The indirect cost associated with coming into compliance may occur through the time lost while installation or repairs are being made.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the highest end of each price range (Questions 2 and 4 of Part IV) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "$5,000 and above," the lower end of the range was used in the calculation. The cost is estimated to be $154,000 for handwashing sinks (Table 3) and $137,866 for handwashing supplies (Table 4) based on the results of the survey.

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	15 = (15/26) = 57.7%	57.7% x 26 = 15.0	15.0 x $5,000 = $75,000
Public Middle School	6 = (6/8) = 75%	75% x 8 = 6.0	6.0 x $5,000 = $30,000
Public High School	3 = (3/5) = 60%	60% x 7 = 4.2	4.2 x $5,000 = $21,000
Catholic School	3 = (3/10) = 33%	33% x 14 = 4.62	4.6 x $5,000 = $23,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $5,000 = $5,000
		TOTAL	**$154,000**

Table 3. Estimated financial impact to Guam's schools to implement the handwashing unit provisions of the proposed *Rules and Regulations for School Building Sanitation.*

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	13 = (13/26) = 50%	50% x 26 = 13	13 x $5,000 = $65,000
	1 = (1/26) = 3.8%	3.8% x 26 = 0.99	0.99 x $2,999 = $2,969
	1 = (1/26) = 3.8%	3.8% x 26 = 0.99	0.99 x $1,499 = $1,484
	2 = (2/26) = 7.7%	7.7% x 26 = 2.00	2.00x $999 = $1,998
	2 = (2/26) = 7.7%	7.7% x 26 = 2.00	2.00 x $499 = $998
Public Middle School	6 = (6/8) = 75%	75% x 8 = 6.0	6.0 x $5,000 = $30,000
Public High School	2 = (2/5) = 40%	40% x 7 = 2.8	2.8 x $5,000 = $14,000
	1 = (1/5) = 25%	25% x 7 = 1.75	1.75 x $1,499 = $2,623
Catholic School	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $4,999 = $13,997
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $1,499 = $2,099
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $499 = $699
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $1,999 = $1,999
		TOTAL	**$137,866**

Table 4. Estimated financial impact to Guam's schools to implement the handwashing supplies provisions of the proposed *Rules and Regulations for School Building Sanitation.*

Part V. Lockers

- Ten respondents (35%) revealed that they will not be able to comply with the proposed requirements.
    - Nine respondents that said that they will not be able to comply with the provisions indicated that they would need to expend $5,000 and above to come into compliance with this requirement; one respondent said the cost for them to comply would be about $2,000-$2,999.
- Sixteen respondents (55%) answered "yes" to this question.

- Three respondents (10%) provided no answer, or said that this requirement did not apply to them.

Based on the survey, about a third of the schools would not be able to comply with the proposed requirements. In addition, the majority of the institutions would incur a cost of $5,000 and above to install or repair locker facilities.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the anticipated cost (Question 2 of Part V) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of institutions. As a result, it is estimated that the cost would be $57,199 based on the survey responses (Table 5).

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	Not Applicable	Not Applicable	Not Applicable
Public Middle School	5 = (5/8) = 62.5%	62.5% x 8 = 5.0	5.0 x $5,000 = $25,000
Public High School	2 = (2/5) = 40%	40% x 7 = 2.8	2.8 x $5,000 = $14,000
Catholic School	2 = (2/10) = 20% 1 = (1/10) = 10%	20% x 14 = 2.8 10% X 14 = 1.4	2.8 x $5,000 = $14,000 1.4 x $2,999 = $4,199
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$57,199**

Table 5. Estimated financial impact to Guam's schools to implement the locker provisions of the proposed *Rules and Regulations for School Building Sanitation*.

Part VI. Toilets

- Thirteen respondents (24%) revealed that they will need additional toilets to comply with the proposed requirements.
  - All 13 respondents that said they will not be able to comply with the provisions further indicated that they would need to expend $5,000 and above to come into compliance with this requirement.
- Twenty-eight respondents (51%) answered "no" to this question.
- Fourteen respondents (25%) did not provide an answer to this question.

About a quarter of the schools would not be able to comply with the proposed toilet requirements based on the responses to the survey. In addition, the majority of the schools would incur a cost of $5,000 and above to install or repair locker facilities.

The projected direct economic impact the institutions will sustain in the implementation of this provision was determined by multiplying the anticipated cost (Question 2 of Part VI) with the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of schools. As a result, it is estimated that the cost would be $73,000 (Table 6).

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	8 = (8/26) = 30.8%	30.8% x 26 = 8.0	8.0 x $5,000 = $40,000
Public Middle School	1 = (1/8) = 12.5%	12.5% x 8 = 1.0	1.0 x $5,000 = $5,000
Public High School	0 = (0/5) = 0%	0% x 7 = 0	0
Catholic School	3 = (3/10) = 33%	33% x 14 = 4.6	4.6 x $5,000 = $23,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $5,000 = $5,000
		TOTAL	**$73,000**

Table 6. Estimated financial impact to Guam's schools to implement the toilet provisions of the proposed *Rules and Regulations for School Building Sanitation.*

Total Financial Impact of the New Provisions

Among the five provisions of the proposed *School Building Sanitation Regulations* evaluated in the survey, the handwashing unit and supplies provisions appear likely to have the greatest financial impact to the schools as 51% of the schools will need to repair or replace existing handwashing units, and 60% of them will need to purchase additional handwashing supplies at a total estimated cost of about $292,000. This was followed by the one-time cost of about $73,000 to comply with the toilet provision and the one-time cost of about $57,000 to come into compliance with the locker provision. Complying with the playground requirement will cost the institutions $56,000. The ventilation, temperature, and humidity requirements will have the least monetary impact as most schools will be able to meet the requirements, and only one school will need to expend about $7,000 to comply.

The proposed regulations provide a five-year time frame from the date of its effectivity for all the existing schools to come into compliance with the provisions. This means that the total estimated direct financial impact of $485,065 is an expense that can be spread over a five-year period for the affected institutions (Table 7).

Following the five-year grace period and thereafter, the amount will be greatly reduced as the cost of installing the equipment or constructing the structures will no longer be applicable.

Total Direct Cost of Adopting the Rules and Regulations for School Building Sanitation		
Requirement	Anticipated Cost	Comments
Playground	$56,000	Institutions will be need to provide outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used.
Ventilation, Temperature, and Humidity	$7,000	Proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60% will need to be provided.
Handwashing Units and Supplies	$291,866	Handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities will be required of schools. In addition, soap, sanitary paper towels, and waste containers at all handwashing units will need to be provided.

Lockers	$57,199	Schools will be required to provide a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum.
Toilets	$73,000	A minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) are required in secondary schools, colleges, and universities.
ANTICIPATED TOTAL DIRECT COST IN THE FIRST YEAR = $485,065		

Table 7. Financial impact of adopting the proposed *Rules and Regulations for School Building Sanitation* based on the cost analyses of implementing the five significant requirements that would likely have the greatest economic impact to the schools.

B. Financial Impact of the Existing Requirements

To evaluate the cost borne by schools in implementing the existing requirements in the proposed regulations, DEH sent out another survey in January 2018 to the same schools that participated in the first survey. The survey was in a form of a questionnaire (**Appendix C**), which asked the following eight questions:

Part I: School Site

1. *Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?*
2. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school site?*

Part II: School Building Exterior

3. *Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?*
4. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building exterior?*

Part III: School Building Interior

5. *Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?*
6. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building interior?*

Part III: School Building Interior

7. *Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?*
8. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building systems?*

The schools were given two weeks to complete the survey. Four schools provided a survey response within the given time frame. Ten other schools turned in their completed survey after

the deadline. GDOE did not submit a survey response for all schools under its jurisdiction despite numerous follow-up communication done by DEH.

Similar to the first survey, DEH planned to conduct a census survey. However, due to the low response rate (21%), a sample survey was done instead. Not all of the respondents answered every question. Graphical results of the survey are provided in **Appendix D**.

Part I. School Site

- Thirteen respondents (93%) indicated that they expend resources for the cleaning, repair, and maintenance of the school site which includes the playground, site drainage, sidewalks, and grounds.
    - When asked what the annual cost their school incurs to maintain the school site, majority of the schools answered that they spend between $5,000 to $35,000; one school said that it costs $179,000 to maintain the same area; and another school indicated that it expends $250,000 for the cleaning, repair, and maintenance of its school site.
- One respondent (7%) said that it does not expend resources for the maintenance of its school site.

Based on the results of the survey, majority of the schools (93%) incur expenses to effectuate the provisions on maintaining their school site. It is a common observation during DEH compliance inspections that a lot of schools have issues with garbage and trash disposal, overgrown vegetation, pooling of water in walkways, and awnings that are in disrepair; thus, DEH assumes that most of the expenses relating to maintenance of the school site would go to materials, equipment, supplies, and labor for these usual problem areas.

To estimate the direct economic impact the schools would sustain in the implementation of the provision on maintaining the school site, the highest end of each price range (Question 2 of Part I) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "other," the amount that was indicated by the respondent was used in the calculation. As a result, the estimated compliance cost for provisions related to the maintenance of the school site would be $1,271,000 based on the survey responses (Table 7).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Catholic School	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $5,000 = $14,000
	4 = (4/10) = 40%	15% x 14 = 2.1	2.1 x $10,000 = $21,000
	2 = (2/10) = 20%	7.7% x 14 = 1.1	1.1 x $25,000 = $27,500
	2 = (2/10) = 20%	7.7% x 14 = 1.1	1.1 x $35,000 = $38,500
Other Private School	1 = (1/2) = 50%	50% x 9 = 4.5	4.5 x $10,000 = $45,000
	1 = (1/2) = 50%	50% x 9 = 4.5	4.5 x $250,000 = $1,125,000
College/University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $179,000 = $179,000
		TOTAL	**$1,271,000**

Table 7. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school site.

Part II. School Building Exterior

- All 14 respondents revealed that they expend resources for the cleaning, repair, and maintenance of the school building exterior which includes the windows, walls, doors, and roof.
    - When asked what the annual cost their school incurs to maintain the school building exterior, 13 schools indicated that they spend between $5,000 to $25,000; one school said that it costs $150,000 to maintain the same area.

Survey results indicate that complying with the existing requirements for maintaining the school building exterior imposes some economic burden on the schools. The expenses may be proportional to the size of the school, and may be incurred as a result of repairing, refurbishing, or repainting walls, windows, doors, and roof. DEH estimated the direct economic impact of implementing the provision on maintaining the school building exterior by multiplying the highest end of each price range (Question 2 of Part I) by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "other," the cost that was specified by the respondent was used in the calculation. Thus, the estimated compliance cost for provisions related to the maintenance of the school building exterior would be $720,000 based on the survey responses (Table 8).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Catholic School	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $5,000 = $21,000
	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $10,000 = $42,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $15,000 = $42,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $25,000 = $70,000
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $15,000 = $45,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $150,000 = $450,000
College and University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $20,000 = $20,000
		TOTAL	**$720,000**

Table 8. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building exterior.

Part III. School Building Interior

- All 14 respondents answered "yes" when asked if their school expend resources for the cleaning, repair, and maintenance of the school building interior, which includes the walls, floors, ceilings, stairs, interior doors, handwashing sinks, restrooms, classrooms, gym, and shower facilities.
    - Thirteen schools indicated that they spend between $5,000 to $25,000 for the maintenance of the school building interior; one school said that it costs $250,000 to maintain the same area.

In determining the projected direct economic impact the schools will sustain in the implementation of the provision relating to the upkeep of the school building interior, the highest end of each price range (Question 2 of Part III) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. The cost indicated by the respondent was used in the calculation for

responses of "other." Based on the results of the survey, the total cost is estimated to be $1,047,116 (Table 9).

Type of School	Respondents	No. of Schools	Financial Impact
Catholic School	4 = (4/10) = 40%	40% x 14 = 5.6	5.6 x $5,000 = $28,000
	4 = (4/10) = 40%	40% x 14 = 5.6	5.6 x $10,000 = $56,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $15,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $20,000 = $28,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $25,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $46,116 = $46,116
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $250,000 = $750,000
College and University	1 = (1/2) = 50%	50% x 2 = 1	1.0 x $25,000 = $25,000
		TOTAL	**$1,047,116**

Table 9. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building interior.

Part IV. School Building Systems

- All 14 respondents indicated that their school expend resources for the cleaning, repair, and maintenance of the school building systems, which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters.
    - Twelve schools replied that they spend between $5,000 to $25,000 for the maintenance of the school building interior; one school said that it costs $100,000 to maintain the same area; and another school indicated that it expends $150,000 for the cleaning, repair, and maintenance of its school building systems.

Based on the survey, majority of the institutions would incur a cost of $5,000 and above annually to maintain their school building systems. The economic burden would depend on the number and condition of school building equipment, and the population of the school, among other factors. To estimate the direct economic impact the institutions will sustain in the implementation of the provisions related to school building systems, the anticipated cost (Question 2 of Part IV) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of schools. This resulted in a projected cost of $998,000 based on the survey responses (Table 10).

Type of School	Respondents	No. of Schools	Financial Impact
Catholic School	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $5,000 = $21,000
	2 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $10,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $15,000 = $21,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $20,000 = $28,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $25,000 = $56,000
	1 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $100,000 = $280,000
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $15,000 = $45,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $150,000 = $450,000
College and University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $25,000 = $25,000
		TOTAL	**$998,000**

Table 10. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building systems.

Total Financial Impact of the Existing Requirements

Based on the results of the survey, maintenance of the school site appears likely to have the greatest financial impact to the schools as the schools spend approximately $1,271,000 yearly to clean, repair, and maintain the school grounds, sidewalks, and site drainage. This was followed by the annual cost of about $1,047,116 to maintain the school building interior and the yearly cost of about $998,000 to comply with the requirements relating to school building systems. Maintaining the school building exterior will have the least monetary impact as schools will need to expend about $720,000 to comply with the requirements related to this portion of the school.

The total direct financial impact of maintaining the school facility to comply with the existing requirements in the proposed regulations is $4,036,116 (Table 11), as estimated from the results of the survey. This figure is not an expense that is new to the schools; this is the amount that the schools have been expending on a yearly basis to maintain their facility. The actual financial impact may be higher when the cost of maintaining public schools are included; however, GDOE did not submit a response to the survey, and thus the cost of maintaining its schools was not included in the calculation. However, in an attempt to provide a clearer understanding of the total impact of the existing requirements, DEH took the average cost reported by survey respondents and multiplied this by the number of public schools to provide a projected cost for GDOE. This resulted in an annual cost of $11,820,054 for GDOE to maintain its school facilities, which is a significantly higher amount than the annual budget of $850,000 as stated by GDOE officials during a March 9, 2017 public hearing for these proposed regulations.

Total Direct Cost of the Existing Provisions in the Rules and Regulations for School Building Sanitation		
Requirement	Anticipated Cost	Comments
School Site	$1,271,000	Schools are required to keep the playground, sidewalks, and grounds clean and in good repair, and free of potential pest breeding sites. Site drainage shall also be maintained to prevent pooling of water.
School Building Exterior	$720,000	Roof, walls, and windows shall be kept clean and in good repair, and free of leakage or entry points for pests. Exit doors shall be self-closing and tight-fitting.
School Building Interior	$1,047,116	Classrooms, gym, shower facilities, and associated equipment shall be free of hazards, and be maintained to promote the health and safety of school occupants.
School Building Systems	$998,000	Schools will need to provide adequate lighting, temperature, and ventilation that will promote students' health and comfort, and provide an indoor environment that is conducive to learning.
ANTICIPATED TOTAL DIRECT ANNUAL COST = $4,036,116		

Table 11. Financial impact of implementing the existing requirements of the *Rules and Regulations for School Building Sanitation* based on the cost analyses of cleaning, repair, and maintenance of four areas in the school building likely to have the greatest economic impact to the schools.

C. Total Financial Impact of the Proposed Regulations

Results of the survey conducted by DEH in 2016 to assess the economic impact of complying with the proposed requirements indicate that the compliance cost will be $485,065 over the course of five years. If this figure is divided equally among 66 schools, the yearly cost would be $122.49 per school or $10.21 monthly per school. Meanwhile, the cost to comply with the existing

requirements is $4,036,116 annually, which is what the schools have already been spending to maintain their facilities. Consequently, this cost is not a new burden to these schools.

Economic Burden of Student Illnesses

School buildings harbor various hazards that result in illness or injury to students and other occupants. Because children spend more time in school than in any other indoor environment other than the home, their risk of exposure to these hazards is high. Asthma, pneumonia, and unintentional injuries are some of the notable effects to students in schools that result in significant economic cost. The economic impact of other illnesses such as influenza, strep throat, and meningitis will not be discussed here but should be mentioned as they also bring about considerable economic costs to the community. The medical burden of the above-mentioned student injuries and illnesses contribute to the indirect adverse impact to the island's economy that the proposed regulations aim to minimize.

According to CDC, 1 in 11 children had asthma in 2010 and the average annual cost of care for a child with asthma is $1,039.[5] During the school year 2016-2017, about 59,667 students were enrolled in Guam schools. If this figure is multiplied by the average annual cost of care for asthma, the economic burden of asthma in Guam annually is roughly $5.6 million.

Infectious diseases that may be found in the school setting include respiratory infections, meningococcal infections, and foodborne diseases. These can be spread via air or close contact. Pneumonia and influenza are the more common contagious infections, and both come with considerable medical costs. Unfortunately, no local data was found to quantify the economic costs of pneumonia or influenza on Guam. Results of the National Health Interview Survey done by the NCHS in 2010 indicated that 27 per 10,000 children under 15 years old were hospitalized in 2010 due to pneumonia.[6] The 2015 Census projection for this age group in Guam is 41,206.[7] If the rate reported by the NCHS is applied to the Census projection, about 111 hospitalizations in Guam are due to pneumonia for this age group. The American Lung Association reports that hospitalizations due to pneumonia cost $13,319 per case in 2013.[8] This means that the annual economic burden of pneumonia in Guam for children less than 15 years old is about $1,478,409.

Results of epidemiological studies suggest that from 10 to 25 percent of injuries incurred by school-aged children occur at school.[9] A 2010 report by the NCHS estimates that hospitalization rate due to injury and poisoning for children under 15 years of age is 31%.[10] Applying this data to the 2015 Census projection of children less than 15 years of age in Guam, approximately 1,274 children are hospitalized annually due to unintentional injuries using the lower range of the reported rate. If the medical cost for unintentional injury is $13,800 per case as indicated by a study in Maryland, the annual cost of unintentional injuries to school-aged children in Guam is about $17,581,200.

In total, the annual economic burden of asthma, pneumonia, and unintentional injuries for children below 15 years of age in Guam is estimated to be close to $25 million. This economic burden can be offset by the implementation of the proposed *School Building Sanitation Regulations* if safeguards to protect the health and safety of students and other school occupants are incorporated in the proposal. The proposed regulations require a minimum ventilation rate of 15 cfm per student

to reflect the recommendation by ASHRAE to prevent recirculation of viruses and bacteria, which should reduce the number of school illnesses and absenteeism, and thus the economic burden.

Other impacts of illnesses, such as the impact on student learning and performance are difficult to quantify. Perhaps, one way to understand the impact of illness to student learning is through the number of school days missed. The National Health Interview Survey conducted by CDC in 2015 revealed that close to 70% of children ages 5 to 17 years missed school days due to illnesses and injuries.[11] A research study conducted by a group of pediatricians concluded that "children that are frequently or persistently absent from school tend to perform poorly in school and are likely to drop out before graduation."[12] Thus, school absences from illnesses and injuries can cause future unemployment and welfare costs.

III. Potential Increase or Decrease to Cost of Living or Price of Good or Service

The direct economic impact to the schools from the adoption of the *School Building Sanitation Regulations* is estimated to be $4,133,129 annually, which equals to $5,219 monthly per school, and therefore, about $174 a day. A big portion of this cost is expended for maintenance of school facilities, which the schools have been budgeting for on yearly basis. It is unlikely the increased cost from implementing the proposed regulations will be passed down to the students when the expected cost from the proposed changes will be less than $4 per day over five years. Larger institutions may be able to readily absorb the increased cost without hardship. Even the smaller schools should be able to handle the nominal cost increase since their actual expenses resulting from the adoption of the proposed regulations would be proportional to the size of their operation. The greatest cost impact of implementing the changes in the proposed regulations is the handwashing unit provision.

A reduction in the cost of living that may result from the adoption of the *School Building Sanitation Regulations* could be attributed to the decrease in the occurrence or spread of illnesses caused by improved compliance inspections of these schools. However, the confirmation of such consideration may require more thorough analysis.

IV. Direct or Indirect Impact on Employment

Adverse impact to employment is not expected from the adoption of the *School Building Sanitation Regulations*. The direct impact may occur from schools needing to hire engineers; construction workers; and heating, ventilation, and air conditioning (HVAC) specialists to install, repair, or maintain structures, fixtures, and HVAC systems. Indirect impact to employment could result from schools either increasing or decreasing hours of operation to make necessary changes.

V. Increase or Decrease in Cost of Business

Private schools will be the primary entities that will experience increased cost from the adoption of the *School Building Sanitation Regulations*. The additional expenses they will bear will derive from the potential construction and repair of toilets, locker rooms, and hand washing units. Other expenses include the procurement of supplies, such as soap and paper towels. The expenses these

institutions will incur will decrease after the five-year implementation period to come into compliance.

The implementation of the proposed regulations may also impact the schools favorably from the prevention of possible litigation from parents and/or guardians who may seek civil action against the institution as a result of illnesses or injuries that may occur at the school.

VI. Adverse or Beneficial Economic Impact

The adoption and implementation of the *School Building Sanitation Regulations* will certainly have a financial impact on the institutions as schools will be required to implement measures new measures in the proposed regulations. While these additional costs may be deemed as an adverse impact to the affected school, the overall impact will be beneficial to the economy and the health of the population from the anticipated reduction in the number of injuries and illnesses in schools and its associated economic burden. The vast majority of injuries and illnesses are both preventable and predictable, and increasing the level of prevention by implementing the proposed regulations will produce savings.

The anticipated reduction of illnesses and injuries in Guam schools, which is expected to occur from the implementation of the proposed *School Building Sanitation Regulations* should consequently reduce the economic burden these illnesses and injuries have on the island and its people. These cost benefits should outweigh the actual and imagined costs that the institutions may experience from the adoption of the proposed regulations. The anticipated annual implementation cost of the proposed regulations, which is about $4.1 million, is only 17% of the annual economic burden of asthma, pneumonia, and unintentional injuries on Guam, which is approximately $24.7 million. The compliance cost will be offset by medical savings from these three illnesses if the proposed regulations is able to prevent at least 877 hospitalizations per year among roughly 65,000 school occupants on Guam.

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Part I: Playground

The proposed Rules and Regulations for School Building Sanitation [Section 4706(f)] contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used.

1. Will your school be able to comply with this requirement?

   YES_____ NO_____ *(If you answered "YES," you do not need to complete the rest of Part I. Please go on to Part II. If "NO," please continue below.)*

2. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part II: Ceilings

The proposed Rules and Regulations for School Building Sanitation [Section 4707(c)(1)] contain a provision which requires the ceilings of the school building to be smooth, easily cleanable, and maintained in good repair and in a clean, sanitary condition.

3. Will your school be able to comply with this requirement?

   YES_____ NO_____ *(If you answered "YES," you do not need to complete the rest of Part II. Please go on to Part III. If "NO," please continue below.)*

4. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

Part III: Ventilation, Temperature, and Humidity

The proposed Rules and Regulations for School Building Sanitation [Sections 4708(a), 4709(a), and 4709(b)] contain provisions which require proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60%.

1. Will your school be able to comply with this requirement?

   YES_____ NO_____ *(If you answered "YES," you do not need to complete the rest of Part III. Please go on to Part IV. If "NO," please continue below.)*

2. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, how do you plan to provide the required ventilation, temperature, and relative humidity in your school? *(Please mark all that apply.)*

   REPAIR OR REPLACE LOUVERS _____ INSTALL MECHANICAL DEVICES _____

   OTHER _____ Please specify_____

3. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur to repair, purchase, or install louvers and/or mechanical devices? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part IV: Handwashing Units

The proposed Rules and Regulations for School Building Sanitation [Section 4713(a)] contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities. In addition, the proposed rules and regulations [Sections 4713(c) through 4713(f)] contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units.

1. Does your school need additional handwashing units to meet the proposed required ratio?

   YES _____ NO_____ *(If you answered "NO," please go on to Question No. 3 of this Part. If "YES," please continue below.)*

2. What is the total cost your school will likely incur to purchase and install additional handwashing units? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

3. Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?

   YES _____ NO_____ *(If you answered "NO," you do not need to complete the rest of Part IV. Please go on to Part V. If "YES," please continue below.)*

4. What is the total cost your school will likely incur to purchase and install additional soap and sanitary paper towels, and waste containers? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part V: Lockers

The proposed Rules and Regulations for School Building Sanitation [Section 4715(b) and 4715(d)] contain provisions which require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum.

1. Will your school be able to comply with this requirement?

   YES _____ NO_____ *(If you answered "YES," you do not need to complete the rest of Part V. If "NO," please continue below.)*

2. What is the total cost your school will likely incur to purchase and install lockers to meet this requirement? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part VI: Toilets

The proposed Rules and Regulations for School Building Sanitation [Section 4715(a)] contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities.

1. Does your school need additional toilets to meet the minimum required ratio as proposed?

   YES _____ NO_____ *(If you answered "NO," you do not need to complete the rest of Part VI. If "YES," please continue below.)*

3. What is the total cost your school will likely incur to install additional toilets? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

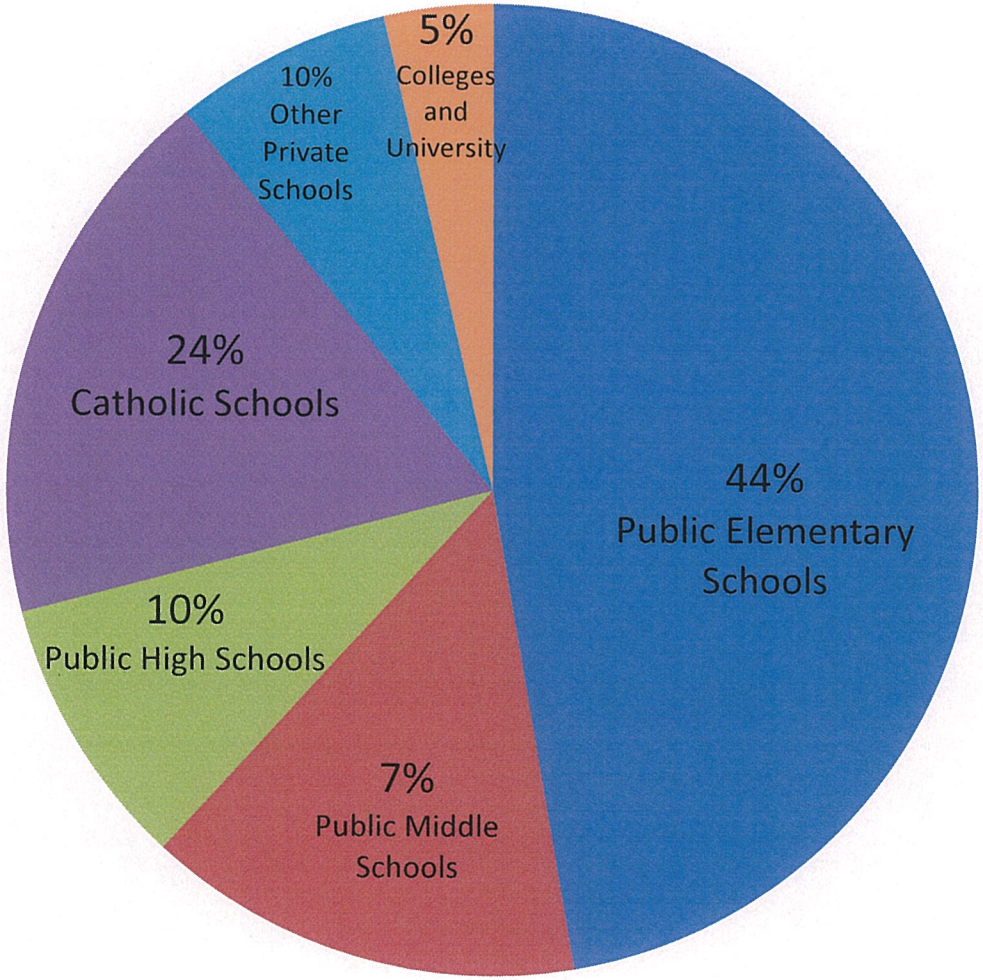
   $5,000 and above_____

   COMMENTS: _____

   _____

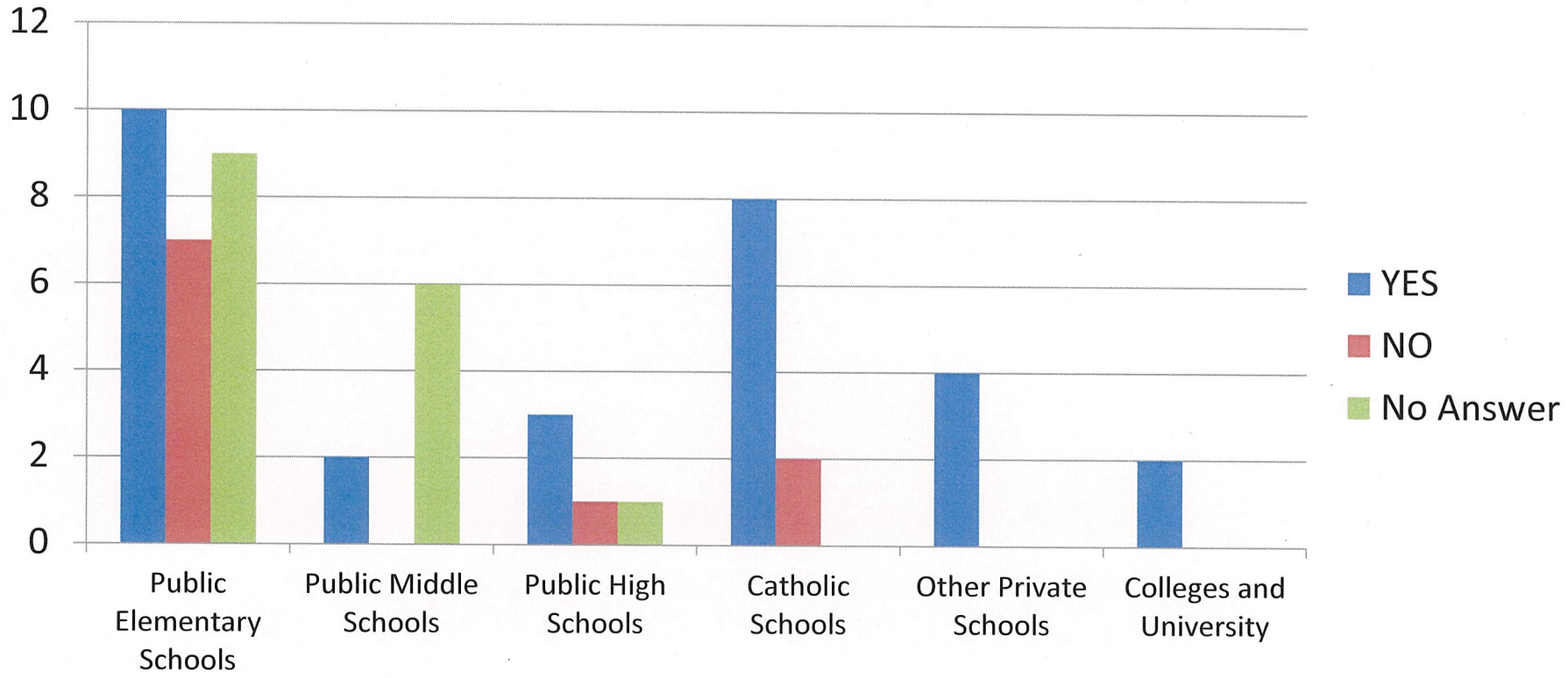
   _____

Respondents



Part I. Playground

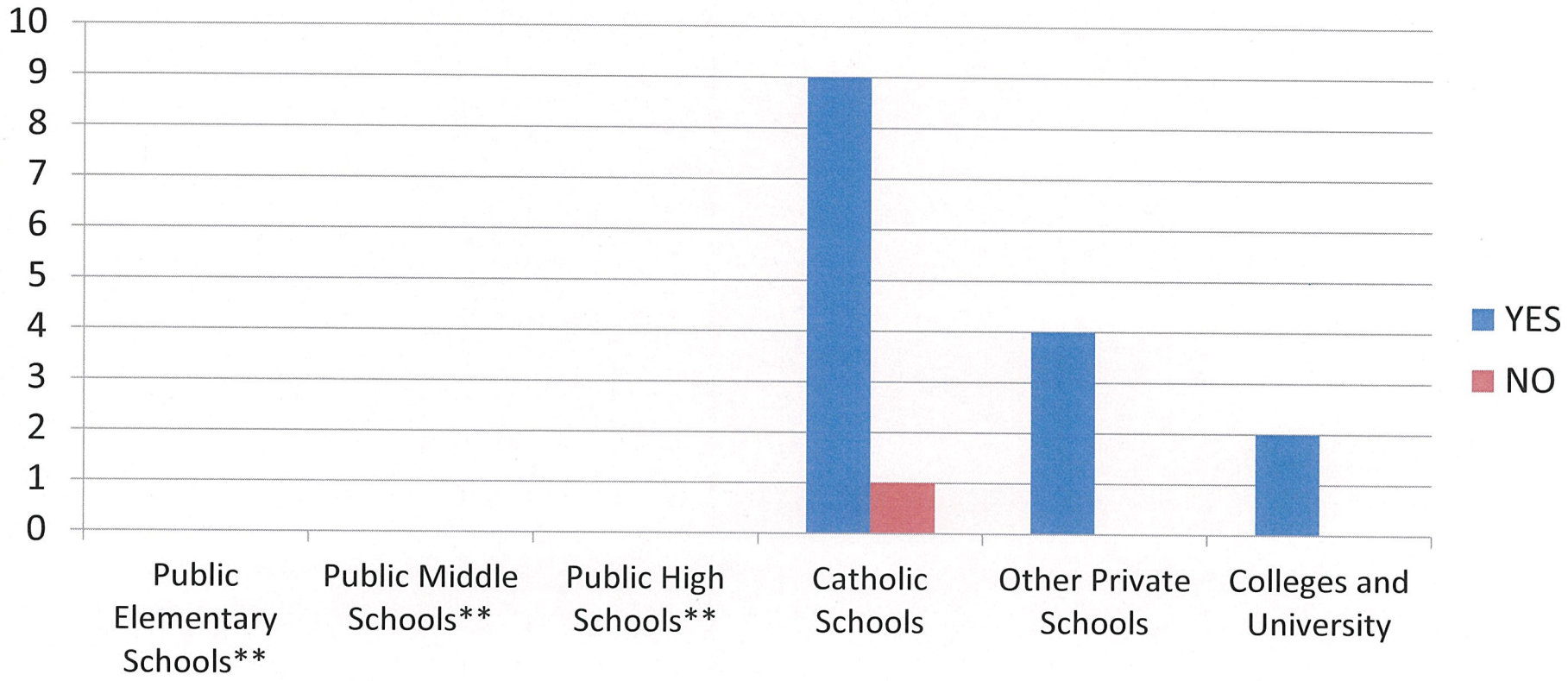
Will your school be able to comply with this requirement?*



*The proposed Rules and Regulations for School Building Sanitation [Section 4706(f)] contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student using that area at any given period.

Part III. Ventilation, Temperature, and Humidity

Will your school be able to comply with this requirement?*



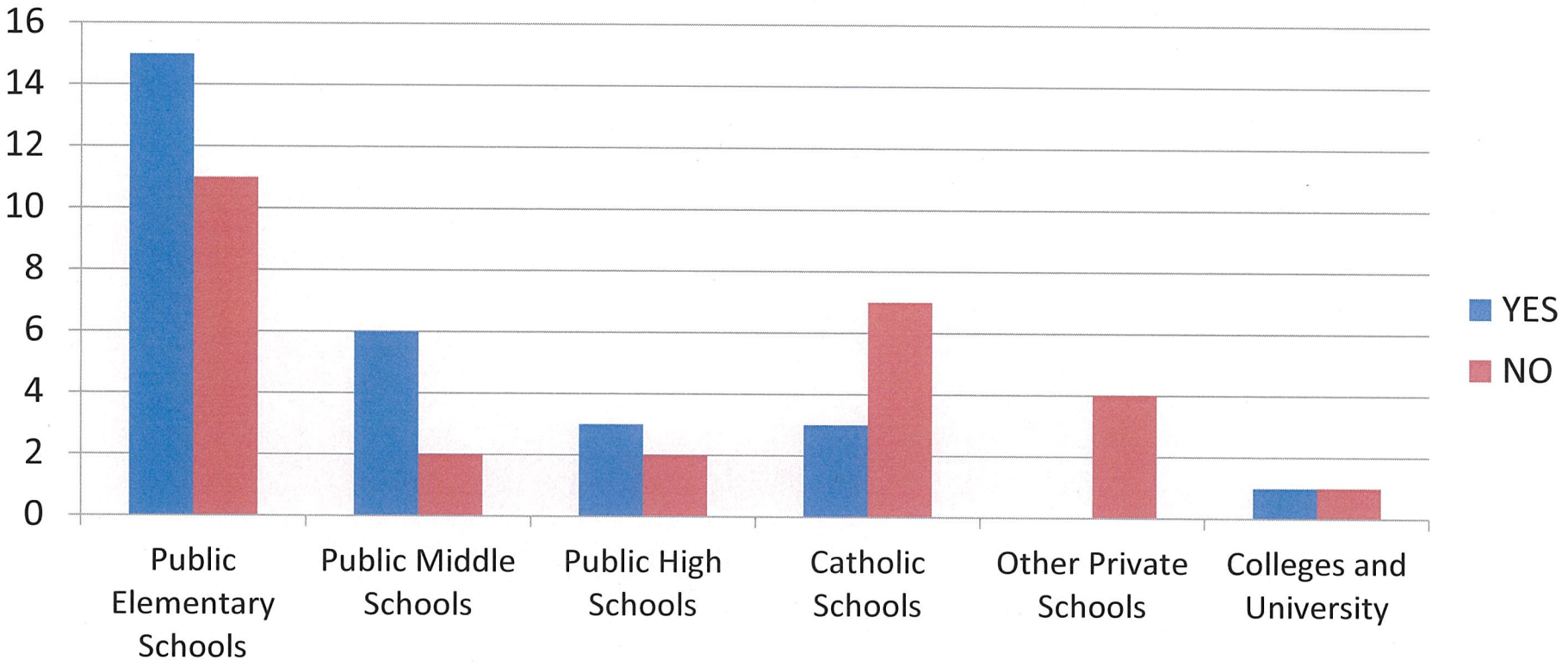
*The proposed Rules and Regulations for School Building Sanitation [Sections 4708(a), 4709(a), and 4709(b)] contain provisions which require proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30% to 60%.

**Responses from public schools were not included in the calculation because these requirements are not new to them as DPHSS have adopted these requirements during compliance inspections in the past ten years.

Doc. No. 35GL-19-0236.

Part IV. Question 1. Handwashing Units

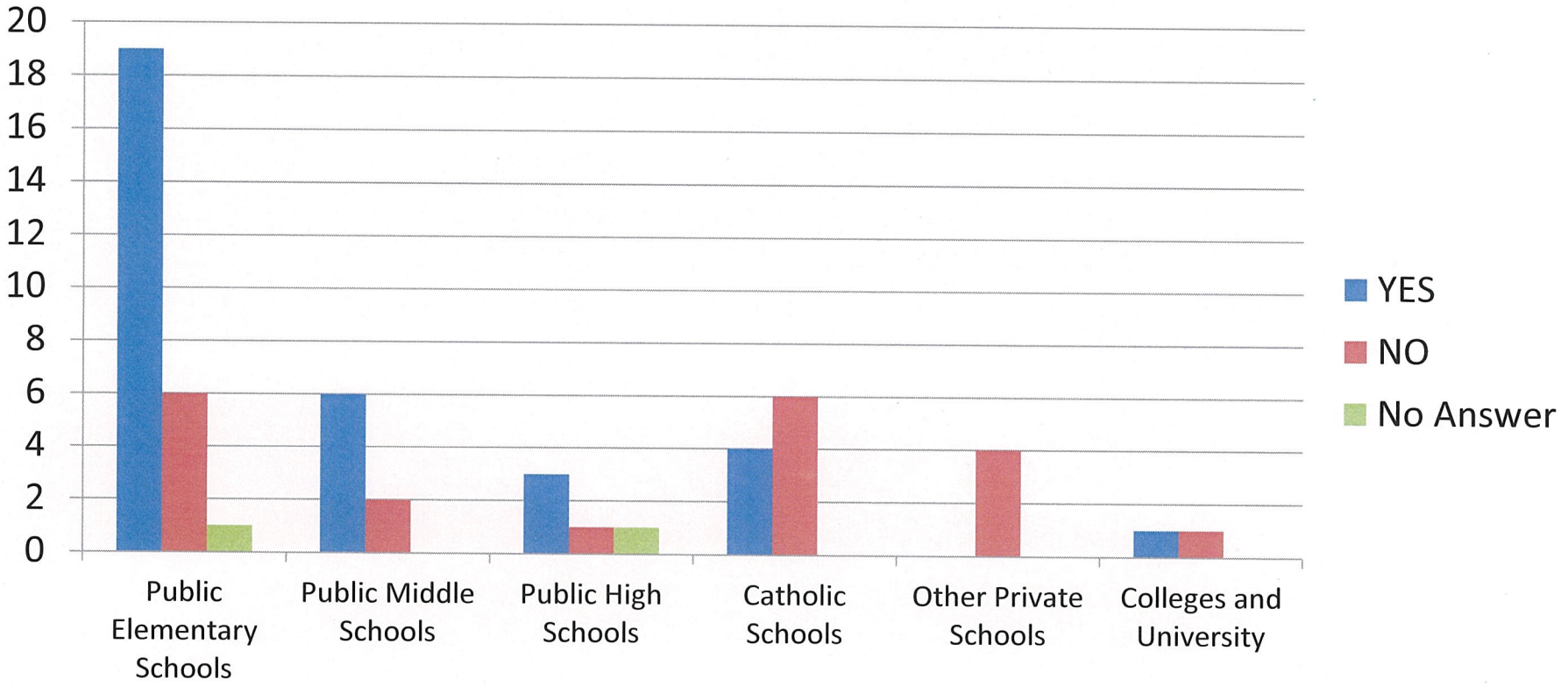
Does your school need additional handwashing units to meet the proposed required ratio?*



*The proposed Rules and Regulations for School Building Sanitation [Section 4713(a)] contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities.

Part IV. Question 3. Handwashing Supplies

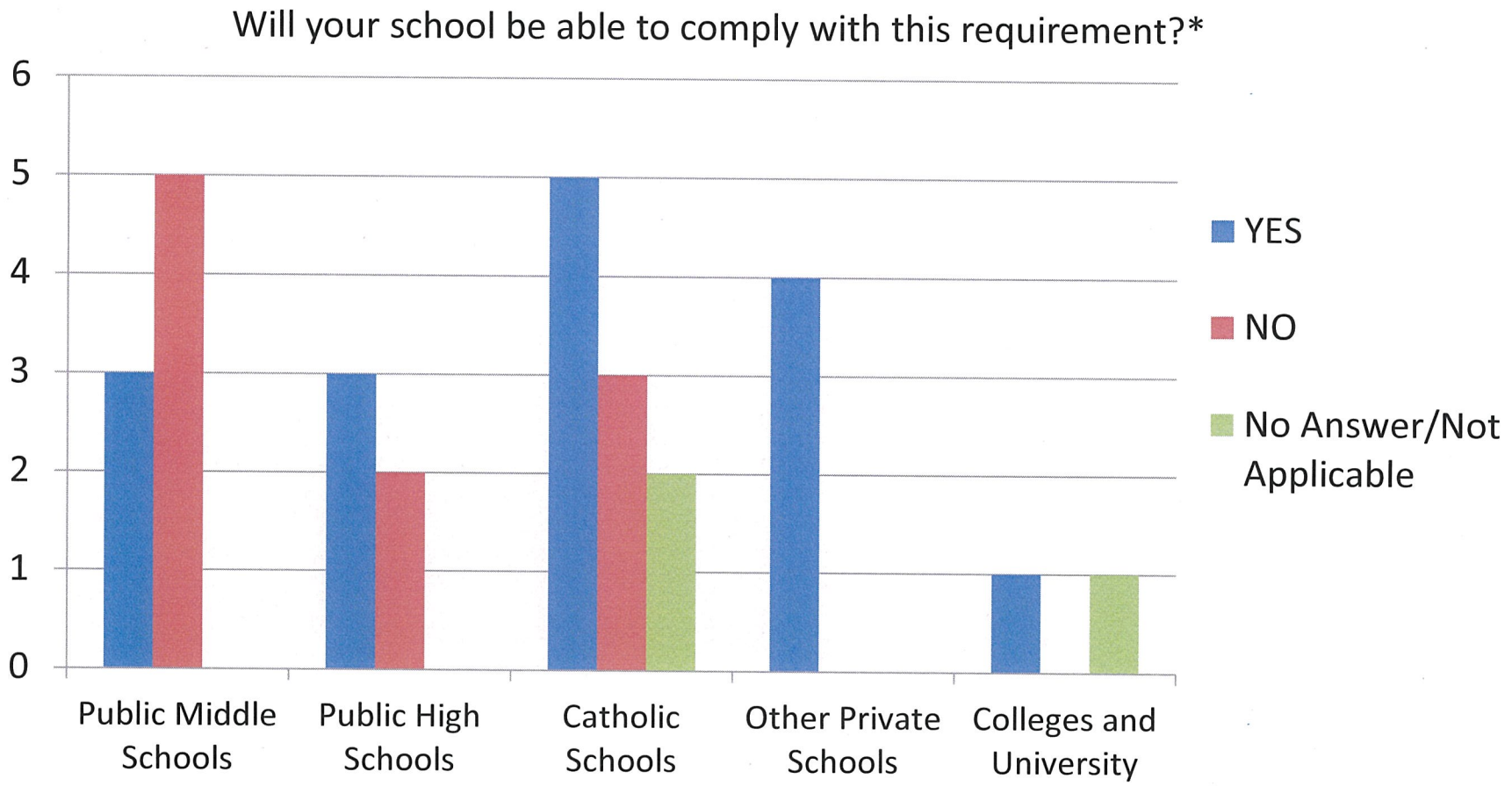
Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?*



*The proposed rules and regulations [Sections 4713(c) through 4713(f)] contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units.

Doc. No. 35GL-19-0236.

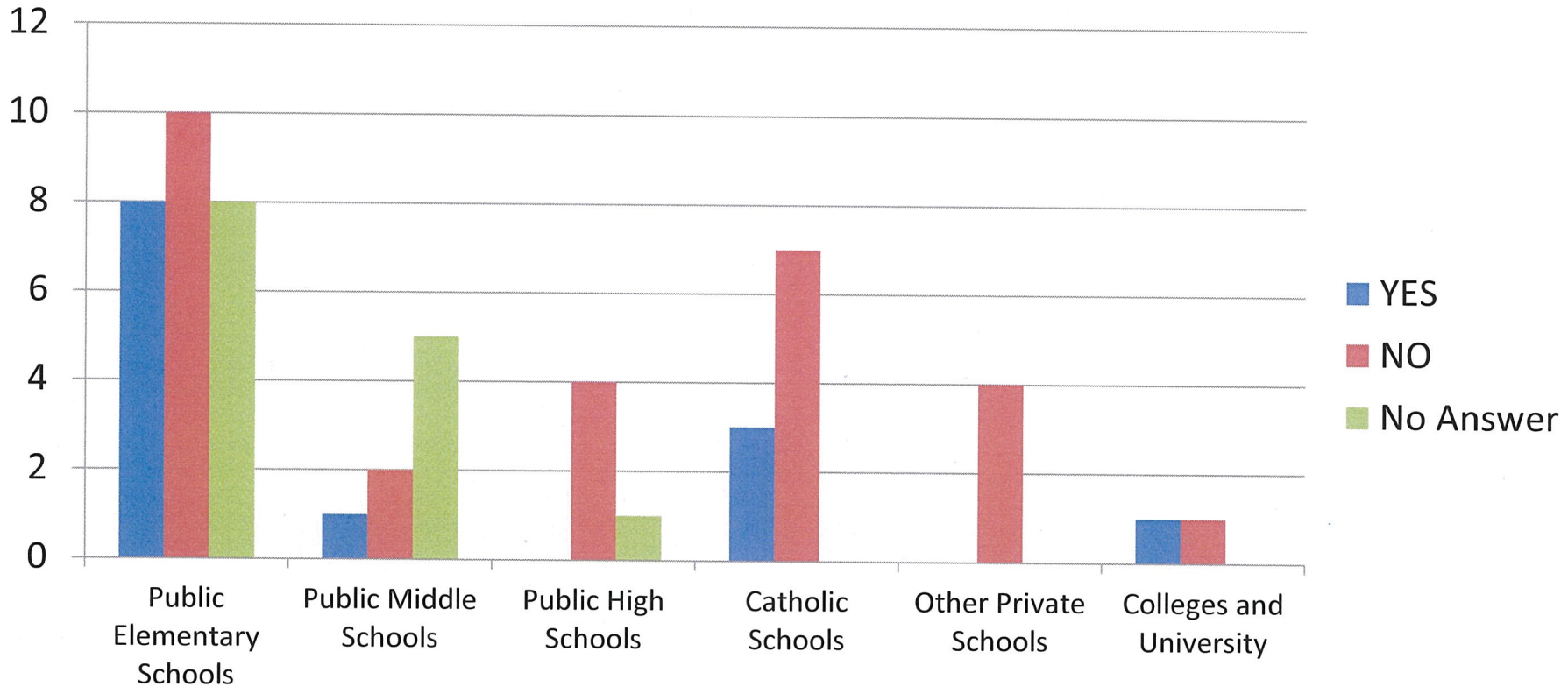
Part V. Lockers



*The proposed Rules and Regulations for School Building Sanitation [Section 4715(b) and 4715(d)] contain provisions which require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum.

Part VI. Toilets

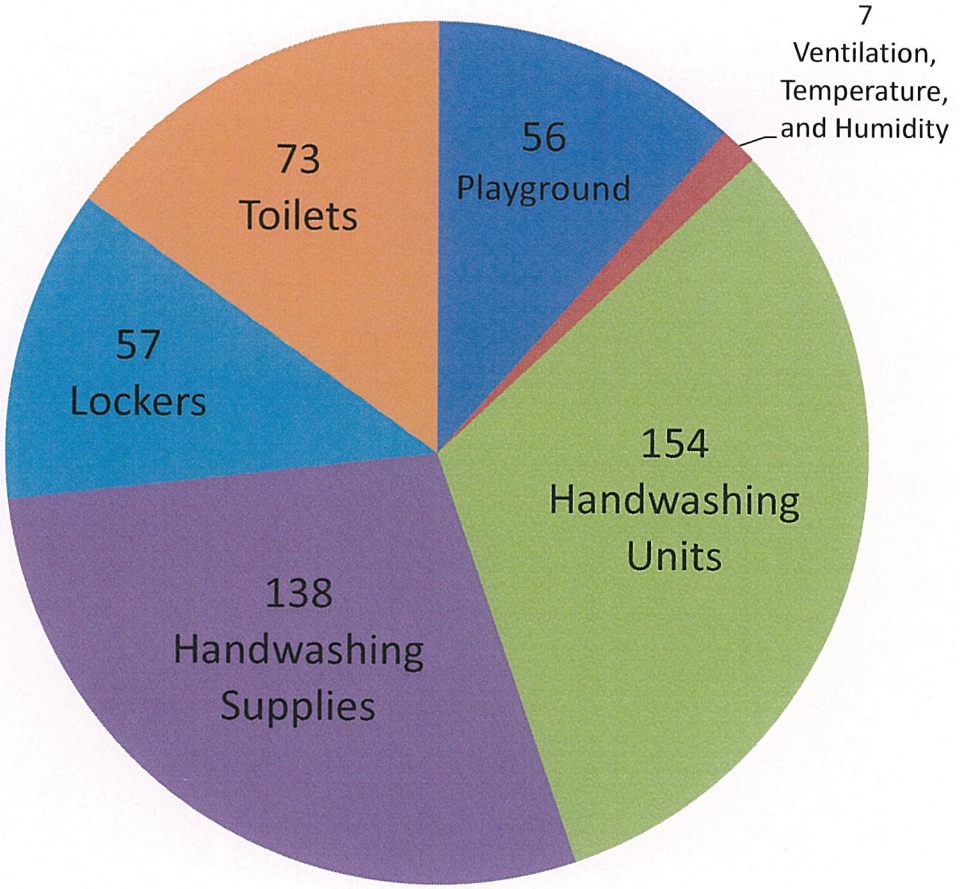
Does your school need additional toilets to meet the minimum required ratio as proposed?*



*The proposed Rules and Regulations for School Building Sanitation [Section 4715(a)] contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities.

Total Estimated Financial Impact

(in Thousand Dollars)



Department of Public Health and Social Services
Division of Environmental Health

Part I: School Site

1. Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?

   YES_____ NO_____ *(If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

2. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school site? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part II: School Building Exterior

3. Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?

   YES_____ NO_____ *(If you answered "NO," you do not need to complete the rest of Part II. Please go on to Part III. If "YES," please continue below.)*

4. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building exterior? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part III: School Building Interior

5. Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?

   YES_____ NO_____ *(If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

6. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building interior? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part IV: School Building Systems

7. Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?

   YES_____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

8. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building systems? *(Please mark one only.)*

   $1 - $1, 999_____ $2,000 - $3,999_____ $4,000 - $5,999 _____

   $6,000 - $7,999 _____ $8,000 - $9,999_____ Other (please enter amount) _____

   COMMENTS:

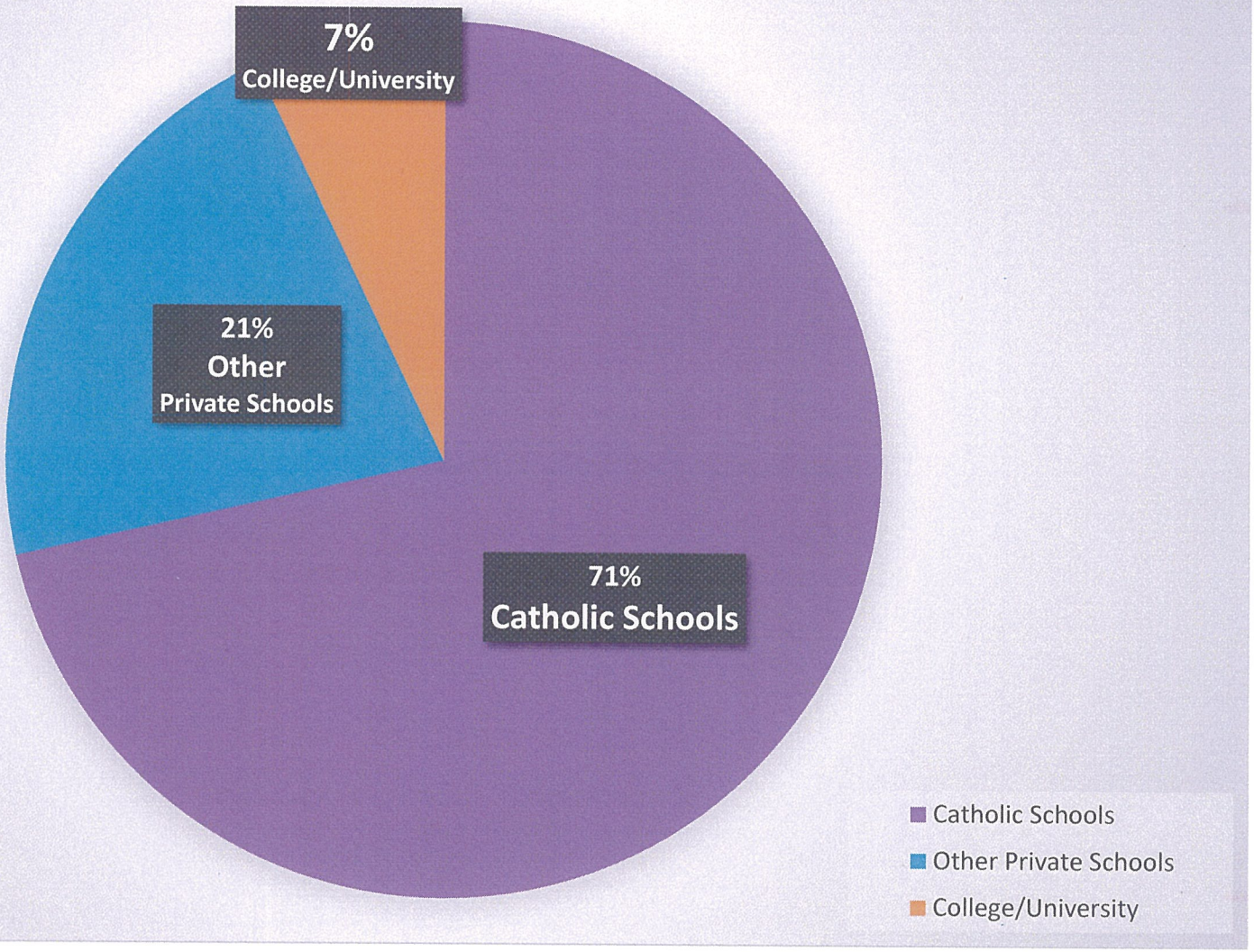
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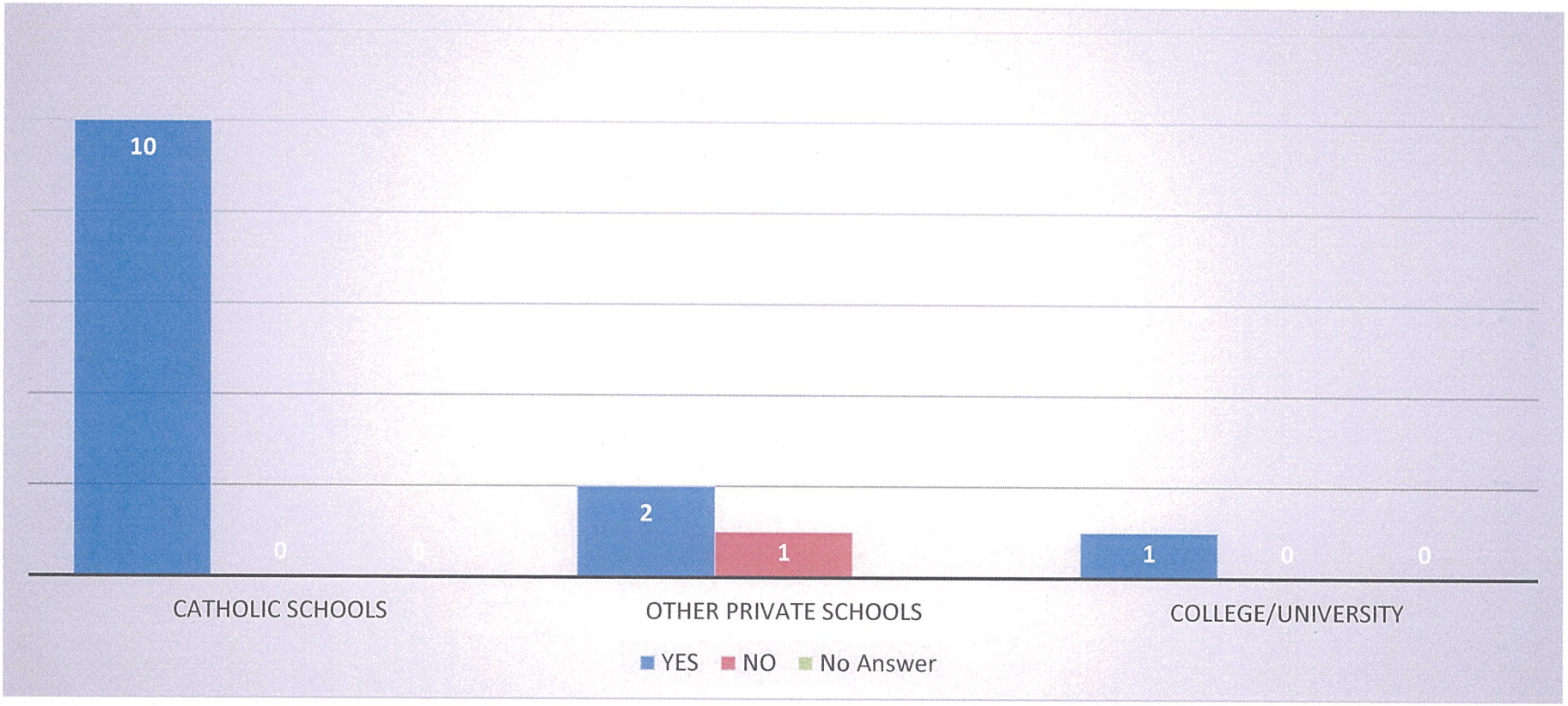
End of Survey
Please submit the completed form to DEH by Friday, January 12, 2018.
Thank you for your participation!

Respondents



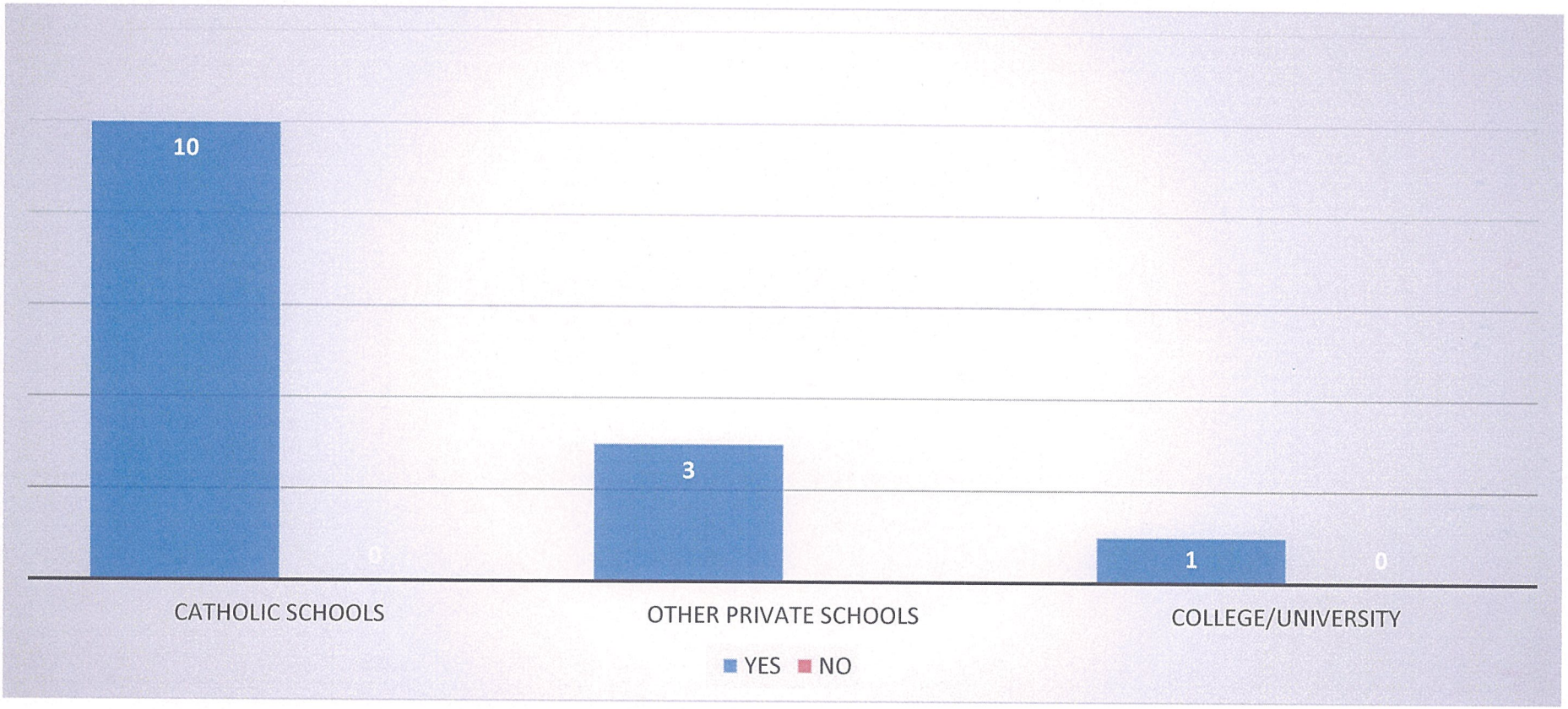
Part I. School Site

Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?



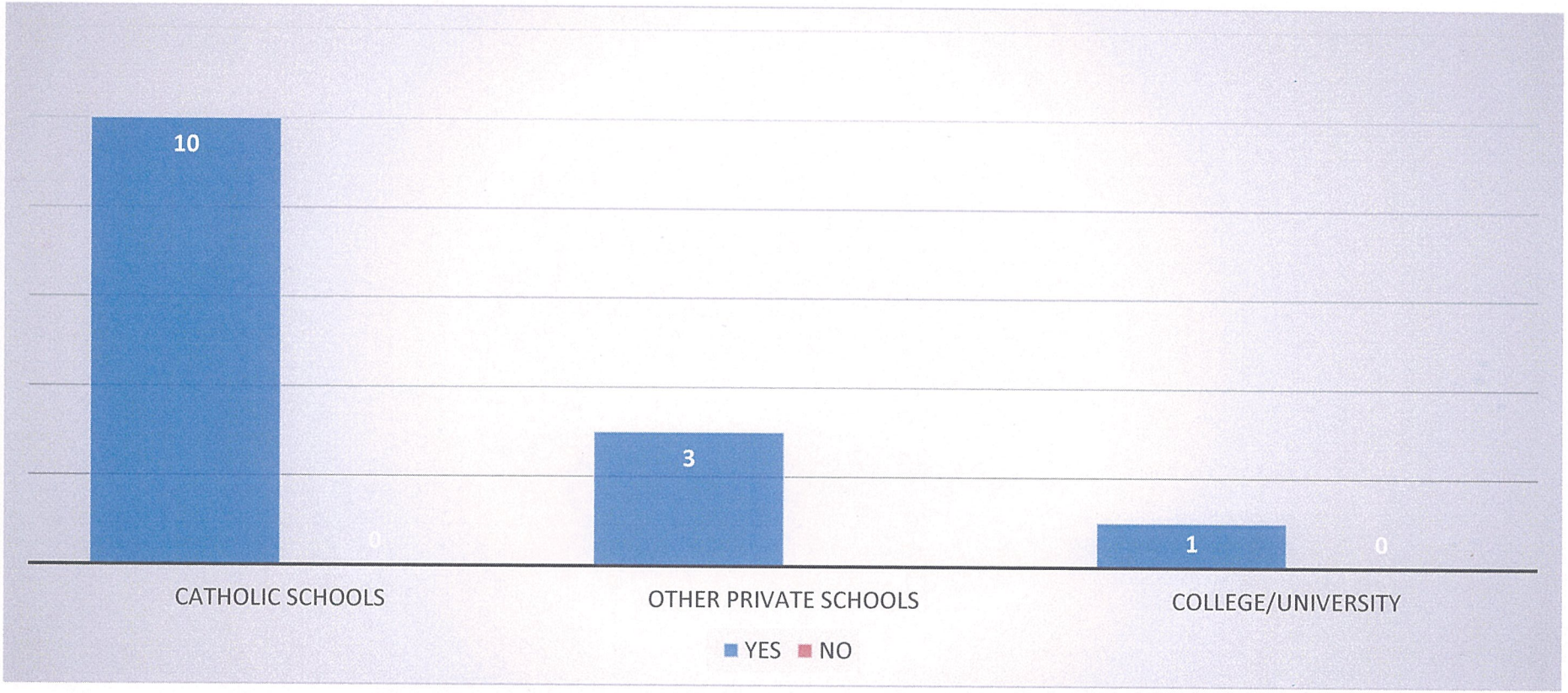
Part II. School Building Exterior

Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?



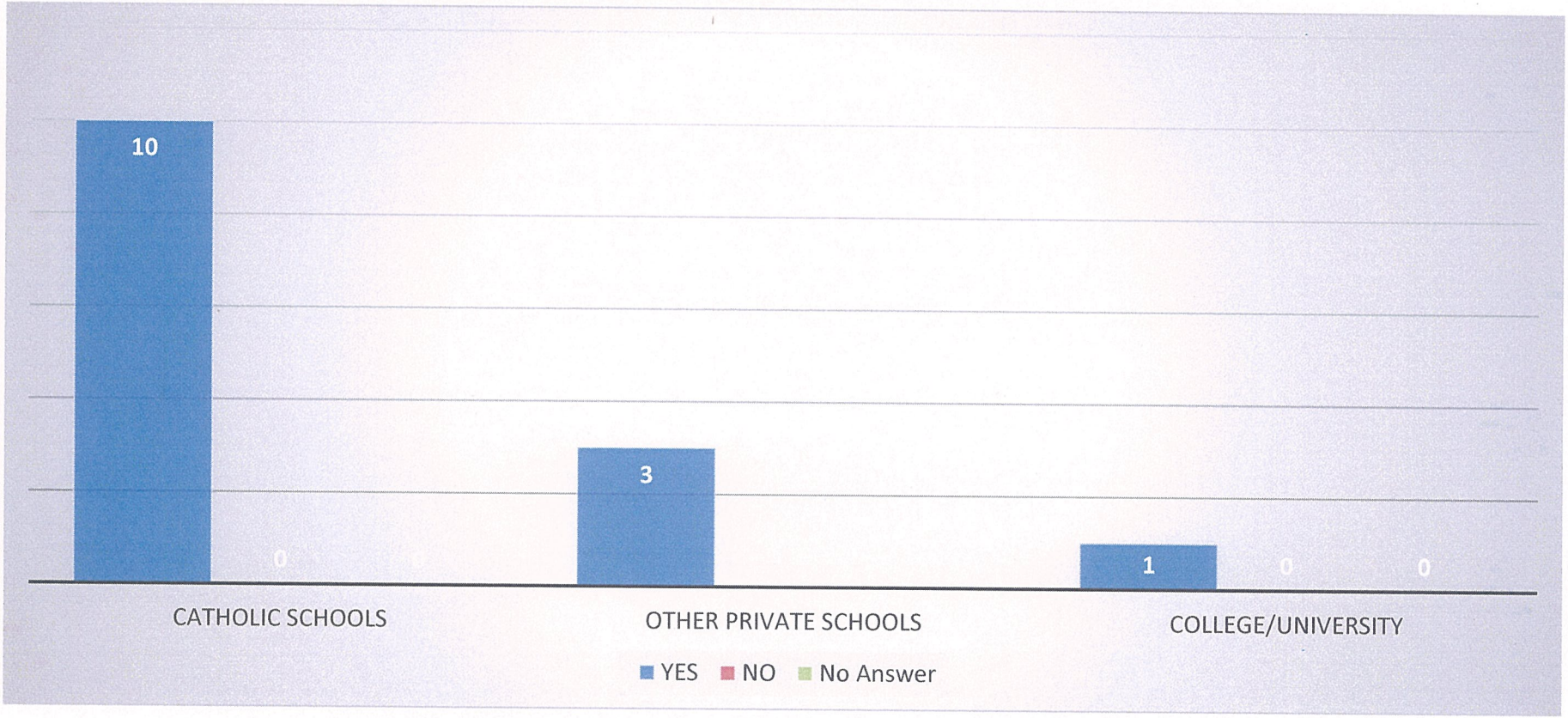
Part III. School Building Interior

Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?



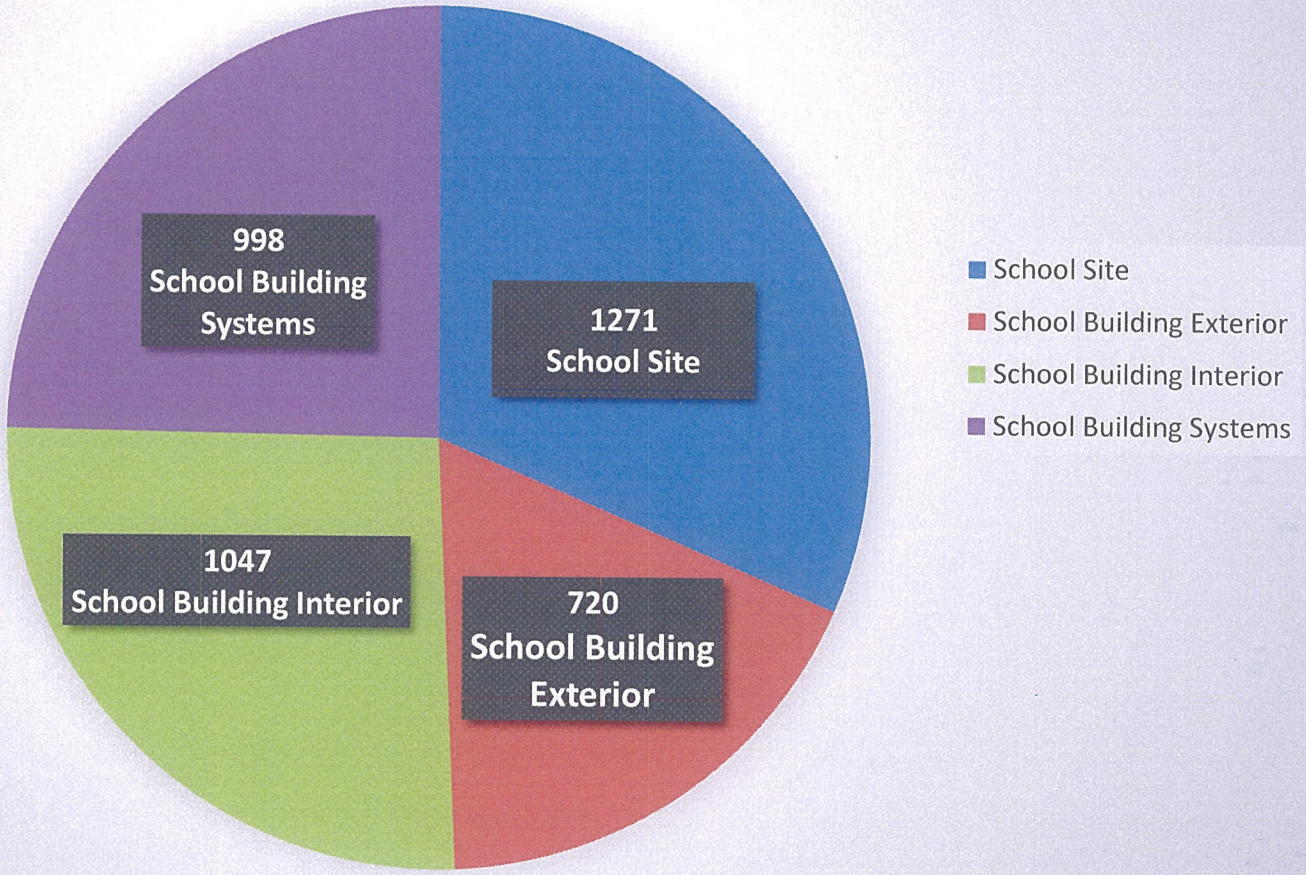
Part IV. School Building Systems

*Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?



Doc. No. 35GL-19-0236.

Total Estimated Financial Impact (in thousand dollars)



Department of Public Health and Social Services
Division of Environmental Health

PUBLIC HEARING TRANSCRIBED ORAL TESTIMONIES

MINUTES OF PUBLIC HEARING
Proposed Rules and Regulations
For School Building Sanitation
March 9, 2017 (3:00pm – 5:00pm)
Division of Senior Citizens, Conference Room
Castle Mall, Mangilao

Division of Environmental Health (DEH) Attendance	Tom Nadeau, Chief Environmental Public Health Officer (EPHO) Marilou Scroggs, EPHO Administrator Jeffrey Pinaula, Program Coordinator IV Claire Baradi, EPHO III Leilani Navarro, EPHO I	
TOPICS	**DEH**	**PUBLIC**
I. Opening Remarks	Before the official start of the hearing, Tom Nadeau (TN) explained to the attendees how the hearing will be held. Afterwards, he gave the floor to Marilou Scroggs (MS) to formally open the Public Hearing. MS stated the date and time of the start of the Public Hearing - March 9, 2017; 3:00pm. She then read the opening remarks: "My name is Marilou Scroggs; I am an Environmental Public Health Officer Administrator for the Bureau of Inspection and Enforcement of the Division of Environmental Health of the Department of Public Health and Social Services. On behalf of the Director of this Department, Mr. James Gillan, we welcome you all to this public hearing where we will be accepting and hearing comments to the proposed Rules and Regulations for School Building Sanitation. With me today are Mr. Thomas Nadeau, Chief Environmental Public Health Officer of the Division of Environmental Health, and Ms. Leilani Navarro, Environmental Public Health Officer for the Bureau of Inspection and Enforcement. Title 10 GCA, Chapter 21 mandates the Division of Environmental Health to regulate the sanitary operation of institutional facilities such as schools. Section 25101(b) of Chapter 25 of the same code defines "school" as, "any establishment, public or private, for the care and education of students from kindergarten through grade twelve and any college or university or educational institution of higher learning." To carry out the provisions of these mandates, Section 20105 of Title 10 GCA, Chapter 20 authorizes the Director of the Department of	

	Public Health and Social Services to adopt and promulgate rules and regulations, as necessary. The promulgation of rules and regulations is governed by the Administrative Adjudication Law (Title 5, Chapter 9, Guam Code Annotated), and Section 9301 of that law requires that 10 days before the public hearing, a notice must appear in the newspaper of general circulation in Guam announcing the date, time, and place of the public hearing. The Department did comply with that provision by publishing the announcement in The Guam Daily Post on February 23, 2017. Copies of the proposed rules and regulations were also made available at the DEH office and on the Department website as required by law. As part of Administrative Adjudication Law procedures, it was determined by the Department that an Economic Impact Statement was not required, and thus not conducted. Section 9301(i) of that law exempts the Department from conducting the study since the annual economic impact to the public in adopting this proposal will be less than $500,000, as determined by a survey conducted by the Department. In regulating school buildings, the Division of Environmental Health is mandated to issue Sanitary Permits to all qualifying schools. The standards required of schools in the acquisition of such permit are outlined in our Rules and Regulations Pertaining to School Sanitation which was adopted in 1984. The Division has determined that the existing regulations are inadequate in protecting and the health and safety of students and employees in Guam schools. Thus, the Department seeks to update these rules and regulations. Much of the requirements in the current regulations have been retained in the proposal, and some of the most significant changes are: needing to provide adequate playground area for students; establishing standards for temperature, ventilation, and humidity; requirements and exemptions of colleges and universities; and providing sufficient number of toilet facilities and handwashing units. The proposed regulations also detail how compliance inspections by the Division will be conducted.	

		We will now formally accept any written or oral testimonies on the proposed rules and regulations. Dakolo Na Si Yu'os Ma'ase!" Before opening the floor to receive public testimony, TN provided a short explanation in how administrative rules and regulations are adopted by the department: 1. Department is given authorization by the Legislature, via statute, to promulgate regulations. 2. An administrative public hearing is held by the Department to receive public comments about the draft proposal. 3. As determined by the Department, public comments may or may not be incorporated into the draft proposal. 4. Draft proposal is sent to the Attorney General's (AG's) office for legal review. 5. Upon AG's approval, the document is sent to the Governor's office for his approval. The proposal is then transmitted to the Legislature by the Governor. 6. Legislature has 90 days to take action, if any; otherwise, the draft proposal becomes officially adopted. TN stated that much of School Building Rules and Regulations remain the same, but some new items were added and other areas expanded and clarified. For example, he mentioned how classroom temperature was not explicitly mentioned in the existing regulations, but now added in the proposal using ASHRAE standard. TN further added that the public can still submit written testimony 10 days from the date of today's public hearing. Leilani Navarro (LN) began calling individuals who signed-in.	
II.	Oral or Written Testimonies	LN called upon Sister Eva Gamotin from Dominican Child Development Center to provide an oral or written testimony. Sister Eva Gamotin declined to provide testimony. LN called upon Sister Versamin Calamiog from Dominican Child Development Center to provide an oral or written testimony. Sister Versamin Calamiog declined to provide testimony.	

	LN called upon Sister Anotia Addy of Maria Artero Catholic Pre-school and Kindergarten to provide an oral or written testimony. Sister Anotia Addy declined to provide testimony. LN called upon Sister M. Emilin Artero of Maria Artero Catholic Pre-school and Kindergarten to provide an oral or written testimony. Sister M. Emilin Artero declined to provide testimony. LN called upon Mr. Jon Quidachay to provide an oral or written testimony. Mr. Quidachay did not have a written testimony but did provide comments and asked questions. LN responded by providing background in how the survey was conducted: • Distributed in July 2016. • Survey had 5 questions and was sent to all DOE schools, private schools, GCC, and UOG. • Survey questions asked if the schools would be able to comply given the proposed changes to the regulation. Specific to Part 3: • Of the 18 public elementary schools that responded, 5 replied that they would not be able to comply. • Of the 3 public middle schools that responded, 1 replied that it would not be able to comply. • Of the 4 public high schools that responded, 1 replied that it would not be able to comply. • The calculation on page 5 of the survey was determined by dividing the number of schools that would not be	Mr. Jon Quidachay introduced himself as an employee of Department of Education's (DOE) Facilities and Maintenance division. Mr. Quidachay asked about Part 3 (ventilation, temperature, and relative humidity) of the Economic Impact Survey that DEH conducted. He questioned how the estimated financial impact amount of $65,350 was determined for all public schools and private schools. Mr. Quidachay added that 25% of GDOE budget ($850,000) was for preventative maintenance of ACs and still wasn't enough. Mr. Quidachay also stated that acquisition of parts and materials were cumbersome due to our location in the Pacific Ocean.

	able to comply by the total number of schools all together. This number (%) was then multiplied by the upper range of the cost to determine the anticipated impact.	Mr. Quidachay voiced concern that out of the 41 schools, the amount was not enough to cover half the schools. He also stated that the number of units needed to put in for the government procurement side was overwhelming. The amount needed to accommodate the regulations was overwhelming.
	LN responded that the calculation was based on the surveys that were returned. TN clarified that the figures were not arbitrary but based on the results of the returned survey, which were sent out to all private and public schools. It was based on what was received, and unfortunately, only a small percentage responded. TN also stated that the Division was not saying that the calculated numbers were accurate [or exact] but that it was based on the responses the Division received.	Mr. Chris Anderson, DOE Administrator for Student Support Services, then asked if the financial information would be used to drive any of the Division's decision making.
	TN responded by stating that part of the requirement for promulgating rules and regulations was to do an Economic Impact Study, provided the impact was less than $500,000. If not, the Department was not required to create one. The Division did a survey to get an idea if the impact would be less than $500,000, and based on the responses from the survey, it was determined that the impact would be less than $500,000. TN also stated that the survey was based on the impact of the new requirements of the proposed rules and regulations, and not based on existing requirements of the existing regulations. That was the reason the survey was specific to six items that would have the most significant changes and impact to the school's economy.	Mr. Anderson responded that that was a good point of clarification. He understood that the estimated impact was based on the cost of trying to meet the anticipated changes from the new regulations, and not the overall impact of the entire regulations. Just the cost of trying to maintain a certain temperature in the classroom for the Department of Education was very expensive and the figure in the EIS was not a reflection of this.
	TN then stated that the Division did not adopt the temperature requirement stated in the Adequate Education law. Instead, the Division utilized the temperature range from ASHRAE	

	standards for non-mechanically ventilated room. Annex 1 of the proposed draft explains the reasoning and justification on why the Division did so. TN also stated that the rules and regulations were still in draft form and DEH was more than happy to accept comments from the public. TN further commented that the Division has been inspecting GDOE for many years and they have made progress in several areas, and did not want to scale back the existing requirements since that would be a step backwards. The Division wants to maintain current requirements and improve certain areas. The proposal seeks to improve what is already required by clarifying and expanding them. One good example is the temperature issue, which is very silent in the existing regulations, and DEH wanted to clarify it in the proposed regulations. LN called upon Mr. John Flores of DOE to provide an oral or written testimony. Mr. John Flores had no testimony to present. LN called upon Mr. Resty Reyes of Saint Anthony Catholic School to provide an oral or written testimony. Mr. Resty Reyes had no testimony to present. LN called upon Mr. Fred Torres of Saint Anthony Catholic School to provide an oral or written testimony. Mr. Fred Torres had no testimony to present. LN called upon Mr. Craig Guevara of DOE to provide an oral or written testimony. Mr. Craig Guevara had no testimony to present but did have questions and comments.	Mr. Craig Guevara stated that he was with the Department of Education and he had questions regarding the economic impact survey. He said he recalled the survey and completed it on behalf of 35 GDOE schools. He questioned if DEH had used that as a "multiplier or not." He also reiterated that there are 41 schools in the Guam DOE but six are leased out so his focus for the survey was on the 35 government-operated facilities. Mr. Guevara also stated that he wanted to know how DEH derived at the numbers in the survey of $5,000 and above. He reiterated that he submitted the survey but he was unsure if DEH received it.

		He said that on one question in the survey, he had indicated that they would not meet the requirement and checked $5,000 and above as his response. Thus, the cost for GDOE would be $5,000 x 35 schools and he wanted clarification on what number DEH used to define "and above."
	TN asked MS and LN if a survey response was ever received from Mr. Guevera. LN replied that she did not receive any survey from Mr. Guevara.	Mr. Guevara stated that there was no signature or name block on the survey and had forwarded the survey to his main office.
	LN asked Mr. Guevara how he submitted the survey.	Mr. Guevara stated that he submitted the form to his Central Office but does not know if was forwarded to DEH.
	TN informed Mr. Guevara and Mr. Andersen that the Division will still accept the survey from GDOE.	
	TN responded that DEH did not use the same standard as the Adequate Education law. LN further added that the temperature requirement in the proposal was based on ASHRAE Standard 55-2004.	Mr. Guevara also asked if DEH defined adequate temperature as 78 degrees Fahrenheit, similar to the Adequate Education Act.
	TN stated that the 83 degrees Fahrenheit was the maximum end of the proposed allowable temperature range using ASHRAE's recommended standards.	Mr. Guevara stated that in the survey, the temperature was increased to 83 degrees Fahrenheit. He asked if this was a new temperature requirement to increase it by 5 degrees.
	TN confirmed that cold water is not being required in the proposal.	He then asked about water coolers: DOE must provide safe drinking water but it did not say it must be cold water.
		Mr. Anderson commented that the law supersedes regulations, and if the law required DOE to have their temperatures at a certain temperature then DOE has to work to comply with that. But he said he was happy that the regulatory requirements are giving Guam DOE a range of up to 83, because it is good for Guam DOE.
		Mr. Anderson also stated that DOE wants inspectors to be consistent; that they are not citing for demerit when they see the temperature ranges from 75 – 83, because inspectors had cited DOE for improper

		ventilation when the temperature was higher than 76 degrees Fahrenheit.
	TN responded that Mr. Andersen may be confusing temperature requirements from relative humidity. Humidity over 70% promotes the growth of mold, and thereby, affecting asthmatic students and air quality.	
	TN added that one of the clarifications made in the proposed regulations was on ventilation since currently there are no standards given.	Mr. Guevara asked when the deadline to submit written testimony would be.
	MS replied that the deadline is 10 days from today.	
	TN asked that written testimony be transmitted to LN.	
	LN stated that her email was not on the EIS but she will give her card after the hearing and that the Division's contact information was on the last page of the survey.	
	TN reiterated that the Division is more than happy to accept any written comments within the next 10 days.	Mr. Guevara thanked the Division for the clarification.
	LN called upon Mr. Phil Roberto to provide an oral or written testimony.	Mr. Phil Roberto did not have a testimony but would like to know how demerits were determined as he couldn't find anything in writing how the Division determines demerits-how two or six demerits will get you to B. It sounded like it was discretionary.
	TN explained that demerit points are given when violations are found during compliance inspections. The more critical the requirement, the greater the demerit score when violated. The law requires demerit score to be 1 to 6. TN stated that the inspection report for school building inspection is still in draft form.	
	LN added that she did bring some copies but not enough for everyone.	
	TN stated that the draft inspection report itemizes requirements, and each requirement is assigned a particular demerit score and grade: 0 – 10 score is an A grade; 11 – 20 score is a B; 21 – 40 score is a C grade; demerit score of 41 and above is a D grade, which is an automatic suspension of the Sanitary Permit, and thus, a closure of the establishment.	
	TN clarified that repeat violations would not increase the demerit points. Although it would	

	be noted in the inspection report, the demerit score will be issued only once for that particular violation. Thus, having 10 of the same violation, would not result in the issuance of a demerit score 10 times. TN responded with an affirmative and explained that the law required DPHSS to immediately suspend a permit if the demerit score exceeds 40 points. However, he added that DEH works with the establishments (i.e., schools) by allowing them to correct the violations on the spot, if possible, but the deficiencies are still noted in the report. MS stated that the current inspection report form provides a total of 120 demerit points; but on the proposed inspection report, the demerit points will add to 100 points. TN replied that DEH determines what is critical and thus the accompanying demerit score. TN explained that the proposal and DEH actions must mirror the statute as to how much time is given to correct the violations. MS replied 30 days are given to the school. LN added that an A grade requires the school to correct non-critical requirements (those with less than 6 demerit point) within 30 days. TN informed Mr. Anderson that DEH will double check the governing law that dictates how much time is given to correct the violations. TN repeated that DEH determines what is critical and thus the accompanying demerit score.	A question from the audience (person unknown) inquired if closure was possible. Mr. Anderson stated that Mr. Roberto provides facility maintenance for JFK, and Mr. Anderson will ensure that they will get with the facility maintenance staff to be familiar with the inspection requirements to ensure DOE facilities do not get the requisite demerits to be shutdown. Mr. Guevara asked if the grade scale remains constant. Mr. Anderson asked for clarification if the time frame for correction of violations cited in a school with an "A" rating is still 30 days. Mr. Anderson asked that when an establishment has less than 10 demerits and a few of them are 2 or 4 demerit points, if he has 30 days or 15 days to correct the violation. Mr. Anderson felt like he missed something based on the language. He would like a statement to clarify whether those demerits that are 2 or 4 will have to be completed in 15 days and not necessarily 30 days. Someone from the audience asked if the demerits were arbitrary or would there be a value assigned to the violation.

	LN called upon Mr. Paul Cruz to provide an oral or written testimony. Mr. Paul Cruz had no testimony to present. LN called upon Mr. Leon Guerrero to provide an oral or written testimony. Mr. Leon Guerrero had no testimony to present.	
	LN called upon Mr. Chris Anderson to provide an oral or written testimony.	Mr. Anderson stated that DOE will be submitting a written testimony. He also stated that he had four issues regarding the proposed regulations. The first issue was deferred to Mr. Randy Romero of DOE to better explain the concern of Subsection 4705 (Page 4 of the proposal). Mr. Anderson commented that this particular section was about the adherence to the recently adopted building, plumbing, and fire regulatory codes. He expressed concern that the subsection is not consistent with 21 GCA Chapter 67 and 66. Mr. Anderson asked Mr. Romero to elaborate on this. Mr. Romero asked if DEH was requiring DOE to comply with the latest adopted codes. Mr. Romero commented that 21 GCA Real Property Chapter 67 adopted the 2009 IBC, IPC, and IFC, but 21 GCA Real Property Chapter 66, the Building Law that applies to existing buildings, states that compliance to the current codes is only required whenever any renovation or construction is 50% above the value of the building. He wanted to know if the proposed regulations would arbitrarily require them to comply with the latest code requirements or if this would only apply to existing buildings that exceed the 50% cost in repairs and alterations. Mr. Romero said that he understood that new facilities would need to comply with the latest adopted building code, but he said that DOE has major upgrades to do for existing buildings in order comply with Section 4705 (g) of the proposed regulations.
	TN asked the commenter to state his name for the record. TN responded that similar question was once asked to the AG's Office on a different proposed rules and regulations, and that office responded	Mr. Romero stated that his name was Randy Romero and that he was from Guam DOE.

	that if the Division was not authorized to enforce the requirement (i.e., the building code), then it would need to refer the matter to the respective regulatory agency (DPW). They also stated that the insertion/referencing of some other agency's requirements were fine to remind the public of other applicable laws and regulations. TN stated that DPW would have to address that specific question, and that DEH included this language in its proposed regulations so to give the schools information about other applicable laws. TN further stated that he did not know how DPW enforces their codes. TN also stated that DEH will refer all sections regarding other agencies' code to the proper agency that has the enforcement power to do so. MS pointed out that this section was deleted from the current, proposed inspection report form; and thus, not applicable during DEH's enforcement. TN again stated that this section was included to notify the school of other regulatory requirements. LN asked if Mr. Anderson had additional questions. MS responded that this requirement pertains to the use of the outdoor area during certain periods such as recess period. MS gave an example: if 100 students will be in the playground at a given time, there must be 10,000 square feet of accessible area. MS commented that based on observations during past inspections, she does not see a problem with public schools meeting the playground requirement because most have big outdoor spaces. MS stated that this requirement might be a challenge for private schools with limited outdoor space.	Mr. Romero suggested to reword this section in a way that it would not be enforced during inspections. Mr. Anderson referred to Subsection 4706, relative to outdoor recreational areas. Mr. Anderson asked if the minimum square foot that is acceptable for students is 100 square feet. Mr. Anderson understood that this subsection did not mean that a total outdoor area must equal to the total school population multiplied by 100 square feet; rather the number of students at any given time multiplied by 100 square feet. This requirement is similar to the locker room facility requirement in that the number of showers required would be relative to the number of students using that facility at any given time.

		Mr. Anderson commented that it would help if the language that was just discussed be written in a manner to clarify the proposed regulations regarding students using the space at any given time. Mr. Roberto commented that private schools with land issues who could not meet this requirement can apply for a variance through the Director.
	TN acknowledged that DEH did include a variance provision, but an alternative plan or option needs to be provided that will address the public health concern. TN stated that whenever a variance is requested, justification shall be provided as to why the school cannot comply with the requirements.	Mr. Anderson then referred to Subsection 4713, relative to handwashing units in lavatories for every 50 students.
	LN stated that most of the plumbing requirements in the current regulations were retained in the proposed regulations. The only change was in the handwashing sink ratio and the toilet ratio for male, which were all based on the 2009 International Plumbing Code.	Mr. Anderson commented that this provision is a potential cost driver for DOE. Mr. Anderson stated that DOE was not really clear as to whether or not the increase will significantly improve the issue of health and safety for the students. Mr. Anderson stated that this comment will be put in DOE's written testimony.
	TN stated that since this was already required by law (as enforced by DPW).	Mr. Anderson reiterated that there would be some big costs that GDOE will incur in order to comply with this requirement and he wanted to make sure that this was duly noted. Mr. Anderson then referred to Subsection 4716. Mr. Anderson commented that this was requiring the trash bins in schools to drain into an approved sewage disposal system, elevated at least 6 inches from the ground surface.
	LN responded that the current regulations require dumpsters to be elevated at least 18 inches from the ground, and that DEH lessened the requirements to 6 inches in the proposed regulations.	Mr. Anderson stated that currently DOE trash bins are on a flat surface, which is usually concrete or paved surface, but they do not drain into any specific drainage system.
	TN stated that Guam Environmental Protection Agency (GEPA) has the authority to address waste disposal, and GEPA had previously stated	

	that if the land has proper swale to prevent puddling, it would be acceptable. TN stated that DEH is concerned about accumulation or puddling of liquid waste that will attract rodents and other vectors. If this is avoided then generally that complies with the requirement, provided that it is elevated above 6 inches from the ground. TN said that the prior requirement was 18 inches, and this proposed requirement was a significant reduction. DEH recognized that it was difficult not just for schools but for other businesses to comply with the 18 inches requirement. TN stated that all variance requests will reviewed on a case by case basis as each school has a different situation and condition. TN also stated that the current regulations does not have the variance provision and it was added into the proposed regulations to give the schools some flexibility. However, the schools must still make attempts to address, fix, and mitigate their problems. LN thanked Mr. Anderson for his comments and called upon Sister Barbara Ungacta to provide an oral or written testimony. Sister Barbara Ungacta said that she did not have any testimony and that she was just there to listen. LN called upon Mr. Randy Romero to provide an oral or written testimony. Mr. Randy Romero had no testimony to present and did not have further comments. LN called upon Mr. Henry Taitano to provide an oral or written testimony.	Mr. Anderson commented that after GDOE makes an assessment of the financial impact to comply with the changes in the regulations, they may apply for a variance. Mr. Anderson commented that he sees in the language that GDOE has 5 years to comply for existing buildings and that they would likely need more time to comply. Mr. Henry Taitano stated that he had a question about page 14, line 16 of the proposed regulations. Mr. Palmer commented that this was more of a Guam Waterworks Authority (GWA) issue and he asked how GDOE would be expected to meet this if the issue lies with another agency providing the service. Mr. Taitano commented that this is the case in Tiyan High School and the contamination of water wells in the area. This would affect Tiyan High School's rating during inspections but in reality, it is not a problem caused by GDOE. Mr. Taitano suggested that there should be a

		way to identify how many different schools are not being provided ample water.
	TN commented that he believes it is a mandate of GWA (and GEPA) that all water for consumption be from an approved source and it is potable. He added stated that from DEH's perspective, schools must provide water to the students, and this water should be safe to drink. TN further stated that although GWA is responsible for providing an approved water source, schools should ensure that potable water is provided to students. Thus, if there is water outage, the school should temporarily cease operation until an alternate means of water supply is provided. GDOE would have to provide alternate water supply like bottled water or portable water tank; otherwise, they would need to close down their operation. If they wish to continue operations, they will have to provide alternate water supply.	Mr. Anderson commented that if GWA is not able to provide adequate pressure to the school, toilets are not able to be flushed and there will be sanitary issues. He asked what authority can DEH has to sanction the public utility for failing to provide adequate pressure.
	Mr. Nadeau responded that DEH does not have the authority to regulate GWA.	Mr. Taitano asked if an analysis has been done on the Division's capabilities to enforce all the regulations.
	TN responded that an analysis was conducted nearly a decade ago, and DEH determined that it would need at least 77 staff to meet the existing requirements. Currently, DEH has a staff of 20. TN added that although DEH is short-staffed, it does prioritize inspections based on risk analysis. Therefore, those facilities that cater to high-risk populations like children, the elderly, the ill, and the immuno-compromised get prioritized over others.	
	As there were no further comments from the public, TN reiterated that the Division was still accepting written testimony in the next 10 days. The written testimonies will be reviewed, and the proposed regulations will be revised, as necessary, based on the comments received. After 10 days, DEH will submit the proposed regulations to the AG for legal review. Upon completion of the AG's review, it will be submitted to the Governor for review, and if approved, the Governor will transmit the proposal to the Legislature. Then Legislature has 90 days to decide on what action to pursue – either accept it as is, have another public	

	hearing, or revise it. If no action is taken by the Legislature after the 90 days, then it is promulgated and becomes a part of the regulations.	
III. Closing		MS officially closed the Public Hearing on the Rules and Regulations for School Building Sanitation at 5:00pm, on March 9, 2017.

WRITTEN TESTIMONY FROM THE GUAM DEPARTMENT OF EDUCATION

DEPARTMENT OF EDUCATION
OFFICE OF THE SUPERINTENDENT

www.gdoe.net
500 Mariner Avenue
Barrigada, Guam 96913
Telephone: (671) 300-1547/1536•Fax: (671)472-5001
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Jon J. P. Fernandez
Superintendent of Education

RECEIVED 5:05 PM
MAR 30 2017
DIVISION OF
ENVIRONMENTAL
HEALTH

March 30, 2017

Mr. James Gillan
Director, Department of Public Health and Social Services
123 Chalan Kareta Route 10
Mangilao, Guam 96913

Attention:
Mr. M. Thomas Nadeau
Chief Environmental Public Health Officer
Division of Environmental Health

RE: Proposed Rules and Regulations for School Building Sanitation

Hafa Adai Mr. Gillan,

Enclosed is the Guam Department of Education's response to the proposed Rules and Regulations for School Building Sanitation. The department appreciates your agency's diligence in addressing and advocating for the health and safety of our students. Although the proposed rules carryovers some existing requirements, the overarching issue is the reduction in ratios that will require extensive activities in order to meet the requirements if passed. Our existing schools have limitations in expansion due in part of the way the structure and infrastructure was designed. The Department of Education struggles to balance operational costs and existing regulations. The cost impact the proposed regulations will have will be significant and will increase operational cost which is primarily dependent on Government revenues.

Senseramente,

JON J.P. FERNANDEZ
Superintendent of Education

Jon J. P. Fernandez
Superintendent of Education

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This document contains Department of Education's comments to the proposed GPHSS Rules and the Public Hearing held on March 9, 2017on the Proposed Rules and Regulations for School Building Sanitation

These comments are directly tied to GDOE operated facilities (35 schools) and does not account for leased facilities (6 schools), GDOE mentioned during the Public Hearing that one Economic Impact Survey form was used for 35 GDOE schools and a determination on how this form was used with a multiplier to derive at the total estimated financial impact @ $457,028.00 was questioned during the Public Hearing.

Commentary points:

- Subsection 4704,d-should add to elementary definition Pre-K and Headstart aged children
- Subsection 4705,h-schools shall have updated floor plans available to Director upon request. If this pertains to existing schools, many don't have regular or updated floor plans. Recommend that this clearly indicate for facilities built after 2000.
- Subsection 4706-new language requiring 100SF per student of playground space. Recommend we stay with existing language..not enough land to meet increase.
- Testimony should itemize each of the proposed changes and reflect whether there is a positive/negative financial impact to GDOE.
- Recommend that DPHSS use the existing timeline based on overall letter grade for determining the response time to correct all demerits. The proposed language on subsection 4720; d4 is not easy to follow.
- Recommend that the proposed regulatory requirements be required of all newly constructed schools or any major renovations where costs equal to 50% or more of the value of the facility.
- Recommend that we specifically indicate that GDOE is not able to meet the proposed regulatory requirements for the 41 existing schools and that we propose three courses of action (COAs) - 1. Remove subsection 4719/4721 in it's entirety and add language that clearly indicates that all 41 existing schools are grandfathered and subject to existing regulations, or 2. Leave subsections 4719/4721 but change the number of years to be in compliance to 20 years and quality that enforcement is subject to GDOE receiving the necessary funding to be in compliance, or 3. Leave 4719/4721 but change the number of years for full compliance two 25 years and enforcement subject to GDOE receiving funding each year to be compliance.

Overall review:

1. **GPHSS Proposed Rules §4705 Sanitary Permit (a) (2nd paragraph, line 13)** Any person, before constructing a new school, or making an addition to, or major alteration of, an existing facility shall first submit plans and specifications of such building or changes to the Director Department.

   Comments:
   Clarification required to define extent of major alteration, examples should be defined as to total square footage or total number of building components to be replaced or upgraded prior to satisfying the requirement of submitting plans and specifications to the Director

   New school construction, additions, and major alterations to existing buildings requires a building permit application as required by 21 GCA. Ch. 66, Article 2; Certificate of Occupancy 21 GCA. Ch. 66, Article 3; 10GCA, Ch. 21, §21102(d) etc... By virtue, this proposed rule is covered by Guam Law and is a redundant rule to apply. All new school construction, additions, and major alterations to existing buildings are handled through contractual means.

2. **GPHSS Proposed Rules §4705 Sanitary Permit (g)** The school shall adhere to the most recently adopted building, plumbing and fire and other pertinent regulatory codes.

   Comments:
   Section 4705 contradicts 21GCA Chapter 67, The Building Code and 21GCA Chapter 66, The Building Law and Section 3401.2 of IBC 2009 which states;

   21GCA Real Property Chapter 67 The Building Code
   §67101 International Building Code Adopted.
   The *International Building Code* (IBC), 2009 edition, including Appendices C, E, F, G, H, I, J, and K, as published by the International Code Council, is hereby adopted and enacted as the building code for Guam. The IBC *shall* be recognized as the standard for the furtherance of the intent of Chapter 66, The Building Law,...

   21GCA Real Property Chapter 66 The Building Law
   § 66104. Application to Existing Buildings.
   (a) General. Buildings or structures to which additions, alterations or repairs are made shall comply with all the requirements for new buildings or structures except as specifically provided in this Section.

   (b) Addition, Alterations and Repairs: More than Fifty Percent (50%). When additions, alterations or repairs within any 12-month period exceed fifty percent (50%) of the value of an existing building or structure, such building or structure *shall be made to conform to the requirements for new buildings or structures.*

   (c) Additions, Alterations and Repairs: Twenty-Five Percent (25%) to Fifty Percent (50%). Additions, alterations and repairs exceeding twenty-five percent (25%) but not exceeding fifty

percent (50%) of the value of an existing building or structure and complying with the requirements for new buildings or structures may be made to such building or structure within any 12-month period *without making the entire building or structure comply.*

IBC 2009 CH. 34, Existing Structures, Section 3401.2

3401.2 Maintenance. Buildings and structures, and parts thereof, shall be maintained in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in conformance with the code edition under which installed. The owner or the owner's designated agent shall be responsible for the maintenance of buildings and structures. To determine compliance with this subsection, the *building official* shall have the authority to require a building or structure to be reinspected. The requirements of this chapter shall not provide the basis for removal or abrogation of fire protection and safety systems and devices in existing structures.

IBC 2009 CH. 34, Existing Structures, Section 3402

TECHNICALLY INFEASIBLE. An *alteration* of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or *alteration* of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

Therefore, the proposed requirement to adhere to the most recently adopted codes will be limited to the Guam Laws and Building Codes specified above.

3. **GPHSS Proposed Rules §4706 School Location and Premises (a) & (b).**

Comments:

The proposed (a) & (b) shall only apply to new schools and shall not be a demeritable offense for existing schools. Reference IBC 2009 CH. 34, Existing Structures, Section 3401.2

4. **GPHSS Proposed Rules §4706(j) (k)** Exterior of buildings, walkways, awnings, picnic tables, benches, and other outside structures shall be kept clean and in good repair.

Comments:

Budget constraints prevent GDOE from properly maintaining walkways, awnings, tables, benches, and other outside structures. Canopy system repairs and restoration efforts present a huge challenge year after year as monies are not identified for such an undertaking.

5. **GPHSS Proposed Rules §4707 School Building (d) Ceiling Requirements (1):** Ceilings shall have flat surfaces, light in color and be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

Comments:

Majority of the ceiling surfaces throughout GDOE facilities are constructed using acoustical ceiling tiles. These materials are extremely porous and not cleanable. While GDOE is aware of this requirement for food establishments, DPHSS must consider removing this "cleanable surface" requirement for general areas to include classrooms and assembly areas.

If the rule establishes a complete removal of existing, in this case ceiling tiles from all schools, it will have a definite cost impact. The approximately cost of $5.00 per square feet (material +labor) with a total estimated square feet of 3,074,049 sf for 35 schools for example will equate to $15,370,245.00. Does the proposed rule constitute a distinct life safety hazard?

6. **GPHSS Proposed Rules §4707 School Building (e) Door Requirements (1):** School building exits shall be provided, which are easily accessible and plainly indicated. Exit signs shall be posted at the interior side of the exit door.

Comments:

21GCA Real Property Chapter 67 The Building Code §67101 International Building Code Adopted. IBC and IFC 2009 Section 1011 Exit Signs establishes the requirements for exit sign placements and is enforced through the Guam Fire Code and Guam Fire Department. General and arbitrary requirements as proposed may unnecessarily impose requirements to comply and demerits issued contrary to existing building codes as adopted.

7. **GPHSS Proposed Rules §4708 Ventilation (a).** Ventilation shall be a minimum of fifteen cubic feet per minute per student (15cfm/student) to provide proper circulation of needed air within a room by either windows or mechanical ventilators (ASHRAE Standard 62-1999). Ventilation rate requirements may be increased by the Department for rooms where the ventilation rate is insufficient.

Comments:

GDOE facilities were constructed well before these ASHRAE standards were developed. Again most buildings are 40 plus years old and there should be some form of grandfather clause. Due to continued financial constraints of the Government of Guam upgrades to satisfy ASHRAE standards are out of reach at this time. The ventilation (windows) in a majority of our schools are majorly needed, but due to budget short falls, taking on this feat would be extremely expensive.

ASHRAE Standard 62-1999 on ventilation essentially is on indoor air quality which requires an indoor and outdoor air mixture rate. "Since indoor air quality depends on many factors, including source strengths, moisture control and thermal parameters, these ventilation requirements cannot guarantee good indoor air quality, but meeting these requirements is a sign of managing for good indoor air quality, where unusual countercurrents or sources are present, they should be controlled at the source." This section is a citation from ASHRAE

62-1999 which in essence does not guarantee indoor air quality. How will GPHSS assign a demerit value on noncompliance of this rule when the standard claims not guaranteed?

GPHSS must provide in detail how it plans to implement ASHRAE Standard 62-1999 to older facilities and how it plans to identify ventilation rates. Or is GPHSS interpretation of ventilation inclusive of Air Conditioning Systems CFM?

8. **GPHSS Proposed Rules §4708(e)** Windows, including louvers shall be adjustable at the top and bottom, and when this is the only means of ventilation, at least one-half (112) of the windows shall open from both top and bottom.

Comments:
Majority of the louvered systems throughout GDOE's antiquated facilities are in need of replacement. Lack of funding prohibits these types of upgrades at the current time. GDOE must consider pulling away from the louvered window systems with the Every Student is Entitled to an Adequate Education Laws which require controlled temperature rooms leading to sealing of louvered window systems to maintain cool air within the classroom or assembly areas.

9. **GPHSS Proposed Rules §4712 Water Supply (a) & (c):**

(a) Each school building shall be provided with an ample supply of water from an approved public water system. Water supply shall be safe and of sanitary quality.

(c) The school water supply system shall be in good working order at all times so as to adequately supply the water demand of the school.

Comments:
With the subsections identified above, ample and adequate water supply is the responsibility of GWA. The DOE cannot be held responsible for the lack of and cannot be a demeritable offense when it is beyond our control.

10. **GPHSS Proposed Rules §4713 (2)**: Middle schools, high schools. colleges. and universities shall have at least one ***(1) handwashing unit lavatory for every 50 students.***

Comments:
The change from every 100 to 50 student requirement for handwashing units in the middle and high school poses a significant increase in requirements and poses a significant cost impact due to unavailable water and sewer infrastructure in certain locations in the campus. Existing restroom facilities cannot be expanded to meet this rule unless space is acquired from classrooms which will reduce classroom size. In order to comply; sewer and water lines must be installed at great distances and if building and land elevations are encountered to sewer point of connection, trenching must be conducted or lift stations must be installed or construct additional restroom facilities which will further add to the cost. IBC 2009

Section 2902.3.2 specifies that a toilet facility shall not exceed a distance of 500 feet which will be impossible for DOE to meet due to the way existing schools were designed. This rule should only apply to new school construction and should not affect existing schools as authorized under *21GCA Real Property Chapter 66 The Building Law* § 66104 *and IBC 2009 CH. 34, Existing Structures, Section 3401.2 and 3402* .This concern also applies to **Proposed Rules §4715 1(A) and 2(B)** where the ratio requirement changes from 100 to 50 on Male Toilets.

11. **GPHSS Proposed Rules §4714(b)** Lockers or cubicles shall be provided in a separate room when shower rooms are required.

Comments:
Numerous shower/locker rooms require new installations and upgrades of locker systems. Again, due to financial constraints GDOE is prevented from ensuring full compliance with this requirement.

12. **GPHSS Proposed Rules §4714(e)** The floors of the shower facilities shall be of smooth, finished material with non-slip surface impervious to moisture and sloped to the floor drain. Junctions between walls and floors shall be covered and sealed. Shower rooms and stalls shall have floors, partitions, and walls to a minimum height of six (6) feet, finished with dense non-absorbent and non-corrosive materials having a smooth impervious surface.

Comments:
GDOE locker and shower rooms require major renovations. Also restroom partitions to include shower stalls where equipped, toilets, and urinals are in dire need of replacement. Funding constraints prevent forward movement down these lines.

13. **GPHSS Proposed Rules §4714(f)** Shower facilities shall be kept clean, free of mildew or mold, and well ventilated; and the lockers, showerheads, and floors shall be kept in good repair.

Comments:
GDOE locker and shower rooms require major renovations. Floors and roof exhaust systems are in need of replacement. Roof exhaust upgrades have been placed in FM budget request year after year but denied due to financial constraints.

14. **GPHSS Proposed Rules §4714(g)** The temperature of water at the shower head shall not exceed 110 deg. Fahrenheit

Comments:
Most GDOE locker rooms do not provide hot water at shower rooms.

15. **GPHSS Proposed Rules §4715(i)** Toilet stall partitions and toilet stall doors shall begin not more than one (1) foot from the floor and extend to a height of not less than five (5) feet for elementary, and not less than six (6) feet for middle schools, high schools, and

colleges and universities. Each toilet stall door shall be equipped with a latch or lock to secure the door to ensure privacy when using the toilet.

Comments:
GDOE continues to request funding for restroom renovations to no avail All GDOE schools are in dire need of restroom upgrades inclusive of toilet stall and urinal partitions.

16. **GPHSS Proposed Rules §4716(e)** Bulk refuse containers shall be located on impervious asphalt or concrete surfaces sloped to drain into an approved sewage disposal system, elevated at least six inches from the ground surface.

Comments:
Some locations may require concrete pads to satisfy 6" elevation requirement for bulk refuse containers.

Is the intent of the sewage disposal system a self-contained system (containment system) or connect to public sewage system? What is GPHSS definition of "Approved Sewage Disposal System"?

17. **GPHSS Proposed Rules §4719** School facilities in existence at the time that these regulations take effect shall be given five years from the date that these rules become effective to come into full compliance with the requirements of these rules unless a school facility or person files a written statement of exception with the Director and receives a variance as provided in §4721.

Comments:

DPHSS must strongly consider increasing the window to come into compliance with the propose rules. Due to the financial constraints of the Government and budget request being denied year after year, a more realistic timeline of compliance must be considered. Some regulatory agencies such as the National Fire Protection Association allow up to 20 years to comply with new requirements understanding the costs tied to these regulatory requirements especially for buildings that are 40 plus years old or constructed prior to new standards being developed and adopted.

LETTER RE: GUIDANCE FOR FORMATTING RULES AND REGULATIONS

Guam Law Library, 141 San Ramon Rd., Hagåtña, Guam 96910-5174
Telephone: (671) 477-7623 and 472-8062 Facsimile: (671) 472-1246

F. PHILIP CARBULLIDO
Chief Justice

GERALDINE AMPARO CEPEDA
Compiler of Laws

GUIDANCE FOR FORMATTING RULES AND REGULATIONS (GAR)

The Office of the Compiler of Laws is statutorily mandated to "[u]ndertake the publication of the continuing Administrative Rules and Regulations" of Guam. 1 GCA § 1602(c). The authority for the rule-making procedures of government of Guam agencies, departments, and other entities are set forth in Title 5, Guam Code Annotated, Chapter 9, Article 3, entitled "Rule-making Procedures." As part of this process, the rules are statutorily required to be "in a form approved by the Compiler of Laws." 5 GCA § 9303(a).

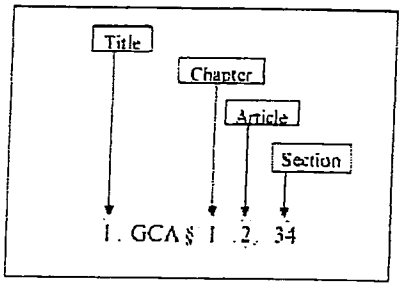
To assist government of Guam agencies, departments, and other entities, with the process of publishing submissions for including in the Guam Administrative Rules & Regulations (GAR), the Office of the Compiler of Laws has prepared this document to give guidance in the drafting process. It is strongly encouraged that those responsible for drafting rules and regulations review the recommendations and utilize the standard format herein, which was approved by the Guam Code Advisory Commission on June 21, 2005. Compliance with the recommended format will be de facto indication that that the submission is in a format approved by the Compiler of Laws.

Recommendation 1

Please compose GAR sections according to the diagram below. It is helpful to know that the GAR is divided into the following subdivisions in descending order:

Title (mandatory)
Division (if necessary)
Part (if necessary)
Chapter (mandatory)
Article (if necessary)
Section (mandatory)
Subsection (if necessary)

Note that Title, Chapter and Section designations are required for any codification scheme. Division, Part and Article designations are sometimes not used in particular codification schemes. We recommend that whenever possible, Article designations be used. The following diagram shows an example of the general codification scheme for the GCA, which similarly applies to the GAR:



Recommendation 2

Please draft GAR sections according the example below and identify subsections in the following format.

§ 1101. Name or Title of Section.

In the section title, the first letter of each major word is capitalized. Do not capitalize minor words such as conjunctions and articles (e.g. and, but, or, the, a, etc.). The text of the section should be written as shown in this example.

(a) First subsection. The first subsection (if any) is designated with small letters in parentheses.

(1) Second subsection. The second subsection (if any) is designated by Arabic numerals in parentheses.

(A) Third subsection. The third subsection (if any) is designated by large capital letters in parentheses.

(i) Fourth subsection. The fourth subsection (if any) is designated by small Roman numerals in parentheses.

(aa) Fifth subsection. If necessary, a fifth subsection is designated by double lower case letters in parentheses and the cycle repeats as follows.

(1) Sixth subsection.

(AA) Seventh subsection.

(i) Eighth subsection.

Recommendation 3

Please use Microsoft Word for creating new legislative documents. The Compiler's Office now uses Microsoft Word exclusively for processing the GAR. Legal publishers such as Lexis and West require transmittal of Word files. Use of MS Word will minimize glitches and errors caused by conversions of files created with other word processing software such as WordPerfect.

Recommendation 4

Please use Times New Roman font in documents. Times New Roman seems to be used universally and is a true-type font necessary for embedding in documents to be published. We use this font exclusively in all GAR documents.

Recommendation 5

When assigning a code section number to a new statutory addition and you are unsure of whether the desired code section number is vacant and available, please call our office.

Thank you for considering these recommendations. Please note that the suggestions herein are not necessarily hard and fast rules. There may be occasions requiring deviation from any standard formatting scheme. If you have any questions or comments, please do not hesitate to call my office.

GERALDINE A. CEPEDA

UFISINAN I MAGA'HÅGA
OFFICE OF THE GOVERNOR

LOURDES A. LEON GUERRERO
MAGA'HÅGA • GOVERNOR

JOSHUA F. TENORIO
SIGUNDO MAGA'LÅHI • LIEUTENANT GOVERNOR

March 1, 2019

VIA CENTRAL FILES / E-MAIL (linda.denorcey@guam.gov)

Ms. Linda Unpingco Denorcey, MPH MAR 0 6 2019
Director
Department of Public Health and Social Services
123 Chalan Kareta
Mangilao, GU 96913

RE: Proposed Adoption of the Rules and Regulations for School Building Sanitation

Dear Director Denorcey:

Thank you for submitting the proposed Rules and Regulations for School Building Sanitation. In reviewing the documents, I was pleased to see the attention and detail that was afforded in their preparation. These rules and regulations, in clarifying and expanding certain provisions in the existing school building regulations, play a significant role in protecting all that use these facilities from environmental health hazards.

I encourage you to continue the good work in ensuring the safety and welfare of our people and island.

Now, therefore, I, as *Åkto Maga'låhen Guåhan*, Acting Governor of Guam, in full consultation and coordination with Lourdes A. Leon Guerrero, *Maga'hågan Guåhan*, Governor of Guam, and pursuant to Title 5, Chapter 9 Article 3, am approving these Rules and Regulations as to policy.

Senseramente,

JOSHUA F. TENORIO
Åkto Maga'låhen Guåhan
Acting Governor of Guam

cc: M. Thomas Nadeau, Chief Environmental Public Health Officer of the Division of Environmental Health (masatomo.nadeau@dphss.guam.gov)

GOVERNMENT OF GUAM
DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIPATTAMENTON SALUT PUPBLEKO YAN SETBISION SUSIAT

LOURDES A. LEON GUERRERO
GOVERNOR, MAGA'HÅGA'

JOSHUA F. TENORIO
LT. GOVERNOR, SIGUNDO MAGA'LÅHI

LINDA UNPINGCO DENORCEY, MPH
ACTING DIRECTOR

LAURENT SF DUENAS, MPH, BSN, RN
DEPUTY DIRECTOR

FEB 13 2019

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FEB 14'19 AM10:26 Tina

Memorandum

To: Governor of Guam

From: Acting Director, Department of Public Health and Social Services

Subject: Proposed adoption of the Rules and Regulations for School Building Sanitation

Pursuant to §9303, Division 1, Chapter 9 of Title 5 G.C.A., this department is submitting for your review and approval the proposed "Rules and Regulations for School Building Sanitation." The attached proposal was developed to mostly clarify and/or expand certain provisions in the existing school building regulations to further protect the occupants (i.e., students and teachers) from environmental health hazards.

The proposed rules and regulations were posted on the Department of Public Health and Social Services' (www.dphss.guam.gov) website on February 23, 2017, which was accompanied with a press release seeking public comments on the proposal. Five copies of the proposed rules and regulations have been on file at the Division of Environmental Health (DEH) since that time.

A public hearing was held on Thursday, March 9, 2017, on the proposal. Announcements were printed in the Guam Daily Post on February 23, 2017 and March 08, 2017. A total of sixteen members of the public attended the hearing; six provided oral testimony. One written testimony was received by DEH. The minutes of the public hearing is attached.

Pursuant to Title 5, Chapter 9 Article 3, an economic impact study of the existing regulations and the proposed regulations was conducted, which is also attached. The proposal has been approved by the Office of the Attorney General.

The following materials have been included for onward transmittance to the 35th Guam Legislature:

- Hardcopy of the public hearing notice that was printed in the Guam Daily Post on February 23, 2017 and March 8, 2017;
- Hardcopy of the proposed "Rules and Regulations for School Building Sanitation" and its Economic Impact Statement (EIS);
- Approval to form and requirement by the Office of the Attorney General;
- Hardcopy of the minutes of the administrative public hearing that was conducted on March 9, 2017;
- Hardcopy of the written testimony from the Guam Department of Education; and

- Written draft transmittal letter to Legislative Secretary Amanda Shelton of the 35th Guam Legislature.

A computer disk with the electronic copy of the "Rules and Regulations for School Building Sanitation," dated October 1, 2018, and its EIS, draft transmittance letter to the Legislative Secretary, and a copy of the minutes are further provided.

For any questions you may have in this matter, please contact Mr. M. Thomas Nadeau, the Chief Environmental Public Health Officer of the Division of Environmental Health, at 735-7221 or via his email at masatomo.nadeau@dphss.guam.gov.

LINDA UNPINGCO DENORCEY, MPH

Attachments

Suenae
2/11/19

Office of the Attorney General of Guam

RECEIVED
Financial Management Services
Division Of General Administration

590 S. Marine Corps Dr., Ste. 901, Tamuning, Guam 96913

JAN 17 2019

DPH&SS
Time: Locator#:

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December 19, 2018

RECEIVED
JAN 18 2019
DIVISION OF ENVIRONMENTAL HEALTH

James Gillan, Director
Department of Public Health and Social Services
123 Chalan Kareta
Mangilao, Guam 96913-6304

Subject: **Attorney General Approval of Revised Proposed Rules and Regulations for School Building Sanitation (Ref: DPHSS 17-0611)**

Dear Director Gillan:

On October 4, 2017, this Office received a draft of proposed Rules and Regulations for School Building Sanitation. However, after review of the initial draft submitted, it was recommended that the draft be revised and that the economic impact statement submitted be amended as well. On October 9, 2018, a revised draft of the rules including an amended economic impact statement was submitted by DPHSS for review. The Office of the Attorney General has completed a new review of the revised proposed rules and regulations and the included amended economic impact statement.

Pursuant to the Administrative Adjudication Law (AAL), 5 GCA § 9303, I hereby approve the revised attached version of the proposed Rules and economic impact statement as to form and as to compliance with the applicable requirements of the AAL.

The current rule-making procedures provide that no rule shall become effective until after ninety (90) calendar days have elapsed from the date of filing with the Legislative Secretary. However, within this 90-day time period, the Legislature may approve, disapprove, or amend these proposed rules.

RECEIVED
Director's Office
Division of General Administration
JAN 16 2019
DPH&SS
Attachment Time: Locator #: INC19-094

Sincerely,

E. Barrett-Anderson

ELIZABETH BARRETT-ANDERSON
Attorney General of Guam

ELECTRONIC COPY OF:

1. PROPOSED RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION AND ITS ECONOMIC IMPACT STATEMENT

2. TRANSCIPT OF PUBLIC HEARING MINUTES

RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

ECONOMIC IMPACT STATEMENT

Title 5 Guam Code Annotated, Chapter 9, Article 3

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIVISION OF ENVIRONMENTAL HEALTH
123 Chalan Kareta
Mangilao, Guam 96913-6304
(671) 735-7221

Doc. No. 35GL-19-0236.*

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EXECUTIVE SUMMARY

The Division of Environmental Health (DEH) of the Department of Public Health and Social Services (DPHSS) is seeking to repeal and replace the existing *Rules and Regulations Pertaining to School Sanitation* with the proposed, *School Building Sanitation Regulations*. The proposal revises and updates the current regulations for the sanitary operation of Guam's school buildings. As defined in Title 10 GCA, Chapter 25, schools are any public and private establishment for the care and education of students from kindergarten through grade twelve, and any college and university, regulated by DEH.

The primary goal of the proposed regulations is to protect and promote the health and safety of every occupant in Guam schools. In Fiscal Year 2017, there were a total of 66 schools regulated by DEH. If adopted, the proposed regulations will govern the operation of these schools, and thus, affect the health and safety of about 40% of Guam's population (65,323 students and staff) who occupy these institutional facilities.

To aid in the economic impact assessment of the proposed regulations, DEH analyzed available data from the Centers for Disease Control and Prevention (CDC), several national research studies, and survey results from affected local, regulated institutions. Both direct and indirect economic impacts are presented here. Direct costs include medical expenses incurred to treat or alleviate illnesses, while indirect costs are earnings loss by school personnel who take time off from work due to illness, or by parents who have to take care of the sick child. The analysis represents DEH's best estimate of these economic impacts. Other possible impacts, such as long-term health consequences, pain and suffering of sick students and staff, time lost from class or work, and possible lawsuits, are not quantified in this analysis, but mentioned because the economic impact these factors can play when regulating school buildings.

To determine the anticipated, direct economic impact the adoption of the proposed regulations may have on Guam schools, two survey questionnaires were distributed to all 66 schools on island that would be affected by the proposed regulations. These educational institutions included all Guam Department of Education schools, private schools, Guam Community College, and the University of Guam. DEH attempted to conduct a census survey, but because not every school responded, a sample survey was conducted instead. The first survey focused on the five new provisions in the proposed regulations that were deemed by DEH to have the greatest economic impact: (1) playground; (2) ventilation, temperature, and humidity; (3) hand washing units and supplies; (4) lockers; and (5) toilets. Forty-one responses (62%) were received for this survey. The second survey assessed the maintenance cost of four areas in school buildings to determine the financial impact of the existing requirements: (1) school site; (2) school building exterior; (3) school building interior; and (4) school building systems. Fourteen responses (21%) were received for the second survey.

Results of the first survey relating to the proposed changes indicated that the adoption of the regulations will have a direct total financial impact of $485,065 to the schools in the first five years of its implementation, which included one-time costs for the replacement or modification of structures and the purchase of additional supplies and equipment. The projected cost, based on survey results:

- Playground (Projected one-time cost = $56,000)
- Ventilation, temperature, and humidity (Projected one-time cost = $7,000)
- Handwashing units and supplies (Projected one-time cost =$291,866)
- Lockers (Projected one-time cost = $57,199)
- Toilets (Projected one-time cost = $73,000)

Meanwhile, the cleaning, repair, and maintenance of four major areas in the school building, which is mandated by the existing requirements, and the proposal, have a direct financial impact of $4,036,116 on Guam schools annually based on second survey responses:

- School site (Projected annual cost = $1,271,000)
- School building exterior (Projected annual cost = $720,000)
- School building interior (Projected annual cost = $1,047,116)
- School building systems (Projected annual cost = $998,000)

The proposed regulations allow five years, from the date of its effectivity, for all existing schools to come into compliance with the new requirements; therefore, the amount of $485,065 derived from the first survey can be spread over a period of five years. If the costs are equally distributed to all the affected schools, the economic impact of the new requirements to the industry would be $4.03/day for the first five years. On the other hand, the estimated cost of $4,036,116 to comply with the existing requirements, as derived from the second survey, is not a new cost to the schools. In fact, this is the amount these schools have already been expending on a yearly basis as these requirements have been in effect since 1984.

While the increased costs that will result from the adoption of the proposed regulations may be deemed as an adverse impact to the affected institutions, the overall impact will be beneficial to the economy and the health of the population from the expected reduction in the number of sick students and school staff on island and its associated economic burden. The collective reduction of the economic burden derived from illnesses through the implementation of preventive measures mandated in the proposed regulations will outweigh the actual and imagined costs that the schools will experience in the adoption of the proposed regulations.

Asthma is one of the illnesses that the proposed regulations aim to prevent with the updated provisions on ventilation, temperature, and humidity. Poor indoor air quality results from inadequate ventilation, air temperature, and relative humidity by promoting the growth and proliferation of molds and other allergens, which may cause asthma to sensitive individuals. According to CDC, 1 in 11 children had asthma in 2010 with the average annual cost of care of $1,039 for a child with asthma. If these figures are applied to the student population of approximately 59,667 in Guam's schools for school year 2016-2017, the economic burden of asthma in Guam is estimated to be $5,635,819 annually. While the implementation of the proposed regulations is not expected to prevent all asthma cases in schools, it should decrease the incidence of asthma. The projected annual cost of asthma alone, ($5.6 million), offsets the annual compliance cost ($4,133,129) to implement the proposed regulations.

Respiratory infections, such as pneumonia and influenza, are two diseases that can be spread via casual contact in classrooms. Good personal hygiene, including regular handwashing, is an important factor in preventing the spread of these types of infection and is addressed by the toilet,

handwashing, and locker room provisions in the proposed regulations. CDC's National Center for Health Statistics (NCHS) reports that 27 per 10,000 children under 15 years of age were hospitalized in 2010 due to pneumonia. Applying this rate to the 2015 Census projection for this age group in Guam, about 111 hospitalizations can be attributable to pneumonia for this age group. According to the American Lung Association, hospitalization due to pneumonia in 2013 costs $13,319 per case. This means that the annual economic burden of pneumonia in Guam for children less than 15 years old is $1,478,409. The proposed regulations are not expected to curb all pneumonia cases on island, but a significant reduction may be achieved by the implementation of provisions for hand washing and toilet ratios.

Another childhood health problem that may be addressed by some provisions in the proposed regulations is unintentional injury, which includes poisoning. The proposed regulations require that school structures and equipment be maintained in good repair, and janitorial rooms be secured to minimize physical and chemical hazards to students. A 2010 report by the NCHS estimates that hospitalization rate due to injury and poisoning for children under 15 years of age is 31%. The U.S. Congress' Office of Technology Assessment (OTA) said that about 10% to 25% of injuries sustained by school-aged children occur at school. If this data is applied to the 2015 Census projection in Guam for children younger than 15 years of age, about 1,274 children could be hospitalized annually due to unintentional injuries using the lower range of OTA's reported rate. According to a study conducted in Maryland, the medical cost for unintentional injury in 1996 was roughly $13,800 per injury. Thus, it can be inferred that the cost of unintentional injuries to school-aged children in Guam is about $17,581,200 annually.

Based on the calculations above, the combined annual medical cost of childhood asthma, pneumonia, and unintentional injury on Guam is approximately $24.7 million. It should be emphasized that this figure does not include long-term health consequences and productivity costs associated with these illnesses, which DEH expects to result in significant economic burden to the community. Presumably, the benefits of the proposed regulations outweigh the anticipated costs of its implementation. As an illustration, the compliance cost can be offset by medical savings from asthma, pneumonia, and injury if the proposed regulations is able to prevent 877 cases of these illnesses, or if about 1.5% of the total student population on Guam.

I. Purpose and Need

Pursuant to Title 10 GCA Chapter 21, a Sanitary Permit from the Division of Environmental Health (DEH) of the Department of Public Health and Social Services (DPHSS) is required for the lawful operation of certain businesses. The issuance of a Sanitary Permit enables DEH to regulate the applicable establishments to ensure that these facilities are sanitary and operate in such a manner as to protect the public from environmental hazards. Businesses possessing a Sanitary Permit are required to allow the access and inspection of its regulated facility by DEH. One type of regulated businesses is institutional facilities, which include school buildings.

DEH conducts compliance inspections of schools to ensure these establishments operate in a manner, and possess the physical assets, to protect the health and safety of Guam's people. These regulatory inspections are conducted through the implementation of adopted rules and regulations that provide the sanitary operation and physical requirements, which establishments must comply with, such as:

- Construction and maintenance of the facility
- Outdoor space
- Grounds and playground equipment
- Water supply and plumbing of the facility
- Hand-washing and toilet facilities
- Lighting and ventilation
- Waste removal
- Insect and rodent control

Currently, DEH imposes the "*Rules and Regulations Pertaining to School Sanitation*" for the regulatory control of schools. This document was adopted in 1984. DEH determined that there are some provisions in the existing regulations that need to be expanded and clarified to further protect the health and safety of school occupants on Guam.

The U.S. Congress' Office of Technology Assessment (OTA) noted that in 1992, children ages 5 to 17 suffered 13 million injuries and about 55 million respiratory infections. This resulted in more than 214 million missed school days, or roughly 460 days for every 100 students.[1] Although the source of infectious diseases is usually unknown and cannot be directly linked to the school environment, schools can act as breeding grounds for the spread of these diseases from school occupants to families and the community. Additionally, outbreaks of food-borne diseases and meningitis have been directly associated to some schools. These outbreaks often result in substantial economic burden to the afflicted and the government.

One major factor in school buildings that affect student's health is indoor air quality (IAQ). IAQ is impacted by thermal conditions such as temperature, humidity, and ventilation. Poor IAQ results in increased airborne contaminants that may trigger asthma in sensitive individuals. The National Center for Health Statistics (NCHS) of the Centers for Disease Control and Prevention (CDC) reported that 8.5% of children had asthma between 2013 and 2015.[2] Asthma results in pain and suffering for the sick child, time lost from class instruction, medical costs, and work loss by parent needing to take care of the ill child.

About one third of U.S. schools are considered to be afflicted with sick building syndrome (SBS).[3] SBS is caused by poor IAQ and its symptoms include eye, nose, throat, or lung irritations, and drowsiness. These symptoms usually go away when the building occupant leaves the premises. SBS may also be considered a significant public health concern as its annual nationwide cost is estimated to be about $76 billion.[4]

With the adoption of the revised "*Rules and Regulations for School Building Sanitation,"* DPHSS seeks to prevent and reduce the number of environmental hazards in Guam schools. Many of these hazards are addressed in the proposed regulations. For example, by updating the ratio of handwashing units and toilets, as provided in the proposed regulations, the spread of infectious diseases caused by poor personal hygiene would be better controlled.

II. Financial Impact

A. Financial Impact of the New Provisions

The most significant provisions that would likely have the greatest financial impact to schools are playground; ventilation, temperature, and humidity; hand washing units/supplies; lockers; and toilets.

1. Existing regulations is silent in the requirement, and thus the size, of outdoor recreational space in schools. In the proposed regulations, schools occupied by kindergarten through grade twelve will be required to provide such open area for students, and such area must be a minimum of 100 sq. ft. of accessible space per student who are utilizing the area at any given period. As a result, schools will need to provide adequate outdoor space during certain periods such as recess, physical education, and playtime when a portion of the school population makes use of the recreational area. To comply with this requirement, schools may need to add or modify landscaping structures, or acquire additional space, which may come at a significant cost to them.

2. Although "adequate ventilation" is required of all schools in the existing rules and regulations, it does not provide any standards or conditions to meet such requirement. The proposed regulations will require that circulation of needed air, within a room by either windows or mechanical ventilators, be of air temperature of 75^{o}F to 83^{o}F and relative humidity of 30% to 60%. To meet this requirement, some schools may need to purchase, repair, or install windows, fans, and/or air conditioning units. These improvements will cause additional expenses to the affected facilities. It is important to note here that DEH had adopted a policy in defining "adequate ventilation" for regulatory enforcement, which used air temperature standards of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 55-2004 and relative humidity in controlling mold growth (< 70%). As a result, Guam public schools, which have been inspected most often by DEH, have been complying with these standards. Consequently, the proposed regulations should not cause additional economic burden to the 35 public schools.

3. Current regulations require the number of handwashing sinks to the number of students in the ratio of 1:60 for elementary schools and 1:100 for secondary schools. In addition,

one sink is required for each classroom in kindergarten to grade two, and for other rooms which require frequent handwashing. However, the proposed regulations increased the ratio to 1:50, and one for every room where laboratory, art, and cooking classes are taught. These ratios were updated to mirror the requirements in the 2009 International Plumbing Code, which is the plumbing code currently in effect on Guam. In addition, these handwashing units will be required to be provided with soap, sanitary paper towels, and waste containers. The cost of compliance will most likely derive from the construction, repair, and installation of these handwashing units, as well as the purchase of additional handwashing supplies.

4. Existing regulations do not specify the number and placement of lockers. The proposed regulations will require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum. This may result in the facilities having to construct, renovate, or repair their locker rooms to come into compliance with the proposed regulations. Such costs will impact the affected schools.

5. The proposed regulations contain provisions which require a minimum toilet to student ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in middle schools, high schools, colleges, and universities, which are consistent with the International Plumbing Code and the International Building Code, which Guam had adopted. Consequently, schools may need to purchase and install additional toilets, or repair existing ones, which may result in additional costs.

To assess the direct financial impact the proposed regulations may have on the 66 schools on island as a result of the adoption and implementation of the five provisions noted above, DPHSS attempted to conduct a census survey. However, not all schools responded; eighty-three percent of total schools provided a response. Thus, a sample survey was conducted instead. This survey, which was prepared in the form of a questionnaire (**Appendix A**), asked the following fifteen questions to schools possessing a Sanitary Permit with the Department:

<u>Part I: Playground</u>

1. *The proposed regulations contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used. Will your school be able to comply with this requirement?*
2. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement?*

<u>Part II: Ceiling</u>

3. *The proposed regulations contain a provision which requires the ceilings of the school building to be smooth, easily cleanable, and maintained in good repair and in a clean, sanitary condition. Will your school be able to comply with this requirement?*
4. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement?*

Part III: Ventilation, Temperature, and Humidity

5. *The proposed regulations contain provisions which require proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60%. Will your school be able to comply with this requirement?*
6. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, how do you plan to provide the required ventilation, temperature, and relative humidity in your school?*
7. *If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur to repair, purchase, or install louvers and/or mechanical devices?*

Part IV: Handwashing Units

8. *The proposed regulations contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities. In addition, the proposed regulations contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units. Does your school need additional handwashing units to meet the proposed required ratio?*
9. *What is the total cost your school will likely incur to purchase and install additional handwashing units?*
10. *Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?*
11. *What is the total cost your school will likely incur to purchase and install additional soap and sanitary paper towels, and waste containers?*

Part V: Lockers

12. *The proposed regulations contain provisions which require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum. Will your school be able to comply with this requirement?*
13. *What is the total cost your school will likely incur to purchase and install lockers to meet this requirement?*

Part VI: Toilets

14. *The proposed regulations contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities. Does your school need additional toilets to meet the minimum required ratio as proposed?*
15. *What is the total cost your school will likely incur to install additional toilets?*

The schools were afforded two months to submit their completed survey; DPHSS received a total of 41 responses during that time period. Six months later, the Guam Department of Education (GDOE) submitted a survey response for the remaining schools under their authority, which brought the total number of responses to 55. Not all of the respondents answered every question or followed the instructions given. Graphical results of the survey are provided in **Appendix B**.

Questions regarding the proposed ceiling requirements were initially included in the survey. However, DPHSS later removed such from provision from the proposal, thus, the economic impact for the said provision is not included in the analysis.

Part I. Playground

- Ten respondents (18%) indicated that they will not be able to comply with the proposed requirements.
    - When asked what the anticipated cost their school may incur to comply with the playground requirements, all ten respondents selected the cost-range of $5,000 and above.
- Sixteen respondents (29%) did not provide an answer to this question. Fourteen of those that did not provide an answer are operated by GDOE.

Based on the results of the survey, 25% of schools will be able to comply with the playground requirement. DEH suspects that most respondents misunderstood the requirement to mean that they would need to provide 100 sq. ft. of outdoor area for every student enrolled in school as opposed to the actual requirement of 100 sq. ft. per student using that space during certain periods. It has been the observation of DPHSS' compliance officers that most, if not all, of the schools that have been inspected have adequate play areas that are able to meet the new requirement. Ten out of the 55 respondents indicated that they will need to incur expenses to effectuate this provision. It was not made clear in the responses if such costs were monthly, yearly, or other date-related expenses, or if this is a one-time cost; DEH assumes it would be a one-time cost.

In determining the projected direct economic impact the schools would sustain in the implementation of this particular provision, the anticipated cost (Question 2 of Part I) was multiplied by the number of affected schools, which was determined by the number of respondents for each type of school and its corresponding percentage of the total number of surveyed schools. As a result, the estimated compliance cost for this provision would be $56,000 based on the survey responses (Table 1).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Public Elementary School	7 = (7/26) = 26.9%	26.9% x 26 = 7.0	7.0 x $5,000 = $35,000
Public Middle School	0/8 = 0%	0% x 8 = 0	0
Public High School	1 = (1/5) = 20%	20% x 7 = 1.4	1.4 x $5,000 = $7,000
Catholic School	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $5,000 = $14,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$56,000**

Table 1. Estimated financial impact to Guam's schools to implement the playground provision of the proposed *Rules and Regulations for School Building Sanitation*.

Part II. Ceiling

- Responses received for this part of the survey were not included in the economic impact assessment as the original proposal of requiring smooth, easily cleanable ceiling was later removed from the proposal after the survey was conducted.

Part III. Ventilation, Temperature, and Humidity

- GDOE responses were excluded, as noted above (II. Financial Impact).
- Only one out of 16 respondents (6%) revealed that they will not be able to comply with the proposed requirements.
    - The school that responded that it will not be able to comply with the provisions further indicated that the school would need to expend $5,000 and above to come into compliance with this requirement.
- Fifteen respondents (94%) answered "yes" to this question.

Based on the survey, almost all of the schools would be able to comply with the proposed requirements. Because DEH had adopted a policy that established the standards for "adequate ventilation" in the existing regulations in 2008, which have been enforced since then during compliance inspections of all GDOE schools, the public school system has already been complying with these requirements. Consequently, these are not new requirements for GDOE, and thus, their survey responses for this part was not included. However, because non-GDOE schools have yet to be inspected with these ventilation standards, the requirements would be new to them, and therefore, their responses were included in the financial impact assessment.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the anticipated cost (Question 3 of Part III) was multiplied by the number of affected institutions, which was determined by the number of respondents for each range and its corresponding percentage of the total number of institutions. As a result, it is estimated that the cost would be $7,000 based on the survey responses (Table 2).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Public Elementary School	Not Applicable	Not Applicable	0
Public Middle School	Not Applicable	Not Applicable	0
Public High School	Not Applicable	Not Applicable	0
Catholic School	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $5,000 = $7,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$7,000**

Table 2. Estimated financial impact to Guam's schools to implement the ventilation, temperature, and humidity provisions of the proposed *Rules and Regulations for School Building Sanitation*.

Part IV. Handwashing Units and Supplies

- Twenty-eight of the respondents (51%) indicated that they need additional handwashing units to meet the proposed ratio.
    - All 28 said that it would cost them $5,000 and above to come into compliance with the requirement.
- Twenty-seven respondents (49%) answered "no" to Question 1, Part IV.
- Thirty-three respondents (60%) said that they need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement.
- Two respondents (4%) did not provide an answer to Question 3, Part IV.

The direct financial impact that will be borne by the schools from this provision will most likely derive from the repair or installation of handwashing units, and the purchase of additional

handwashing supplies. The cost among schools may differ depending on how many handwashing units and supplies they need to meet the requirement. Additional costs may occur as a result of routine maintenance of handwashing units. The indirect cost associated with coming into compliance may occur through the time lost while installation or repairs are being made.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the highest end of each price range (Questions 2 and 4 of Part IV) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "$5,000 and above," the lower end of the range was used in the calculation. The cost is estimated to be $154,000 for handwashing sinks (Table 3) and $137,866 for handwashing supplies (Table 4) based on the results of the survey.

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	15 = (15/26) = 57.7%	57.7% x 26 = 15.0	15.0 x $5,000 = $75,000
Public Middle School	6 = (6/8) = 75%	75% x 8 = 6.0	6.0 x $5,000 = $30,000
Public High School	3 = (3/5) = 60%	60% x 7 = 4.2	4.2 x $5,000 = $21,000
Catholic School	3 = (3/10) = 33%	33% x 14 = 4.62	4.6 x $5,000 = $23,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $5,000 = $5,000
		TOTAL	**$154,000**

Table 3. Estimated financial impact to Guam's schools to implement the handwashing unit provisions of the proposed *Rules and Regulations for School Building Sanitation.*

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	13 = (13/26) = 50% 1 = (1/26) = 3.8% 1 = (1/26) = 3.8% 2 = (2/26) = 7.7% 2 = (2/26) = 7.7%	50% x 26 = 13 3.8% x 26 = 0.99 3.8% x 26 = 0.99 7.7% x 26 = 2.00 7.7% x 26 = 2.00	13 x $5,000 = $65,000 0.99 x $2,999 = $2,969 0.99 x $1,499 = $1,484 2.00x $999 = $1,998 2.00 x $499 = $998
Public Middle School	6 = (6/8) = 75%	75% x 8 = 6.0	6.0 x $5,000 = $30,000
Public High School	2 = (2/5) = 40% 1 = (1/5) = 25%	40% x 7 = 2.8 25% x 7 = 1.75	2.8 x $5,000 = $14,000 1.75 x $1,499 = $2,623
Catholic School	2 = (2/10) = 20% 1 = (1/10) = 10% 1 = (1/10) = 10%	20% x 14 = 2.8 10% x 14 = 1.4 10% x 14 = 1.4	2.8 x $4,999 = $13,997 1.4 x $1,499 = $2,099 1.4 x $499 = $699
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $1,999 = $1,999
		TOTAL	**$137,866**

Table 4. Estimated financial impact to Guam's schools to implement the handwashing supplies provisions of the proposed *Rules and Regulations for School Building Sanitation*.

Part V. Lockers

- Ten respondents (35%) revealed that they will not be able to comply with the proposed requirements.
    - Nine respondents that said that they will not be able to comply with the provisions indicated that they would need to expend $5,000 and above to come into compliance with this requirement; one respondent said the cost for them to comply would be about $2,000-$2,999.
- Sixteen respondents (55%) answered "yes" to this question.

- Three respondents (10%) provided no answer, or said that this requirement did not apply to them.

Based on the survey, about a third of the schools would not be able to comply with the proposed requirements. In addition, the majority of the institutions would incur a cost of $5,000 and above to install or repair locker facilities.

In determining the projected direct economic impact the schools will sustain in the implementation of this provision, the anticipated cost (Question 2 of Part V) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of institutions. As a result, it is estimated that the cost would be $57,199 based on the survey responses (Table 5).

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	Not Applicable	Not Applicable	Not Applicable
Public Middle School	5 = (5/8) = 62.5%	62.5% x 8 = 5.0	5.0 x $5,000 = $25,000
Public High School	2 = (2/5) = 40%	40% x 7 = 2.8	2.8 x $5,000 = $14,000
Catholic School	2 = (2/10) = 20% 1 = (1/10) = 10%	20% x 14 = 2.8 10% X 14 = 1.4	2.8 x $5,000 = $14,000 1.4 x $2,999 = $4,199
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	0/2 = 0%	0% x 2 = 0	0
		TOTAL	**$57,199**

Table 5. Estimated financial impact to Guam's schools to implement the locker provisions of the proposed *Rules and Regulations for School Building Sanitation*.

Part VI. Toilets

- Thirteen respondents (24%) revealed that they will need additional toilets to comply with the proposed requirements.
    - All 13 respondents that said they will not be able to comply with the provisions further indicated that they would need to expend $5,000 and above to come into compliance with this requirement.
- Twenty-eight respondents (51%) answered "no" to this question.
- Fourteen respondents (25%) did not provide an answer to this question.

About a quarter of the schools would not be able to comply with the proposed toilet requirements based on the responses to the survey. In addition, the majority of the schools would incur a cost of $5,000 and above to install or repair locker facilities.

The projected direct economic impact the institutions will sustain in the implementation of this provision was determined by multiplying the anticipated cost (Question 2 of Part VI) with the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of schools. As a result, it is estimated that the cost would be $73,000 (Table 6).

Type of School	Respondents	No. of Schools	Financial Impact
Public Elementary School	8 = (8/26) = 30.8%	30.8% x 26 = 8.0	8.0 x $5,000 = $40,000
Public Middle School	1 = (1/8) = 12.5%	12.5% x 8 = 1.0	1.0 x $5,000 = $5,000
Public High School	0 = (0/5) = 0%	0% x 7 = 0	0
Catholic School	3 = (3/10) = 33%	33% x 14 = 4.6	4.6 x $5,000 = $23,000
Other Private School	0/4 = 0%	0% x 9 = 0	0
College and University	1 = (1/2) = 50%	50% x 2 = 1	1 x $5,000 = $5,000
		TOTAL	**$73,000**

Table 6. Estimated financial impact to Guam's schools to implement the toilet provisions of the proposed *Rules and Regulations for School Building Sanitation*.

Total Financial Impact of the New Provisions

Among the five provisions of the proposed *School Building Sanitation Regulations* evaluated in the survey, the handwashing unit and supplies provisions appear likely to have the greatest financial impact to the schools as 51% of the schools will need to repair or replace existing handwashing units, and 60% of them will need to purchase additional handwashing supplies at a total estimated cost of about $292,000. This was followed by the one-time cost of about $73,000 to comply with the toilet provision and the one-time cost of about $57,000 to come into compliance with the locker provision. Complying with the playground requirement will cost the institutions $56,000. The ventilation, temperature, and humidity requirements will have the least monetary impact as most schools will be able to meet the requirements, and only one school will need to expend about $7,000 to comply.

The proposed regulations provide a five-year time frame from the date of its effectivity for all the existing schools to come into compliance with the provisions. This means that the total estimated direct financial impact of $485,065 is an expense that can be spread over a five-year period for the affected institutions (Table 7).

Following the five-year grace period and thereafter, the amount will be greatly reduced as the cost of installing the equipment or constructing the structures will no longer be applicable.

Total Direct Cost of Adopting the Rules and Regulations for School Building Sanitation		
Requirement	Anticipated Cost	Comments
Playground	$56,000	Institutions will be need to provide outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used.
Ventilation, Temperature, and Humidity	$7,000	Proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60% will need to be provided.
Handwashing Units and Supplies	$291,866	Handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities will be required of schools. In addition, soap, sanitary paper towels, and waste containers at all handwashing units will need to be provided.

Lockers	$57,199	Schools will be required to provide a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum.
Toilets	$73,000	A minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) are required in secondary schools, colleges, and universities.
ANTICIPATED TOTAL DIRECT COST IN THE FIRST YEAR = $485,065		

Table 7. Financial impact of adopting the proposed *Rules and Regulations for School Building Sanitation* based on the cost analyses of implementing the five significant requirements that would likely have the greatest economic impact to the schools.

B. Financial Impact of the Existing Requirements

To evaluate the cost borne by schools in implementing the existing requirements in the proposed regulations, DEH sent out another survey in January 2018 to the same schools that participated in the first survey. The survey was in a form of a questionnaire (**Appendix C**), which asked the following eight questions:

Part I: School Site

1. *Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?*
2. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school site?*

Part II: School Building Exterior

3. *Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?*
4. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building exterior?*

Part III: School Building Interior

5. *Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?*
6. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building interior?*

Part III: School Building Interior

7. *Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?*
8. *If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building systems?*

The schools were given two weeks to complete the survey. Four schools provided a survey response within the given time frame. Ten other schools turned in their completed survey after

the deadline. GDOE did not submit a survey response for all schools under its jurisdiction despite numerous follow-up communication done by DEH.

Similar to the first survey, DEH planned to conduct a census survey. However, due to the low response rate (21%), a sample survey was done instead. Not all of the respondents answered every question. Graphical results of the survey are provided in **Appendix D**.

Part I. School Site

- Thirteen respondents (93%) indicated that they expend resources for the cleaning, repair, and maintenance of the school site which includes the playground, site drainage, sidewalks, and grounds.
    - When asked what the annual cost their school incurs to maintain the school site, majority of the schools answered that they spend between $5,000 to $35,000; one school said that it costs $179,000 to maintain the same area; and another school indicated that it expends $250,000 for the cleaning, repair, and maintenance of its school site.
- One respondent (7%) said that it does not expend resources for the maintenance of its school site.

Based on the results of the survey, majority of the schools (93%) incur expenses to effectuate the provisions on maintaining their school site. It is a common observation during DEH compliance inspections that a lot of schools have issues with garbage and trash disposal, overgrown vegetation, pooling of water in walkways, and awnings that are in disrepair; thus, DEH assumes that most of the expenses relating to maintenance of the school site would go to materials, equipment, supplies, and labor for these usual problem areas.

To estimate the direct economic impact the schools would sustain in the implementation of the provision on maintaining the school site, the highest end of each price range (Question 2 of Part I) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "other," the amount that was indicated by the respondent was used in the calculation. As a result, the estimated compliance cost for provisions related to the maintenance of the school site would be $1,271,000 based on the survey responses (Table 7).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Catholic School	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $5,000 = $14,000
	4 = (4/10) = 40%	15% x 14 = 2.1	2.1 x $10,000 = $21,000
	2 = (2/10) = 20%	7.7% x 14 = 1.1	1.1 x $25,000 = $27,500
	2 = (2/10) = 20%	7.7% x 14 = 1.1	1.1 x $35,000 = $38,500
Other Private School	1 = (1/2) = 50%	50% x 9 = 4.5	4.5 x $10,000 = $45,000
	1 = (1/2) = 50%	50% x 9 = 4.5	4.5 x $250,000 = $1,125,000
College/University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $179,000 = $179,000
		TOTAL	**$1,271,000**

Table 7. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school site.

Part II. School Building Exterior

- All 14 respondents revealed that they expend resources for the cleaning, repair, and maintenance of the school building exterior which includes the windows, walls, doors, and roof.
    - When asked what the annual cost their school incurs to maintain the school building exterior, 13 schools indicated that they spend between $5,000 to $25,000; one school said that it costs $150,000 to maintain the same area.

Survey results indicate that complying with the existing requirements for maintaining the school building exterior imposes some economic burden on the schools. The expenses may be proportional to the size of the school, and may be incurred as a result of repairing, refurbishing, or repainting walls, windows, doors, and roof. DEH estimated the direct economic impact of implementing the provision on maintaining the school building exterior by multiplying the highest end of each price range (Question 2 of Part I) by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. For responses of "other," the cost that was specified by the respondent was used in the calculation. Thus, the estimated compliance cost for provisions related to the maintenance of the school building exterior would be $720,000 based on the survey responses (Table 8).

Type of School	Respondents	Number of Schools Surveyed	Financial Impact
Catholic School	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $5,000 = $21,000
	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $10,000 = $42,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $15,000 = $42,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $25,000 = $70,000
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $15,000 = $45,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $150,000 = $450,000
College and University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $20,000 = $20,000
		TOTAL	**$720,000**

Table 8. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building exterior.

Part III. School Building Interior

- All 14 respondents answered "yes" when asked if their school expend resources for the cleaning, repair, and maintenance of the school building interior, which includes the walls, floors, ceilings, stairs, interior doors, handwashing sinks, restrooms, classrooms, gym, and shower facilities.
    - Thirteen schools indicated that they spend between $5,000 to $25,000 for the maintenance of the school building interior; one school said that it costs $250,000 to maintain the same area.

In determining the projected direct economic impact the schools will sustain in the implementation of the provision relating to the upkeep of the school building interior, the highest end of each price range (Question 2 of Part III) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage to the total number of schools. The cost indicated by the respondent was used in the calculation for

responses of "other." Based on the results of the survey, the total cost is estimated to be $1,047,116 (Table 9).

Type of School	Respondents	No. of Schools	Financial Impact
Catholic School	4 = (4/10) = 40%	40% x 14 = 5.6	5.6 x $5,000 = $28,000
	4 = (4/10) = 40%	40% x 14 = 5.6	5.6 x $10,000 = $56,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $15,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $20,000 = $28,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $25,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $46,116 = $46,116
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $250,000 = $750,000
College and University	1 = (1/2) = 50%	50% x 2 = 1	1.0 x $25,000 = $25,000
		TOTAL	**$1,047,116**

Table 9. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building interior.

Part IV. School Building Systems

- All 14 respondents indicated that their school expend resources for the cleaning, repair, and maintenance of the school building systems, which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters.
    - Twelve schools replied that they spend between $5,000 to $25,000 for the maintenance of the school building interior; one school said that it costs $100,000 to maintain the same area; and another school indicated that it expends $150,000 for the cleaning, repair, and maintenance of its school building systems.

Based on the survey, majority of the institutions would incur a cost of $5,000 and above annually to maintain their school building systems. The economic burden would depend on the number and condition of school building equipment, and the population of the school, among other factors. To estimate the direct economic impact the institutions will sustain in the implementation of the provisions related to school building systems, the anticipated cost (Question 2 of Part IV) was multiplied by the number of affected schools, which was determined by the number of respondents for each range and its corresponding percentage of the total number of schools. This resulted in a projected cost of $998,000 based on the survey responses (Table 10).

Type of School	Respondents	No. of Schools	Financial Impact
Catholic School	3 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $5,000 = $21,000
	2 = (3/10) = 30%	30% x 14 = 4.2	4.2 x $10,000 = $42,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $15,000 = $21,000
	2 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $20,000 = $28,000
	1 = (1/10) = 10%	10% x 14 = 1.4	1.4 x $25,000 = $56,000
	1 = (2/10) = 20%	20% x 14 = 2.8	2.8 x $100,000 = $280,000
Other Private School	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $10,000 = $30,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $15,000 = $45,000
	1 = (1/3) = 33%	33% x 9 = 3.0	3.0 x $150,000 = $450,000
College and University	1 = (1/2) = 50%	50% x 2 = 1.0	1.0 x $25,000 = $25,000
		TOTAL	**$998,000**

Table 10. Estimated annual financial impact to Guam's schools to implement the provisions in the proposed *Rules and Regulations for School Building Sanitation* relating to the cleaning, repair, and maintenance of the school building systems.

Total Financial Impact of the Existing Requirements

Based on the results of the survey, maintenance of the school site appears likely to have the greatest financial impact to the schools as the schools spend approximately $1,271,000 yearly to clean, repair, and maintain the school grounds, sidewalks, and site drainage. This was followed by the annual cost of about $1,047,116 to maintain the school building interior and the yearly cost of about $998,000 to comply with the requirements relating to school building systems. Maintaining the school building exterior will have the least monetary impact as schools will need to expend about $720,000 to comply with the requirements related to this portion of the school.

The total direct financial impact of maintaining the school facility to comply with the existing requirements in the proposed regulations is $4,036,116 (Table 11), as estimated from the results of the survey. This figure is not an expense that is new to the schools; this is the amount that the schools have been expending on a yearly basis to maintain their facility. The actual financial impact may be higher when the cost of maintaining public schools are included; however, GDOE did not submit a response to the survey, and thus the cost of maintaining its schools was not included in the calculation. However, in an attempt to provide a clearer understanding of the total impact of the existing requirements, DEH took the average cost reported by survey respondents and multiplied this by the number of public schools to provide a projected cost for GDOE. This resulted in an annual cost of $11,820,054 for GDOE to maintain its school facilities, which is a significantly higher amount than the annual budget of $850,000 as stated by GDOE officials during a March 9, 2017 public hearing for these proposed regulations.

Total Direct Cost of the Existing Provisions in the Rules and Regulations for School Building Sanitation		
Requirement	Anticipated Cost	Comments
School Site	$1,271,000	Schools are required to keep the playground, sidewalks, and grounds clean and in good repair, and free of potential pest breeding sites. Site drainage shall also be maintained to prevent pooling of water.
School Building Exterior	$720,000	Roof, walls, and windows shall be kept clean and in good repair, and free of leakage or entry points for pests. Exit doors shall be self-closing and tight-fitting.
School Building Interior	$1,047,116	Classrooms, gym, shower facilities, and associated equipment shall be free of hazards, and be maintained to promote the health and safety of school occupants.
School Building Systems	$998,000	Schools will need to provide adequate lighting, temperature, and ventilation that will promote students' health and comfort, and provide an indoor environment that is conducive to learning.
ANTICIPATED TOTAL DIRECT ANNUAL COST = $4,036,116		

Table 11. Financial impact of implementing the existing requirements of the *Rules and Regulations for School Building Sanitation* based on the cost analyses of cleaning, repair, and maintenance of four areas in the school building likely to have the greatest economic impact to the schools.

C. Total Financial Impact of the Proposed Regulations

Results of the survey conducted by DEH in 2016 to assess the economic impact of complying with the proposed requirements indicate that the compliance cost will be $485,065 over the course of five years. If this figure is divided equally among 66 schools, the yearly cost would be $122.49 per school or $10.21 monthly per school. Meanwhile, the cost to comply with the existing

requirements is $4,036,116 annually, which is what the schools have already been spending to maintain their facilities. Consequently, this cost is not a new burden to these schools.

Economic Burden of Student Illnesses

School buildings harbor various hazards that result in illness or injury to students and other occupants. Because children spend more time in school than in any other indoor environment other than the home, their risk of exposure to these hazards is high. Asthma, pneumonia, and unintentional injuries are some of the notable effects to students in schools that result in significant economic cost. The economic impact of other illnesses such as influenza, strep throat, and meningitis will not be discussed here but should be mentioned as they also bring about considerable economic costs to the community. The medical burden of the above-mentioned student injuries and illnesses contribute to the indirect adverse impact to the island's economy that the proposed regulations aim to minimize.

According to CDC, 1 in 11 children had asthma in 2010 and the average annual cost of care for a child with asthma is $1,039.[5] During the school year 2016-2017, about 59,667 students were enrolled in Guam schools. If this figure is multiplied by the average annual cost of care for asthma, the economic burden of asthma in Guam annually is roughly $5.6 million.

Infectious diseases that may be found in the school setting include respiratory infections, meningococcal infections, and foodborne diseases. These can be spread via air or close contact. Pneumonia and influenza are the more common contagious infections, and both come with considerable medical costs. Unfortunately, no local data was found to quantify the economic costs of pneumonia or influenza on Guam. Results of the National Health Interview Survey done by the NCHS in 2010 indicated that 27 per 10,000 children under 15 years old were hospitalized in 2010 due to pneumonia.[6] The 2015 Census projection for this age group in Guam is 41,206.[7] If the rate reported by the NCHS is applied to the Census projection, about 111 hospitalizations in Guam are due to pneumonia for this age group. The American Lung Association reports that hospitalizations due to pneumonia cost $13,319 per case in 2013.[8] This means that the annual economic burden of pneumonia in Guam for children less than 15 years old is about $1,478,409.

Results of epidemiological studies suggest that from 10 to 25 percent of injuries incurred by school-aged children occur at school.[9] A 2010 report by the NCHS estimates that hospitalization rate due to injury and poisoning for children under 15 years of age is 31%.[10] Applying this data to the 2015 Census projection of children less than 15 years of age in Guam, approximately 1,274 children are hospitalized annually due to unintentional injuries using the lower range of the reported rate. If the medical cost for unintentional injury is $13,800 per case as indicated by a study in Maryland, the annual cost of unintentional injuries to school-aged children in Guam is about $17,581,200.

In total, the annual economic burden of asthma, pneumonia, and unintentional injuries for children below 15 years of age in Guam is estimated to be close to $25 million. This economic burden can be offset by the implementation of the proposed *School Building Sanitation Regulations* if safeguards to protect the health and safety of students and other school occupants are incorporated in the proposal. The proposed regulations require a minimum ventilation rate of 15 cfm per student

to reflect the recommendation by ASHRAE to prevent recirculation of viruses and bacteria, which should reduce the number of school illnesses and absenteeism, and thus the economic burden.

Other impacts of illnesses, such as the impact on student learning and performance are difficult to quantify. Perhaps, one way to understand the impact of illness to student learning is through the number of school days missed. The National Health Interview Survey conducted by CDC in 2015 revealed that close to 70% of children ages 5 to 17 years missed school days due to illnesses and injuries.[11] A research study conducted by a group of pediatricians concluded that "children that are frequently or persistently absent from school tend to perform poorly in school and are likely to drop out before graduation."[12] Thus, school absences from illnesses and injuries can cause future unemployment and welfare costs.

III. Potential Increase or Decrease to Cost of Living or Price of Good or Service

The direct economic impact to the schools from the adoption of the *School Building Sanitation Regulations* is estimated to be $4,133,129 annually, which equals to $5,219 monthly per school, and therefore, about $174 a day. A big portion of this cost is expended for maintenance of school facilities, which the schools have been budgeting for on yearly basis. It is unlikely the increased cost from implementing the proposed regulations will be passed down to the students when the expected cost from the proposed changes will be less than $4 per day over five years. Larger institutions may be able to readily absorb the increased cost without hardship. Even the smaller schools should be able to handle the nominal cost increase since their actual expenses resulting from the adoption of the proposed regulations would be proportional to the size of their operation. The greatest cost impact of implementing the changes in the proposed regulations is the handwashing unit provision.

A reduction in the cost of living that may result from the adoption of the *School Building Sanitation Regulations* could be attributed to the decrease in the occurrence or spread of illnesses caused by improved compliance inspections of these schools. However, the confirmation of such consideration may require more thorough analysis.

IV. Direct or Indirect Impact on Employment

Adverse impact to employment is not expected from the adoption of the *School Building Sanitation Regulations.* The direct impact may occur from schools needing to hire engineers; construction workers; and heating, ventilation, and air conditioning (HVAC) specialists to install, repair, or maintain structures, fixtures, and HVAC systems. Indirect impact to employment could result from schools either increasing or decreasing hours of operation to make necessary changes.

V. Increase or Decrease in Cost of Business

Private schools will be the primary entities that will experience increased cost from the adoption of the *School Building Sanitation Regulations.* The additional expenses they will bear will derive from the potential construction and repair of toilets, locker rooms, and hand washing units. Other expenses include the procurement of supplies, such as soap and paper towels. The expenses these

institutions will incur will decrease after the five-year implementation period to come into compliance.

The implementation of the proposed regulations may also impact the schools favorably from the prevention of possible litigation from parents and/or guardians who may seek civil action against the institution as a result of illnesses or injuries that may occur at the school.

VI. Adverse or Beneficial Economic Impact

The adoption and implementation of the *School Building Sanitation Regulations* will certainly have a financial impact on the institutions as schools will be required to implement measures new measures in the proposed regulations. While these additional costs may be deemed as an adverse impact to the affected school, the overall impact will be beneficial to the economy and the health of the population from the anticipated reduction in the number of injuries and illnesses in schools and its associated economic burden. The vast majority of injuries and illnesses are both preventable and predictable, and increasing the level of prevention by implementing the proposed regulations will produce savings.

The anticipated reduction of illnesses and injuries in Guam schools, which is expected to occur from the implementation of the proposed *School Building Sanitation Regulations* should consequently reduce the economic burden these illnesses and injuries have on the island and its people. These cost benefits should outweigh the actual and imagined costs that the institutions may experience from the adoption of the proposed regulations. The anticipated annual implementation cost of the proposed regulations, which is about $4.1 million, is only 17% of the annual economic burden of asthma, pneumonia, and unintentional injuries on Guam, which is approximately $24.7 million. The compliance cost will be offset by medical savings from these three illnesses if the proposed regulations is able to prevent at least 877 hospitalizations per year among roughly 65,000 school occupants on Guam.

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Part I: Playground

The proposed Rules and Regulations for School Building Sanitation [Section 4706(f)] contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student at any given period when being used.

1. Will your school be able to comply with this requirement?

   YES_____ NO_____ (*If you answered "YES," you do not need to complete the rest of Part I. Please go on to Part II. If "NO," please continue below.)*

2. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part II: Ceilings

The proposed Rules and Regulations for School Building Sanitation [Section 4707(c)(1)] contain a provision which requires the ceilings of the school building to be smooth, easily cleanable, and maintained in good repair and in a clean, sanitary condition.

3. Will your school be able to comply with this requirement?

   YES_____ NO_____ (*If you answered "YES," you do not need to complete the rest of Part II. Please go on to Part III. If "NO," please continue below.)*

4. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur in meeting this requirement? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

Part III: Ventilation, Temperature, and Humidity

The proposed Rules and Regulations for School Building Sanitation [Sections 4708(a), 4709(a), and 4709(b)] contain provisions which require proper circulation of needed air within a room by either windows or mechanical ventilators, and maintenance of indoor air temperature at 75°F to 83°F and relative humidity of 30%-60%.

1. Will your school be able to comply with this requirement?

   YES_____ NO_____ (*If you answered "YES," you do not need to complete the rest of Part III. Please go on to Part IV. If "NO," please continue below.)*

2. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, how do you plan to provide the required ventilation, temperature, and relative humidity in your school? *(Please mark all that apply.)*

   REPAIR OR REPLACE LOUVERS _____ INSTALL MECHANICAL DEVICES _____

   OTHER _____ Please specify_____

3. If "NO" and the Rules and Regulations for School Building Sanitation are adopted, what is the anticipated cost your school will incur to repair, purchase, or install louvers and/or mechanical devices? *(Please mark one only.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part IV: Handwashing Units

The proposed Rules and Regulations for School Building Sanitation [Section 4713(a)] contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities. In addition, the proposed rules and regulations [Sections 4713(c) through 4713(f)] contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units.

1. Does your school need additional handwashing units to meet the proposed required ratio?

   YES _____ NO_____ (*If you answered "NO," please go on to Question No. 3 of this Part. If "YES," please continue below.)*

2. What is the total cost your school will likely incur to purchase and install additional handwashing units? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

3. Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?

   YES _____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part IV. Please go on to Part V. If "YES," please continue below.)*

4. What is the total cost your school will likely incur to purchase and install additional soap and sanitary paper towels, and waste containers? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part V: Lockers

The proposed Rules and Regulations for School Building Sanitation [Section 4715(b) and 4715(d)] contain provisions which require a minimum of one locker or cubicle for each student at any one period, which shall be located in a room separate from the shower rooms when physical education is a required subject in the curriculum.

1. Will your school be able to comply with this requirement?

   YES _____ NO_____ (*If you answered "YES," you do not need to complete the rest of Part V. If "NO," please continue below.)*

2. What is the total cost your school will likely incur to purchase and install lockers to meet this requirement? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

   $5,000 and above_____

   COMMENTS: _____

   _____

   _____

Part VI: Toilets

The proposed Rules and Regulations for School Building Sanitation [Section 4715(a)] contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities.

1. Does your school need additional toilets to meet the minimum required ratio as proposed?

   YES _____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part VI. If "YES," please continue below.)*

3. What is the total cost your school will likely incur to install additional toilets? *(Please mark one.)*

   $1 - $499_____ $500 - $999_____ $1,000 - $1,499_____

   $1,500 - $1,999 _____ $2,000 - $2,999 _____ $3,000 - $4,999_____

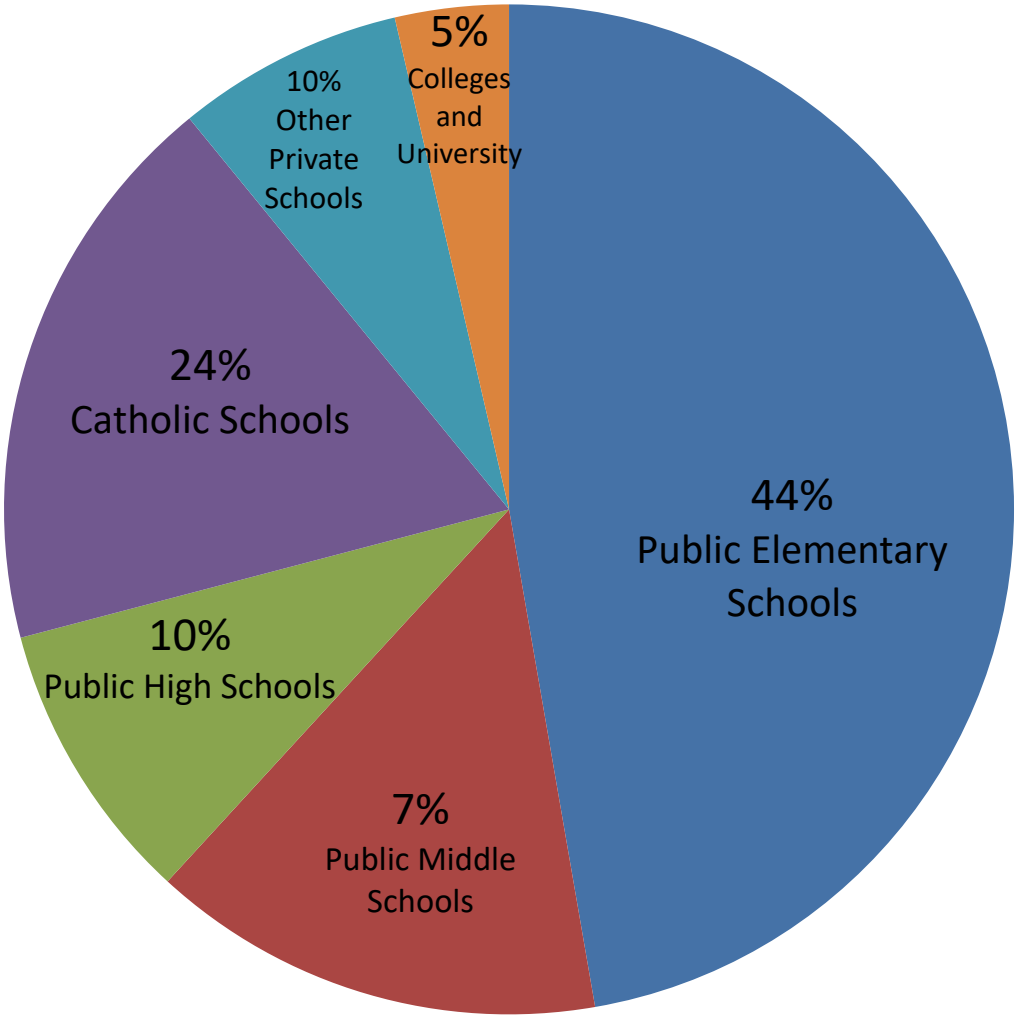
   $5,000 and above_____

   COMMENTS: _____

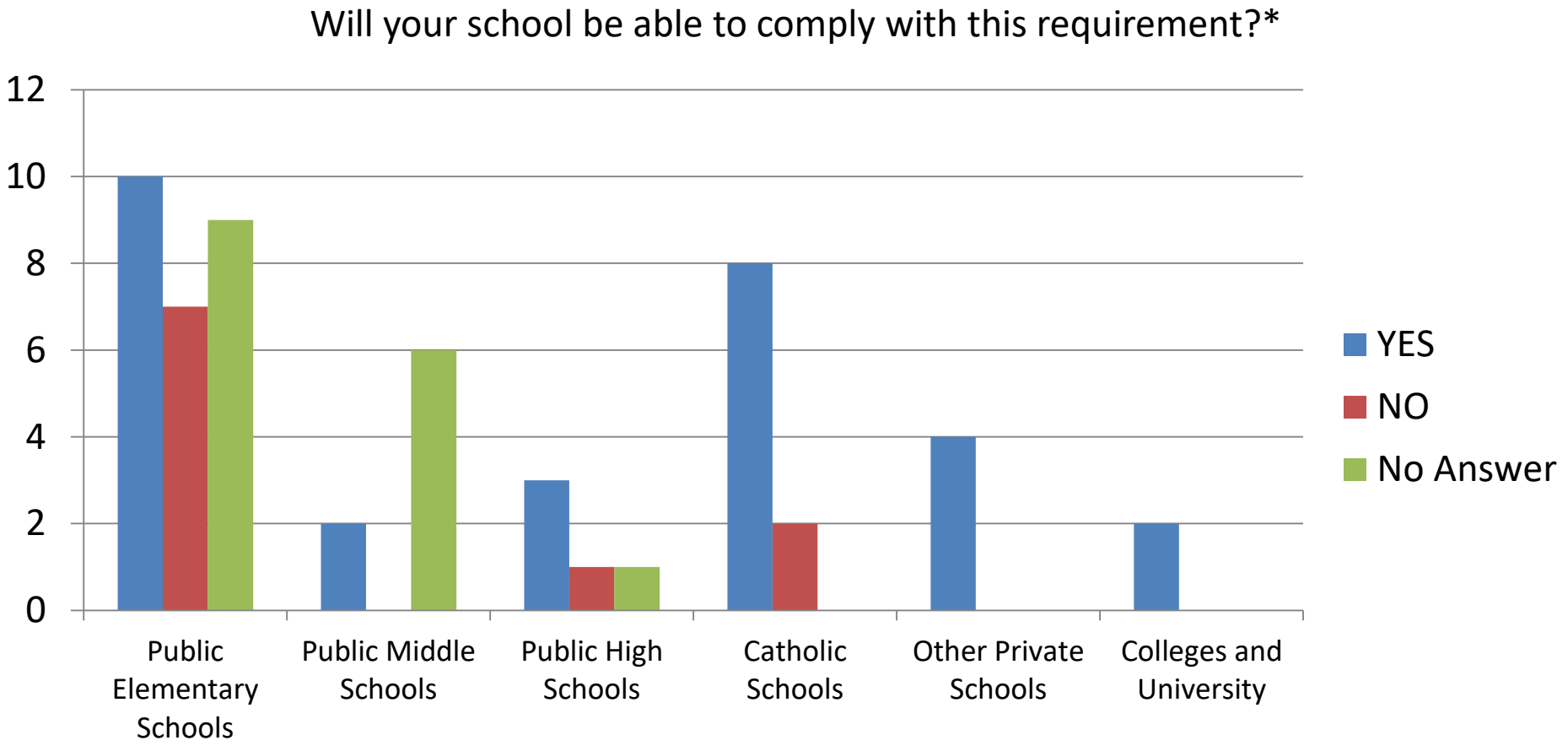
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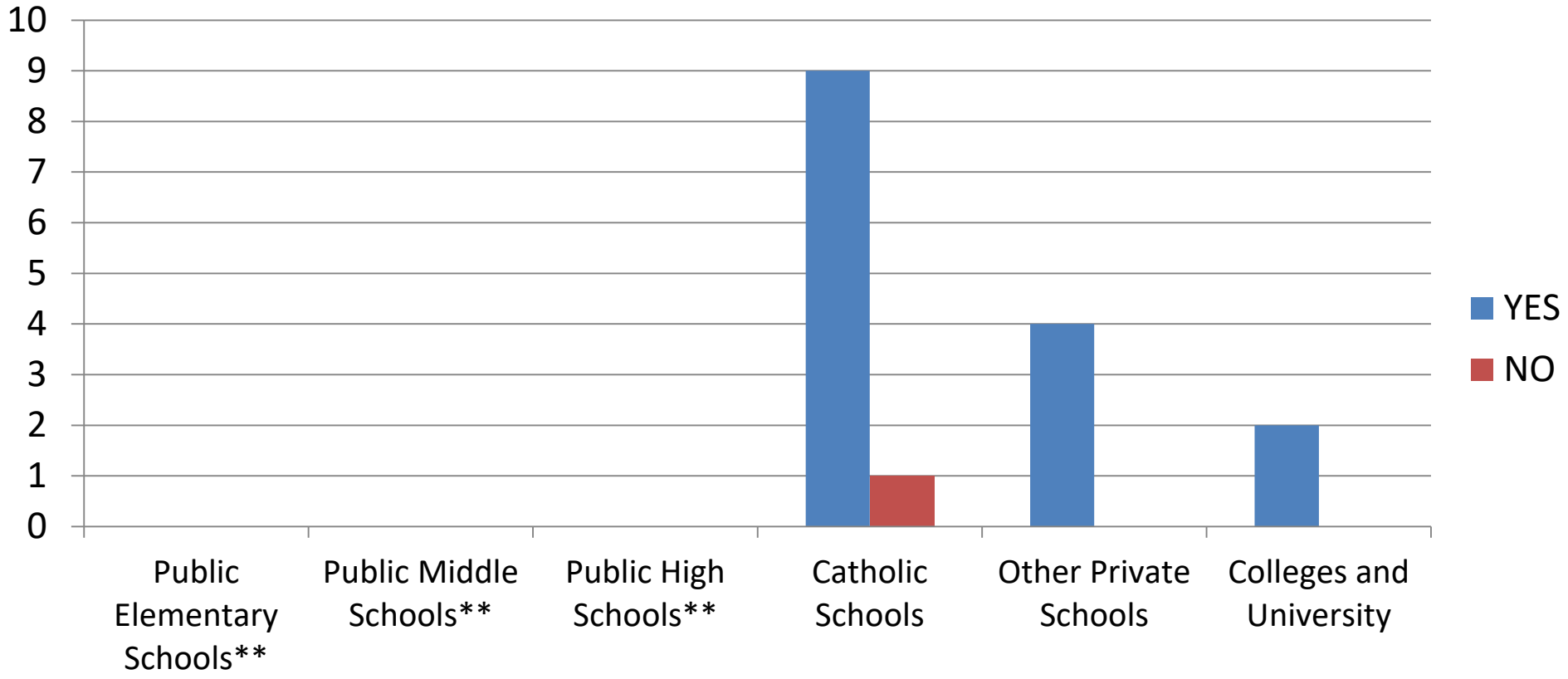
Part I. Playground



*The proposed Rules and Regulations for School Building Sanitation [Section 4706(f)] contain a provision which requires outdoor recreational area for schools occupied by kindergarten through grade twelve and such area must be a minimum of 100 sq. ft. of accessible space per student using that area at any given period.

Part III. Ventilation, Temperature, and Humidity

Will your school be able to comply with this requirement?*

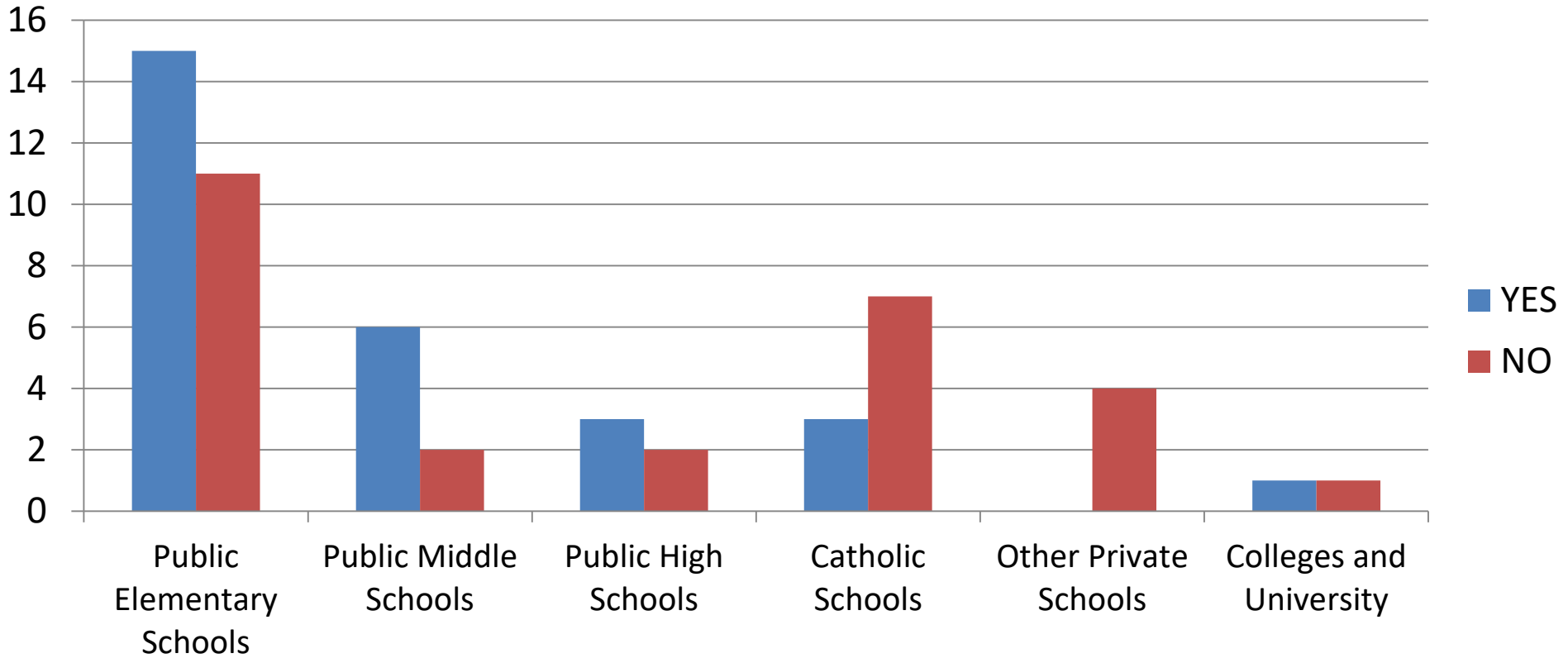


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**Responses from public schools were not included in the calculation because these requirements are not new to them as DPHSS have adopted these requirements during compliance inspections in the past ten years.

Part IV. Question 1. Handwashing Units

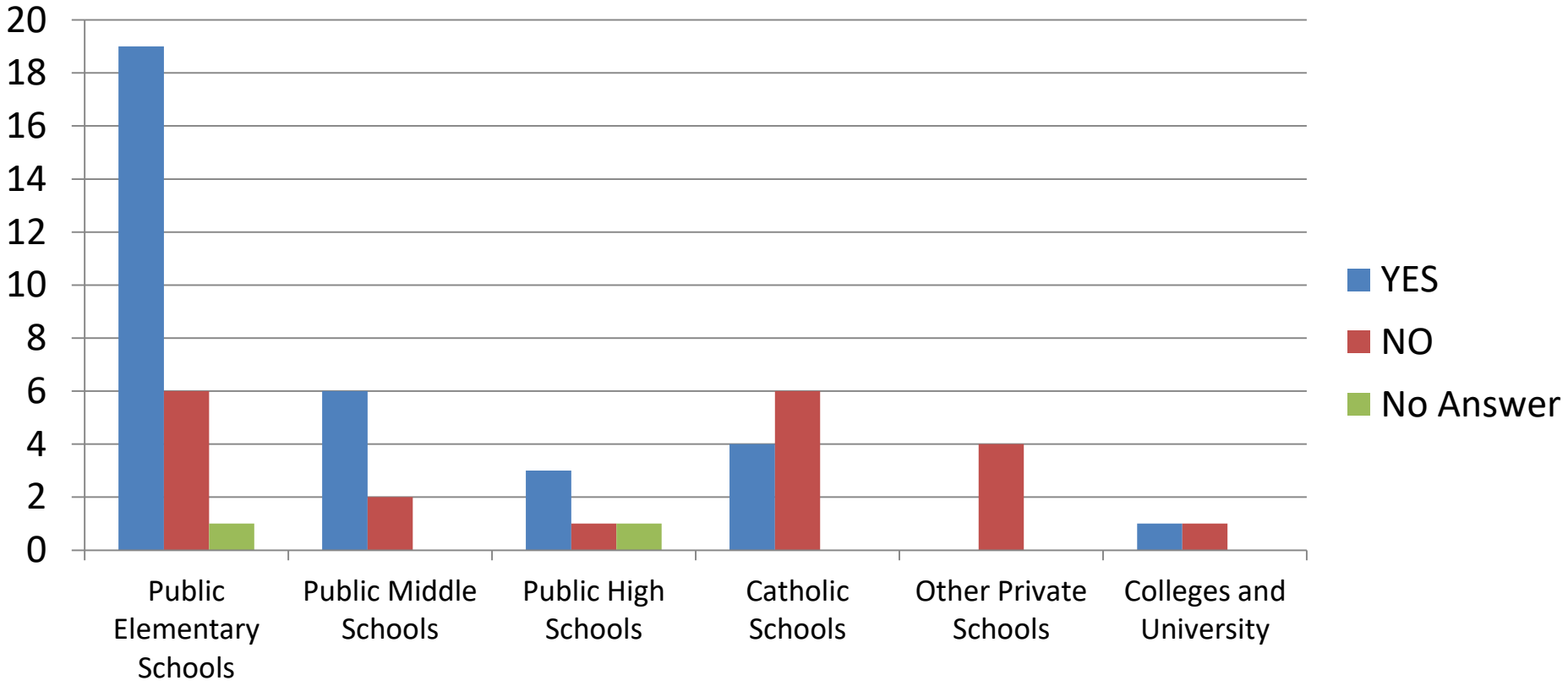
Does your school need additional handwashing units to meet the proposed required ratio?*



*The proposed Rules and Regulations for School Building Sanitation [Section 4713(a)] contain provisions which require handwashing units in all rooms for grade 2 and below, laboratories, and art and cooking classes; and in the ratio of 1:50 for elementary, middle, and high schools, and colleges and universities.

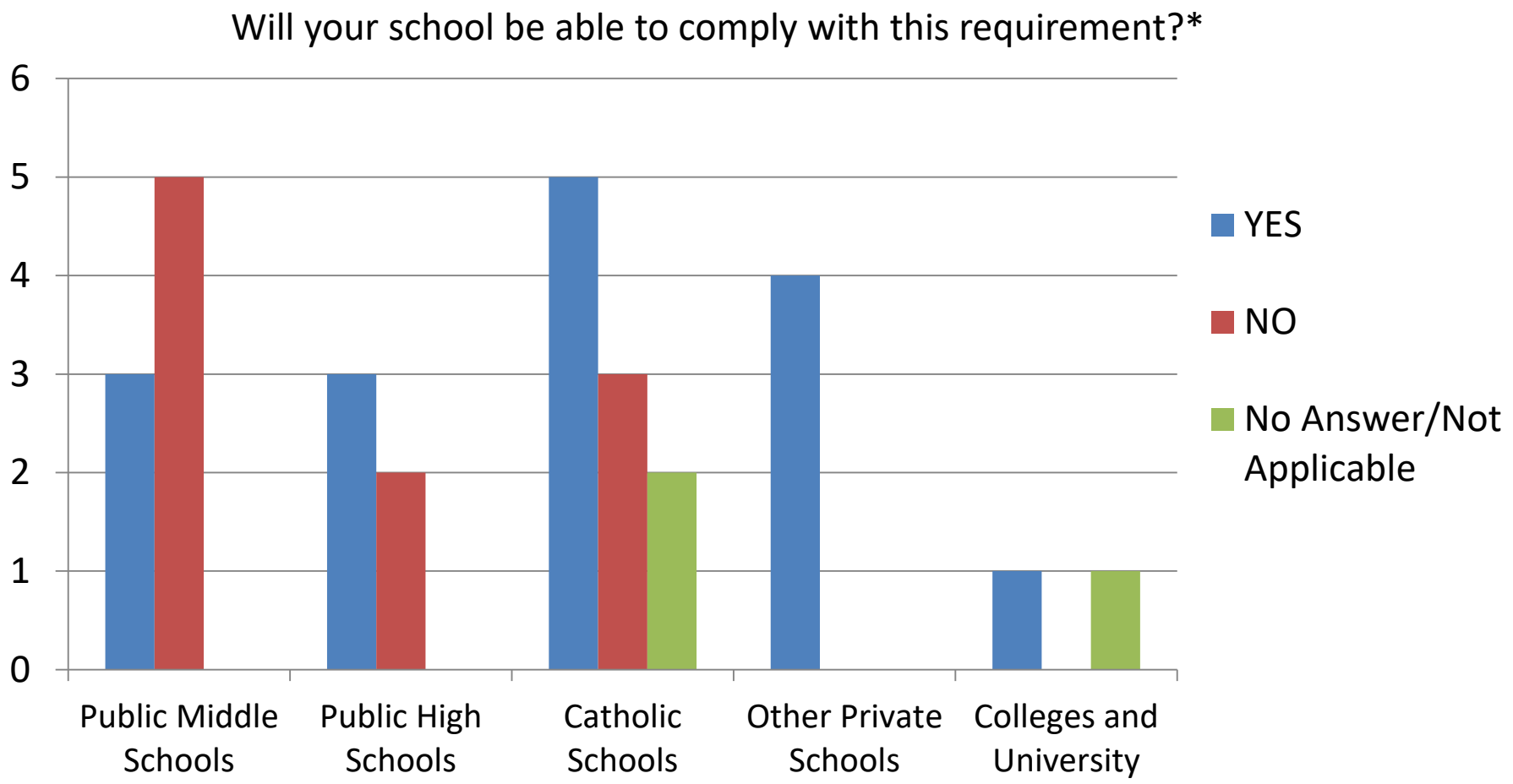
Part IV. Question 3. Handwashing Supplies

Does your school need to purchase additional soap, sanitary paper towels, and waste containers to meet the proposed requirement?*



*The proposed rules and regulations [Sections 4713(c) through 4713(f)] contain provisions which require soap, sanitary paper towels, and waste containers at all handwashing units.

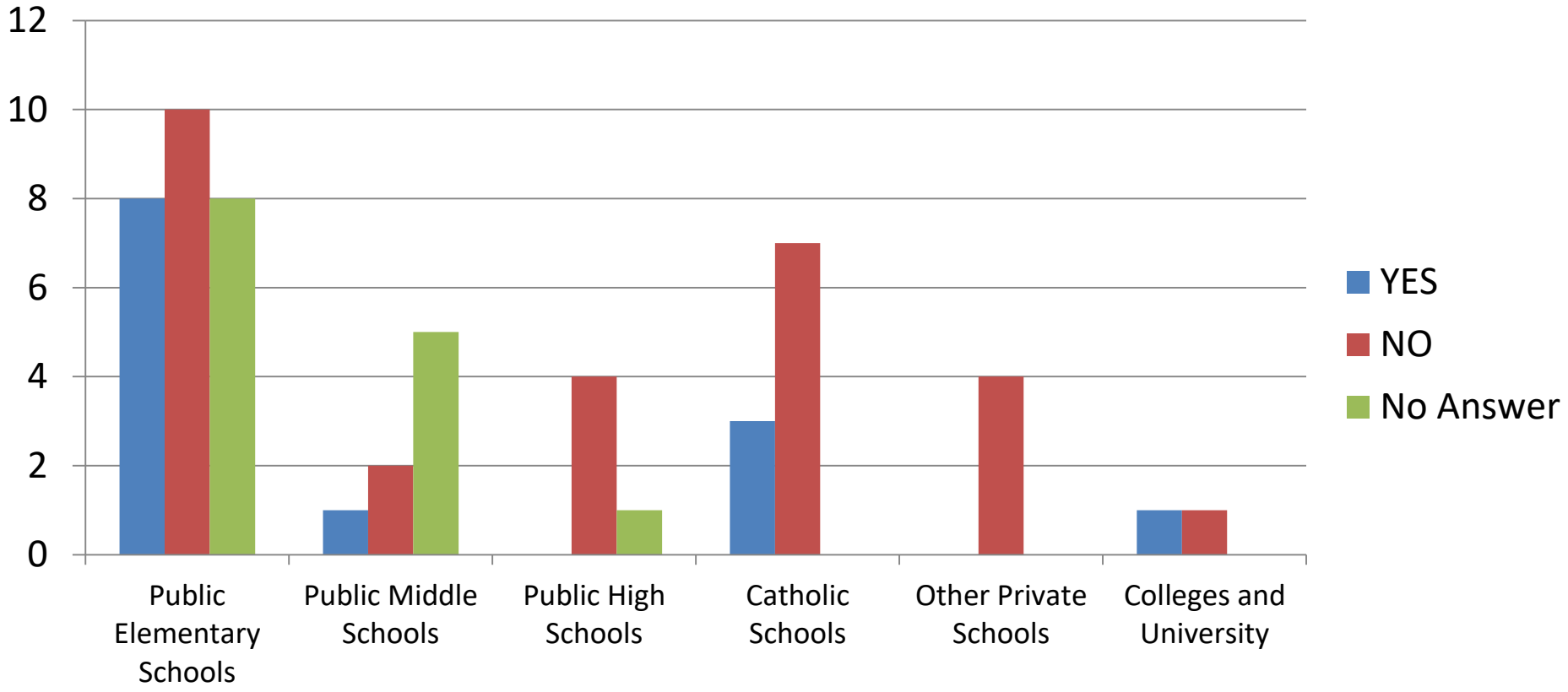
Part V. Lockers



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Part VI. Toilets

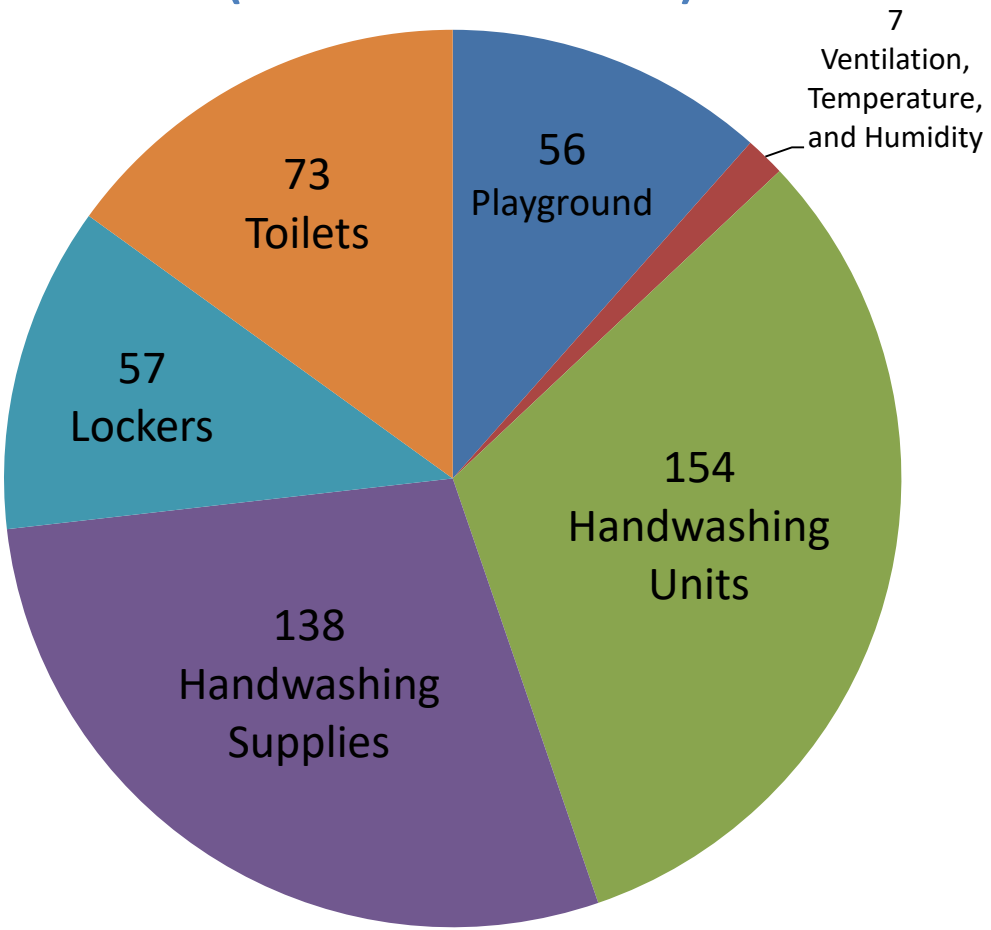
Does your school need additional toilets to meet the minimum required ratio as proposed?*



*The proposed Rules and Regulations for School Building Sanitation [Section 4715(a)] contain provisions which require a minimum toilet ratio of 1:35 (female) and 1:50 (male) in elementary schools; 1:45 (female) and 1:50 (male) in secondary schools, colleges, and universities.

Total Estimated Financial Impact

(in Thousand Dollars)



Part I: School Site

1. Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?

   YES_____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

2. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school site? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part II: School Building Exterior

3. Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?

   YES_____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part II. Please go on to Part III. If "YES," please continue below.)*

4. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building exterior? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part III: School Building Interior

5. Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?

   YES_____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

6. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building interior? *(Please mark one only.)*

   $1 - $5, 000_____ $5,001 - $10,000_____ $10,001 - $15,000 _____

   $15,001 - $20,000 _____ $20,001 - $25,000_____ Other (please enter amount) _____

   COMMENTS:

   _____

   _____

Part IV: School Building Systems

7. Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?

   YES_____ NO_____ (*If you answered "NO," you do not need to complete the rest of Part I. Please go on to Part II. If "YES," please continue below.)*

8. If "YES," what is the annual cost of the materials, supplies, equipment, and labor for maintaining your school building systems? *(Please mark one only.)*

   $1 - $1, 999_____ $2,000 - $3,999_____ $4,000 - $5,999 _____

   $6,000 - $7,999 _____ $8,000 - $9,999_____ Other (please enter amount) _____

   COMMENTS:

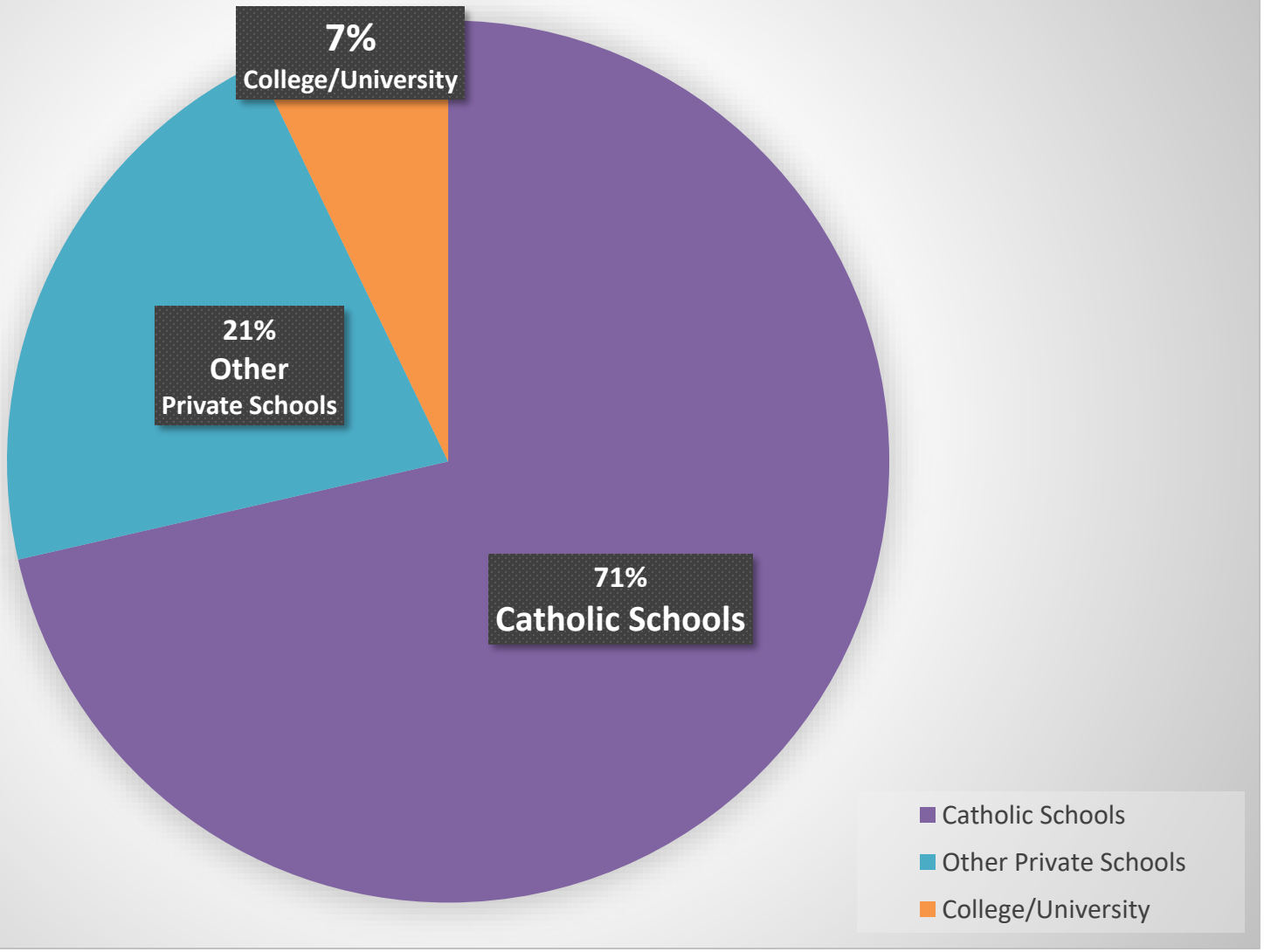
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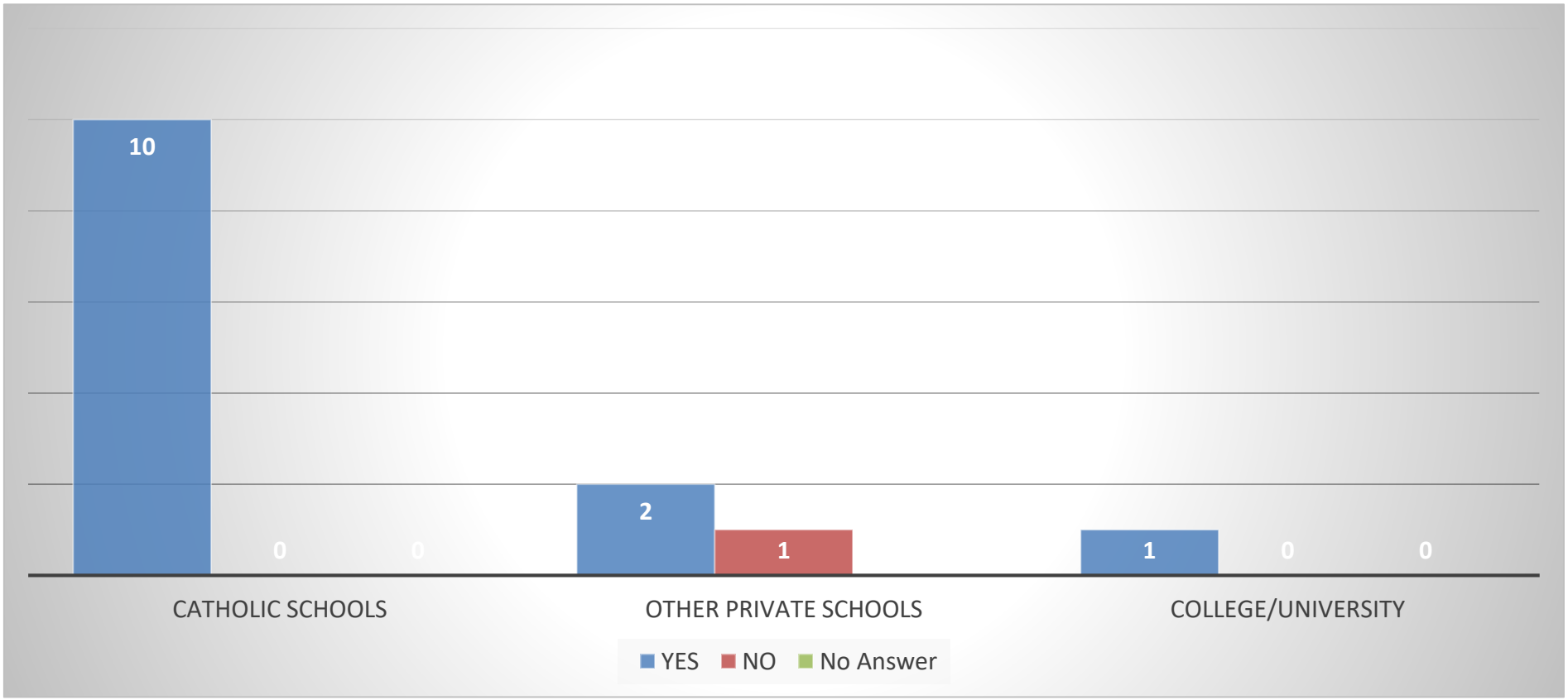
End of Survey
Please submit the completed form to DEH by Friday, January 12, 2018.
Thank you for your participation!

Respondents



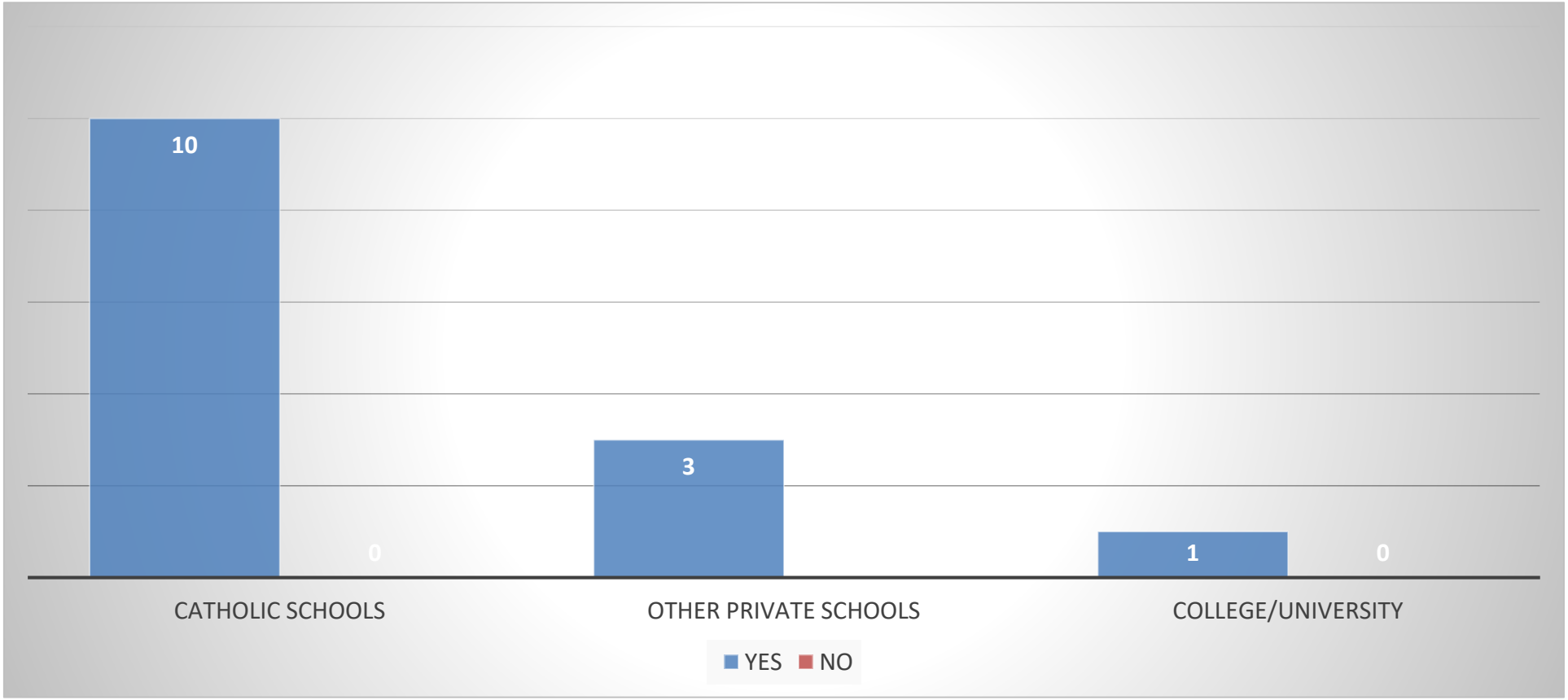
Part I. School Site

Does your school expend resources for the cleaning, repair, and maintenance of the school site which includes playground, site drainage, sidewalks, and grounds?



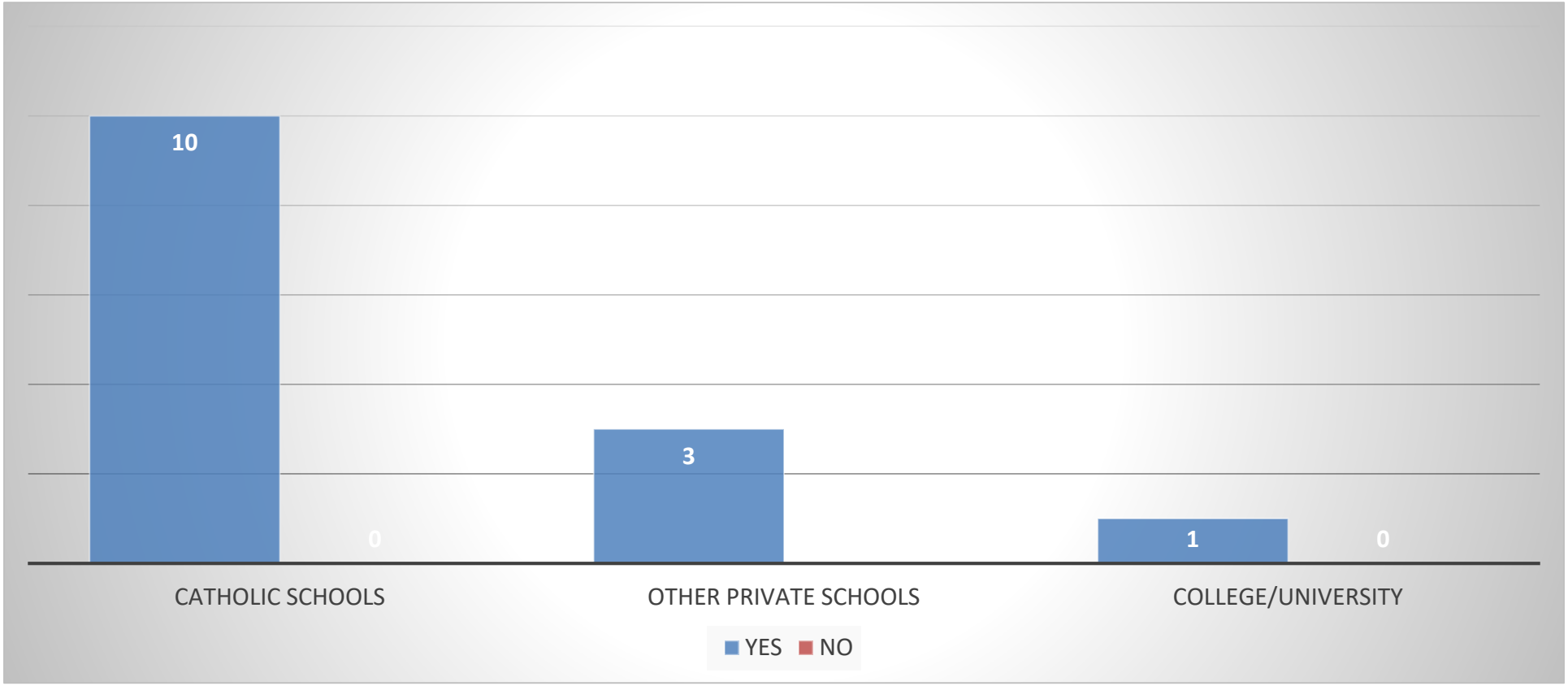
Part II. School Building Exterior

Does your school expend resources for the cleaning, repair, and maintenance of the school building exterior which includes windows, walls, doors, and roof?



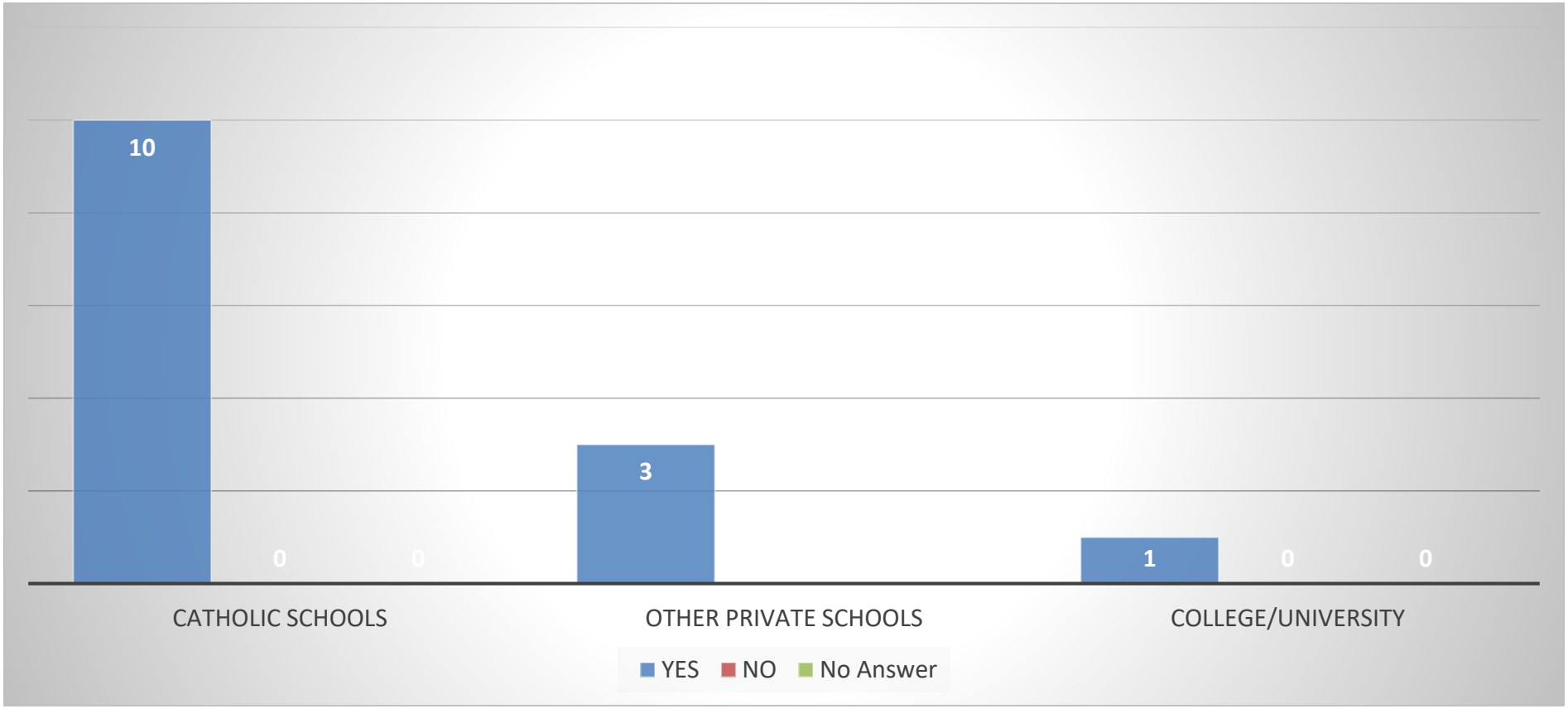
Part III. School Building Interior

Does your school expend resources for the cleaning, repair, and maintenance of the school building interior which includes walls, floors, ceilings, stairs, interior doors, handwashing sinks and restrooms, classrooms, gym, and shower facilities?

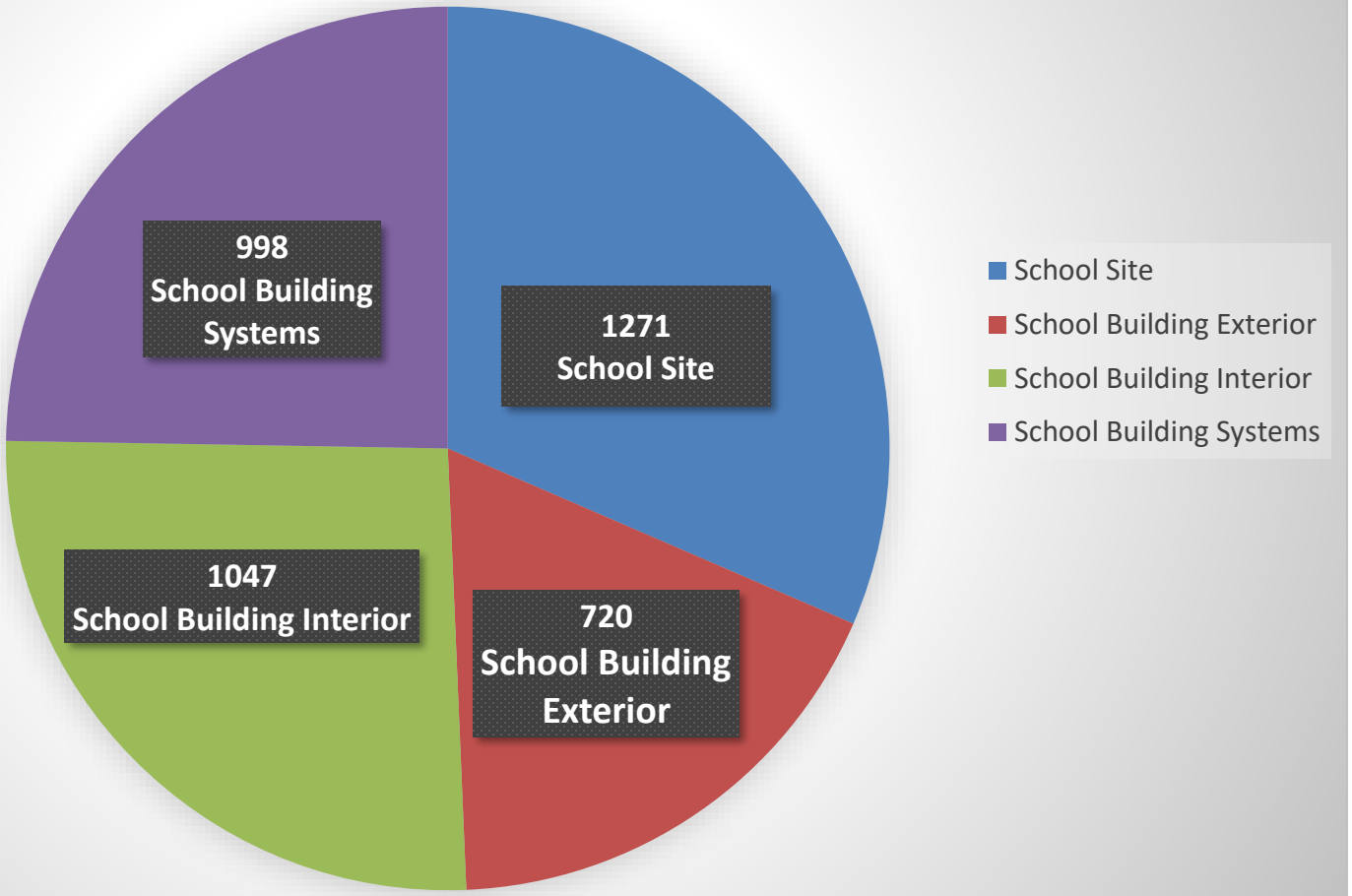


Part IV. School Building Systems

*Does your school expend resources for the cleaning, repair, and maintenance of the school building systems which includes: lighting; electrical distribution; fire protection systems; equipment rooms; heating, ventilation, and cooling (HVAC); and plumbing and water heaters?



Total Estimated Financial Impact (in thousand dollars)



I MINA 'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
2019 (FIRST) Session

Bill No. _____

Introduced by: _____

AN ACT TO ESTABLISH RULES AND REGULATIONS OF THE DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES UNDER ARTICLE 7 OF CHAPTER 4, DIVISION 1, TITLE 26, GUAM ADMINISTRATIVE RULES AND REGULATIONS, RELATIVE TO SCHOOL BUILDING.

BE IT ENACTED BY THE PEOPLE OF GUAM:

Section 1. Legislative Findings and Intent. Title 10 Guam Code Annotated, Chapter 25 ("Institutional Facilities"), mandates the Director of the Department of Public Health and Social Services to adopt regulations as necessary to implement the chapter. *I Liheslaturan Guåhan* recognizes that there is a need to update the regulations on the sanitary operation and standards for school building to protect and promote the health and safety of all students and employees in schools on Guam.

Furthermore, *I Liheslaturan Guåhan* finds that there are some provisions in the existing regulations, which was adopted in 1984, that need to be expanded and clarified.

Much of the requirements in the existing regulations have been retained, and some of the most significant changes are: needing to provide adequate playground area for students; establishing standards for temperature, ventilation, and humidity; requirements and exemptions of colleges and universities; and providing sufficient number of toilet facilities and handwashing units. The proposed regulations also detail how compliance inspections by the Department of Public Health and Social Services will be conducted.

Section 2. Adoption of Rules. Notwithstanding any other provision of law, rule, regulation, and executive order, the rules and regulations of the Department of Public Health and Social Services for school building sanitation, and attached hereto as Exhibit "A," to be codified under Chapter 4, Division 1, Title 26, Guam Administrative Rules and Regulations, is hereby adopted by *I Mina 'Trentai Sinko Na Liheslaturan Guåhan*.

Section 3. Effective Date. The administrative rules and regulations adopted pursuant to Section 2 of this Act shall become effective immediately upon enactment.

Section 4. Severability. If any provision of this law or its application to any person or circumstance is found to be invalid or contrary to law, such invalidity shall not affect other provisions or applications of this law which can be given effect without the invalid provisions or application, and to this end the provisions of this law are severable.

EXHIBIT "A"

RULES AND REGULATIONS FOR SCHOOL BUILDING SANITATION

Article 7
26 Guam Administrative Rules and Regulations
Division 1
Chapter 4

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES
DIVISION OF ENVIRONMENTAL HEALTH

123 Chalan Kareta
Mangilao, Guam 96913-6304
(671) 735-7221

10.01.18

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§4701. Purpose.

The purpose of these rules and regulations is to protect and promote the health and safety of all employees and students in schools on Guam.

§4702. Authority.

Title 10 Guam Code Annotated, Chapter 21, Section 21102 authorizes the Director of the Department of Public Health and Social Services to establish rules and regulations to carry out the provisions of Chapter 25, Title 10 Guam Code Annotated.

§4703. Title.

These rules and regulations shall be known as the *"Rules and Regulations for School Building Sanitation."*

§4704. Definitions.

As used in these rules and regulations, the following definitions shall apply:

(a) *American Society of Heating, Refrigerating, and Air-Conditioning Engineers* (also known as *ASHRAE*) means the building technology society that focuses on building systems, energy efficiency, indoor air quality, and sustainability within the industry.

(b) *American Society for Testing and Materials* (also known as *ASTM*) means the international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

(c) *Campus* means the grounds and buildings of a school found on a property that is owned, leased, rented, or otherwise occupied by the operator on single, continuous property.

(d) *Department, or DPHSS,* means the Guam Department of Public Health and Social Services.

(e) *Director* means the Director of Public Health and Social Services or his/her designated representative.

(f) *Elementary School* means a school attended by students in kindergarten to fifth grade.

(g) *Handwashing Unit* means an area that includes a sink, a soap dispenser, and a sanitary paper towel dispenser.

(h) *High School* means a school attended by students in ninth to twelfth grade.

(i) *Imminent Health Hazard* means a significant threat or danger to health that is considered to exist when there is evidence sufficient to show that a product, practice, circumstance, or event creates a situation that requires immediate correction or cessation of operation to prevent injury based on the number of potential injuries, and the nature, severity, and duration of the anticipated injury.

(j) *Middle School* means a school attended by students in sixth to eighth grade.

(k) *Operator* means a person, governmental agency, firm, association, corporation, or business entity, who owns, leases or manages, or proposes to own, lease, or manage, a school, and includes any person designated in the application for a Sanitary Permit to operate a school or having authority to administer day-to-day operation of the facility and to respond to complaints, orders, and other matters as set forth in these rules and regulations.

(l) *Restroom* means an area that includes a toilet, toilet paper dispenser, and handwashing unit.

(m) *Sanitary Permit* means the official document issued by the DPHSS authorizing the establishment to operate its business.

(n) *School* means any establishment, public or private, for the care and education of students from kindergarten through grade twelve and any college or university or institution of higher learning.

(o) *Shower Facilities* means a shower room and locker room are combined into one area.

(p) *Storm Drainage System* means piping within a public or private premises that carries rainwater, surface water, subsurface water, and similar liquid wastes to a point of disposal.

(q) *Variance* means a written document issued by the Director that authorizes a modification or waiver of one or more requirements of these rules and regulations if, in the opinion of the Director, a health hazard or nuisance will not result from the modification or waiver.

§4705. Sanitary Permit.

(a) No operator shall directly or indirectly in any manner, conduct, control, manage, maintain, or operate a school unless a valid Sanitary Permit issued by the Department to operate such a facility has been obtained and posted. Any operator, before constructing a new school, or making an addition to, or major alteration of, an existing facility shall first submit plans and specifications of such building or changes to the Director for approval.

(b) An application for a Sanitary Permit to operate all new or existing schools, whether public, private, or vocational, shall be made in writing on a form prescribed by the Department, signed by the applicant or his authorized agent, and shall contain such information that will determine that the facility and its operation are in compliance with the applicable provisions of these regulations.

(c) Every campus shall obtain a separate Sanitary Permit, and the transfer of that permit to another person, operator, school, campus, or location shall be prohibited.

(d) Before the application for a Sanitary Permit shall be approved, the Department shall verify that the facility meets the minimum sanitary requirements and standards by means of a pre-operation inspection. This shall include the access onto premises, inspection, and investigation.

(e) Before a pre-operation inspection is conducted, plans and specifications shall be submitted to the Director in accordance with the requirements established in these regulations, which shall include the following:

(1) The dimensions of the proposed establishment;

(2) The location, number, and type of plumbing fixtures, including all water supply fixtures and toilet fixtures, and other fixtures and equipment; and

(3) If a newly-constructed building, the general layout of water supply lines, wastewater lines, or methods of wastewater disposal.

(f) If upon inspection, the Director is satisfied that the school meets the qualifications and standards prescribed in these rules and regulations, a nontransferable Sanitary Permit shall be issued. The Sanitary Permit shall be posted in a conspicuous area designated by the Director.

(g) An application for renewal of Sanitary Permit shall be submitted no earlier than 30 days prior to its expiration date with its applicable fees.

(h) The school shall adhere to the most recently adopted building, plumbing, fire, and other pertinent regulatory codes for Guam.

(i) The school shall have an updated floor plan readily available and shall present it to the Director upon request. Such floor plan shall show the arrangement of all rooms, buildings, and areas in the school.

(j) Compliance with this section does not absolve the school from obtaining other permits and licenses required by law.

§4706. School Location and Premises.

(a) The school shall not permit activities that will increase the intensity of noise on the school premises. Noise level at the site should not exceed seventy (70) decibels.

(b) The school site shall be located so that it is as remote as possible from sources of air pollution such as manufacturing plants, abattoirs, refineries, open-burning dumps, sanitary landfill operations, polluted streams, and any sources of smoke, dust, fumes, or objectionable odors.

(c) Once a school site has been established, no source of objectionable conditions as detailed in Section 4706 (a) and (b) above shall be permanently located near enough to a school site so as to create conditions objectionable to the school.

(d) The school site, which includes the area used for a playground as well as that immediately adjacent to the school building, shall be evenly graded and sloped so as to provide adequate surface drainage.

(e) Playgrounds shall be constructed and maintained to permit maximum utilization of sites, with elimination of sanitary and health hazards, including depressions, fragments of glass, stone, and similar obstructions.

(f) Outdoor recreational area shall be required of schools occupied by kindergarten through grade twelve and shall comprise a minimum of 100 sq. ft. of accessible space per student

using that area at any given period. The outdoor recreational area shall be either fenced or properly isolated from vehicular traffic.

(g) The school site shall be free of potential pest breeding sites, such as open dumps, swamps, etc., and shall be located away from low lying swampy areas where mosquitoes breed.

(h) The school site shall be kept clean and free of rubbish and overgrown vegetation.

(i) No school shall be located in a private family residence unless that portion of the residence to which students have access is physically separated from the usual living quarters of the family. A solid, doorless partition from the floor to the ceiling and between such walls shall be available to provide complete physical separation of the school from such other business or dwelling.

(j) Exterior of buildings, walkways, awnings, picnic tables, benches, and other outside structures shall be kept clean and in good repair.

(k) All storm drainage systems shall include a gutter, leader, downspout, splash block, and/or drain opening. The gutter/downspout grading and/or discharge point shall be such that water will not pool.

(l) All equipment, structures, and fixtures that are no longer being used shall be removed from the building and properly disposed.

§4707. School Building.

(a) Room Requirements.

(1) The classroom shall be of sufficient size to provide at least 25-30 square feet of space per student in elementary schools, 20-25 square feet of space per student in middle schools, and at least 18-20 square feet of space per student in high schools, colleges, and universities.

(2) Rooms shall be kept clean, neat, and orderly with approved waste container that is durable, easily cleanable, and appropriately sized for its use.

(3) All dining areas that are used for purposes other than dining shall be kept clean, neat, and orderly, with adequate seating and lighting.

(4) The janitorial rooms, and any storage area used to store hazardous materials, shall be locked to prevent student access.

(5) Rooms or areas unsafe for use shall be closed or cordoned off to prevent access. Readily visible signs shall be posted in conspicuous locations to prohibit unauthorized access.

(6) Use of scented products such as air fresheners, candles, deodorizers, and plug-ins shall be prohibited in rooms.

(b) Floor Requirements.

(1) Floors of all rooms shall be of such construction as to be easily cleanable, non-absorbent, light in color, and shall be kept clean and in good repair.

(2) Floors shall be made from materials approved by the Department.

(3) Floors without carpeting shall be sealed with a satisfactory floor sealer.

(4) Area carpets and rugs shall be easily cleanable, have friction backings or underlayment when placed on smooth floor surfaces, and shall not be used in areas where contamination with bodily fluids or food is likely. Carpets and rugs shall be kept clean and in good repair.

(c) Wall Requirements.

(1) Walls shall be smooth, have surfaces light in color, be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

(2) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(d) Ceiling Requirements.

(1) Ceilings shall have flat surfaces, light in color, be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

(2) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(e) Door Requirements.

(1) School building exits shall be provided, which are easily accessible and plainly indicated. Exit signs shall be posted at the interior side of the exit door.

(2) Rolling, sliding, revolving, and double swinging doors are prohibited. Doors leading to the outside of the building shall be tight-fitting, self-closing, and shall open outward.

(3) Doors shall be kept clean and in good repair.

(4) All unintended openings to the outer air shall be sealed off to effectively prevent the entrance of pests.

(f) Window Requirements.

(1) Windows shall be kept clean and in good repair.

(2) All openings to the outer air shall be screened effectively, unless other effective means are provided to prevent the entrance of pests. Plastic or wire screen shall be not less than 16 mesh to the inch.

(g) Classroom Equipment Requirements.

(1) The classroom equipment such as chalkboards, whiteboards, erasers, desks, chairs and other furniture shall be kept clean and in good repair.

(2) Chalkboards shall be of black or green, dull finish, and shall have smooth, even surfaces with no cracks and as few seams as possible.

(3) Chalkboards and whiteboards shall be located so as to be easily seen by the intended users and opposite windows so as not to create areas of high light contrast near or behind chalkboards.

(4) Use of equipment, such as crayon or chalk containing lead, lead compounds, and other hazardous materials is prohibited.

(5) Art and craft materials shall be labeled in accordance with the chronic hazard labeling standard, ASTM D4236-94(2005).

(h) Seating Requirements.

(1) Each student shall have an individual seating unit with writing table attached or adjacent to the seat and so constructed as to provide comfortable seating and convenient writing without undue strain.

(2) Where windows are the primary source of illumination, the desks shall be so arranged as to minimize the effects of glare and shadow.

(3) When the student is erectly seated with feet squarely on the floor, there must be no pressure from the forward edge of the seat under the knees.

(4) Writing tables shall be smooth, easily cleanable, maintained, and in good repair.

(i) Maintenance and Housekeeping Requirements.

(1) There shall be sufficient space for the storage of outdoor clothing, raincoats, maintenance equipment, ground equipment, and instructional equipment to prevent cluttering of classrooms, walkways, or other areas.

(2) All areas, facilities, furniture, and equipment shall be maintained in a clean, safe, and sanitary condition and kept in good repair. Furniture and equipment no longer being used shall be removed and disposed of properly.

(3) The building shall be free of pests and conditions which attract, provide harborage, and promote breeding of such.

(4) Cleaning materials, tools, and maintenance equipment shall be provided and shall be safely stored and secured in a locked area.

§4708. Ventilation.

(a) Ventilation shall be a minimum of fifteen cubic feet per minute per student (15 cfm/student) to provide proper circulation of needed air within a room by either windows or mechanical ventilators (ASHRAE Standard 62-1999). Ventilation rate requirements may be increased by the Department for rooms where the ventilation rate is insufficient.

(b) Ventilation system filters shall be cleaned or replaced regularly to prevent excessive accumulation of dust or debris.

(c) All rooms, areas, and equipment from which contaminated aerosols, obnoxious odors, or noxious fumes, or vapors may originate shall be effectively vented to the outside air.

(d) Windows, including louvers opened from the bottom, which cause direct currents of air on students nearby, shall be provided with window ventilators or deflectors.

(e) Windows, including louvers shall be adjustable at the top and bottom, and when this is the only means of ventilation, at least one-half (1/2) of the windows shall open from both top and bottom.

(f) Ducts and fans in connection with mechanical ventilation shall be so arranged and controlled as to eliminate objectionable air currents directly on the students.

(g) When mechanical ventilation is provided, it shall be kept clean and in good repair.

§4709. Temperature and Humidity.

(a) Indoor air temperature of rooms occupied by students and faculty shall be in the range of 75^{o}F – 83^{o}F (ASHRAE Standard 55-2004).

(b) Indoor relative humidity shall be in the range of 30% - 60% (ASHRAE Standard 62-1999).

§4710. Lighting.

(a) Availability of natural light is highly recommended in all rooms occupied by students. When adequate natural light is not available, artificial light shall be provided to promote a comfortable visual environment.

(b) All classroom windows shall be provided with shades or blinds which shall be kept clean and in good repair and so used or adjusted so that glare and excessive light intensities are reduced to a minimum.

(c) Minimum acceptable levels for school lighting in the following areas shall be:

(1) Lecture rooms, study halls, laboratories, offices, libraries, art rooms, and electronic and machine shops: 50 foot-candles at all levels.

(2) Reception rooms, gymnasiums, and swimming pools: 30 foot-candles at all levels.

(3) Auditoriums, restrooms, locker rooms, corridors and stairways, storage, and any other rooms: 20 foot-candles at all levels.

(d) Artificial lighting in all areas except storage areas shall be diffused, indirect, and glare-free, and shall be provided with light shields.

(e) Window panes shall not be used for decorations or objects which shut out the light.

§4711. Plumbing.

Plumbing shall be sized, installed, and maintained to carry adequate quantities of water to required locations throughout the school, to prevent contamination of the water supply, to properly convey sewage and liquid wastes from the school building to the public sewage system or to a sewage disposal system approved by the regulatory agencies so as not to create an unsanitary condition or nuisance.

§4712. Water Supply.

(a) Each school building shall be provided with an ample supply of water from an approved public water system. Water supply shall be safe and of sanitary quality.

(b) Drinking water dispensed by means of drinking fountains, cups, and water coolers shall conform to the following:

(1) Drinking fountains shall be kept clean and in good repair.

(2) Drinking fountains shall be provided in the ratio of one per 75 students.

(3) Drinking fountains shall be constructed of impervious material, such as stainless steel, vitreous china, porcelain, enamel, or stoneware.

(4) The jet of the drinking fountain shall dispense from a nozzle of non-oxidizing, impervious material set at an angle from the vertical so as to prevent the return of the water to the orifice or orifices from where it is dispensed.

(5) The end of the nozzle shall be protected by a non-oxidizing guard to prevent the mouth and nose of a person using the fountain from coming into contact with the nozzle.

(6) The bowl of a drinking fountain shall be free from corners so as to be easily cleanable and to avoid collection of dirt and other contaminants.

(7) The waste opening pipe shall be provided with a strainer and be of sufficient size to carry off the water promptly.

(8) Single service cups shall be used when dispensing drinking water from bottled water or water coolers. Single service cups shall be stored, handled, and dispensed in a sanitary manner.

(9) Water coolers used for dispensing drinking water shall be provided with a cover, and shall be kept clean. Dipping of water from a water cooler is prohibited.

(10) Other cups, such as individually owned cups, shall be used only by one owner.

(c) The school water supply system shall be in good working order at all times so as to adequately supply the water demand of the school.

(d) All water outlets shall be protected from back-flow either by air gap or back-flow prevention devices. There shall be no cross-connection, or existing or potential conditions to cause back-siphonage, anywhere in the school building or its premises.

(e) Any water outlet with a threaded, serrated, or quick coupling nozzle shall be provided with a vacuum breaker.

§4713. Handwashing Unit.

(a) Handwashing units shall be located in all classrooms for grade two and below, and in other rooms which require frequent handwashing, such as laboratories, art and cooking classes, and other classrooms as determined by the Department.

(b) Handwashing units shall be kept clean, maintained, and shall be adequate in size and number to serve the total population of the school. Elementary schools, middle schools, high schools, colleges, and universities shall have at least one (1) handwashing unit for every 50 students.

(c) Handwashing sinks shall be provided with cold water at a minimum. If hot water is also provided at handwashing sink, it must be combined with the cold water through a mixing faucet. The hot water shall have a maximum temperature of 110^{o}F.

(d) Soap, sanitary paper towels, and waste containers shall be provided at all handwashing units.

(e) Liquid soap dispenser shall be of a type that uses a replacement pouch or sealed-soap cartridge. If a non-mounted refillable liquid soap dispenser is used, it shall be discarded when empty (shall not be refilled). Soap dispensers shall be provided and placed so that the user does not have to move away from the handwashing sink to obtain the soap.

(f) Sanitary paper towels shall be placed inside the sanitary paper towel dispenser. Dispensers shall be installed near the handwashing sink. A heated air hand-drying device may be used in place of sanitary paper towels. Common use towels are prohibited.

(g) Handwashing units shall be conveniently located to or in restrooms.

(h) Soap dispensers and sanitary paper towel dispensers that are no longer being used shall be removed and disposed of properly.

§4714. Shower Facilities.

(a) Shower facilities shall be provided in all middle schools, high schools, colleges, and universities where physical education is a required subject in the curriculum.

(b) Lockers or cubicles shall be provided in a separate room when shower rooms are required.

(c) There shall be a minimum of one showerhead for every four (4) females and one showerhead for every five (5) males based upon maximum demand in any one period.

(d) There shall be a minimum of one locker or cubicle for each student based upon maximum demand in any one period.

(e) The floors of the shower facilities shall be of smooth, finished material with non-slip surface impervious to moisture and sloped to the floor drain. Junctions between walls and floors shall be covered and sealed. Shower rooms and stalls shall have floors, partitions, and walls to a minimum height of six (6) feet, finished with dense non-absorbent and non-corrosive materials having a smooth impervious surface.

(f) Shower facilities shall be kept clean, free of mildew or mold, and well ventilated; and the lockers, showerheads, and floors shall be kept in good repair.

(g) The temperature of water at the shower head shall not exceed 110ºF.

§4715. Restrooms.

(a) The following establishes the minimum number of toilets and urinals for schools:

(1) Elementary schools:

(A) Female toilets – one for each 35 females

(B) Male toilets – one for each 50 males

(C) Boys' Urinals - one for each 30 males

(2) Secondary schools, and colleges and universities:

(A) Female toilets - one for each 45 females

(B) Male toilets - one for each 50 males

(C) Boys' Urinals - one for each 30 males

(b) For each toilet added in excess of the minimum required, one urinal may be deducted. The number of urinals shall not be reduced to less than two-thirds of the minimum requirement.

(c) Toilets and urinals shall be of appropriate height for the students.

(d) Separate restrooms for each gender shall be conveniently located. Restrooms found in classrooms may accommodate both genders provided the required toilet ratios have been met.

(e) Restrooms shall be provided in conjunction with shower or locker rooms.

(f) Restrooms shall be completely enclosed.

(g) Restrooms that open directly to the outdoors shall have entrance doors that are tight fitting, self-closing, and open outward.

(1) Restroom entrance doors shall be provided with signs designating the gender for which such room is intended.

(2) Doors shall be kept clean and in good repair.

(h) Floors in the restroom shall be of material impervious to moisture and floor drains shall be provided. Junctions between walls and floors shall be covered and sealed.

(i) Toilet stall partitions and toilet stall doors shall begin not more than one (1) foot from the floor and extend to a height of not less than five (5) feet for elementary, and not less than six (6) feet for middle schools, high schools, and colleges and universities. Each toilet stall door shall be equipped with a latch or lock to secure the door to ensure privacy when using the toilet.

(j) Each restroom shall be provided with a waste container that is durable, easily cleanable, and appropriately sized for its use.

(k) All restrooms shall be kept in good repair, clean, and free from foul odor.

(l) All toilet paper shall be placed in the toilet paper holder/dispenser and be available and conveniently located adjacent to each toilet.

§4716. Garbage, Trash, and Recycling Disposal.

(a) Every school shall provide an adequate number of garbage and trash containers, which shall be located at a place suitable for their use. When recycling programs are in place, recycling containers shall be provided and located at a place suitable for their use.

(b) Watertight and non-absorbent containers with tight-fitting lids shall be used for storing garbage, trash, and recycling. Containers shall be washed and treated with a disinfectant as often as necessary to prevent nuisances. The disinfectant used in such containers shall contain at least 100 ppm of chlorine or its equivalent of an acceptable sanitizer.

(c) Garbage, trash, recycling, and other solid wastes shall be disposed of regularly.

(d) Trash and solid waste shall be disposed of in an approved manner so as not to create a nuisance or health hazard.

(e) Bulk refuse containers shall be located on impervious asphalt or concrete surfaces sloped to drain into an approved sewage disposal system, elevated at least six inches from the ground surface.

(f) Garbage intended for use as animal feed shall be stored according to regulations separately established for feeding of garbage to livestock.

§4717. Food Protection.

For classes that require cooking as part of the curriculum, written procedures shall be maintained and made available to the Department upon request, which address the minimum critical requirements of food safety including, but not limited to, demonstration of food safety knowledge by the class instructor, student health and hand hygiene, temperature control, preventing cross-contamination, and obtaining food from safe sources.

§4718. Safety.

(a) Each school shall have adequate type and number of first aid material as determined by the individual school's health care professional.

§4719. Existing Facilities.

School facilities in existence at the time that these regulations take effect shall be given five years from the date that these rules become effective to come into full compliance with the requirements of these rules unless a school facility or operator files a written statement of exception with the Director and receives a variance as provided in §4721.

§4720. Inspection and Grading.

(a) Access.

An employee or representative of the Department shall, after proper presentation of credentials, have access to any school building at any reasonable time for the purpose of making

inspections to determine compliance with these rules and regulations. Denial of access shall be cause for suspension of the Sanitary Permit.

(b) Report of Inspections.

Whenever an inspection of a school building is conducted, the findings shall be recorded on a form authorized by the Director, shall summarize the requirements of these rules and regulations, and shall set forth a demerit value for each requirement. Demerit value assignments shall be from one through six. Inspection remarks shall be written to reference, by section number, the section violated and shall state the correction to be made. The rating score of the establishment shall be the total of the demerit values for all violations. A copy of the completed inspection report form shall be issued to the operator of the establishment at the conclusion of the inspection. The completed form is a public document that shall be made available for public disclosure to any person who requests it according to law.

(c) Appeal.

The report of inspection of a school building shall state that an opportunity for appeal from any notice or inspection findings will be provided if a written request for a hearing is filed with the Director within the period of time established in the notice for correction.

(d) Grading.

(1) Grades of a school building shall be as follows:

(i) Grade A: An establishment having a demerit score of not more than ten;

(ii) Grade B: An establishment having a demerit score of more than ten but not more than twenty;

(iii) Grade C: An establishment having a demerit score of more than twenty but not more than forty; and

(iv) Grade D: An establishment having a demerit score of more than forty.

(2) Whenever two or more similar violations of the same item are observed during the same inspection, the demerit value for that item violation shall only be counted once.

(3) The Department shall issue a placard reflecting the letter grade of the most recent inspection.

(4) The Department shall establish a specific and reasonable period of time for correction of the violations found, in accordance with the following provision:

(i) When the demerit score of the establishment is twenty or less, all violations of one through five demerits must be corrected within a period of time not to exceed 30 days; or

(ii) When the demerit score of the establishment is more than twenty but less than forty-one, all items of one through five demerit points must be corrected within a period of time not to exceed 15 days; or

(iii) When one or more six demerit point items are in violation, regardless of demerit score, such items must be corrected within a period of time not to exceed 10 days; and

(iv) When the demerit score of the establishment is more than forty, the Sanitary Permit shall be immediately suspended.

(e) The operator shall ensure that he/she, or a designee, be present during inspections of a school building by the Department.

(f) The Inspection Report and Letter Grade Placard shall be posted in a conspicuous area designated by the Director.

(g) Except as specified in (h) of this section, an operator shall immediately discontinue operations and notify the Department if an imminent health hazard may exist because of an emergency such as a fire, flood, extended interruption of electrical or water service, sewage backup, misuse of poisonous or toxic materials, gross insanitary occurrence or condition, or other circumstance that may endanger public health.

(h) An operator need not discontinue operations in an area of a school that is unaffected by the imminent health hazard.

(i) Failure to report an imminent health hazard to the Department may result in immediate suspension of the permit.

§4721. Administrative Penalties.

(a) The Director may impose a fine payable to the "Treasurer of Guam" for any operator that operates without a valid Sanitary Permit. The monetary fine for this administrative violation shall be charged to the operator based on the following:

(1) A fine not less than One Thousand Dollars ($1,000) per violation, but not exceeding Five Thousand Dollars ($5,000), for operating without a valid Sanitary Permit.

(2) For §4720 (a) (l) above, the Department shall treat each additional day as a separate violation per day of continuing violation.

(b) The Director shall issue a notice of violation and administrative penalty against an operator and provide an opportunity to request a hearing on the proposed penalty. The request must be made within 10 days of the date that the notice is served upon the operator.

(c) Any operator may seek review of any administrative penalty imposed before the Superior Court of Guam. Such review shall be upon the record established before the Director and not de novo. The Superior Court may sustain, modify or vacate any administrative penalty it reviews.

(d) If any operator fails to comply with an administrative penalty order after it has become final, the Attorney General shall bring a civil action to enforce the order and to recover the amount ordered or assessed, plus current interest from the date of the final order or decision. To prevail in such an action, the Director need establish only that:

(1) Notice was given as required;

(2) A hearing was granted to the defendant or that the defendant requested no hearing; and

(3) The penalty was imposed and has become final either because the administrative order was not appealed to the Superior Court, or that after judicial review the administrative order remains an unsatisfied obligation.

§4721. Variance.

In the event that a school or an operator is unable to comply with certain requirements of these rules and regulations, upon a showing of good cause which is not the result of negligence or malfeasance, the Director may grant a variance from the requirements of a particular rule by making a written determination. Before a variance from a requirement of these rules is approved, the school or the operator shall first submit a written statement of the proposed variance from the requirement citing relevant rule section numbers. The written statement shall include an alternate plan to address the potential public health hazards and nuisances under the

relevant rule sections. The Director, not his/her representative, is delegated the authority to approve such variance.

§4722. Severability.

If any provision or the application of any provision of these regulations is held invalid, that invalidity shall not affect other provisions or applications of these rules and regulations**.**

Annex 1

Public Health Reasons

Acronym List

ACGIH – American Conference of Governmental Industrial Hygienists

ADA – Americans with Disabilities Act

ASHRAE – American Society of Heating, Refrigeration & Air-conditioning Engineers

DPHSS – Department of Public Health and Social Services

IAQ – Indoor Air Quality

IESNA – Illuminating Engineering Society of North America

IPM – Integrated Pest Management

IQ – Intelligence Quotient

NFPA – National Fire Protection Association

NIOSH – National Institute for Occupational Safety and Health

RH – Relative Humidity

US CDC – United States Centers for Disease Control and Prevention

US CPSC – United States Consumer Product Safety Commission

US EPA – United States Environmental Protection Agency

Annex 1

Public Health Reasons

§4705. Sanitary Permit.

A valid Sanitary Permit issued by the Department of Public Health and Social Services (DPHSS) is required for the lawful operation of a school as stated in Title 10 Guam Code Annotated Chapter 21, Section 21107. Issuance of such permit confirms that the facility has been inspected by DPHSS and meets the minimum sanitary requirements and standards. This is to protect the students and other occupants of Guam schools from various environmental hazards. Furthermore, the Sanitary Permit authorizes DPHSS to enter the permitted school to conduct an inspection of the facility as required by law. By applying for a Sanitary Permit, knowing that such an inspection may be called for, the operator gives implied consent to the inspection and is considered to have surrendered the right to object to an inspection in return for the grant of the Sanitary Permit.

An updated floor plan, not necessarily drawn to scale, shows the relationship between rooms, spaces, and other physical features at each level of a school building. This is necessary to facilitate ease of inspection and egress.

All schools are expected to comply with other regulatory codes.

§4706. School Location and Premises.

§4706(a). Noise.

Excessive noise is disruptive to both students and staff. Noise detracts from the teacher's ability to teach and the student's ability to learn. Recent studies have shown that student

performance on standardized tests is inversely correlated with noise levels – as noise increases, performance decreases.[1]

Individuals, particularly the hearing-impaired, are greatly affected by excessive background noise. In addition, 13 out of 100 students have some level of hearing loss that affects their ability to hear instruction in the presence of background noise.[2] The most frequent sources for noise in the school environment are outside noise, such as traffic, and noise from within the school, such as gymnasium and music rooms. A standard threshold for residential noise and what is usually recommended in the school environment is 70 decibels. Some examples of this noise level include busy traffic, vacuum cleaner, and alarm clocks.[3]

§4706(b) and (c). Air Pollution.

Air pollutants are commonly produced by manufacturing plants, abattoirs, refineries, open-burning dumps, sanitary landfill operations, polluted streams, and any sources of smoke, dust, and fumes. Children are more vulnerable to many toxic environmental pollutants than adults because "their lungs are still developing and they breathe more air per pound of body weight than adults do."[4] Some of the effects of air pollution are decreased lung function, asthma, bronchitis, emphysema, and even some types of cancer. As such, a more conservative approach to minimizing childhood exposures to pollutants is needed.

§4706(d), (i), and (j). Premises.

The school site should be evenly graded and sloped to provide adequate drainage. The ground immediately adjacent to the building exterior should receive all of the water that impacts and cascades down the walls. Large quantities of water pour onto the ground from the walls during periods of heavy rain. If the ground near the wall is inadequately sloped to enable water to

effectively drain away from the building, the potential for water movement through the foundation is greatly increased. Water accumulation or ponding near the building perimeter may eventually moisten the interior wall surfaces. This will greatly increase the probability of mold growth and structural degradation of these surfaces.

Significant water ponding also constitutes a potential site for mosquito breeding. Mosquitoes go through four distinct stages during their life cycle:[5]

- Egg: hatches when exposed to water
- Larva: "wriggler" lives in the water; molts several times; most species surface to breathe air
- Pupa: "tumbler" does not feed; stage just prior to emerging as adult; stays in water
- Adult: flies a short time after emerging and after its body parts have hardened

The first three stages occur in water, but the adult (female) is an active flying insect that feeds upon the blood of humans and/or animals. The female mosquito lays eggs directly on water, or on moist substrates that may be flooded with water. The egg later hatches into the larva, the elongated aquatic stage most commonly observed as it swims in the water. The larva transforms into the pupa where internal changes occur and the adult mosquito takes form. After two days to a week in the pupal stage, the adult mosquito emerges onto the water's surface and flies away. By eliminating water ponding sites, we can effectively control mosquito infestations near the school building.

Areas or facilities that are not compatible with school institutions, such as the living quarters of a private family residence, must be physically separate and distinct from other areas of the school to minimize the presence of improperly designed facilities and equipment, and the traffic of unauthorized and/or unnecessary persons or pets.

The requirements concerning exteriors of buildings, walkways, awnings, picnic tables, benches, and other outside structures are intended to facilitate maintenance and minimize the accumulation of dust and mud on walking and driving areas, provide durable exterior building surfaces for the safety of students and staff, and prevent the attracting, harboring, or breeding of insects, rodents, and other pests.

§4706(e) and (f). Recreational Area.

Playgrounds that are properly constructed and maintained may reduce the risk of accidents and injuries. Trip hazards such as holes, fragments of glass, stones, and similar obstructions must be eliminated for the safety of the students. The United States Centers for Disease Control and Prevention (CDC) recommends that resources should be allocated to develop and use safer playground equipment and surfaces.[6] Each year, many children are sent to the emergency room for injuries that occurred on the playground. According to the United States Consumer Product Safety Commission (CPSC), 76% of these injuries occur on public playgrounds. Approximately 15% of the injuries are severe and can result in hospitalization or death. The most prevalent injuries are fractures, which account for 39% of all injuries.[7]

The requirement for a minimum of 100 sq. ft. per student of outdoor recreational area to be occupied by grades kindergarten through twelfth grade allows for freedom of movement without collisions among active children. Providing more square feet per child may correspond to a decrease in the number of injuries associated with gross motor play equipment,[8] such as swings and climbers.

Furthermore, sufficient outdoor play space is needed in order to meet the Americans with Disabilities Act (ADA) outdoor play area requirements for accessible routes.[9] The ADA requires that "each service, program or activity conducted by a public entity, when viewed in its entirety,

be readily accessible to, and usable by, individuals with disabilities." This means that whenever play areas are available, such as those in schools, they must come into compliance with the requirements of this Act.

The space requirement of 100 sq. ft. per student is only applicable during certain periods such as recess or playtime when a portion of the school population makes use of the recreational area. Compliance to this requirement will be determined by the total number of students using that area at a given time, and not by the total school population.

§4706(g) and (h). Vector Control.

Open dumps and swamps serve as an attractive haven for animals and insects, and also a nuisance for people. Food, food products, and food wastes can attract such environmental pests as roaches, rodents, and other insects and their larva. Likewise, trees and bushes that are allowed to grow next to the school building provide shelter for animals to build their nests. There are several diseases that can be transmitted to humans by rodents and other vectors. Items stored on the ground can inhibit proper and thorough cleaning. Clutter will contribute to pest infestations by providing them shelter.

§4706(k). Storm Drainage.

Downspouts are designed to direct storm water collected by overhead gutters into storm water drains or directly to grade, provided they are adequately sloped to effectively channel water away from the foundation. Because all components comprising the storm water collection and drainage system may become clogged with leaves, sticks and other debris, they shall be kept clean. Any obstruction in this system increases the likelihood of water overflow and seepage in the vicinity of the building foundation.

Storm drains, typically located on the ground immediately below each downspout and adjacent to the foundation, receive rain water collected from downspouts and direct that water into below-grade storm sewers or away from the building. A poor connection between downspout and storm drain or drainage system may cause storm water to miss the drain, and instead, pour directly onto the ground adjacent to the foundation. Obstructions in the sewer system may lead to storm water backups and overflows at the storm drain. Both outcomes often result in foundation water issues.

Splash plates are generally manufactured concrete pads placed beneath downspouts where no storm drain exists. Because the amount of water directed onto these plates during stormy periods is so significant, it is imperative that they be installed with sufficient slope to prevent water accumulation near the foundation.

Improperly sloped or obstructed gutters and downspouts may cause rain water overflow, leading to uncontrolled ponding and seepage on the ground below. Should such spill-over occur in an area lacking adequate slope to effectively drain this water away from the building, seepage may occur at the foundation.

Finally, leaves, nests, or other debris permitted to accumulate in gutters, downspouts, or drains will invariably result in water accumulation and, over time, the decay of such debris. Standing water can also provide a favorable breeding ground for mosquitoes, while the decaying plant material will harbor a variety of bacterial and fungal species. These pests and contaminants pose a health hazard to building occupants and maintenance workers.

§4707. School Building.

§4707(a)(1), (2), and (6). Classrooms.

Numerous studies have explored space requirements that are necessary to:

a) Provide an environment that is highly functional for program delivery and to encourage strong, positive staff-to-student relationships;

b) Accommodate the recommended group size and staff-to-student ratio; and

c) Efficiently use space and incorporate ease of supervision.

Students' cognitive, social, and emotional developments are greatly impacted by the quality of the physical designed environment of schools.[4] In addition to meeting the needs of students, teachers require space to implement programs and facilitate interactions with them.

Student behavior tends to be more constructive when sufficient space is organized to promote developmentally appropriate skills. Crowding has been shown to be associated with increased risk of developing upper respiratory tract infections.[4] Also, having sufficient space will reduce the risk of injury from simultaneous activities.

It is important to keep the rooms clean and organized for the health and safety of the occupants. Appropriate number and size of trash cans encourage proper clean-up and help in integrated pest management (IPM). Though not required, separate, plastic-lined waste receptacles that do not require touching with contaminated hands or objects are recommended. These prevent students from coming into contact with body fluids. Anything that increases handling increases the potential for contamination.

Fragrance products, such as air fresheners, deodorizers, candles, and plug-ins are used to mask odors and to create a pleasing scent to the air. However, these products emit potentially hazardous chemicals and volatile organic compounds that can impair indoor air quality (IAQ), according to the U.S. Environmental Protection Agency (EPA). A recent national survey indicated that 20.4% of the U.S population experience health problems such as migraine headaches, asthma attacks, and dermatitis when exposed to air fresheners and deodorizers.[10] A severe type of fragrance sensitivity, called multiple chemical sensitivity, is considered a disability

under the ADA.[11] As a result, use of fragrance products is prohibited in schools. Adequate ventilation and removal of sources of odors should be done instead to eliminate noxious odors in the school building.

§4707(a)(3). Multi-Purpose Rooms.

When dining areas are used for other purposes, it is important to keep them sanitary and uncluttered to minimize attracting pests and to prevent contamination of food and equipment when these areas are eventually used for dining. Sufficient lighting is also necessary to aid in thorough cleaning.

§4707(a)(4) to (5). Janitorial Rooms.

Many of the chemicals and supplies commonly found in the janitorial rooms pose fire, safety, and health hazards to students. Such chemicals may also represent an attractive nuisance to students inclined toward their misuse. Access to all janitorial rooms should be restricted and doors kept locked while not physically occupied by school janitorial staff. Such controls will significantly reduce the likelihood of accidental chemical exposures, other accidents, or intentional misuse by students. In addition, rooms or areas deemed unsafe for use shall be closed or cordoned off to prevent injuries.

(b) **Floor Requirements**.

§4707(b)(1) to (4).

Floors that are of smooth, durable construction and that are nonabsorbent are more easily cleaned. Requirements for floor and floor sealers are intended to ensure that effective cleaning is possible and will minimize attraction for insects and rodents.

A seal is a chemical that protects floors by soaking into the pores found naturally in highly absorbent materials.[12] The deep pores and flexible surface attract soil and bacteria. Floor sealer fills in the pores and makes cleaning much easier.

Carpets or similar fabrics are difficult to clean and sanitize properly. In addition, these items absorb moisture and can serve as a place for microorganisms to grow. Dust mites are microorganisms that live in carpets and may cause allergy to some students. These microorganisms can be easily killed by frequent washing and drying.

Carpets and other surfaces that trap particles are not allowed in toilet rooms, and food preparation and service areas. Area carpets and rugs may be used for activities that do not involve food or contact with body fluids. Washable rugs and carpets shall be secured with a non-slip mat or other method to prevent tripping hazards.

(c) and (d) **Wall and Ceiling Requirements**.

§4707(c) and (d).

Walls and ceilings shall have surfaces light in color to facilitate proper cleaning. Smooth or flat surfaces prevent accumulation of dirt, dust, and debris. When walls and ceilings are stained, it is important to identify the source and type of the stains since stains that are caused by food or drink can attract pests. Water stains can be an indication of water intrusion from the outside or an internal leak of some sort (roof, restrooms, other classroom plumbing, etc.). Rust stains, on the other hand, may indicate that condensation is accumulating on pipes. Water damage or stains can grow mold if the surfaces are not dried promptly. Mold can exacerbate allergies and trigger an asthma episode in sensitive individuals. Asthma is the leading chronic illness among children and adolescents in the United States, and the number one cause of school absences associated with chronic illness. Data from U.S. CDC's National Center for Health

Statistics in 2015 indicate that approximately 10.2 million children were diagnosed with asthma in the United States.

If mold is present, the source of the water should be determined, the problem corrected, and the mold removed by thorough cleaning. It is recommended that ceiling tiles that have become wet and/or have mold on them be thrown away and replaced with new ceiling tiles.

Acoustical ceiling tiles are acceptable provided that they are easily cleanable or replaceable, and no accumulation of dirt or moisture will occur.

Outside air intakes should be protected from animal and insect entry via screens or grills. Screens prevent the entry of insects, which may bite, sting, or carry disease. Bees, wasps, and other stinging pests pose a great risk in the school environment; some individuals are allergic to the stings from these insects. Allergic reactions should be taken seriously as they can be life threatening.

Birds build their nests in areas where their young will be protected, such as roof spaces of buildings when accessible. Bird droppings are commonly found in large quantities around the nesting area. When bird droppings dry they can become aerosolized and inhaled. Bird droppings in close proximity to the outside air intakes of the school building can enter the school's ventilation system and be dispersed throughout the building.

(e) **Door Requirements.**

§4707(e)(1) to (4).

Unobstructed exit routes that are plainly visible are essential for prompt evacuation during emergencies. As soon as children can learn to recognize exit signs and pathway markings, they will benefit from having these paths of egress clearly marked. Adults who come into the building as visitors need these markings to direct them as well.

Proper door swings provide easy, quick passage and prevent injuries. The *NFPA 101: Life Safety Code* from the National Fire Protection Association (NFPA) requires that doors serving an area with fifty or more people swing in the direction of egress travel. If not, this can be a safety issue when a large number of persons might push against each other, leaving those up against a door without the ability to step back and allow the door to swing back into the room.

Properly installed doors are important to the health and safety of school occupants. Doors should not admit pests and rain when shut and fit tightly in their frames to minimize draft and loss of temperature control.

(f) **Window Requirements**.

§4707(f)(1) to (2).

Windows that are not properly screened and maintained allow pests into the school building, make thermal comfort for the occupants more challenging, and create safety concerns. Screens not less than 16 mesh to the inch will prevent the intrusion of most insects. Furthermore, poorly maintained window systems with cracks or openings may cause injuries and allow for water intrusion into the school environment. When moisture is allowed to collect and remain, mold will start to grow. For sensitive individuals, mold exposure can result in an allergy or asthma episode.

(g) **Classroom Equipment Requirements**.

§4707(g)(1) to (3). Chalkboards.

Chalkboards with smooth, even surfaces facilitate easy cleaning and maintenance. Excessive chalk or marker dust on chalkboard or whiteboard trays can be dispersed into the air. The dust generated by these products can be inhaled and may trigger an allergy or asthma episode

in sensitive individuals. Cleaning the trays of these boards on a daily basis when the room is not occupied by students may help prevent or reduce the number of adverse respiratory episodes.

Likewise, the proper placement of chalkboards is important to ensure that the students are able to see it properly, without any glare or shadows.

§4707(g)(4) to (5). Lead.

All classroom equipment shall also be free from lead or other hazardous substances. Lead is a neurotoxin. Even at low levels of exposure, lead can cause reduction in a person's intelligence quotient (IQ) and attention span and result in reading and learning disabilities, hyperactivity, and behavioral difficulties. These effects cannot be reversed once the damage is done, affecting a child's ability to learn, succeed in school, and function later in life. Other symptoms of low levels of lead in a person's body are subtle behavioral changes, irritability, low appetite, weight loss, sleep disturbances, and shortened attention span.[13]

Labels are required on art supplies to identify any hazardous ingredients, precautions, and first aid.

(h) **Seating Requirements**.

§4707(h)(1) to (4).

Student chairs and writing tables that are properly constructed and are comfortable for the users facilitate reading, comfort, completion of projects, and safety. Undue pressure from the forward edge of the seat under the student's knees will affect the student's comfort and ability to concentrate.

Likewise, student desks that are dirty, rough, and in poor condition are not conducive to learning. Unclean desks can be an attraction for pests and can harbor bacteria and viruses. Desks

that are cracked, missing portions of the surface, or are wobbly could cause injury to students from sharp, protruding edges, or a fall.

Proper illumination on desks is also important for occupants to be able to comfortably and accurately see their tasks, such as reading and writing.

(i) **Maintenance and Housekeeping Requirements**.

§4707(i)(1) to (4).

Clutter will contribute to pest infestations by providing them shelter and food. Dust collection on clutter may contribute to asthma and allergy episodes in sensitive individuals.

A lack of storage space will contribute to clutter in the classroom. All storage containers should be kept on shelving or in cabinets so that floors and other horizontal surfaces can be cleaned. Storage containers should not be stored outside of cabinets, when cabinets are available. Keeping storage to a minimum allows for proper cleaning of the classroom and provides less of an attraction for pests. Nothing should be stored long-term that will inhibit proper and thorough cleaning of the floor or other horizontal surfaces. Teaching supplies should be stored in containers that can be easily moved and cleaned. Educational staff should keep only materials that are necessary for instruction and will be used during the school year in the classroom. Storage containers placed in locations that block air flow, such as on or around ventilators, can reduce the quality of the indoor air and the thermal comfort of the occupants.

One of the substances most commonly involved in poison exposures of children are cleaning substances. Therefore, proper storage of cleaning materials and maintenance equipment is very important. These should be properly secured at all times to limit access and prevent injuries to students and staff.

§4708. Ventilation.

§4708(a) to (g).

Adequate ventilation in a classroom is important for the comfort and health of the occupants. The presence of dirt, moisture, and warmth encourages the growth of mold and other contaminants, which can trigger allergic reactions and asthma. Incidents of acute asthma episodes among children have doubled in the past 10 years, and asthma is currently the No. 3 reason American children under the age of 15 are hospitalized.[14]

Poor IAQ has been linked to headaches, sore throats, sleepiness, lethargy, dizziness, and asthma.[15] Good IAQ can increase productivity and a sense of comfort for all school occupants.

The American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Standard 62 prescribes ventilation rates for acceptable indoor air quality. The 15 cubic feet per minute per student (cfm/student) recommended by ASHRAE 62-1999 was found to be "the minimum ventilation rate necessary to maintain the levels of important airborne contaminants below recognized guidelines set by United States Environmental Protection Agency (EPA), National Institute for Occupational Safety and Health (NIOSH), American Conference of Governmental Industrial Hygienists (ACGIH), and CDC."

Objectionable odors in the science, laboratory, and art rooms may contain toxic ingredients, including possible human carcinogens, creating a significant risk to the health and well-being of the occupants. Thus, a higher ventilation rate may be required for these rooms. Toxic chemicals can produce fumes that trigger asthma, allergies, headaches, and nausea. When mechanical ventilation is necessary, it must have adequate capacity to ensure that soiling of walls, ceilings, and other equipment is minimized, obnoxious odors or toxic fumes are effectively removed, and no hazards or nuisances involving accumulation of dust and similar wastes are created.

Dust or debris shall not be allowed to collect on the ventilation system filters to prevent allergy or asthma attack on certain people. Routine maintenance of the filters also ensures that the equipment is working efficiently.

§4709. Temperature and Humidity.

§4709(a). Temperature.

Temperature cannot be overlooked in the school environment because thermal comfort is vital for school occupants. In addition, temperature impacts indoor contaminant levels.[16] The higher the temperature, the more likely it is for molds, fungi, bacteria, and other indoor pollutants to proliferate.

A number of factors interact to determine whether people are comfortable with the temperature of the indoor air. These factors include the amount of clothing, activity level, age, and physiology of people. The ASHRAE Standard 55-2004 describes the temperature ranges that are comfortable for most people. Using the adaptive method of this standard, the acceptable temperature for 90% of people is in the range of 75^{o}F – 84^{o}F based on Guam's monthly mean temperature of about 81^{o}F.[17]

§4709(b). Humidity.

Humidity is a factor in the thermal comfort of the occupants and the growth of mold. Excessively high or low relative humidity can produce discomfort. High relative humidity reduces a person's ability to lose heat through perspiration and evaporation, so that the effect is similar to raising the temperature. In addition, RH of 70% and above can promote the growth of mold and mildew which may cause allergy to sensitive people. Low relative humidity, on the other hand,

can cause dry eyes, dry skin, and respiratory irritation to occupants. ASHRAE Standards 55-2004 and 62-1999 require that relative humidity (RH) should be between 30% - 60%.

Humidity also impacts indoor contaminant levels.[16] As previously mentioned, an increase in relative humidity has the same effect as increased temperature. This makes it easier for microbes and other contaminants to thrive in the air.

§4710. Lighting.

§4710(a) to (e).

Adequate lighting is important for health and learning. For good visual performance and comfort, occupants need to see their visual tasks accurately and quickly. Every school should have enough light for students to learn and see all areas of the classroom, for teachers to use different media for instruction, and for custodial staff to properly clean. The Illuminating Engineering Society of North America (IESNA) Lighting Design Guide specifies the foot-candle requirements for different areas of educational institutions.

Shades and blinds help control levels of illumination to facilitate cleaning, reading, completion of projects, comfort, and safety. Too little light, too much glare, and confusing shadows can cause eyestrain and headaches.

The safety of lighting fixtures also has to be ensured by providing some type of shielding to the exposed bulbs to protect occupants from glass shards in the event it is shattered.

§4711. Plumbing.

Improper installation and maintenance of the plumbing system can cause problems such as back-siphonage, cross-connections, and leakage. To ensure proper sanitation and good hygiene,

plumbing fixtures in schools need to be working properly. Wastewater must be collected, contained, transferred, and disposed of properly because it may contain pathogenic microorganisms and poisonous chemicals that may threaten the health and comfort of students and teachers. All drains should be able to receive water and waste for release into the sanitary sewer system. When drains become clogged, they can overflow onto the floor creating an unsanitary environment.

Water leaks, on the other hand, can be costly because of increased water usage, cause property damage, and result in an increased potential for mold growth and pest infestation. Plumbing fixtures that become broken or inoperable should be fixed immediately. The affected areas should also be promptly dried and cleaned.

§4712. Water Supply.

§4712(a) and (c). Clean Water Supply.

Water from an unsafe source may become a vehicle for transmission of disease-causing organisms. Water can also become contaminated with natural or man-made chemicals. Therefore, for the protection of students, teachers, and employees, water must be obtained from a source regulated by law and must be used, transported, and dispensed in a sanitary manner. The water supply system should also be sufficient to meet the demands of the school population.

When water supply is inadequate or unsanitary, as may happen during natural disasters, the school shall find alternative means of water supply, such as a portable water tank or bottled water. Another alternative may be for school operations to temporarily cease until adequate water supply is restored.

§4712(b)(1) to (10). Drinking Fountains.

Access to water provides for fluid maintenance that is essential to body health. The provision of one drinking fountain per 75 students aims to ensure access of potable drinking water throughout the day.[18]

A smooth, nonporous surface prevents deterioration and mold, and is easier to clean and sanitize. This helps prevent the spread of infectious diseases. Water containers should also be covered and kept clean to avoid contamination of the drinking water.

The human mouth contains a multitude of microorganisms that could possibly be transmitted to others, especially from saliva on the basin from spittle. The water stream coming out of the spout should be projected at an angle from the vertical. To prevent students from touching the mouth guard while taking a drink, the water should stream at least one inch above the mouth guard, but not so high that the floor beneath the fountain becomes wet.

To prevent cross-contamination, the use of sanitary single service cups is needed when providing water from a dispenser. The reuse of the same cup between individuals promotes disease transmission, and thus, should not be practiced.

§4712(d) and (e). Back-Flow Prevention.

Pressure differentials may allow contamination of drinking water if cross-connections or submerged inlets exist.[18] Whenever a condition is established for the continuous flow of water between a potable water supply and a source of contaminated water, a cross-connection has been made. This cross-connection will convert the intended inlet to become a siphon if the pressure in the water supply is reversed. A typical example of a cross-connection caused by the submerged inlet principle is a short hose often attached to the faucet of janitorial and/or laundry sinks that extends below the top edge of the basin. The end of such hose is often found in a pool of potentially contaminated water. If the water faucet is not completely closed, a loss of pressure in the water

system could result in the contaminated water being drawn up the hose like dirt is drawn into a vacuum cleaner, thus contaminating the drinking water supply. To prevent this, vacuum breakers shall be installed as part of the plumbing fixtures.

§4713. Handwashing Unit.

§4713(a) to (h).

Proper hand hygiene is the most important way to reduce the spread of infection. Many studies have shown that improperly cleaned hands are the primary carriers of infections. In order to encourage people to wash their hands, hand washing units should be readily accessible and available to them. The 2009 International Plumbing Code, which was adopted by Guam, sets a minimum ratio of one student per fifty handwashing stations.

Nothing must block the approach to a hand-washing facility and thereby discouraging its use. In addition, the temperature of the water should be comfortable in order to promote proper rinsing. If hot water is available, the thermostat must be adjusted to 110^{o}F or less to prevent students from scalding themselves.

Lack of supplies discourages necessary and proper hand-washing. Some people are unlikely to wash their hands unless properly equipped hand-washing facilities are accessible in the immediate area. Supplies must be within arm's reach for easy access and use. Liquid soap dispenser and paper towels must also be protected from contamination. This explains the need for paper towel dispensers and tamper-resistant soap dispensers. Shared cloth towels can transmit germs and illness from person to person; thus, their use is prohibited.

§4714. Shower Facilities.

§4714(a) to (g).

There are many types of diseases transmitted through lack of good hygiene. Good hygiene in the schools is promoted through the provision of showers and faucets. A sufficient number of age-appropriate showers must be available to permit separate bathing for every student per period. The water temperature must also be comfortable to encourage proper bathing and washing. The shower facilities shall also be made of smooth, non-slip floors that are sloped to drain to minimize accumulation of moisture on floors, walls, and ceilings. Mold and mildew grow on wet surfaces. Mold can cause allergy, difficulty breathing, and infection.[19] This is also the reason why all areas of the shower facilities must be kept clean, well-ventilated, and in good repair. The height requirement for shower rooms and stalls partitions are put in place to facilitate privacy and sanitation. It is likewise important that the numbers of lockers or cubicles be adequate for the students to keep their personal belongings and to prevent transmission of disease from sharing of personal items.

§4715. Restrooms.

§4715(a) to (l).

Adequate, sanitary toilet facilities are necessary for the proper disposal of human waste, which carries disease-causing microorganisms, and for preventing the spread of diseases. The requirement for minimum ratio of male toilets in secondary schools, colleges, and universities was updated from 1:100 to 1:50 to reflect the ratio required by the 2009 International Plumbing Code, which is the standard adopted by Guam for plumbing systems. These restroom requirements are put in place to help ensure that such facilities will be readily available and accessible to students when the need arises.

Toilet facilities must be of sanitary design and kept clean and in good repair to prevent contamination. To motivate students to use sanitary practices in the school, toilets and urinals

must be of proper height and must be completely enclosed. Toilet stall partitions and doors must also meet height requirements to ensure privacy when in use. In addition, clean supplies such as toilet paper must be readily available and within reach.

Soiled floors are unsanitary and promote the spread of disease. Staff or students who walk on contaminated floors may spread contamination throughout the building. The floors in the restrooms should be cleaned daily or more frequently, as needed. Restroom floors should also be kept dry to prevent slipping or falling.

To minimize unpleasant odors, all restrooms must be well-ventilated and kept clean and must have an appropriately-sized waste container.

§4716. Garbage, Trash, and Recycling Disposal.

§4716(a) to (f).

Outside trash and recycling dumpster areas are attractants for animals and insects, and also a nuisance for people. On school grounds, the trash and recycling areas should be located away from the school buildings, inaccessible to students, and kept clean. The dumpsters should be large enough to accommodate all trash and recyclables without overflowing. Proper and regular disposal is also an essential part of IPM. The entire area should be cleaned as often as necessary to prevent the accumulation of waste on the dumpster pad. Waste containers shall be constructed of durable material, designed and used so that wild and domesticated animals and pests do not have access to the contents, and so they do not leak or absorb liquids. Such containers shall also be regularly washed and sanitized using the appropriate disinfectant. This practice provides proper sanitation and protection of health; inhibits infestations by rodents, insects, and other pests; and prevents odors. Bulk containers shall be placed on concrete surfaces that are sloped to drain into

an approved disposal system to prevent the formation of breeding sites, becoming a source of foul odor, and the creation of pest attractant.

§4717. Food Protection.

Outbreaks of foodborne illness have occurred in schools. Many of these diseases can be prevented through appropriate hygiene and sanitation methods provided in the Guam Food Code.

The development and effective implementation of a food safety policy may help in preventing foodborne illness associated with contamination of food by sick students, improper hand hygiene, and inadequate temperature control, among others. The person in charge, usually the class instructor, needs to know and understand food safety practices so that he/she can monitor and verify that safeguards are in place to prevent contamination of food.

§4718. Safety.

Facilities must place emphasis on safeguarding each student and ensuring that the staff members are able to handle emergencies by providing adequate type and number of first aid kits.

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MINUTES OF PUBLIC HEARING
Proposed Rules and Regulations
For School Building Sanitation
March 9, 2017 (3:00pm – 5:00pm)
Division of Senior Citizens, Conference Room
Castle Mall, Mangilao

Division of Environmental Health (DEH) Attendance	Tom Nadeau, Chief Environmental Public Health Officer (EPHO) Marilou Scroggs, EPHO Administrator Jeffrey Pinaula, Program Coordinator IV Claire Baradi, EPHO III Leilani Navarro, EPHO I	
TOPICS	**DEH**	**PUBLIC**
I. Opening Remarks	Before the official start of the hearing, Tom Nadeau (TN) explained to the attendees how the hearing will be held. Afterwards, he gave the floor to Marilou Scroggs (MS) to formally open the Public Hearing. MS stated the date and time of the start of the Public Hearing - March 9, 2017; 3:00pm. She then read the opening remarks: "My name is Marilou Scroggs; I am an Environmental Public Health Officer Administrator for the Bureau of Inspection and Enforcement of the Division of Environmental Health of the Department of Public Health and Social Services. On behalf of the Director of this Department, Mr. James Gillan, we welcome you all to this public hearing where we will be accepting and hearing comments to the proposed Rules and Regulations for School Building Sanitation. With me today are Mr. Thomas Nadeau, Chief Environmental Public Health Officer of the Division of Environmental Health, and Ms. Leilani Navarro, Environmental Public Health Officer for the Bureau of Inspection and Enforcement. Title 10 GCA, Chapter 21 mandates the Division of Environmental Health to regulate the sanitary operation of institutional facilities such as schools. Section 25101(b) of Chapter 25 of the same code defines "school" as, "any establishment, public or private, for the care and education of students from kindergarten through grade twelve and any college or university or educational institution of higher learning." To carry out the provisions of these mandates, Section 20105 of Title 10 GCA, Chapter 20 authorizes the Director of the Department of	

	Public Health and Social Services to adopt and promulgate rules and regulations, as necessary. The promulgation of rules and regulations is governed by the Administrative Adjudication Law (Title 5, Chapter 9, Guam Code Annotated), and Section 9301 of that law requires that 10 days before the public hearing, a notice must appear in the newspaper of general circulation in Guam announcing the date, time, and place of the public hearing. The Department did comply with that provision by publishing the announcement in The Guam Daily Post on February 23, 2017. Copies of the proposed rules and regulations were also made available at the DEH office and on the Department website as required by law. As part of Administrative Adjudication Law procedures, it was determined by the Department that an Economic Impact Statement was not required, and thus not conducted. Section 9301(i) of that law exempts the Department from conducting the study since the annual economic impact to the public in adopting this proposal will be less than $500,000, as determined by a survey conducted by the Department. In regulating school buildings, the Division of Environmental Health is mandated to issue Sanitary Permits to all qualifying schools. The standards required of schools in the acquisition of such permit are outlined in our Rules and Regulations Pertaining to School Sanitation which was adopted in 1984. The Division has determined that the existing regulations are inadequate in protecting and the health and safety of students and employees in Guam schools. Thus, the Department seeks to update these rules and regulations. Much of the requirements in the current regulations have been retained in the proposal, and some of the most significant changes are: needing to provide adequate playground area for students; establishing standards for temperature, ventilation, and humidity; requirements and exemptions of colleges and universities; and providing sufficient number of toilet facilities and handwashing units. The proposed regulations also detail how compliance inspections by the Division will be conducted.	

	We will now formally accept any written or oral testimonies on the proposed rules and regulations. Dakolo Na Si Yu'os Ma'ase!" Before opening the floor to receive public testimony, TN provided a short explanation in how administrative rules and regulations are adopted by the department: 1. Department is given authorization by the Legislature, via statute, to promulgate regulations. 2. An administrative public hearing is held by the Department to receive public comments about the draft proposal. 3. As determined by the Department, public comments may or may not be incorporated into the draft proposal. 4. Draft proposal is sent to the Attorney General's (AG's) office for legal review. 5. Upon AG's approval, the document is sent to the Governor's office for his approval. The proposal is then transmitted to the Legislature by the Governor. 6. Legislature has 90 days to take action, if any; otherwise, the draft proposal becomes officially adopted. TN stated that much of School Building Rules and Regulations remain the same, but some new items were added and other areas expanded and clarified. For example, he mentioned how classroom temperature was not explicitly mentioned in the existing regulations, but now added in the proposal using ASHRAE standard. TN further added that the public can still submit written testimony 10 days from the date of today's public hearing. Leilani Navarro (LN) began calling individuals who signed-in.	
II. Oral or Written Testimonies	LN called upon Sister Eva Gamotin from Dominican Child Development Center to provide an oral or written testimony. Sister Eva Gamotin declined to provide testimony. LN called upon Sister Versamin Calamiog from Dominican Child Development Center to provide an oral or written testimony. Sister Versamin Calamiog declined to provide testimony.	

	LN called upon Sister Anotia Addy of Maria Artero Catholic Pre-school and Kindergarten to provide an oral or written testimony. Sister Anotia Addy declined to provide testimony. LN called upon Sister M. Emilin Artero of Maria Artero Catholic Pre-school and Kindergarten to provide an oral or written testimony. Sister M. Emilin Artero declined to provide testimony. LN called upon Mr. Jon Quidachay to provide an oral or written testimony. Mr. Quidachay did not have a written testimony but did provide comments and asked questions. LN responded by providing background in how the survey was conducted: • Distributed in July 2016. • Survey had 5 questions and was sent to all DOE schools, private schools, GCC, and UOG. • Survey questions asked if the schools would be able to comply given the proposed changes to the regulation. Specific to Part 3: • Of the 18 public elementary schools that responded, 5 replied that they would not be able to comply. • Of the 3 public middle schools that responded, 1 replied that it would not be able to comply. • Of the 4 public high schools that responded, 1 replied that it would not be able to comply. • The calculation on page 5 of the survey was determined by dividing the number of schools that would not be	Mr. Jon Quidachay introduced himself as an employee of Department of Education's (DOE) Facilities and Maintenance division. Mr. Quidachay asked about Part 3 (ventilation, temperature, and relative humidity) of the Economic Impact Survey that DEH conducted. He questioned how the estimated financial impact amount of $65,350 was determined for all public schools and private schools. Mr. Quidachay added that 25% of GDOE budget ($850,000) was for preventative maintenance of ACs and still wasn't enough. Mr. Quidachay also stated that acquisition of parts and materials were cumbersome due to our location in the Pacific Ocean.

	able to comply by the total number of schools all together. This number (%) was then multiplied by the upper range of the cost to determine the anticipated impact. LN responded that the calculation was based on the surveys that were returned. TN clarified that the figures were not arbitrary but based on the results of the returned survey, which were sent out to all private and public schools. It was based on what was received, and unfortunately, only a small percentage responded. TN also stated that the Division was not saying that the calculated numbers were accurate [or exact] but that it was based on the responses the Division received. TN responded by stating that part of the requirement for promulgating rules and regulations was to do an Economic Impact Study, provided the impact was less than $500,000. If not, the Department was not required to create one. The Division did a survey to get an idea if the impact would be less than $500,000, and based on the responses from the survey, it was determined that the impact would be less than $500,000. TN also stated that the survey was based on the impact of the new requirements of the proposed rules and regulations, and not based on existing requirements of the existing regulations. That was the reason the survey was specific to six items that would have the most significant changes and impact to the school's economy. TN then stated that the Division did not adopt the temperature requirement stated in the Adequate Education law. Instead, the Division utilized the temperature range from ASHRAE	Mr. Quidachay voiced concern that out of the 41 schools, the amount was not enough to cover half the schools. He also stated that the number of units needed to put in for the government procurement side was overwhelming. The amount needed to accommodate the regulations was overwhelming. Mr. Chris Anderson, DOE Administrator for Student Support Services, then asked if the financial information would be used to drive any of the Division's decision making. Mr. Anderson responded that that was a good point of clarification. He understood that the estimated impact was based on the cost of trying to meet the anticipated changes from the new regulations, and not the overall impact of the entire regulations. Just the cost of trying to maintain a certain temperature in the classroom for the Department of Education was very expensive and the figure in the EIS was not a reflection of this.

	standards for non-mechanically ventilated room. Annex 1 of the proposed draft explains the reasoning and justification on why the Division did so. TN also stated that the rules and regulations were still in draft form and DEH was more than happy to accept comments from the public. TN further commented that the Division has been inspecting GDOE for many years and they have made progress in several areas, and did not want to scale back the existing requirements since that would be a step backwards. The Division wants to maintain current requirements and improve certain areas. The proposal seeks to improve what is already required by clarifying and expanding them. One good example is the temperature issue, which is very silent in the existing regulations, and DEH wanted to clarify it in the proposed regulations. LN called upon Mr. John Flores of DOE to provide an oral or written testimony. Mr. John Flores had no testimony to present. LN called upon Mr. Resty Reyes of Saint Anthony Catholic School to provide an oral or written testimony. Mr. Resty Reyes had no testimony to present. LN called upon Mr. Fred Torres of Saint Anthony Catholic School to provide an oral or written testimony. Mr. Fred Torres had no testimony to present. LN called upon Mr. Craig Guevara of DOE to provide an oral or written testimony. Mr. Craig Guevara had no testimony to present but did have questions and comments.	Mr. Craig Guevara stated that he was with the Department of Education and he had questions regarding the economic impact survey. He said he recalled the survey and completed it on behalf of 35 GDOE schools. He questioned if DEH had used that as a "multiplier or not." He also reiterated that there are 41 schools in the Guam DOE but six are leased out so his focus for the survey was on the 35 government-operated facilities. Mr. Guevara also stated that he wanted to know how DEH derived at the numbers in the survey of $5,000 and above. He reiterated that he submitted the survey but he was unsure if DEH received it.

		He said that on one question in the survey, he had indicated that they would not meet the requirement and checked $5,000 and above as his response. Thus, the cost for GDOE would be $5,000 x 35 schools and he wanted clarification on what number DEH used to define "and above."
	TN asked MS and LN if a survey response was ever received from Mr. Guevera. LN replied that she did not receive any survey from Mr. Guevara.	Mr. Guevara stated that there was no signature or name block on the survey and had forwarded the survey to his main office.
	LN asked Mr. Guevara how he submitted the survey.	Mr. Guevara stated that he submitted the form to his Central Office but does not know if was forwarded to DEH.
	TN informed Mr. Guevara and Mr. Andersen that the Division will still accept the survey from GDOE.	
	TN responded that DEH did not use the same standard as the Adequate Education law. LN further added that the temperature requirement in the proposal was based on ASHRAE Standard 55-2004.	Mr. Guevara also asked if DEH defined adequate temperature as 78 degrees Fahrenheit, similar to the Adequate Education Act.
	TN stated that the 83 degrees Fahrenheit was the maximum end of the proposed allowable temperature range using ASHRAE's recommended standards.	Mr. Guevara stated that in the survey, the temperature was increased to 83 degrees Fahrenheit. He asked if this was a new temperature requirement to increase it by 5 degrees.
	TN confirmed that cold water is not being required in the proposal.	He then asked about water coolers: DOE must provide safe drinking water but it did not say it must be cold water.
		Mr. Anderson commented that the law supersedes regulations, and if the law required DOE to have their temperatures at a certain temperature then DOE has to work to comply with that. But he said he was happy that the regulatory requirements are giving Guam DOE a range of up to 83, because it is good for Guam DOE.
		Mr. Anderson also stated that DOE wants inspectors to be consistent; that they are not citing for demerit when they see the temperature ranges from 75 – 83, because inspectors had cited DOE for improper

		ventilation when the temperature was higher than 76 degrees Fahrenheit.
	TN responded that Mr. Andersen may be confusing temperature requirements from relative humidity. Humidity over 70% promotes the growth of mold, and thereby, affecting asthmatic students and air quality.	
	TN added that one of the clarifications made in the proposed regulations was on ventilation since currently there are no standards given.	Mr. Guevara asked when the deadline to submit written testimony would be.
	MS replied that the deadline is 10 days from today.	
	TN asked that written testimony be transmitted to LN.	
	LN stated that her email was not on the EIS but she will give her card after the hearing and that the Division's contact information was on the last page of the survey.	
	TN reiterated that the Division is more than happy to accept any written comments within the next 10 days.	Mr. Guevara thanked the Division for the clarification.
	LN called upon Mr. Phil Roberto to provide an oral or written testimony.	Mr. Phil Roberto did not have a testimony but would like to know how demerits were determined as he couldn't find anything in writing how the Division determines demerits-how two or six demerits will get you to B. It sounded like it was discretionary.
	TN explained that demerit points are given when violations are found during compliance inspections. The more critical the requirement, the greater the demerit score when violated. The law requires demerit score to be 1 to 6. TN stated that the inspection report for school building inspection is still in draft form.	
	LN added that she did bring some copies but not enough for everyone.	
	TN stated that the draft inspection report itemizes requirements, and each requirement is assigned a particular demerit score and grade: 0 – 10 score is an A grade; 11 – 20 score is a B; 21 – 40 score is a C grade; demerit score of 41 and above is a D grade, which is an automatic suspension of the Sanitary Permit, and thus, a closure of the establishment.	
	TN clarified that repeat violations would not increase the demerit points. Although it would	

	be noted in the inspection report, the demerit score will be issued only once for that particular violation. Thus, having 10 of the same violation, would not result in the issuance of a demerit score 10 times. TN responded with an affirmative and explained that the law required DPHSS to immediately suspend a permit if the demerit score exceeds 40 points. However, he added that DEH works with the establishments (i.e., schools) by allowing them to correct the violations on the spot, if possible, but the deficiencies are still noted in the report. MS stated that the current inspection report form provides a total of 120 demerit points; but on the proposed inspection report, the demerit points will add to 100 points. TN replied that DEH determines what is critical and thus the accompanying demerit score. TN explained that the proposal and DEH actions must mirror the statute as to how much time is given to correct the violations. MS replied 30 days are given to the school. LN added that an A grade requires the school to correct non-critical requirements (those with less than 6 demerit point) within 30 days. TN informed Mr. Anderson that DEH will double check the governing law that dictates how much time is given to correct the violations. TN repeated that DEH determines what is critical and thus the accompanying demerit score.	A question from the audience (person unknown) inquired if closure was possible. Mr. Anderson stated that Mr. Roberto provides facility maintenance for JFK, and Mr. Anderson will ensure that they will get with the facility maintenance staff to be familiar with the inspection requirements to ensure DOE facilities do not get the requisite demerits to be shutdown. Mr. Guevara asked if the grade scale remains constant. Mr. Anderson asked for clarification if the time frame for correction of violations cited in a school with an "A" rating is still 30 days. Mr. Anderson asked that when an establishment has less than 10 demerits and a few of them are 2 or 4 demerit points, if he has 30 days or 15 days to correct the violation. Mr. Anderson felt like he missed something based on the language. He would like a statement to clarify whether those demerits that are 2 or 4 will have to be completed in 15 days and not necessarily 30 days. Someone from the audience asked if the demerits were arbitrary or would there be a value assigned to the violation.

	LN called upon Mr. Paul Cruz to provide an oral or written testimony. Mr. Paul Cruz had no testimony to present. LN called upon Mr. Leon Guerrero to provide an oral or written testimony. Mr. Leon Guerrero had no testimony to present. LN called upon Mr. Chris Anderson to provide an oral or written testimony. TN asked the commenter to state his name for the record. TN responded that similar question was once asked to the AG's Office on a different proposed rules and regulations, and that office responded	Mr. Anderson stated that DOE will be submitting a written testimony. He also stated that he had four issues regarding the proposed regulations. The first issue was deferred to Mr. Randy Romero of DOE to better explain the concern of Subsection 4705 (Page 4 of the proposal). Mr. Anderson commented that this particular section was about the adherence to the recently adopted building, plumbing, and fire regulatory codes. He expressed concern that the subsection is not consistent with 21 GCA Chapter 67 and 66. Mr. Anderson asked Mr. Romero to elaborate on this. Mr. Romero asked if DEH was requiring DOE to comply with the latest adopted codes. Mr. Romero commented that 21 GCA Real Property Chapter 67 adopted the 2009 IBC, IPC, and IFC, but 21 GCA Real Property Chapter 66, the Building Law that applies to existing buildings, states that compliance to the current codes is only required whenever any renovation or construction is 50% above the value of the building. He wanted to know if the proposed regulations would arbitrarily require them to comply with the latest code requirements or if this would only apply to existing buildings that exceed the 50% cost in repairs and alterations. Mr. Romero said that he understood that new facilities would need to comply with the latest adopted building code, but he said that DOE has major upgrades to do for existing buildings in order comply with Section 4705 (g) of the proposed regulations. Mr. Romero stated that his name was Randy Romero and that he was from Guam DOE.

	that if the Division was not authorized to enforce the requirement (i.e., the building code), then it would need to refer the matter to the respective regulatory agency (DPW). They also stated that the insertion/referencing of some other agency's requirements were fine to remind the public of other applicable laws and regulations. TN stated that DPW would have to address that specific question, and that DEH included this language in its proposed regulations so to give the schools information about other applicable laws. TN further stated that he did not know how DPW enforces their codes. TN also stated that DEH will refer all sections regarding other agencies' code to the proper agency that has the enforcement power to do so. MS pointed out that this section was deleted from the current, proposed inspection report form; and thus, not applicable during DEH's enforcement. TN again stated that this section was included to notify the school of other regulatory requirements. LN asked if Mr. Anderson had additional questions. MS responded that this requirement pertains to the use of the outdoor area during certain periods such as recess period. MS gave an example: if 100 students will be in the playground at a given time, there must be 10,000 square feet of accessible area. MS commented that based on observations during past inspections, she does not see a problem with public schools meeting the playground requirement because most have big outdoor spaces. MS stated that this requirement might be a challenge for private schools with limited outdoor space.	Mr. Romero suggested to reword this section in a way that it would not be enforced during inspections. Mr. Anderson referred to Subsection 4706, relative to outdoor recreational areas. Mr. Anderson asked if the minimum square foot that is acceptable for students is 100 square feet. Mr. Anderson understood that this subsection did not mean that a total outdoor area must equal to the total school population multiplied by 100 square feet; rather the number of students at any given time multiplied by 100 square feet. This requirement is similar to the locker room facility requirement in that the number of showers required would be relative to the number of students using that facility at any given time.

		Mr. Anderson commented that it would help if the language that was just discussed be written in a manner to clarify the proposed regulations regarding students using the space at any given time. Mr. Roberto commented that private schools with land issues who could not meet this requirement can apply for a variance through the Director.
	TN acknowledged that DEH did include a variance provision, but an alternative plan or option needs to be provided that will address the public health concern. TN stated that whenever a variance is requested, justification shall be provided as to why the school cannot comply with the requirements.	Mr. Anderson then referred to Subsection 4713, relative to handwashing units in lavatories for every 50 students.
	LN stated that most of the plumbing requirements in the current regulations were retained in the proposed regulations. The only change was in the handwashing sink ratio and the toilet ratio for male, which were all based on the 2009 International Plumbing Code.	Mr. Anderson commented that this provision is a potential cost driver for DOE. Mr. Anderson stated that DOE was not really clear as to whether or not the increase will significantly improve the issue of health and safety for the students. Mr. Anderson stated that this comment will be put in DOE's written testimony.
	TN stated that since this was already required by law (as enforced by DPW).	Mr. Anderson reiterated that there would be some big costs that GDOE will incur in order to comply with this requirement and he wanted to make sure that this was duly noted. Mr. Anderson then referred to Subsection 4716. Mr. Anderson commented that this was requiring the trash bins in schools to drain into an approved sewage disposal system, elevated at least 6 inches from the ground surface.
	LN responded that the current regulations require dumpsters to be elevated at least 18 inches from the ground, and that DEH lessened the requirements to 6 inches in the proposed regulations.	Mr. Anderson stated that currently DOE trash bins are on a flat surface, which is usually concrete or paved surface, but they do not drain into any specific drainage system.
	TN stated that Guam Environmental Protection Agency (GEPA) has the authority to address waste disposal, and GEPA had previously stated	

	that if the land has proper swale to prevent puddling, it would be acceptable. TN stated that DEH is concerned about accumulation or puddling of liquid waste that will attract rodents and other vectors. If this is avoided then generally that complies with the requirement, provided that it is elevated above 6 inches from the ground. TN said that the prior requirement was 18 inches, and this proposed requirement was a significant reduction. DEH recognized that it was difficult not just for schools but for other businesses to comply with the 18 inches requirement. TN stated that all variance requests will reviewed on a case by case basis as each school has a different situation and condition. TN also stated that the current regulations does not have the variance provision and it was added into the proposed regulations to give the schools some flexibility. However, the schools must still make attempts to address, fix, and mitigate their problems. LN thanked Mr. Anderson for his comments and called upon Sister Barbara Ungacta to provide an oral or written testimony. Sister Barbara Ungacta said that she did not have any testimony and that she was just there to listen. LN called upon Mr. Randy Romero to provide an oral or written testimony. Mr. Randy Romero had no testimony to present and did not have further comments. LN called upon Mr. Henry Taitano to provide an oral or written testimony.	Mr. Anderson commented that after GDOE makes an assessment of the financial impact to comply with the changes in the regulations, they may apply for a variance. Mr. Anderson commented that he sees in the language that GDOE has 5 years to comply for existing buildings and that they would likely need more time to comply. Mr. Henry Taitano stated that he had a question about page 14, line 16 of the proposed regulations. Mr. Palmer commented that this was more of a Guam Waterworks Authority (GWA) issue and he asked how GDOE would be expected to meet this if the issue lies with another agency providing the service. Mr. Taitano commented that this is the case in Tiyan High School and the contamination of water wells in the area. This would affect Tiyan High School's rating during inspections but in reality, it is not a problem caused by GDOE. Mr. Taitano suggested that there should be a

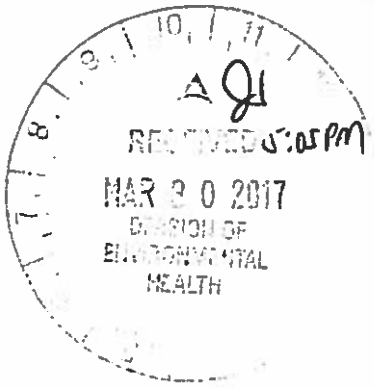
		way to identify how many different schools are not being provided ample water.
	TN commented that he believes it is a mandate of GWA (and GEPA) that all water for consumption be from an approved source and it is potable. He added stated that from DEH's perspective, schools must provide water to the students, and this water should be safe to drink. TN further stated that although GWA is responsible for providing an approved water source, schools should ensure that potable water is provided to students. Thus, if there is water outage, the school should temporarily cease operation until an alternate means of water supply is provided. GDOE would have to provide alternate water supply like bottled water or portable water tank; otherwise, they would need to close down their operation. If they wish to continue operations, they will have to provide alternate water supply.	Mr. Anderson commented that if GWA is not able to provide adequate pressure to the school, toilets are not able to be flushed and there will be sanitary issues. He asked what authority can DEH has to sanction the public utility for failing to provide adequate pressure.
	Mr. Nadeau responded that DEH does not have the authority to regulate GWA.	Mr. Taitano asked if an analysis has been done on the Division's capabilities to enforce all the regulations.
	TN responded that an analysis was conducted nearly a decade ago, and DEH determined that it would need at least 77 staff to meet the existing requirements. Currently, DEH has a staff of 20. TN added that although DEH is short-staffed, it does prioritize inspections based on risk analysis. Therefore, those facilities that cater to high-risk populations like children, the elderly, the ill, and the immuno-compromised get prioritized over others. As there were no further comments from the public, TN reiterated that the Division was still accepting written testimony in the next 10 days. The written testimonies will be reviewed, and the proposed regulations will be revised, as necessary, based on the comments received. After 10 days, DEH will submit the proposed regulations to the AG for legal review. Upon completion of the AG's review, it will be submitted to the Governor for review, and if approved, the Governor will transmit the proposal to the Legislature. Then Legislature has 90 days to decide on what action to pursue – either accept it as is, have another public	

	hearing, or revise it. If no action is taken by the Legislature after the 90 days, then it is promulgated and becomes a part of the regulations.	
III. Closing		MS officially closed the Public Hearing on the Rules and Regulations for School Building Sanitation at 5:00pm, on March 9, 2017.

DEPARTMENT OF EDUCATION
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Jon J. P. Fernandez
Superintendent of Education



March 30, 2017

Mr. James Gillan
Director, Department of Public Health and Social Services
123 Chalan Kareta Route 10
Mangilao, Guam 96913

Attention:
Mr. M. Thomas Nadeau
Chief Environmental Public Health Officer
Division of Environmental Health

RE: Proposed Rules and Regulations for School Building Sanitation

Hafa Adai Mr. Gillan,

Enclosed is the Guam Department of Education's response to the proposed Rules and Regulations for School Building Sanitation. The department appreciates your agency's diligence in addressing and advocating for the health and safety of our students. Although the proposed rules carryovers some existing requirements, the overarching issue is the reduction in ratios that will require extensive activities in order to meet the requirements if passed. Our existing schools have limitations in expansion due in part of the way the structure and infrastructure was designed. The Department of Education struggles to balance operational costs and existing regulations. The cost impact the proposed regulations will have will be significant and will increase operational cost which is primarily dependent on Government revenues.

Senseramente,

JON J.P. FERNANDEZ
Superintendent of Education

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Jon J. P. Fernandez
Superintendent of Education

This document contains Department of Education's comments to the proposed GPHSS Rules and the Public Hearing held on March 9, 2017on the Proposed Rules and Regulations for School Building Sanitation

These comments are directly tied to GDOE operated facilities (35 schools) and does not account for leased facilities (6 schools), GDOE mentioned during the Public Hearing that one Economic Impact Survey form was used for 35 GDOE schools and a determination on how this form was used with a multiplier to derive at the total estimated financial impact @ $457,028.00 was questioned during the Public Hearing.

Commentary points:

- Subsection 4704,d-should add to elementary definition Pre-K and Headstart aged children
- Subsection 4705,h-schools shall have updated floor plans available to Director upon request. If this pertains to existing schools, many don't have regular or updated floor plans. Recommend that this clearly indicate for facilities built after 2000.
- Subsection 4706-new language requiring 100SF per student of playground space. Recommend we stay with existing language..not enough land to meet increase.
- Testimony should itemize each of the proposed changes and reflect whether there is a positive/negative financial impact to GDOE.
- Recommend that DPHSS use the existing timeline based on overall letter grade for determining the response time to correct all demerits. The proposed language on subsection 4720; d4 is not easy to follow.
- Recommend that the proposed regulatory requirements be required of all newly constructed schools or any major renovations where costs equal to 50% or more of the value of the facility.
- Recommend that we specifically indicate that GDOE is not able to meet the proposed regulatory requirements for the 41 existing schools and that we propose three courses of action (COAs) - 1. Remove subsection 4719/4721 in it's entirety and add language that clearly indicates that all 41 existing schools are grandfathered and subject to existing regulations, or 2. Leave subsections 4719/4721 but change the number of years to be in compliance to 20 years and quality that enforcement is subject to GDOE receiving the necessary funding to be in compliance, or 3. Leave 4719/4721 but change the number of years for full compliance two 25 years and enforcement subject to GDOE receiving funding each year to be compliance.

Overall review:

1. **GPHSS Proposed Rules §4705 Sanitary Permit (a) (2nd paragraph, line 13)** Any person, before constructing a new school, or making an addition to, or major alteration of, an existing facility shall first submit plans and specifications of such building or changes to the Director Department.

   Comments:
   Clarification required to define extent of major alteration, examples should be defined as to total square footage or total number of building components to be replaced or upgraded prior to satisfying the requirement of submitting plans and specifications to the Director

   New school construction, additions, and major alterations to existing buildings requires a building permit application as required by 21 GCA. Ch. 66, Article 2; Certificate of Occupancy 21 GCA. Ch. 66, Article 3; 10GCA, Ch. 21, §21102(d) etc... By virtue, this proposed rule is covered by Guam Law and is a redundant rule to apply. All new school construction, additions, and major alterations to existing buildings are handled through contractual means.

2. **GPHSS Proposed Rules §4705 Sanitary Permit (g)** The school shall adhere to the most recently adopted building, plumbing and fire and other pertinent regulatory codes.

   Comments:
   Section 4705 contradicts 21GCA Chapter 67, The Building Code and 21GCA Chapter 66, The Building Law and Section 3401.2 of IBC 2009 which states;

   21GCA Real Property Chapter 67 The Building Code
   §67101 International Building Code Adopted.
   The *International Building Code* (IBC), 2009 edition, including Appendices C, E, F, G, H, I, J, and K, as published by the International Code Council, is hereby adopted and enacted as the building code for Guam. The IBC *shall* be recognized as the standard for the furtherance of the intent of Chapter 66, The Building Law,…

   21GCA Real Property Chapter 66 The Building Law
   § 66104. Application to Existing Buildings.
   (a) General. Buildings or structures to which additions, alterations or repairs are made shall comply with all the requirements for new buildings or structures except as specifically provided in this Section.

   (b) Addition, Alterations and Repairs: More than Fifty Percent (50%). When additions, alterations or repairs within any 12-month period exceed fifty percent (50%) of the value of an existing building or structure, such building or structure *shall be made to conform to the requirements for new buildings or structures.*

   (c) Additions, Alterations and Repairs: Twenty-Five Percent (25%) to Fifty Percent (50%). Additions, alterations and repairs exceeding twenty-five percent (25%) but not exceeding fifty

percent (50%) of the value of an existing building or structure and complying with the requirements for new buildings or structures may be made to such building or structure within any 12-month period *without making the entire building or structure comply.*

IBC 2009 CH. 34, Existing Structures, Section 3401.2

3401.2 Maintenance. Buildings and structures, and parts thereof, shall be maintained in a safe and sanitary condition. Devices or safeguards which are required by this code shall be maintained in conformance with the code edition under which installed. The owner or the owner's designated agent shall be responsible for the maintenance of buildings and structures. To determine compliance with this subsection, the *building official* shall have the authority to require a building or structure to be reinspected. The requirements of this chapter shall not provide the basis for removal or abrogation of fire protection and safety systems and devices in existing structures.

IBC 2009 CH. 34, Existing Structures, Section 3402

TECHNICALLY INFEASIBLE. An *alteration* of a building or a facility that has little likelihood of being accomplished because the existing structural conditions require the removal or *alteration* of a load-bearing member that is an essential part of the structural frame, or because other existing physical or site constraints prohibit modification or addition of elements, spaces or features which are in full and strict compliance with the minimum requirements for new construction and which are necessary to provide accessibility.

Therefore, the proposed requirement to adhere to the most recently adopted codes will be limited to the Guam Laws and Building Codes specified above.

3. **GPHSS Proposed Rules §4706 School Location and Premises (a) & (b).**

Comments:

The proposed (a) & (b) shall only apply to new schools and shall not be a demeritable offense for existing schools. Reference IBC 2009 CH. 34, Existing Structures, Section 3401.2

4. **GPHSS Proposed Rules §4706(j) (k)** Exterior of buildings, walkways, awnings, picnic tables, benches, and other outside structures shall be kept clean and in good repair.

Comments:

Budget constraints prevent GDOE from properly maintaining walkways, awnings, tables, benches, and other outside structures. Canopy system repairs and restoration efforts present a huge challenge year after year as monies are not identified for such an undertaking.

5. **GPHSS Proposed Rules §4707 School Building (d) Ceiling Requirements (1):** Ceilings shall have flat surfaces, light in color and be easily cleanable, and shall be maintained in good repair and in a clean, sanitary condition.

Comments:
Majority of the ceiling surfaces throughout GDOE facilities are constructed using acoustical ceiling tiles. These materials are extremely porous and not cleanable. While GDOE is aware of this requirement for food establishments, DPHSS must consider removing this "cleanable surface" requirement for general areas to include classrooms and assembly areas.

If the rule establishes a complete removal of existing, in this case ceiling tiles from all schools, it will have a definite cost impact. The approximately cost of $5.00 per square feet (material +labor) with a total estimated square feet of 3,074,049 sf for 35 schools for example will equate to $15,370,245.00. Does the proposed rule constitute a distinct life safety hazard?

6. **GPHSS Proposed Rules §4707 School Building (e) Door Requirements (1):** School building exits shall be provided, which are easily accessible and plainly indicated. Exit signs shall be posted at the interior side of the exit door.

Comments:
21GCA Real Property Chapter 67 The Building Code §67101 International Building Code Adopted. IBC and IFC 2009 Section 1011 Exit Signs establishes the requirements for exit sign placements and is enforced through the Guam Fire Code and Guam Fire Department. General and arbitrary requirements as proposed may unnecessarily impose requirements to comply and demerits issued contrary to existing building codes as adopted.

7. **GPHSS Proposed Rules §4708 Ventilation (a).** Ventilation shall be a minimum of fifteen cubic feet per minute per student (15cfm/student) to provide proper circulation of needed air within a room by either windows or mechanical ventilators (ASHRAE Standard 62-1999). Ventilation rate requirements may be increased by the Department for rooms where the ventilation rate is insufficient.

Comments:
GDOE facilities were constructed well before these ASHRAE standards were developed. Again most buildings are 40 plus years old and there should be some form of grandfather clause. Due to continued financial constraints of the Government of Guam upgrades to satisfy ASHRAE standards are out of reach at this time. The ventilation (windows) in a majority of our schools are majorly needed, but due to budget short falls, taking on this feat would be extremely expensive.

ASHRAE Standard 62-1999 on ventilation essentially is on indoor air quality which requires an indoor and outdoor air mixture rate. "Since indoor air quality depends on many factors, including source strengths, moisture control and thermal parameters, these ventilation requirements cannot guarantee good indoor air quality, but meeting these requirements is a sign of managing for good indoor air quality, where unusual countercurrents or sources are present, they should be controlled at the source." This section is a citation from ASHRAE

62-1999 which in essence does not guarantee indoor air quality. How will GPHSS assign a demerit value on noncompliance of this rule when the standard claims not guaranteed?

GPHSS must provide in detail how it plans to implement ASHRAE Standard 62-1999 to older facilities and how it plans to identify ventilation rates. Or is GPHSS interpretation of ventilation inclusive of Air Conditioning Systems CFM?

8. **GPHSS Proposed Rules §4708(e)** Windows, including louvers shall be adjustable at the top and bottom, and when this is the only means of ventilation, at least one-half (112) of the windows shall open from both top and bottom.

Comments:
Majority of the louvered systems throughout GDOE's antiquated facilities are in need of replacement. Lack of funding prohibits these types of upgrades at the current time. GDOE must consider pulling away from the louvered window systems with the Every Student is Entitled to an Adequate Education Laws which require controlled temperature rooms leading to sealing of louvered window systems to maintain cool air within the classroom or assembly areas.

9. **GPHSS Proposed Rules §4712 Water Supply (a) & (c):**

(a) Each school building shall be provided with an ample supply of water from an approved public water system. Water supply shall be safe and of sanitary quality.

(c) The school water supply system shall be in good working order at all times so as to adequately supply the water demand of the school.

Comments:
With the subsections identified above, ample and adequate water supply is the responsibility of GWA. The DOE cannot be held responsible for the lack of and cannot be a demeritable offense when it is beyond our control.

10. **GPHSS Proposed Rules §4713 (2)**: Middle schools, high schools. colleges. and universities shall have at least one ***(1) handwashing unit lavatory for every 50 students.***

Comments:
The change from every 100 to 50 student requirement for handwashing units in the middle and high school poses a significant increase in requirements and poses a significant cost impact due to unavailable water and sewer infrastructure in certain locations in the campus. Existing restroom facilities cannot be expanded to meet this rule unless space is acquired from classrooms which will reduce classroom size. In order to comply; sewer and water lines must be installed at great distances and if building and land elevations are encountered to sewer point of connection, trenching must be conducted or lift stations must be installed or construct additional restroom facilities which will further add to the cost. IBC 2009

Section 2902.3.2 specifies that a toilet facility shall not exceed a distance of 500 feet which will be impossible for DOE to meet due to the way existing schools were designed. This rule should only apply to new school construction and should not affect existing schools as authorized under *21GCA Real Property Chapter 66 The Building Law* § 66104 *and IBC 2009 CH. 34, Existing Structures, Section 3401.2 and 3402* .This concern also applies to **Proposed Rules §4715 1(A) and 2(B)** where the ratio requirement changes from 100 to 50 on Male Toilets.

11. **GPHSS Proposed Rules §4714(b)** Lockers or cubicles shall be provided in a separate room when shower rooms are required.

Comments:
Numerous shower/locker rooms require new installations and upgrades of locker systems. Again, due to financial constraints GDOE is prevented from ensuring full compliance with this requirement.

12. **GPHSS Proposed Rules §4714(e)** The floors of the shower facilities shall be of smooth, finished material with non-slip surface impervious to moisture and sloped to the floor drain. Junctions between walls and floors shall be covered and sealed. Shower rooms and stalls shall have floors, partitions, and walls to a minimum height of six (6) feet, finished with dense non-absorbent and non-corrosive materials having a smooth impervious surface.

Comments:
GDOE locker and shower rooms require major renovations. Also restroom partitions to include shower stalls where equipped, toilets, and urinals are in dire need of replacement. Funding constraints prevent forward movement down these lines.

13. **GPHSS Proposed Rules §4714(f)** Shower facilities shall be kept clean, free of mildew or mold, and well ventilated; and the lockers, showerheads, and floors shall be kept in good repair.

Comments:
GDOE locker and shower rooms require major renovations. Floors and roof exhaust systems are in need of replacement. Roof exhaust upgrades have been placed in FM budget request year after year but denied due to financial constraints.

14. **GPHSS Proposed Rules §4714(g)** The temperature of water at the shower head shall not exceed 110 deg. Fahrenheit

Comments:
Most GDOE locker rooms do not provide hot water at shower rooms.

15. **GPHSS Proposed Rules §4715(i)** Toilet stall partitions and toilet stall doors shall begin not more than one (1) foot from the floor and extend to a height of not less than five (5) feet for elementary, and not less than six (6) feet for middle schools, high schools, and

colleges and universities. Each toilet stall door shall be equipped with a latch or lock to secure the door to ensure privacy when using the toilet.

Comments:
GDOE continues to request funding for restroom renovations to no avail All GDOE schools are in dire need of restroom upgrades inclusive of toilet stall and urinal partitions.

16. **GPHSS Proposed Rules §4716(e)** Bulk refuse containers shall be located on impervious asphalt or concrete surfaces sloped to drain into an approved sewage disposal system, elevated at least six inches from the ground surface.

Comments:
Some locations may require concrete pads to satisfy 6" elevation requirement for bulk refuse containers.

Is the intent of the sewage disposal system a self-contained system (containment system) or connect to public sewage system? What is GPHSS definition of "Approved Sewage Disposal System"?

17. **GPHSS Proposed Rules §4719** School facilities in existence at the time that these regulations take effect shall be given five years from the date that these rules become effective to come into full compliance with the requirements of these rules unless a school facility or person files a written statement of exception with the Director and receives a variance as provided in §4721.

Comments:

DPHSS must strongly consider increasing the window to come into compliance with the propose rules. Due to the financial constraints of the Government and budget request being denied year after year, a more realistic timeline of compliance must be considered. Some regulatory agencies such as the National Fire Protection Association allow up to 20 years to comply with new requirements understanding the costs tied to these regulatory requirements especially for buildings that are 40 plus years old or constructed prior to new standards being developed and adopted.