

America's Common Operating Picture®

Presented by Josh Longenecker

*Director
Pacific Northwest*





Requiring and Funding Accurate and Accessible Maps for Public Schools Statewide

Requiring and Funding Accurate and Accessible Maps for Public Schools Statewide

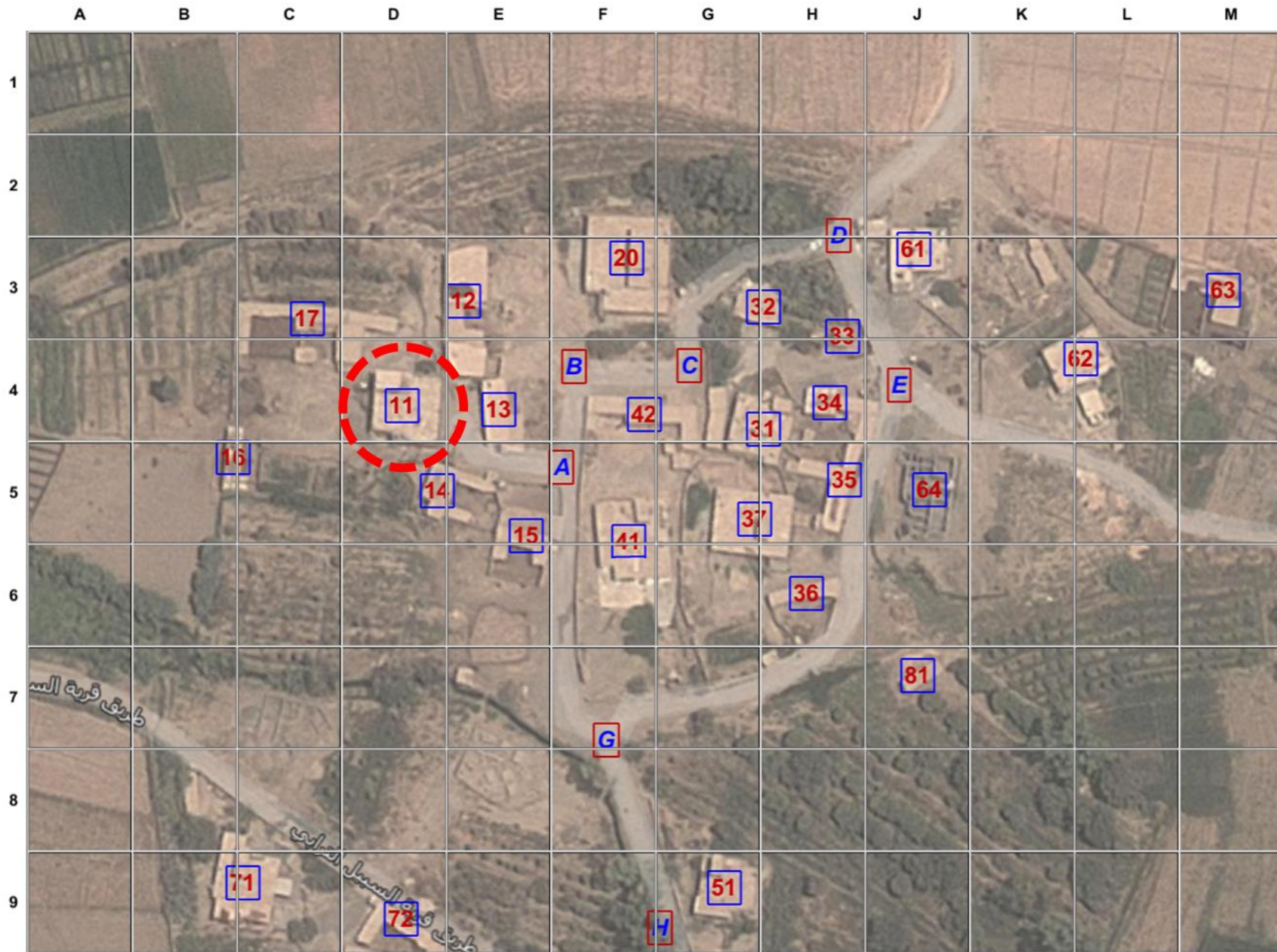


Pennsylvania: Funded via the PA Commission on Crime and Delinquency School Safety Fund



Development of the Gridded Reference Graphic (GRG)





North is UP

Date

25 Yard Grid

Iraq Village #192

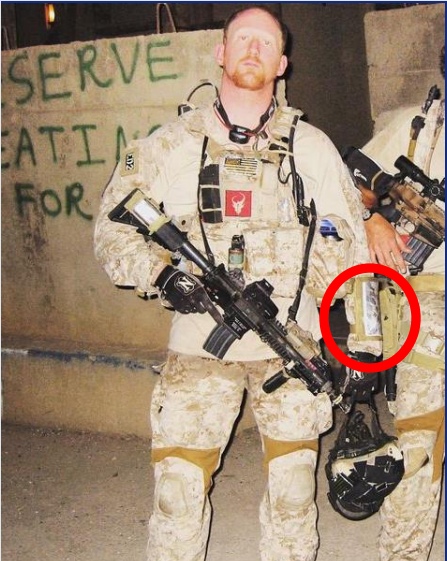


Mapping Technique Was Derived From a Military Best Practice

Validated and Implemented at the Highest Level

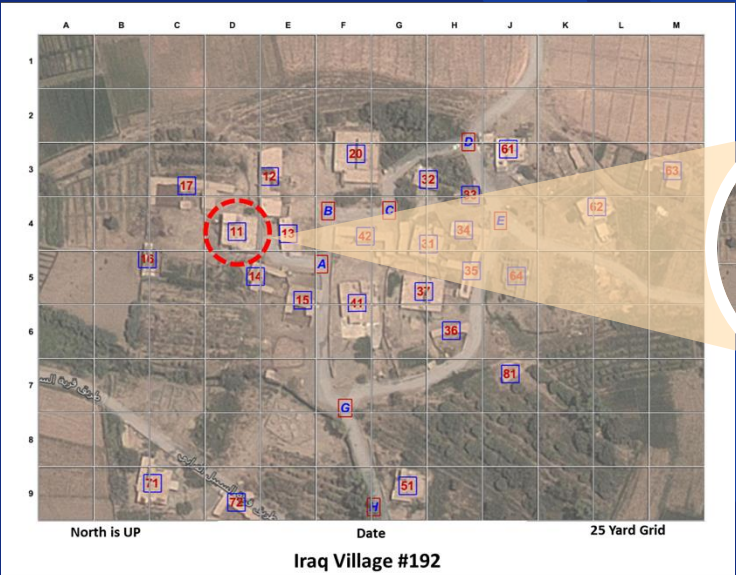


GRG in use during Bin Laden raid.



NAVY SEAL ROB O'NEILL

- ✓ Communication technique used by **US Military Special Operations** in every mission of the last 20 years.
- ✓ Turns the operational area **into a simple game of battleship**, so that operators from the different services, agencies, and nationalities can **speak a common language about an unfamiliar location under stress**.



Sample gridded reference graphic.



Evolution of the GRG into the CRG

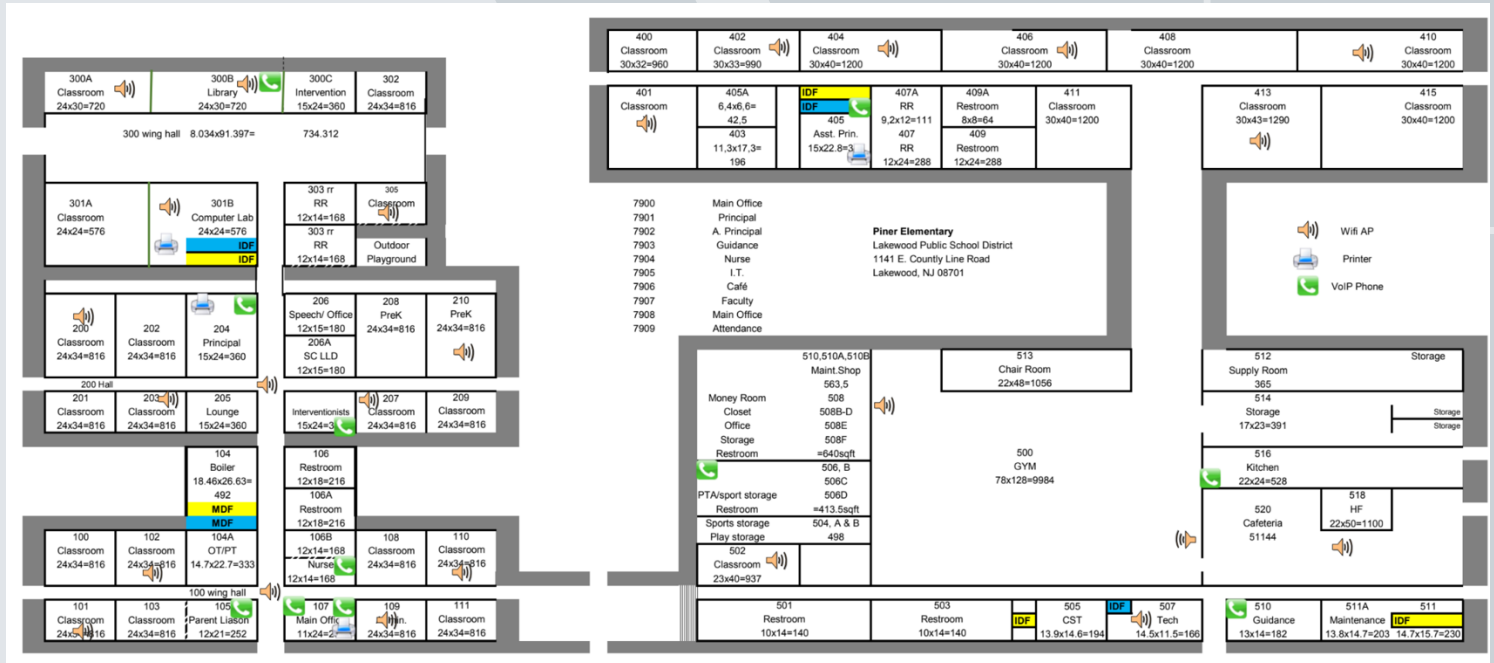
Collaborative Response Graphics.





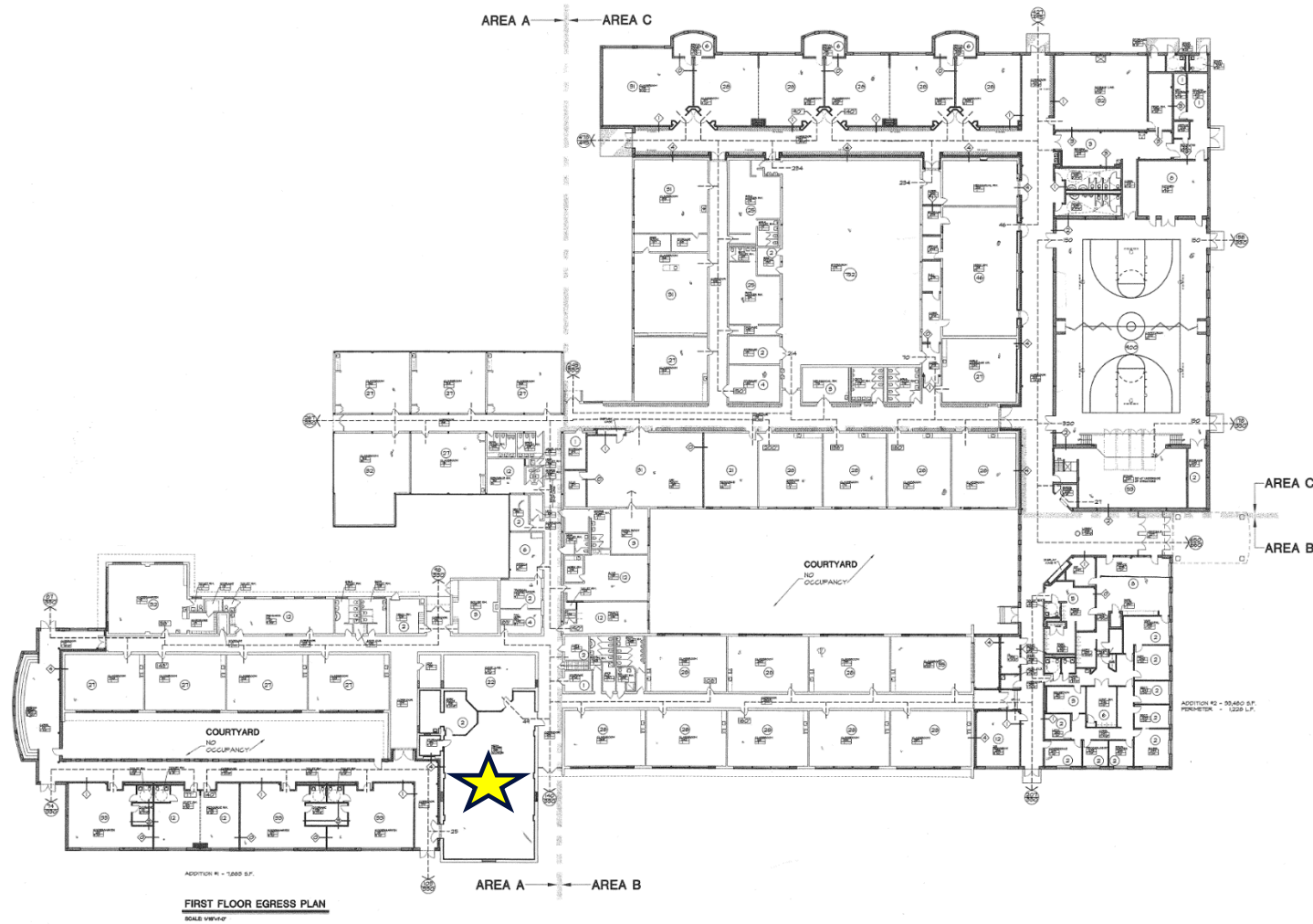
Unusable, Inaccurate, and Inaccessible Floor Plans

According to the Texas House Committee on Youth Health and Safety report on the Uvalde incident, "**the schematic maps of the campus design used by law enforcement to identify potential points of entry were inaccurate.** They wrongly depicted classrooms 111 and 112 as sharing a wall with the library, when in reality, the back walls were flanked with windows. Law enforcement officers testified to the Investigative Committee that they asked whether they could gain access to the classrooms through windows but were deterred by the inaccurate plans." (Page 40-41 *Uvalde After Action- Youth-Health-&-Safety-Committee-Interim-Report-2022*)



According to the after-action report by the Connecticut State Police after the Sandy Hook Elementary incident, "When officers conducted initial and subsequent searches of the school...
...neither floorplans nor schematics of the school were readily available for tactical team search units." (Page 22, *Sandy Hook After Action Report- Connecticut State Police*)





FIRST FLOOR EGRESS PLAN
SCALE 1/8"=1'-0"

CODE ANALYSIS

APPLICABLE CODES

N.J.S.C. 17A:27, SECTION 5.2.2
1999 BOCA BUILDING, FIRE & MECHANICAL, 1999
BOCA PLUMBING, 1999 NATIONAL ELECTRICAL CODE
AND THE NJ REGULATIONS (BCE 1000)

OCCUPANCY CLASSIFICATION (BCE 502)

EXISTING BUILDING
"E" EDUCATION WITH "E" ACCESSORY
"A" ASSEMBLY
SPECIFIC OCCUPANCY AREAS (STORAGE ROOMS,
BOLER ROOMS)

PROPOSED ADDITION
"E" EDUCATION WITH "E" ACCESSORY
SPECIFIC OCCUPANCY AREAS (STORAGE ROOMS,
BOLER ROOMS)

FIRE PROTECTION SYSTEM (BCE 604)
LIMITED AREA FIRE SUPPRESSION SYSTEM TO BE
PROVIDED AT ALL NEW STORAGE ROOMS, BOLER
ROOMS, AND STORAGE ROOMS OVER 50 SF TO BE
SPRINKLED.

CONSTRUCTION TYPE (BCE 602)
EXISTING
30 (SPRINKLED NONCOMBUSTIBLE)
PROPOSED ADDITION
30 (SPRINKLED NONCOMBUSTIBLE)

FIRE RESISTANCE RATINGS OF STRUCTURAL
ELEMENTS AS LISTED IN BOCA TABLE 602 TO BE
PROVIDED EQUAL TO 20 CONSTRUCTION.

GENERAL BUILDING LIMITATIONS (BCE 503)
"E" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #1
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #1 + 1,280 SF + 2,078
ALLOWED

ADDITION #2
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #2 + 1,280 SF + 2,078
ALLOWED

ADDITION #3
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #3 + 1,280 SF + 2,078
ALLOWED

ADDITION #4
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #4 + 1,280 SF + 2,078
ALLOWED

ADDITION #5
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #5 + 1,280 SF + 2,078
ALLOWED

GENERAL BUILDING LIMITATIONS (BCE 503) CONT.
"A" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #6
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #6 + 1,280 SF + 2,078
ALLOWED

ADDITION #7
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #7 + 1,280 SF + 2,078
ALLOWED

ADDITION #8
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #8 + 1,280 SF + 2,078
ALLOWED

ADDITION #9
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #9 + 1,280 SF + 2,078
ALLOWED

ADDITION #10
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #10 + 1,280 SF + 2,078
ALLOWED

GENERAL BUILDING LIMITATIONS (BCE 503) CONT.
"A" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #11
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #11 + 1,280 SF + 2,078
ALLOWED

ADDITION #12
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #12 + 1,280 SF + 2,078
ALLOWED

ADDITION #13
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #13 + 1,280 SF + 2,078
ALLOWED

ADDITION #14
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #14 + 1,280 SF + 2,078
ALLOWED

ADDITION #15
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #15 + 1,280 SF + 2,078
ALLOWED

GENERAL BUILDING LIMITATIONS (BCE 503) CONT.
"A" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #16
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #16 + 1,280 SF + 2,078
ALLOWED

ADDITION #17
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #17 + 1,280 SF + 2,078
ALLOWED

ADDITION #18
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #18 + 1,280 SF + 2,078
ALLOWED

ADDITION #19
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #19 + 1,280 SF + 2,078
ALLOWED

ADDITION #20
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #20 + 1,280 SF + 2,078
ALLOWED

GENERAL BUILDING LIMITATIONS (BCE 503) CONT.
"A" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #21
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #21 + 1,280 SF + 2,078
ALLOWED

ADDITION #22
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #22 + 1,280 SF + 2,078
ALLOWED

ADDITION #23
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #23 + 1,280 SF + 2,078
ALLOWED

ADDITION #24
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #24 + 1,280 SF + 2,078
ALLOWED

ADDITION #25
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #25 + 1,280 SF + 2,078
ALLOWED

GENERAL BUILDING LIMITATIONS (BCE 503) CONT.
"A" USE / TYPE 30 CONSTRUCTION
ALLOWED: 8,600 SF PER FIRE AREA
2 STORIES OR 80'-0" IN HEIGHT

ADDITION #26
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #26 + 1,280 SF + 2,078
ALLOWED

ADDITION #27
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #27 + 1,280 SF + 2,078
ALLOWED

ADDITION #28
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #28 + 1,280 SF + 2,078
ALLOWED

ADDITION #29
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #29 + 1,280 SF + 2,078
ALLOWED

ADDITION #30
AREA TABULATION (BCE 506)
TABLE AREA +
SPRINKLER INCREASE +
HEIGHT REDUCTION +
OPEN PENETRATION +
PERIMETER + 1,228 S.F. + 524 S.F. + 104 S.F. (376)
576 + 2 + 148
ALLOWED AREA +
H.A. ALLOWABLE PER FIRE AREA +
H.A.D. + 2,048 + 2,078 SF
PROPOSED ADDITION #30 + 1,280 SF + 2,078
ALLOWED

KEY PLAN

⊙	TOTAL OCCUPANTS PER ROOM
⊙	TOTAL OCCUPANTS + EXPRESS EGRESS CAPACITY + OCCUPANTS
→	PATH OF EGRESS
—	MAX LENGTH OF TRAVEL

FIRE RESISTANCE RATINGS

⊙	NO FIRE RATING
⊙	1 HR. WALL - GL. + UPG
⊙	2 HR. WALL - GL. + UPG OR UPG
⊙	1 HR. WALL - BRICK PARTITION
⊙	2 HR. WALL - FIRE SEPARATION ASSEMBLY (GL. + UPG)

Prisco & Edwards, AIA A Professional Association

Architecture
Planning
Technology
Telecommunications
Interiors
Waterproofing &
Roof Consultants
Electrical Engineering

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Lawrenceville, NJ 08648
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LJF 4355, NJ
LJF 47748, PA
LJF 284848, NY
LJF 4006, IL

PROJECT TITLE

BRIELLE SCHOOL DISTRICT
ADDITIONS & ALTERATIONS

CLIENT

BRIELLE SCHOOL DISTRICT
605 UNION LANE
BRIELLE, NJ 08703

DATE: 07/01/01

PROJECT No. 00150A

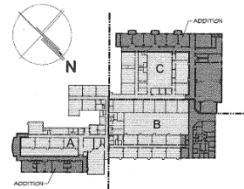
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FLOOR PLAN

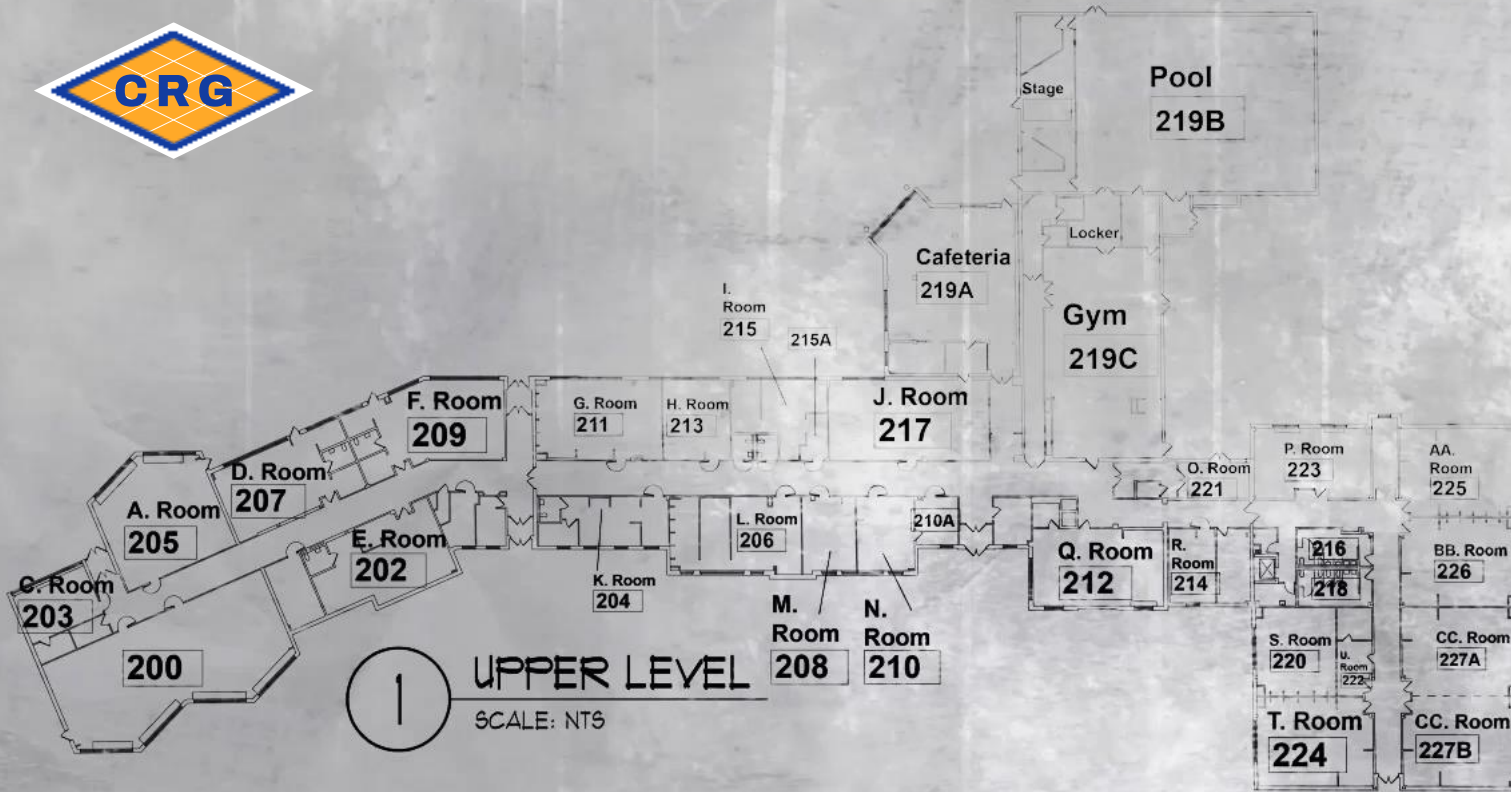
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A-1.0

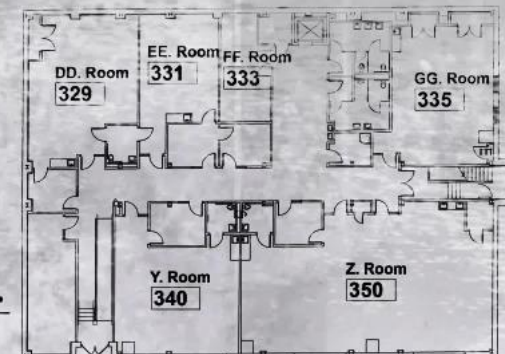
DWG. OF



KEY PLAN
SCALE: N.T.S.



1 UPPER LEVEL
SCALE: NTS



2 LOWER LEVEL
SCALE: NTS

ACME & ABC FLOOR PLANS

123 N. There St.
Somewhere, NJ

Architecture • Interior Design
Planning • Project Management

Chris Smith
Tom Penny

consultant:

client/project:

THIS-SCHOOL
BOARD OF EDUCATION
LRFP
456 Over-there Rd.
Backroad, NJ 08000

drawing title:

REVISIONS	002		
	no.	date	description
drawn	MP	check	scale
issue	date	project no.	0535

drawing number

A-1

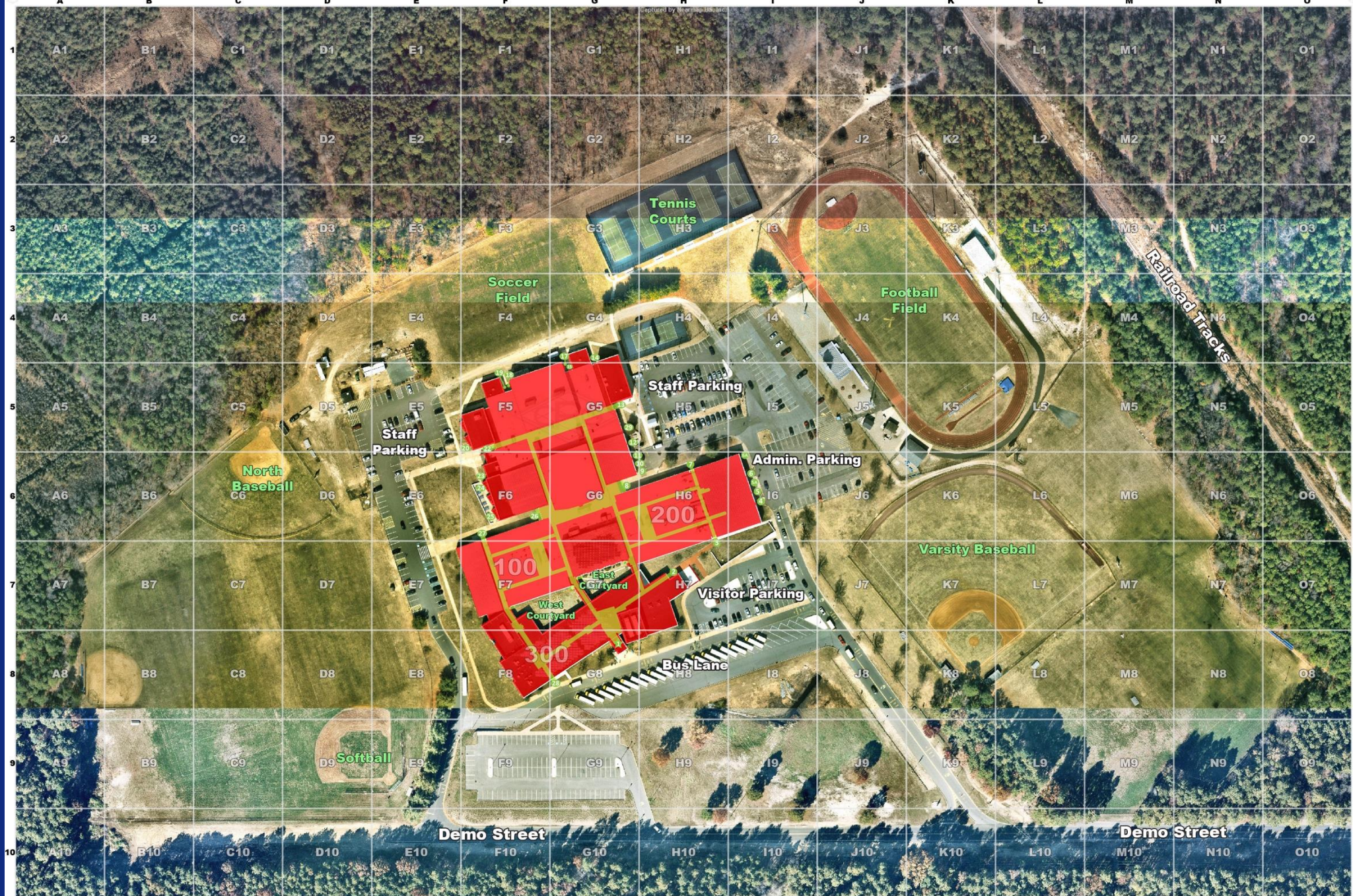


Created by:
CRITICAL RESPONSE GROUP
A Rodgers Group Company

**Version
Control #
D1.0**

Anywhere Elementary School
123 Main St. Anytown, NJ 12345





MAY 2020 100.000000 -40.000000 USNG 31NAA 86021 00000 USA New Jersey Summer Co. Municipality Grades 9-12 POP - 1200



Collaborative Response Group, Inc. 2019

North UP
Version Control #
50 YARD GRID D1.0

MACRO
Demo High School
200 Demo Street, Anywhere, NJ 06789

(732) 779-4393
info@crplans.com
www.CRGplans.com

Commissioned by Critical Response Group Inc.

Floor Plan Locations



Large Format Prints



Binder Inserts



CDs

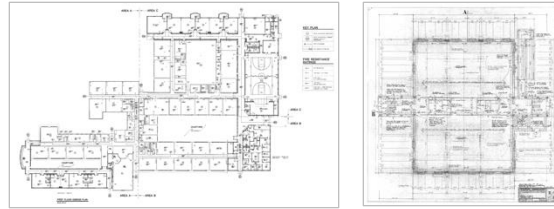


Local Hard Drives



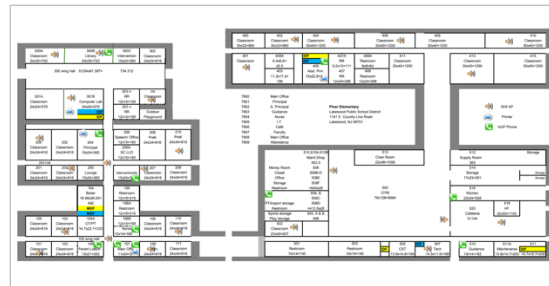
Various File Types

Floor Plan Conditions

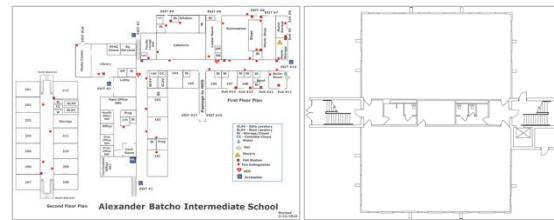


Raster Plans

Poor Quality Plans



Abstract Plans



Segmented Plans

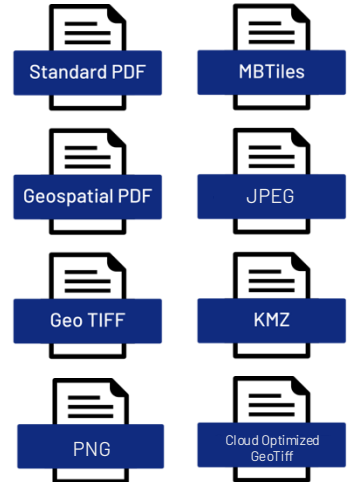
Unlabeled Plans

Collaborative Response Graphic



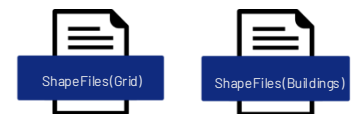
CRG File Formats

Standard Raster Files



WMS

Vector Data Outputs *Optional*



Emergency Response Mapping Data Law

- (a) It must be **compatible** with platforms and applications used by **local, state, and federal public** safety officials.
- (b) It must not require the purchase or integration of **additional software** to view the mapping data.
- (c) It must be provided in a printable format.
- (d) It must be verified for accuracy through a **walk-through** of a school building and school grounds.
- (e) It must be oriented **true north**.
- (f) It must include **accurate floor plans** overlaid on **current aerial imagery** of a school building or school plan.
- (g) It must include **site-specific labeling that matches the structure** of the school building, including room labels, hallway names, external door or stairwell numbers, locations of hazards, key utility locations, key boxes, automated external defibrillators, and trauma kits.
- (h) It must include **site-specific labeling that matches the school grounds**, including parking areas, athletic fields, surrounding roads, and neighboring properties.
- (i) It must include a **gridded overlay with x/y coordinates**.
- (j) provided to the school district and appropriate public safety agencies at no cost beyond the initial cost of production and shall be made available to such entities permanently.



Questions

Jlongenecker@crgplans.com

971-260-7884