CODE REVIEW

Name of Project: Dunwoody-Chamblee Area Elementary School 'D'
Date: 3/10/08

Project Number: DCES 200621

Project Address: Womack Road
Parcel ID 1485.02

APPLICABLE CODES AND ZONING:

Zoning:	R-100
Building:	International Building Code (IBC) 2006 Edition w/ GA Amendments
Life Safety:	NFPA Life Safety Code 2000 Edition
Mechanical:	International Mechanical Code (IMC) 2006 Edition w/ GA Amendments
Electrical:	National Electrical Code (NEC) 2005 Edition w/ GA Amendments
Plumbing:	International Plumbing Code (IPC) 2006 Edition w/ GA Amendments
Gas:	International Fuel Gas Code (IFGC) 2006 Edition w/ GA Amendments
Accessibility:	ADA Accessibility Guidelines (ADAAG) 1997 Georgia Accessibility Code, Chapter 120-3-20
Fire Safety:	International Fire Code (IFC) 2006 Edition w/ GA Amendments
Code Officials:	Larry Barnett, Chief Building Official, Dekalb County Planning and Development Department

Occupancy Classification: Education, (LSC 6.1.3) with Assembly. (LSC 6.1.2) [A-3 in IBC]

Occupancy Separation Requirements: Mixed occupancy allowed (LSC 6.1.14)
2 Hour Fire wall located between central wing and West wing, and between Central wing and South wing

Fire District: DeKalb County

Type of Construction: II–B

Allowable Height and Building Area: Allowable height: 55'-0" (IBC Table 503)
Proposed building height: 36'-9"
Allowable Building Area: (IBC Table 503)
[Separated by 2 hr. fire wall into three buildings.]
Education Occupancy allows for 14,500sf area per story. Section 506 Area modifications allow for a 200% increase if the building is equipped with an automatic sprinkler. (IBC 506.3)
South Education area proposed 23,914sf
West Education area proposed 11,171sf
Allowable Education area per story: 29,000sf

Assembly Occupancy allows for 9500sf area per story. Using the area increase calculations for automatic sprinklers and for frontage on a public way.

Equation 5-2:
If=[(580/729)-0.25](30/30) =.55
Equation 5-1:
Aa=[9500+(9500X.55)+(9500x2) = 33,725

Assembly area proposed: 28,164sf
Allowable Assembly area: 33,725sf

Total Building area per story: 63,249sf
Total Occupied area: 104,191sf

Fire Protection Requirements:
- Automatic sprinkler system throughout
- Smoke barriers between corridors and classrooms, except where classrooms are provided with an exit leading directly outside.
- 1-hour separation at exit stairways.
- 1-hour fire resistance rated storage rooms and Janitors' closets over 100 sq ft.
- Mechanical rooms with equipment less than 400,000 Btu/Hr. are not required to be rated. [Table 508.2 Incidental use areas.]

IBC Table 601
Required fire resistance in hours — Building type II-B

Structural Element	0
Interior Bearing Walls	0
Columns	0
Beams, Girders, Trusses, and Arches	0
Floor/Ceiling Construction	0
Roof/Ceiling Construction	0
Exterior Bearing Walls, Horizontal separation from common or assumed prop line	0
Exterior Non-bearing Walls, Horizontal separation from common or assumed prop line	

Fire Barriers between Building Areas:
- Building divided into three fire compartments by 2-hour fire barriers per IBC 705 and NFPA 7.2.4.3.
- Fire Walls allowed to terminate at underside of roof with Class B roof covering.
- Fire Walls allowed to terminate at interior surface of noncombustible exterior wall per 705.5 (3).
- No separation required between Education and Assembly uses. *[Refer to IBC Table 508.3.3 for fire resistance ratings between occupancies in mixed-use buildings.]*

Fire Resistance Ratings of Vertical Openings:
"Communicating Space" allowed per NFPA 8.2.5.5.

Interior Finishes on Walls and Ceilings:
Interior finishes comply with more stringent of NFPA 14.3.3 and IBC Table 803.5.

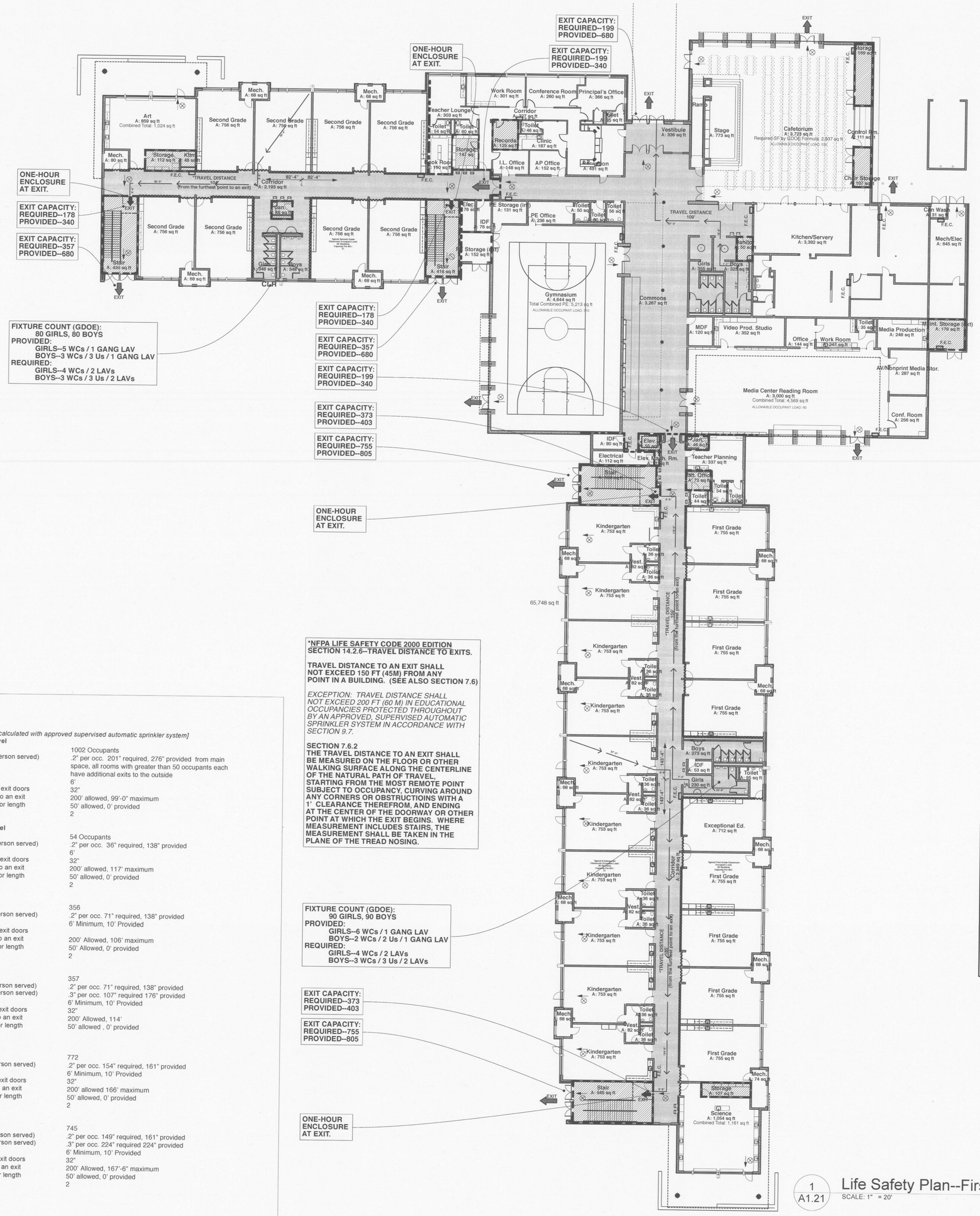
Areas of Refuge: *[per NFPA 7.2.12]*
Required: 1,156 occupant / 200 = 6 *[One 30" x 48" wheelchair space per 200 occupants]*
Provided: Eight [8] spaces *[two per stair]*

Stair Construction:
21 risers @ 6 7/8" = 12'-0"; Tread depth 11".

Parking Requirements:
[IBC Table 1106.1 requires a minimum of 5 handicap accessible spaces.]
Total spaces provided: 128, includes 8 handicap accessible spaces.

Means of Egress: *[All calculated with approved supervised automatic sprinkler system]*

Central Wing: Lower Level	
Occupant Load	1002 Occupants
Exit Capacity (width per person served)	.2" per occ. 201" required, 276" provided from main space, all rooms with greater than 50 occupants each have additional exits to the outside
Minimum Corridor Width	6'
Minimum clear opening of exit doors	32"
Maximum travel distance to an exit	200' allowed, 99'-0" maximum
Maximum dead end corridor length	50' allowed, 0' provided
Minimum number of exits	2
Central Wing: Upper Level	
Occupant Load	54 Occupants
Exit Capacity (width per person served)	.2" per occ. 36" required, 138" provided
Minimum Corridor Width	6'
Minimum clear opening of exit doors	32"
Maximum travel distance to an exit	200' allowed, 117' maximum
Maximum dead end corridor length	50' allowed, 0' provided
Minimum number of exits	2
West Wing: Lower Level	
Occupant Load	356
Exit Capacity (width per person served)	.2" per occ. 71" required, 138" provided
Minimum Corridor Width	6' Minimum, 10' Provided
Minimum clear opening of exit doors	
Maximum travel distance to an exit	200' Allowed, 106' maximum
Maximum dead end corridor length	50' Allowed, 0' provided
Minimum number of exits	2
West Wing: Upper Level	
Occupant Load	357
Exit Capacity (width per person served)	.2" per occ. 71" required, 138" provided
Stair capacity (width per person served)	.3" per occ. 107" required 176" provided
Minimum Corridor Width	6' Minimum, 10' Provided
Minimum clear opening of exit doors	32"
Maximum travel distance to an exit	200' Allowed, 114'
Maximum dead end corridor length	50' allowed , 0' provided
Minimum number of exits	
South Wing Lower Level	
Occupant Load	772
Exit Capacity (width per person served)	.2" per occ. 154" required, 161" provided
Minimum Corridor Width	6' Minimum, 10' Provided
Minimum clear opening of exit doors	32"
Maximum travel distance to an exit	200' allowed 166' maximum
Maximum dead end corridor length	50' allowed, 0' provided
Minimum number of exits	2
South Wing: Upper Level	
Occupant Load	745
Exit Capacity (width per person served)	.2" per occ. 149" required, 161" provided
Stair capacity (width per person served)	.3" per occ. 224" required 224" provided
Minimum Corridor Width	6' Minimum, 10' Provided
Minimum clear opening of exit doors	32"
Maximum travel distance to an exit	200' Allowed, 167'-6" maximum
Maximum dead end corridor length	50' allowed, 0' provided
Minimum number of exits	2



1 A1.21 Life Safety Plan--First Floor
SCALE: 1" = 20'

GENERAL NOTES Life Safety Plans

A REFER TO WRITTEN CODE ANALYSIS LOCATED ON SHEETS A1.21 AND A1.22 FOR ADDITIONAL INFORMATION.

B TEACHERS' LOUNGES ARE DESIGNED FOR MICROWAVE USE ONLY. THERE IS NO COOKING IN THESE SPACES.

SYMBOL LEGEND

- 01 KEYNOTE
- 100c DOOR NUMBER
- A WINDOW IDENTIFIER
- WALL TYPE IDENTIFIER
- WALL TYPE IDENTIFIER-FIRE RATED
- 1 A1.01 BUILDING SECTION INDICATOR: DRAWING NUMBER SHEET NUMBER
- A1.01 WALL SECTION INDICATOR: DRAWING NUMBER SHEET NUMBER
- 1 A1.01 EXTERIOR ELEVATION INDICATOR: DRAWING NUMBER SHEET NUMBER
- 1 A1.01 INTERIOR ELEVATION INDICATOR: DRAWING NUMBER SHEET NUMBER
- 1 A1.01 ENLARGED DETAIL INDICATOR: DRAWING NUMBER SHEET NUMBER
- A COLUMN LINE MARKER
- 0° ELEVATION DESIGNATION
- Room Name 101 ROOM NAME & ROOM NUMBER
- 1 REVISION INDICATOR
- DIMENSION TO FACE OF STRUCTURE OR UNFINISHED MATERIAL
- DIMENSION TO CENTER LINE
- DIMENSION TO FINISH FACE

LIFE SAFETY LEGEND

- 2 HOUR FIRE WALL
- SMOKE BARRIER
- 1 HOUR RATED ENCLOSURE
- 1 HOUR RATED PARTITION
- 2 HOUR RATED PARTITION
- F.E.C. SEMI-RECESSED FIRE EXTINGUISHER CABINET
- EXIT LIGHT - ARROW INDICATES EGRESS ROUTE
- TRAVEL DISTANCE INDICATOR
- AREA OF REFUGE

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Dunwoody-Chamblee Area Elementary School 'D'

DeKalb County School System
Womack Road

REVISIONS

01/18/2008	95% CD submittal
06/16/2008	100% CD submittal

Composite Plans

Life Safety Plan--First Floor

JOB NUMBER 200621

DATE 01/18/2008

SHEET NUMBER A1.21