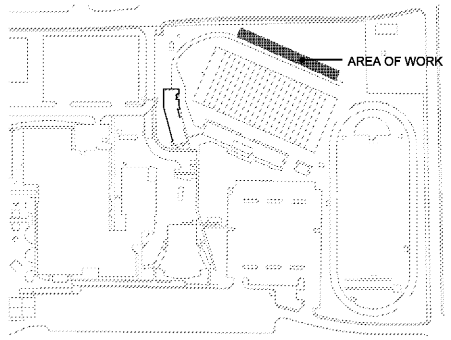
2012 APPENDIX B
NORTH CAROLINA BUILDING CODE SUMMARY

NAME OF PROJECT: SMITH HIGH SCHOOL VISITOR FOOTBALL BLEACHERS REPLACEMENT			
Project Address and ZIP: 2407 S. HOLDEN RD. GREENSBORO, NC 27407		**Proposed Use:** HIGH SCHOOL	
Owner/Agent: GUILFORD COUNTY SCHOOLS		**Contact Person:** Chad M Volk, AIA	
Phone: 336-451-5666 **Fax:** 336-370-3498		**Phone:** 919-719-2814 **Fax:** 919-755-1771	
E-mail: skeltoj@gcsnc.com		**E-mail:** cvolk@daviskane.com	
Owned By: ☒ City/ County	☐ Private	☐ State	
Code Enforcement Jurisdiction: ☒ City	☐ County	☐ State	
Lead Design Professional: Kevin M. Kane			
Designer	**Designer/ Firm**	**License**	**Contact Info**
Architectural	Kevin Kane, AIA Davis Kane Architects, PA	5698	PH: 919-833-3737 FX: 919-755-1771 kkane@daviskane.com
Site/Civil	Steven Miller CLH Design, PA	022625	PH: 919-319-6716 FX: 919-319-7516 smiller@clhdesignpa.com
Electrical	– –	–	PH: – FX: – –
Fire Alarm	– –	–	PH: – FX: – –
Plumbing	– –	–	PH: – FX: – –
Mechanical	– –	–	PH: – FX: – –
Sprinkler/ Standpipe	– –	–	PH: – FX: – –
Structural	– –	–	PH: – FX: – –
Retaining Wall >5' High	– –	–	PH: – FX: – –

2012 EDITION OF NC CODE FOR: ☒ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☒ Repair ☒ Renovation

Constructed: 1983 Original Use: HIGH SCHOOL
Renovated: –
Current Use: HIGH SCHOOL
Proposed Use: HIGH SCHOOL

BUILDING AREA DIAGRAM



VISITOR BLEACHERS AT FOOTBALL FIELD

BUILDING DATA

Construction Type: ☐ I–A ☐ I–B ☐ II–A ☒ II–B ☐ III–A ☐ III–B ☐ IV ☐ V–A ☐ V–B
Sprinklers: ☒ No ☐ Yes ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☒ Yes (Primary) **Flood Hazard Area:** ☒ No ☐ Yes
Building Height: 18 Feet 1 Stories

Gross Building Area:

Floor:	Existing (Sq. Ft.)	New (Sq. Ft.)	Replacement (Sq. Ft.)	Sub-Total (gsf)
3RD FLOOR	– sf	– sf	– sf	– sf
2ND FLOOR	– sf	– sf	– sf	– sf
1ST FLOOR	8,400 sf	– sf	8,400 sf	8,400 sf
Total	8,400 sf	– sf	8,400 sf	8,400 sf

ALLOWABLE AREA – EXISTING BUILDING

OCCUPANCY:
- ASSEMBLY: ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☒ A-5
- ☐ Business ☐ Educational ☐ FACTORY ☐ F-1 Moderate ☐ F-2 Low
- HAZARDOUS: ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
- INSTITUTIONAL: ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
- I-3 CONDITION: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- RESIDENTIAL: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4 ☐ Merchantile
- STORAGE: ☐ S-1 Moderate ☐ S-2 Low ☐ High-Piled
- ☐ Utility and Miscellaneous ☐ PARKING GARAGE ☐ Open ☐ Enclosed ☐ Repair Garage

ACCESSORY OCCUPANCIES:
- ASSEMBLY: ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
- ☐ Business ☐ Educational FACTORY ☐ F-1 Moderate ☐ F-2 Low
- HAZARDOUS: ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
- INSTITUTIONAL: ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
- I-3 CONDITION: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- RESIDENTIAL: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4 ☐ Merchantile
- STORAGE: ☐ S-1 Moderate ☐ S-2 Low ☐ High-Piled
- ☐ Utility and Miscellaneous PARKING GARAGE ☐ Open ☐ Enclosed ☐ Repair Garage

INCIDENTAL USES (Table 508.2.5):
- ☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
- ☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
- ☐ Refrigerant machine room
- ☐ Hydrogen cutoff rooms, not classified as Group H
- ☐ Incinerator rooms
- ☐ Paint shops, not classified as Group H, located in occupancies other than Group F
- ☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
- ☐ Laundry rooms over 100 square feet
- ☐ Group I-3 cells equipped with padded surfaces
- ☐ Group I-2 waste and linen collection rooms
- ☐ Waste and linen collection rooms over 100 square feet
- ☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
- ☐ Rooms containing fire pumps
- ☐ Group I-2 storage rooms over 100 square feet
- ☐ Group I-2 commercial kitchens
- ☐ Group I-2 laundries equal to or less than 100 square feet
- ☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

SPECIAL USES:
☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412
☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423
☐ 424 ☐ 425 ☐ 426 ☐ 427

SPECIAL PROVISIONS: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

PROJECT PLUMBING FIXTURE REQUIREMENTS (NO CHANGE IN OCCUPANCY OR SEATING CAPACITY)

PLUMBING FIXTURE REQUIREMENTS – STADIUM (GRANDSTAND & VISITOR BLEACHERS)

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
A-5, K-12 STADIUM	EXISTING**	7	22	11	9	11	0	0	5
	NEW**	–	–	–	–	–	–	–	–
	REQUIRED	18	22		9	11	0	–	5

* FAMILY AND/OR ASSISTED-USE TOILET ROOM PLUMBING FIXTURES CONTRIBUTE TO FEMALE FIXTURE COUNTS.
** EXISTING FIXTURES ARE WITHIN EXISTING STADIUM TOILET BUILDING (BUILDING AREA E). NEW FIXTURES ARE IN FIELDHOUSE (BUILDING AREA A).

MIXED OCCUPANCY: ☒ No ☐ Yes Separation: – Hr. Exception: –

☐ Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exceptions).

☐ Non-Separated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construciton, so determined, shall apply to the entire building.

☐ Separated Use (508.4) – See below for area calculations.
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1 \quad \frac{-}{-} + \frac{-}{-} \leq 1$

Story No.	Description and Use	(A) Bldg. Area Per Story (Actual)	(B) Table 503 Area 5	(C) Area for Frontage Increase 1	(D) Area for Sprinkler Increase 2	(E) Allowable Area or Unlimited 3	(F) Maximum Building Area 4
1	ASSEMBLY	8,400 SF	UL	N/A	N/A	UL	± 280 FT UL
–	–	–	–	–	–	–	
–	–	–	–	–	–	–	
–	–	–	–	–	–	–	
–	–	–	–	–	–	–	

1 Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet min width = – (F)
b. Total Building Perimeter = – (P)
c. Ratio (F/P) = – (F/P)
d. W = Minimum width of public way = – (W)
e. Percent of frontage increase I = 100[F/P – 0.25] x W/30 = – (%)
2 The sprinkler increase per section 506.3 is as follows:
a. Multi-story building I = 200 percent
b. Single story building I = 300 percent
3 Unlimited area applicable under conditions of Section 507.
4 Maximum Building Area = total number of stories in the building x E (506.4).
5 The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT EXISTING BUILDING	Allowable (Table 503)	Increase for Sprinklers	Shown on Plans	Code Reference
Type of Construction	Type IIB		Type IIB	602.5
Building Height Ft.	UL	H+20'= –	18	TABLE 503
Building Height Stories	1	stories+1= –		TABLE 503

FIRE PROTECTION REQUIREMENTS See Life Safety Plan on sheet(s) T-1.1

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0	0				
BEARING WALLS							
EXTERIOR		N/A	N/A				
NORTH	>30	N/A	N/A				
EAST	>30	N/A	N/A				
WEST	>30	N/A	N/A				
SOUTH	>30	N/A	N/A				
INTERIOR		N/A	N/A				
NONBEARING WALLS AND PARTITIONS EXTERIOR		N/A	N/A				
NORTH	>30	N/A	N/A				
EAST	>30	N/A	N/A				
WEST	>30	N/A	N/A				
SOUTH	>30	N/A	N/A				
INTERIOR WALLS AND PARTITIONS		N/A	N/A				
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		0	0				
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		N/A	N/A				
SHAFT ENCLOSURES – EXIT		N/A	N/A				
SHAFT ENCLOSURES – OTHER		N/A	N/A				
CORRIDOR SEPARATION		N/A	N/A				
OCCUPANCY SEPARATION		N/A	N/A				
PARTY/FIRE WALL SEPARATION		N/A	N/A				
SMOKE BARRIER SEPARATION		N/A	N/A				
TENANT SEPARATION		N/A	N/A				
INCIDENTAL USE SEPARATION		N/A	N/A				
EXIT ENCLOSURE EXTERIOR WALLS		N/A	N/A				

* Indicate section number permitting reduction.

LIFE SAFETY SYSTEM REQUIREMENTS (OUTDOOR BLEACHERS)

Emergency Lighting: ☒ No ☐ Yes
Exit Signs: ☒ No ☐ Yes
Fire Alarm: ☒ No ☐ Yes
Smoke Detection System: ☒ No ☐ Yes ☐ Partial
Panic Hardware: ☒ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS
See Life Safety Plan on sheet(s) T-1.1

ACCESSIBLE PARKING – EXISTING CAMPUS PARKING

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR W/ 5' ACCESS AISLE	VAN SPACES: 132" ACCESS AISLE	VAN SPACES: 8'ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
–	–	–	–	–	–	–

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Wind (I_W) 1.15; Snow (I_S) 1.10; Seismic (I_E) 1.25
Live Loads: Roof N/A psf; Mezzanine N/A psf; Floor 100 psf
Ground Snow Load: 15 psf
Wind Load: Basic Wind Speed 90 mph (ASCE-7); Exposure Category B; Wind Base Shears (for MWFRS) V_x = 5 KIPS V_y = 24 KIPS

SEISMIC DESIGN CATEGORY ☐ A ☒ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☒ III ☐ IV
Spectral Response Acceleration S_S %g 0.221 S_1 %g 0.084
Site Classification (Table 1613.5.2) ☐ A ☐ B ☒ C ☐ D ☐ E ☐ F
Data Source ☒ Field Test ☐ Presumptive ☐ Historical Data
Basic structural system (check one)
☐ Bearing Wall ☐ Dual w/ Special Moment Frame
☒ Building Frame ☐ Dual w/ intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum

Seismic Base Shear V_x = 37 KIPS V_y = 37 KIPS
Analysis Procedure ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored? ☐ Yes ☒ No
LATERAL DESIGN CONTROL: Earthquake ☒ Wind ☒
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) 2,000 psf
Presumptive Bearing capacity ____ psf
Pile size, type, and capacity N/A
SPECIAL INSPECTIONS REQUIRED: Yes ☐ No ☒

SPECIAL APPROVALS

Special Approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, ICC, etc., describe below)

ENERGY SUMMARY (N/A – OUTDOOR BLEACHERS)

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attributes required to portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.
Climate Zone ☐ 3 ☐ 4A ☐ 5
Method of Compliance:
☐ Prescriptive (Energy Code)
☐ Performance (Energy Code)
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE:
Roof/ceiling Assembly (each assembly)

Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Skylights in each assembly:
U-Value of skylight:
Total square footage of skylights in each assembly:

Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Skylights in each assembly:
U-Value of skylight:
Total square footage of skylights in each assembly:

Exterior Walls (each assembly)

Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Openings (windows or doors with glazing)
U-Value of assembly:
Solar heat gain coefficient:
Projection factor:
Doors, non-entrance:
Doors, entrance doors:

Walls below grade (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Floors over unconditioned space (each assembly)
Description of assembly:
U-Value of total assembly:
R-Value of insulation:

Floors slab on grade
Description of assembly:
U-Value of total assembly:
R-Value of insulation:
Horizontal/vertical requirement:
Slab heated:

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SEALS

CLIENT
Guilford County Schools

JOB TITLE
Smith High School
Visitor Football Bleachers
Replacement
Greensboro, North Carolina

JOB NUMBER
1424-A

REVISIONS	DATE

DATE ISSUED
BID DOCUMENTS
1/5/2018

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