

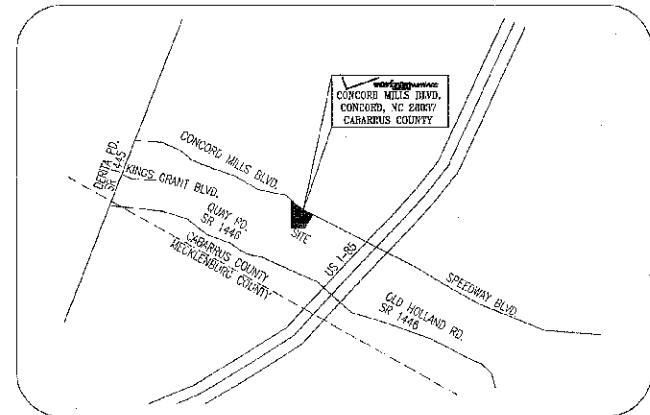


verizon wireless

CONCORD MILLS BLVD.

CABARRUS COUNTY

CONCORD, NC



APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: Verizon Wireless
 Address: Concord Mills Boulevard, Cabarrus County, Concord, NC
 Prepared For: Milligan Architecture, Inc.
 Owner or Contact Person: Lamy Rice Phone #: (704) 564-3030
 Code Enforcement Jurisdiction: City County State

LEAD DESIGN PROFESSIONAL: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581

Architectural: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581
 Civil: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581
 Electrical: Teeter Engineering Group, PA License # 20094 Telephone # (704) 376-2999
 Fire Alarm: Teeter Engineering Group, PA License # 20094 Telephone # (704) 376-2999
 Plumbing: Teeter Engineering Group, PA License # 20094 Telephone # (704) 376-2999
 Mechanical: Teeter Engineering Group, PA License # 20094 Telephone # (704) 376-2999
 Sprinkler- Standpipe: Teeter Engineering Group, PA License # 20094 Telephone # (704) 376-2999
 Structural: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581
 Retaining Walls: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581
 Other: Milligan Architecture, Inc. License # 7981 Telephone # (704) 455-5581

YEAR EDITION OF CODE: 2006 North Carolina Building Code
 New Construction Renovation (Existing Only) Alteration

BUILDING DATA
 Construction Type: I-A I-B I-A II-B II-A III-3
 I-C I-D I-E I-F I-G I-H I-I I-J I-K I-L I-M I-N I-O I-P I-Q I-R I-S I-T I-U I-V I-W I-X I-Y I-Z

Sprinklers: No Yes
 Standpipes: No Yes
 Fire District: No Yes
 Hazmat: No Yes
 High Rise: No Yes
 Gross Building Area: EXISTING (SQ. FT.) NEW (SQ. FT.) SUB-TOTAL
 Floor: 4,550 0 4,550
 Total: 4,550 0 4,550

ALLOWABLE AREA
 Primary Occupancy: Assembly A-1 A-2 A-3 A-4 A-5
 Business Educational Factory-Industrial High-Rise H-1 H-2 H-3 H-4 H-5
 Institutional I-1 I-2 I-3 I-4 I-5
 Mercantile Residential R-1 R-2 R-3 R-4
 Storage S-1 S-2 High-Rise Utility and Miscellaneous Parking Garage Open Enclosed Repair
 Secondary Occupancy: 508.2 508.3 508.4 508.5 508.6 508.7 508.8
 Mixed Occupancy: No Yes
 The required load for 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 construction, as determined, shall apply to the entire building.
 Separated Mixed Occupancy (302.3.2) - 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.
 Actual Area of Occupancy A + Actual Area of Occupancy B ≤ 1
 Allowable Area of Occupancy A + Allowable Area of Occupancy B = _____ < 1.03

STORY	DESCRIPTION AND USE	(A) FLOOR AREA FOR STORY	(B) FLOOR AREA FOR OPEN SPACE INCREASE 2	(C) FLOOR AREA FOR SPRINKLER INCREASE 2	(D) ALLOWABLE AREA OR UNLIMITED	(E) MAXIMUM BUILDING AREA
1st	Mercantile	4,550	12,500			12,500

Open space area increase from Section 508.2 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum 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 = $100 \left[\frac{F}{P} - 0.25 \right] \times W/30$ = _____ (%).
 f. The sprinkler increase per Section 508.3 is as follows:
 a. Multi-story building is = 200 percent.
 b. Single story building is = 300 percent.

Unlimited area applicable under conditions of Sections Group B, C, E, G, I, M, S, A-4 (507.1, 507.2, 507.3, 607.5) Group A medium picture (507.3), Media (402.6), and H-2 aircraft parking hangars (507.7).
 Maximum Building Area = total number of stories in the building x E but not greater than 3 x E.
 The maximum area of parking garages must comply with 408.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

Type of Construction	ALLOWABLE HEIGHT		SHOWN ON PLANS	CODE REFERENCE
	(TABLE 503)	INCREASE FOR SPRINKLERS		
Building Height: In Feet	29'-4"	Height = H + 10' = 39'	3rd	503
Building Height: In Stories	3	Stories 1-3	3	503

Life Safety Plan Sheet #, if provided: _____

BUILDING ELEMENT	FIRE RESISTANCE (HOURS)	FRAMING (WOOD/STEEL)	DETAIL # AND SPEC #	DESIGN # FOR WIND TRANSPORTATION	DESIGN # FOR BIRD IMPACT
Exterior Walls	2	Steel			
Roof	2	Steel			
Interior Walls	0	Steel			
Floors	2	Steel			
Stairways	2	Steel			
Elevators	2	Steel			
Structural Steel Members	2	Steel			
Structural Concrete Members	2	Steel			
Structural Masonry Members	2	Steel			
Structural Wood Members	2	Steel			
Non-Structural Masonry	2	Steel			
Non-Structural Wood	2	Steel			
Non-Structural Concrete	2	Steel			
Non-Structural Steel	2	Steel			
Non-Structural Glass	2	Steel			
Non-Structural Membrane	2	Steel			
Non-Structural Other	2	Steel			

Emergency Lighting: No Yes
 Exit Signs: No Yes
 Fire Alarms: No Yes
 Smoke Detection Systems: No Yes
 Panic Hardware: No Yes

EXIT REQUIREMENTS NUMBER AND ARRANGEMENT OF EXITS	MINIMUM CLEARANCE HEIGHTS		MINIMUM CLEARANCE WIDTHS		MINIMUM CLEARANCE DEPTHS	
	GENERAL	STAIRWAYS	GENERAL	STAIRWAYS	GENERAL	STAIRWAYS
1. MINIMUM CLEARANCE HEIGHTS	7'-0"	7'-0"	3'-0"	3'-0"	3'-0"	3'-0"
2. MINIMUM CLEARANCE WIDTHS	4'-0"	4'-0"	3'-0"	3'-0"	3'-0"	3'-0"
3. MINIMUM CLEARANCE DEPTHS	4'-0"	4'-0"	3'-0"	3'-0"	3'-0"	3'-0"

Corridor door ends (Section 1018.3)
 Single exits (Table 1018.3)

USE GROUP OR SPACE OCCUPATION	(A) AREA	(B) AREA	(C) AREA	(D) AREA	(E) AREA	(F) AREA
Office (Group A)	4,550	12,500				12,500

See Table 1001.1.2 to determine whether net or gross area is applicable.
 See definition "Area, Gross" and "Area, Net" (Section 1002)
 *Minimum aisle width (Section 1008.1); min. corridor width (Section 1016.2); min. door width (Section 1008.4)
 *Minimum width of exit passageway (Section 1020.2)
 *The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1008.1)
 *Assembly occupancies (Section 1024)

DESIGN LOADS:
 Importance Factors: Wind (W) 1.0 Live Loads: Roof 20 psf
 Snow 1.0 Mezzanine 125 psf
 Seismic (S) 1.0 Power 125 psf

SOILS: DESIGN CATEGORY A
 Compliance with Section 1616.4 met? No Yes
 SEISMIC DESIGN CATEGORY B, C, & D
 Provide the following Seismic Design Parameters:
 Seismic Use Group: _____
 Spectral Response Coefficient: $S_a = 0.333$, $S_v = 0.202$
 Site Classification: _____
 Ductile Structural System (check one):
 Bearing Wall Dual w/ Special Moment Frame
 Building Frame Dual w/ Intermediate X/C or Special Steel
 Moment Frame Inverted Pendulum
 Analysis Procedure: Simplified Equivalent Lateral Force Modal
 Architectural, Mechanical, Components anchored?

LATERAL DESIGN CONTROLS: Earthquake: _____ Wind: _____
 SOIL BEARING CAPACITIES:
 Field Test (provide copy of test report): _____ psf
 Presumptive Bearing Capacity: 3,000 psf
 Pile size, type, and capacity: _____

OCCUPANCY	MUTUAL EXCLUSIONS		MIXED OCCUPANCY		MIXED OCCUPANCY	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Assembly	1	1	1	1	1	1

LET OR BEARING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REQUIRED WITH VEHICLE ACCESSIBLE	PROVIDED WITH VEHICLE ACCESSIBLE	
Assembly	15-30	35	-	-	2

SPECIAL APPROVALS
 Special approval: (Local Jurisdiction, Department of Insurance, SBOC, ICC, etc., describe below)

DESIGNER'S STATEMENT
 To the best of my knowledge and belief, the design of this building complies with the thermal envelope requirements of the North Carolina Building Code - Envelope
 Signed: _____
 Name: WILLIAM E. MILLIGAN, ARCHITECT

ELECTRICAL SUMMARY: See sheet E-2 for Electrical Summary
 MECHANICAL SUMMARY: See sheet M-1 for Mechanical Summary

SCHEDULE OF SPECIAL INSPECTION SERVICES
 The following details require special inspections for this project. The construction details which require special inspections for this project are as follows:

NO.	DESCRIPTION	NO.	DESCRIPTION
1	Verification of Soils	11	Inspection of Structural Steel Fabricators
2	Foundation and Footing	12	Structural Masonry
3	Piling and Drilling Plans	13	Welding
4	Modular Retaining Walls	14	High Strength Bolts & Steel Framing exp.
5	Reinforced Concrete	15	Sprayed Fire-Resistant Materials
6	Post-Tensioning Slabs	16	Exterior Insulation and Finish System
7	Pre-cast Concrete Erection	17	Seismic Reinforcement
8	Pre-stressed Concrete	18	Smoke Control
9	Inspection of Pre-Cast Fabricators	19	Detention Basins
		20	Special Closes

Check the above boxes for the special inspection required for this project and list specific special inspections required under chapter 17.

ENERGY SUMMARY (Existing Building)
 ENERGY REQUIREMENTS:
 The following data shall be considered minimum and any specific attributes required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the information for the plan data sheet. If energy budget method, state the annual energy cost budget and allowable energy cost budget.
 THERMAL ENVELOPE:
 Method of Compliance: Prescriptive Performance Energy Cost Budget
 Roof/Ceiling Assembly (each assembly):
 Description of assembly: Insulated single ply on milt. deck
 U-Value of total assembly: U=0.031
 R-Value of insulation: R=15.0
 Skylights in each assembly:
 U-Value of skylight: NA
 Total square footage of skylights in each assembly: NA
 Exterior Walls (each assembly):
 Description of assembly: 6" Metal studs w/ EPS
 U-Value of total assembly: U=0.042
 R-Value of insulation: R=14.2+5.0
 Openings (Windows or doors with glazing):
 U-Value of assembly: Summer U=0.57 Winter U=3.48
 Shading coefficient: 0.29
 Projection factor: NA
 Low-e required, if applicable: NA
 Door R-Values: Stairwell R=4.57 Personnel R=7.46
 Walls adjacent to unconditioned space (each assembly): NA
 Walls below grade (each assembly):
 Description of assembly: Existing building data provided by Tim Williams
 U-Value of total assembly: U=0.042
 R-Value of insulation: R=14.2+5.0
 Floors over unconditioned space (each assembly):
 Description of assembly: Existing building data provided by Tim Williams
 U-Value of total assembly: U=0.042
 R-Value of insulation: R=14.2+5.0
 Floors slab on grade:
 Description of assembly: Existing building data provided by Tim Williams
 R-Value of insulation: R=14.2+5.0
 Horizontal/Vertical requirement: NA
 Slab Height: NA

INDEX OF DRAWINGS

MARK	DATE	REV	SHEET TITLE
	08/29/07	0	COVER SHEET

ARCHITECTURAL PREPARED BY MILLIGAN ARCHITECTURE, INC.
 A-0 08/29/07 0 GENERAL NOTES
 A-1 08/29/07 0 FLOOR & TOILET PLANS, SCHEDULES
 A-2 08/29/07 0 FLOOR FINISH PLAN & DETAILS
 A-3 08/29/07 0 WALL FINISH PLAN & INTERIOR ELEVATIONS
 A-4 08/29/07 0 CABINET ELEVATIONS & DETAILS
 A-5 08/29/07 0 SOTTIN PLAN, SECTIONS & DETAILS
 A-6 08/29/07 0 REFLECTED CEILING PLAN & DETAILS

PLUMBING PREPARED BY TEETER ENGINEERING GROUP, PA
 P-1 08/17/07 0 FLOOR PLAN - PLUMBING

MECHANICAL PREPARED BY TEETER ENGINEERING GROUP, PA
 M-1 08/17/07 0 FLOOR PLAN - MECHANICAL
 M-2 08/17/07 0 MECHANICAL SCHEDULES
 M-3 08/17/07 0 MECHANICAL SPECIFICATIONS

ELECTRICAL PREPARED BY TEETER ENGINEERING GROUP, PA
 E-1 08/17/07 0 FLOOR PLAN - POWER
 E-2 08/17/07 0 FLOOR PLAN - LIGHTING
 E-3 08/17/07 0 SCHEDULES & RISERS
 E-4 08/17/07 0 SCHEDULES & DETAILS
 E-5 08/17/07 0 ELECTRICAL DETAILS
 E-6 08/17/07 0 SPECIFICATIONS

Professional seals and stamps for Milligan Architecture, Inc. and Teeter Engineering Group, PA.



MILLIGAN ARCHITECTURE, INC.
 6451 MOREHEAD RD. P.O. BOX 403
 HARRISBURG, N.C. 28075
 704-455-5581

JOB NO.: 07-016
 DATE: 08/29/07
 REV.:
 TEGPA: 07225