

SOUTH CARGO 3

2012 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS (EXCEPT 1 AND 2 FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: New Egress Door at Warehouse Building
 Address: RDU - South Cargo 3 Zip Code: 27560
 Proposed Use: S-1, Warehouse
 Owner/Authorized Agent: Jim Novak Phone #: (919) 840-7747 E-Mail: _____
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City County Wake State

LEAD DESIGN PROFESSIONAL:

Designer	Firm	Name	Lic. #	Phone #	Email
Architectural	Clark Nexsen	Alfred J. Ockert	10274	919-828-1876	jockey@clarknexsen.com
Civil					
Electrical	Clark Nexsen	Patrick M. Licklider	035022	919-828-1876	plcklider@clarknexsen.com
Fire Alarm					
Plumbing					
Mechanical					
Sprinkler-Standpipe					
Structural					
Retaining Walls >6'					
Other					

YEAR EDITION OF CODE: 2012 New Construction Renovation Upfit
 Alteration

BUILDING DATA

Construction Type: I-A II-A III-A IV V-A
 I-B II-B III-B V-B

Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
 Standpipes: No Yes Class I Class II Class III Wet Dry
 Fire District: No Yes (Primary)
 Building Height: Feet 39'-0"
 Mezzanine: No Yes
 High Rise: No Yes

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUBTOTAL
Floor 6	N/A	N/A	N/A
Floor 5	N/A	N/A	N/A
Floor 4	N/A	N/A	N/A
Floor 3	N/A	N/A	N/A
Floor 2	N/A	N/A	N/A
Mezzanine			
Floor 1	59,035	0	59,035
Basement	N/A	N/A	N/A
TOTAL		0	59,035

ALLOWABLE AREA

Occupancy: A1 A2 A3 A4 A5
 Assembly: A1 A2 A3 A4 A5
 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
 Mercantile:
 Residential: R-1 R-2 R-3 R-4
 Storage: S-1 Moderate S-2 Low High-Piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous:

Accessory Occupancies:

Assembly: A1 A2 A3 A4 A5
 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
 Mercantile:
 Residential: R-1 R-2 R-3 R-4
 Storage: S-1 Moderate S-2 Low High-Piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous:

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

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 construction, so determined, shall apply to the entire building.
 Separated Use (508.4) - See below for area calculations
 For each story, the area of 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.

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

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ³ AREA	(C) AREA FOR FRONTAGE INCREASE ¹	(D) AREA FOR SPRINKLER INCREASE ²	(E) ALLOWABLE AREA OR UNLIMITED ³	(F) MAXIMUM BUILDING AREA ⁴
1	S-1	59,035	17,500	13,125	35,000	65,625	131,250

- Frontage area increases from Section 506.2 are computed thus:
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = $\frac{1,110}{1,110}$ (F)
 b. Total Building Perimeter = $\frac{1,110}{1,110}$ (F)
 c. Ratio (F/F) = $\frac{1}{1}$ (F/P)
 d. Minimum Width of Public Way = $\frac{30}{75}$ (W)
 e. Percent of frontage increase = $100 [(F/P) - 0.25] \times W/30$ = 75% (%)
- The sprinkler increase per Section 506.3 is as follows:
 a. Multi-story Building $I_s = 200\%$
 b. Single story Building $I_s = 300\%$
- Unlimited area applicable under conditions of Section 507
- Maximum Building Area = total number of stories in the building x E (506.4)
- The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type II-B		Type II-B	
Feet 55'-0" (H)	Feet = H + 20' = N/A	30'-0"	
Stories 3 (S)	Stories + 1 = N/A	Stories 2	

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
		REQD	PROV'D				
Structural Frame Including Columns, Girders, Trusses	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
Bearing Walls							
Exterior	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
North							
East							
West							
South							
Interior	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
Nonbearing Walls and Partitions							
Exterior	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
North	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
East	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
West	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
South	>30'-0"	0 HR	EXIST UNDISTURBED CONSTRUCTION				
Interior walls and partitions							
Floor Construction		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Including supporting beams and joists		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Roof Construction		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Including supporting beams and joists		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Shaft Enclosures - Exit		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Shaft Enclosures - Other		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Corridor Separation		0 HR	EXIST UNDISTURBED CONSTRUCTION				
Occupancy Separation		N/A					
Fire Wall Separation		2 HR					
Smoke Barrier Separation		N/A					
Separation (Sleeping units)		N/A					
Incidental Use Separation		N/A					

LIFE SAFETY SYSTEM REQUIREMENTS

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

ACCESSIBLE DWELLING UNITS (Section 1107) EXISTING BUILDING - NO CHANGES

ACCESSIBLE PARKING (Section 1106) EXISTING BUILDING - NO CHANGES

STRUCTURAL DESIGN EXISTING BUILDING - NO CHANGES

PLUMBING FIXTURE REQUIREMENTS EXISTING BUILDING - NO CHANGES

ENERGY SUMMARY EXISTING BUILDING - NO CHANGES

MECHANICAL SUMMARY EXISTING BUILDING - NO CHANGES

ELECTRICAL SUMMARY EXISTING BUILDING - NEW EXIT LIGHTING FIXTURES

CONSTRUCTION PHASING SCHEDULE

CONTRACTOR NOTE:

CONSTRUCTION TO BE COMPLETED IN SHORTEST TIMEFRAME POSSIBLE WITH A MAXIMUM DURATION OF 14 CALENDAR DAYS FROM OWNER ISSUANCE OF NOTICE TO PROCEED (NTP) FOR CONSTRUCTION. ALL EQUIPMENT, DEVICES AND HARDWARE FOR THE JOB NEEDS TO BE PROCURED BY CONTRACTOR BEFORE NTP TO BEGIN CONSTRUCTION WILL BE ISSUED. ONCE CONSTRUCTION HAS BEGUN, WORK SHALL BE CONTINUOUS UNTIL FULLY COMPLETED AND SECURITY GATE IS APPROVED AND OPERATIONAL.

1. BEFORE FIELD WORK BEGINS, MEET WITH BUILDING TENANTS AND STAKEHOLDERS TO COORDINATE THE WORK SEQUENCING AND PROJECT SPECIFICS.

2. PRIOR TO DEMOLITION, CONSTRUCT TEMPORARY SECURITY WALL AND BRACING AS DIRECTED IN THE CONTRACT DOCUMENTS.

3. PRIOR TO DEMOLITION, DISABLE EXISTING MP02 SAACS READERS/SYSTEM TO PEDESTRIAN GATE MP02.

4. CONSTRUCT NEW FENCE SYSTEM AND NEW DOOR AS DIRECTED IN THE CONTRACT DOCUMENTS.

5. ACTIVATE, TEST, AND GET APPROVAL FROM RDU SECURITY/TSA FOR NEW SECURITY DOOR OPERATION.

6. TEST AND GET APPROVAL FROM RDU ES AND WAKE FIRE MARSHALL FOR FIRE ALARM OPERATION.

7. AFTER ACCEPTANCE AND APPROVAL BY AHJ AND THE OWNER, REMOVE TEMPORARY WALL AND REPAIR ANY DAMAGE TO FLOOR AND WALLS.

333 FAYETTEVILLE STREET SUITE 1000
 RALEIGH, NORTH CAROLINA 27601
 919-828-1876 FAX 919-828-1877
 WWW.CLARKNEXSEN.COM



CONSTRUCTION DOCUMENTS



SOUTH CARGO 3
 MP02 SECURITY GATE
 REPLACEMENT
 RALEIGH-DURHAM
 INTERNATIONAL AIRPORT
 RALEIGH, NORTH CAROLINA

CN NO: 4622
 DATE: 06 MARCH 2015
 DESIGN: AJO
 DRAWN: CJD
 REVIEW: CJD

REVISIONS
 No. Date Description By

G001



CONSTRUCTION DOCUMENTS



SOUTH CARGO 3
 MPO2 SECURITY GATE
 REPLACEMENT
 RALEIGH-DURHAM
 INTERNATIONAL AIRPORT
 RALEIGH, NORTH CAROLINA

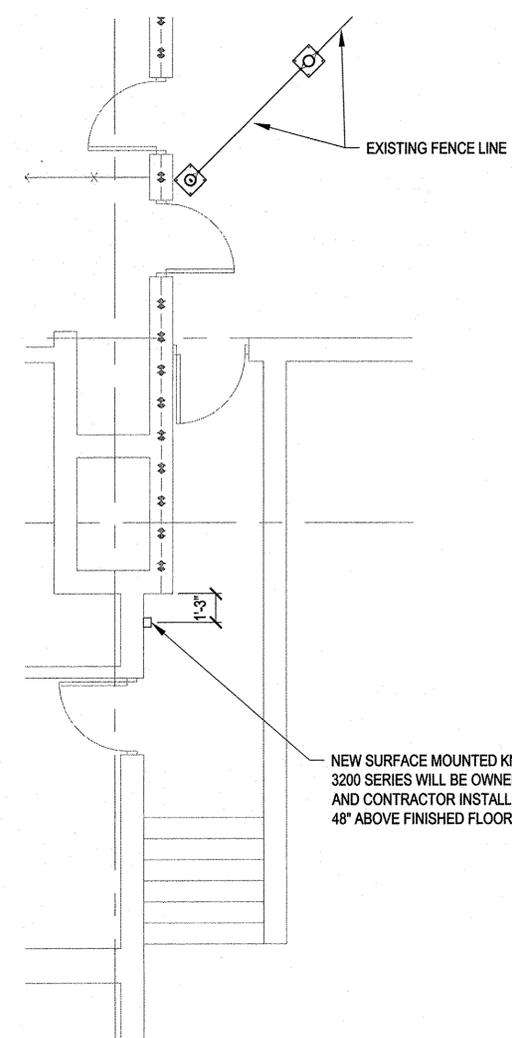
CN NO: 4622
 DATE: 06 MARCH 2015
 DESIGN: AJO
 DRAWN: CJD
 REVIEW: GJD
 REVISIONS

No.	Date	Description	By

A102

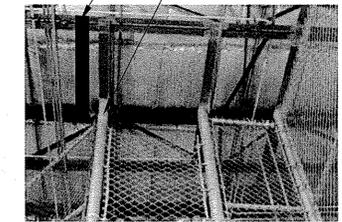
SHEET 3 OF 4

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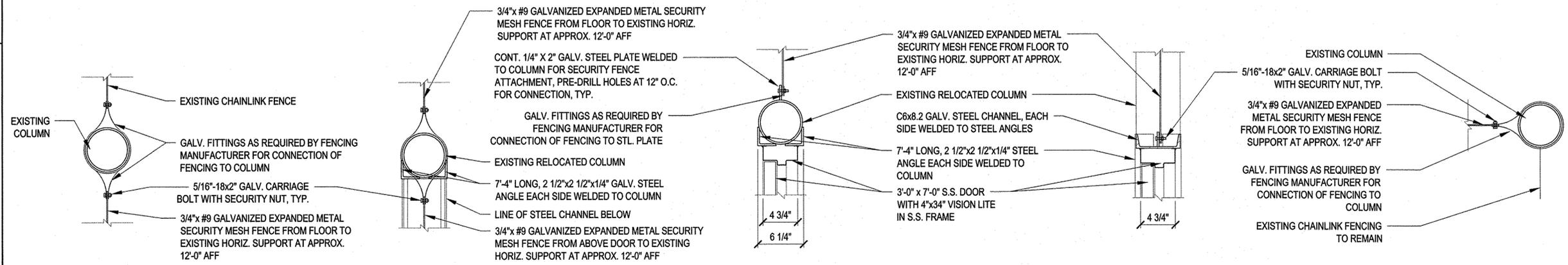
A1 KNOX BOX LOCATION
 1/4" = 1'-0"

WELD 6"x6"x3/8" STEEL ANGLE TO BOTTOM CHORD OF ROOF TRUSSES TO ACCEPT TOP OF COLUMN IN NEW LOCATION, REFER TO GENERAL NOTE 4 FOR WELD
 BREAK WELD AT TOP OF EXISTING COLUMN TO BE RELOCATION



B5 TOP OF COLUMN
 N.T.S.

NOTE:
 PROVIDE FITTINGS AS REQUIRED BY FENCE MANUFACTURER TO ATTACH MESH FENCING TO COLUMNS AND SUPPORTS



A1 DETAIL @ COLUMN
 1 1/2" = 1'-0"

A2 JAMB DETAIL ABOVE DOOR
 1 1/2" = 1'-0"

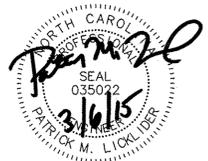
A3 JAMB DETAIL AT DOOR FRAME
 1 1/2" = 1'-0"

A4 HEAD DETAIL
 1 1/2" = 1'-0"

A5 EXISTING COL. PLAN DETAIL
 1 1/2" = 1'-0"



CONSTRUCTION DOCUMENTS



SOUTH CARGO 3
 MP02 SECURITY GATE
 REPLACEMENT
 RALEIGH-DURHAM
 INTERNATIONAL AIRPORT
 RALEIGH, NORTH CAROLINA

CN NO: 4622
 DATE: 06 MARCH 2015
 DESIGN: PML
 DRAWN: JDA
 REVIEW: PML
 REVISIONS

No.	Date	Description	By

ELECTRICAL FLOOR
 PLANS AND NOTES

E101

EXISTING KEY NOTES

- EXISTING 3/4" CONDUIT WITH CAPPED POWER CIRCUIT TO BE UTILIZED FOR POWERING NEW EXIT SIGNS.
- EXISTING 8" X 8" JUNCTION BOX FOR SECURITY WIRING LOCATED ABOVE AT STRUCTURE.
- EXISTING WALL MOUNTED INTERFACE CABINET.
- EXISTING 3" CONDUITS FROM INTERFACE CABINET TO SAACS RISER LOCATED IN THE MAIN TELECOM ROOM.
- EXISTING CARD READER TO BE RELOCATED.
- EXISTING CONDUIT AND WIRING FROM SECURITY DOOR TO INTERFACE CABINET. EXISTING WIRING SHALL BE REPLACED WITH NEW WIRING OF EXACT QUANTITY FOR POWERING / CONTROLLING NEW SECURITY DOOR. EXISTING CONDUIT SHALL BE REMOVED FROM DOOR TO JUNCTION BOX AND FROM JUNCTION BOX TO INTERFACE CABINET.

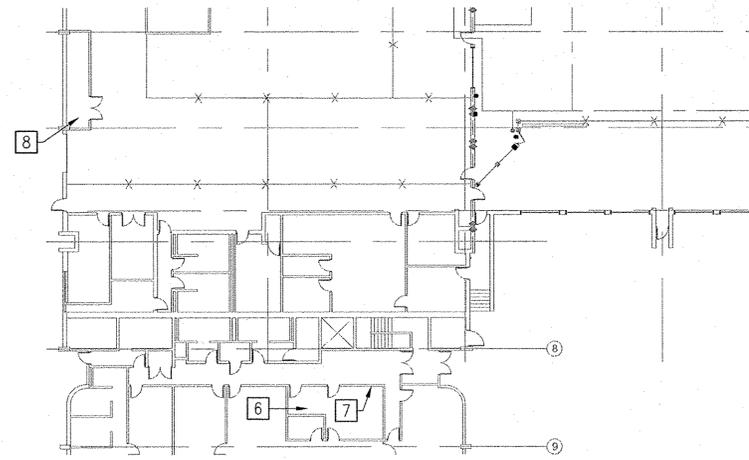
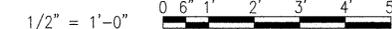
KEY NOTES

- NEW EXIT SIGN, LITHONIA # LQM-S-3-R-120/277-ELN-SD. PROVIDE WITH RED LED, INTEGRAL NICKEL-CADMIUM BATTERY, BLACK HOUSING, AND SELF-DIAGNOSTICS.
- UTILIZE EXISTING CAPPED CIRCUIT AND EXTEND CONDUIT/WIRING TO POWER NEW EXIT SIGNS. TRACE CIRCUIT BACK TO SOURCE AND UPDATE PANEL SCHEDULE ACCORDINGLY.
- PROVIDE NEW 1" CONDUIT FROM NEW JUNCTION BOX LOCATED ON SECURE SIDE ABOVE DOOR TO EXISTING JUNCTION BOX LOCATED AT BOTTOM OF STRUCTURE AND THEN ON TO EXISTING INTERFACE CABINET.
- REPLACE EXISTING 2-CONDUCTOR WIRES FROM EXISTING SECURITY DOOR LOCATION TO EXISTING INTERFACE CABINET (APPROXIMATELY SEVEN TOTAL) WITH SAME QUANTITY OF NEW 16 GAGE 2-CONDUCTOR WIRE FOR THE NEW SECURITY DOOR.
- PROVIDE FOUR ADDITIONAL 16 GAGE 2-CONDUCTOR WIRES ROUTED FROM NEW SECURITY DOOR TO THE INTERFACE CABINET AND FROM CABINET BACK TO SAACS RISER LOCATED IN THE MAIN TELECOM ROOM. UTILIZE EXISTING CONDUITS AND PULL BOXES BETWEEN THE TELECOM ROOM AND THE INTERFACE CABINET.
- EXISTING TELECOM ROOM, SHOWN FOR REFERENCE.
- EXISTING SAACS EQUIPMENT AND POWER SUPPLIES ARE LOCATED ALONG THIS WALL. PROVIDE NEW POWER SUPPLY FOR DOOR IN EMPTY SPACE ALONG WALL AND POWER FROM EXISTING CIRCUIT CURRENTLY SERVING SAACS POWER SUPPLIES.
- APPROXIMATE LOCATION OF MAIN ELECTRICAL ROOM AND FIRE ALARM CONTROL PANEL.
- PROVIDE HORN STROBE, COOPER WHELOCK #MT-24MCW-FW, BLUE STROBE, 24V WIRING AND ALL RELATED APPURTENANCES FOR A COMPLETE WORKING SYSTEM. STROBE SHALL BE WIRED TO DOOR SYSTEM SUCH THAT THE STROBE AND HORN OPERATE WHEN AN ATTEMPT TO DEFEAT THE DOOR SECURITY TAKES PLACE.

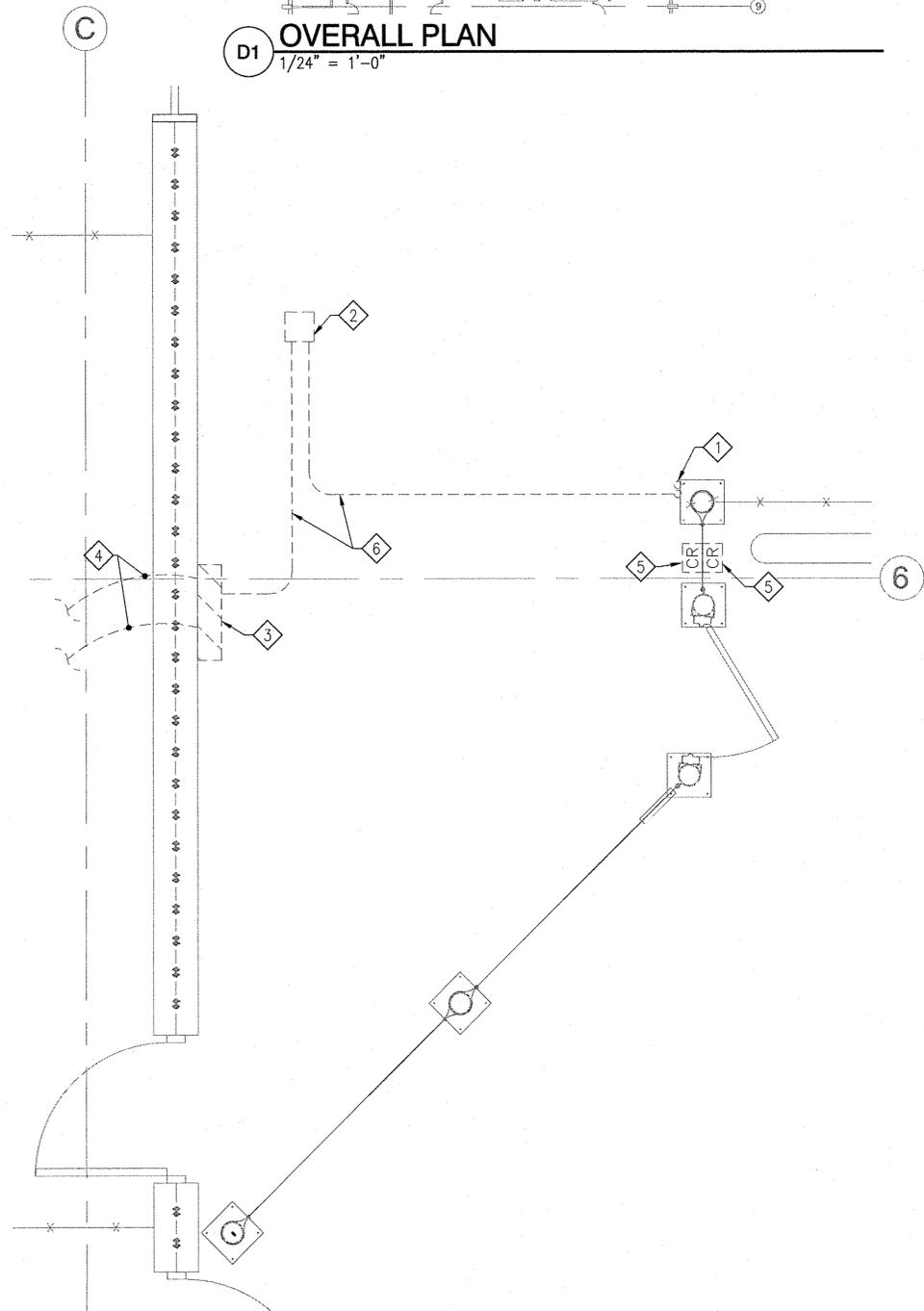
GENERAL NOTES

- CURRENT SAACS APPROVED INTEGRATORS FOR RDU INTERNATIONAL CAMPUS WORK ARE AS FOLLOWS:
 - MARK WOMACK - BPPE INTERNATIONAL - 919-550-2699
 - DALE AUSTIN - SIGNET TECHNOLOGIES - 919-653-3788 X213
- PROVIDE INTERCONNECTION WITH FIRE ALARM SYSTEM AS DESCRIBED ON THE ARCHITECTURAL PLANS SUCH THAT POWER TO THE ELECTRIC STRIKE DROPS IN THE EVENT OF AN ALARM CONDITION AND ALLOWS EGRESS ONLY FROM THE SECURE SIDE.

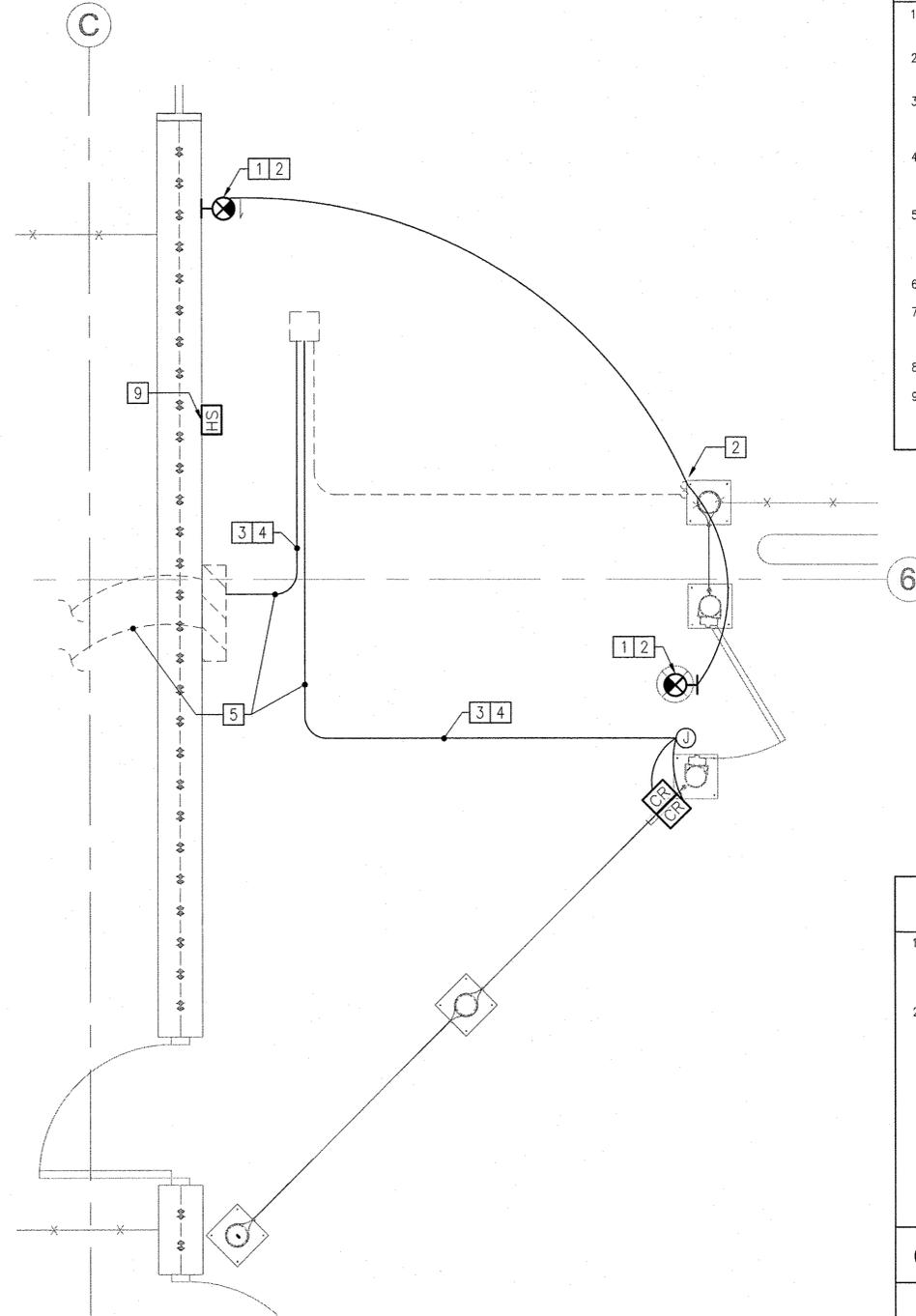
GRAPHIC SCALE:



D1 OVERALL PLAN
 1/24" = 1'-0"



A1 ENLARGED PARTIAL FLOOR PLAN - EXISTING
 1/2" = 1'-0"



A3 ENLARGED PARTIAL FLOOR PLAN - NEW WORK
 1/2" = 1'-0"