

Addendum No. 5

Project: Guilford County Law Enforcement Center Renovation  
Rebid Event # 629

To: All Plan Holders

Addendum Date: August 14, 2018

This Addendum forms a part of and modifies the Bidding Documents dated June 26, 2018 as described below and consists of two (2) pages and the attachments described. Attachments are considered a part of this addendum and therefore a part of the Contract Documents.

SPECIFICATIONS

| ITEM | SECTION          | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | General          | Pre-Bid Agenda, meeting minutes and sign-in sheet are attached.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2.   | Section 01 50 00 | Temporary Facilities: Paragraph 2.1.a. add the following: Temporary water service (and sewer usage) is to be metered and invoiced in the Contractor's name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3.   | Section 01 50 00 | Temporary Facilities: Paragraph 2.1.b. Temporary electric service is to be metered and invoiced in the Contractor's name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4.   | Section 09 30 00 | Ceramic Tile: Paragraph M. 8.a. Porcelain tile base is to be used in Vestibules 100, Lobby 101, Waiting 102, Kiosk 103 and Waiting 186. Ceramic tile base under paragraph M.7.a. is to be used elsewhere throughout where scheduled.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5.   | Section 10 14 00 | Paragraph 2.2.k. As a clarification, it is the intent for a sign to be provided at all interior doors. Doors other than offices, classrooms, restrooms & showers, stairs and elevators are to receive Type C or C1 signs. Provide Type C1 where current room names will not fit on Type C sign.                                                                                                                                                                                                                                                                                                                                                               |
| 6.   | Section 23 73 00 | Central Station Air Handling Units: Paragraph 2.1. "Daikin is accepted as approved equal manufacturer for AHU-1."                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7.   | Section 27 13 00 | Add the following supplemental specifications relative to cabling requirements (Vertical Backbone Fiber Optic Cable – 3 pages; CAT6 Cabling – 7 pages; Horizontal Fiber Optic Cable – 3 pages; Data Cabling Numbering Scheme – 1 page; Cabling – 1 page)                                                                                                                                                                                                                                                                                                                                                                                                      |
| 8.   | Division 27      | New Fiber Cable Required:<br>Contractor shall include in his bid one (1) new fiber optic cable, 24 strand 50 micron fiber to be run in a 2 inch inner duct from L11 (located in the County Courthouse across Eugene Street) to the new MDF on Level 2 of the LEC. New fiber cable is to be run in the existing tunnel under Eugene Street between the LEC and the Courthouse. The new fiber shall be terminated into new fiber patch panels at both ends with SC connectors at both ends. See attached specification. Contractor shall protect all new fiber optic cable from damage during construction as well as any existing fiber optic cable to remain. |
| 9.   | Division 27      | New Fiber Optic Cable must be installed, operational, and protected prior to the removal of any existing fiber optic cabling not required to remain. Coordinate with Guilford County's IT department.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## DRAWINGS

| ITEM | SHEET      | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10.  | G1.1       | There has been a change to the Structural Design data on Drawing G1.1 that pertains to special inspections. (See attached)                                                                                                                                                                                                                                                                                                                                          |
| 11.  | A2.2       | 2226 Level 2 – Mechanical – Floor Plan – Roof Plan: Provide roof walkway pads as specified in Section 07 54 00 and as shown on Addendum Drawing ADD 5-1. (Attached)                                                                                                                                                                                                                                                                                                 |
| 12.  | A3.1       | 3111 High Roof Plan: Provide roof walkway pads as specified in Section 07 54 00 and as shown on Addendum Drawing ADD 5-2. (Attached)                                                                                                                                                                                                                                                                                                                                |
| 13.  | A7.1       | 7123 Elevation @ Men 106 & Women 107: Show 6'-10" high ceramic tile wainscot to agree with Room Finish Schedule on drawing A11.3.                                                                                                                                                                                                                                                                                                                                   |
| 14.  | A9.4       | 9411 Stair # 1 Section @ Main Lobby: As a clarification, there are actually two independent stairs in Stair Tower #1.                                                                                                                                                                                                                                                                                                                                               |
| 15.  | A10.2      | 10206 Window Section @ Tower Type A: As a clarification, this section occurs the entire length of the North and South elevations at Level 3 thru 8.                                                                                                                                                                                                                                                                                                                 |
| 16.  | A11.3      | Room/Color Finish Schedule: At Vestibule 100, Lobby 101, Waiting 102, Kiosk 103, and Waiting 186 ceramic tile floor (F3) and base (B2) should be porcelain tile & base as specified in spec section 09 30 00. All other locations where ceramic tile floor or wall tile are specified are to receive ceramic tile base.                                                                                                                                             |
| 17.  | A11.3      | Delete Note 1. which reads: "Provide vinyl treads over existing concrete treads @ all stairs to match rubber treads @ Stairs 187."<br>Revise to read: Note 1. Provide black vinyl treads at all stairs where scheduled (including Stair 187) as specified in Section 09 65 00 paragraph 2.7. There are no vinyl risers required, however, all risers are to be painted.                                                                                             |
| 18.  | Structural | The following Sheets are reissued, they are attached.<br>S1.0 and S3.1A                                                                                                                                                                                                                                                                                                                                                                                             |
| 19.  | Electrical | Existing AT&T Phone Cable: There is an existing 200 pair copper feeder cable that is AT&T phone company. It is located in the electrical/data room 157 and originates in a manhole outside of the building. This cable is to remain, and AT&T will disconnect and reconnect cable as needed. (but will not remove it) The contractor shall identify cable/conduit through building and ensure the conduit/cable does not get damaged in the demo phase of the work. |

END OF ADDENDUM

Guilford County Law Enforcement Center Renovation

**PRE-BID CONFERENCE AGENDA**

August 9, 2018  
9:00 AM

- I. Welcome – Michael Reed (Guilford County Facilities)
- II. Owner Comments – Guilford County Facilities
  - HUB and Minority Business goals
  - Owner's Security Requirements
- III. Introduction of Project Team – Matt Messick (Walter Robbs)
- IV. Preferred Hardware in accordance with GS 133-3  
  
Preferred Building HVAC Controls in accordance with GS 133-3
- V. Brief description of project scope and systems
  - A. Architectural – Walter Robbs
  - B. Electrical – CES
- VI. General Question and Answers
- VII. Building Tours (Group)
- VIII. Building Tours (Individuals) note: Must sign an additional sign in sheet.

*- All attendees please sign-in -*

## Meeting Notes

Walter Robbs Callahan & Pierce Architects, PA will rely on these notes as our understanding of the matters discussed and conclusions reached during this meeting. This information will be the approved record unless you send written notice to the contrary within seven calendar days of the issue date of these meeting notes.

|                   |                                                   |                          |
|-------------------|---------------------------------------------------|--------------------------|
| Project:          | Guilford County Law Enforcement Center Renovation | Project #: 17-496        |
| Meeting Location: | Guilford County Law Enforcement Center - Lobby    | Meeting Date: 08/09/2018 |
| Meeting Purpose:  | Mandatory Pre-Bid Meeting                         |                          |
| Present:          | See attached sign-in sheet.                       |                          |

|    | Items Discussed                                                                                                                                                                                                                                                                                                                                                                                |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Any General Contractor who attended either the previous pre-bid meeting on 7/10/18 or 7/17/18 will be allowed to bid the project.                                                                                                                                                                                                                                                              |
| 2. | The MWBE requirements for the project were discussed, and the forms were made available to all prime bidders. All forms must be signed and notarized to be considered complete.                                                                                                                                                                                                                |
| 3. | MWBE participation is a high priority of Guilford County, and all GC's are encouraged to exchange contact information with the Subcontractors present at the pre-bid meetings. The County's goal is 10% MWBE participation on this project.                                                                                                                                                    |
| 4. | Addendums #1-#4 have been issued and are available on Walter Robbs' Sharefile project site and on Guilford County's website. Minutes from the previous pre-bid meetings are also available on these sites.                                                                                                                                                                                     |
| 5. | The renovated area of all floors in the building is approximately 114,000sf. The bottom level of the building is predominantly parking. The space directly outside the enclosed parking is secured space contiguous with the Guilford County Jail. Access will be limited from the outside directly into the parking level and will need to be coordinated directly with the Sheriff's Office. |
| 6. | The original contract documents for this renovation show a number of doors to be removed. The Sheriff's Office has since removed a number of doors/ frames in training exercises. This was addressed by Addendum No. 1.                                                                                                                                                                        |
| 7. | The majority of wall/partitions on the main level will be removed as part of the demolition work.                                                                                                                                                                                                                                                                                              |
| 8. | GC's needing further access to the building after the pre-bid meetings will need to sign the individual sign-in sheet, and they will be invited to attend one or both of the following walkthrough dates:<br>AUGUST 14, 2018 – 9:00 AM TO 11:00 AM<br>AUGUST 16, 2018 – 9:00 AM TO 11:00 AM                                                                                                    |
| 9. | The first 4 existing detention floors, Levels 3-6, contain 4" thick precast concrete wall panels, tilted up into a notch in the ceiling above, and clipped to the floor and covered with a 2" concrete topping slab. It is the intent to leave as much of the 2" topping slab as possible, but the GC will need to chip back the slab to detach the clips and infill the slab back flush.      |

Distribution:

Prepared by:  
Matthew D. Messick AIA, LEED AP BD+C

Issue Date: 08/14/2018

|     | Items Discussed                                                                                                                                                                                                                                                                                                                                                                      |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10. | Chase openings in the structural waffle slab will need to be coordinated with the structural drawings and confirmed with the Structural Engineer.                                                                                                                                                                                                                                    |
| 11. | Insulation along the exterior walls of Levels 3-6 is believed to be fireproofing spray. Levels 7-8 have foil faced fiberglass insulation. New insulation will be installed throughout the building as part of this renovation.                                                                                                                                                       |
| 12. | The upper 2 levels of the building were renovated in 2001 using primarily reinforced cmu walls. The GC should anticipate 8" rebar at 8" o.c. in these walls.                                                                                                                                                                                                                         |
| 13. | Mechanical system will be totally replaced in the renovation. The cooling tower at the roof will be removed, along with old equipment and heat pumps. Central plant for the mechanical system is one level up from the main level.                                                                                                                                                   |
| 14. | The upper 6 levels are currently sprinklered. Other levels will receive sprinklers as part of the renovation.                                                                                                                                                                                                                                                                        |
| 15. | The existing floor to ceiling clearances are very tight on the upper floors, with the average clearance being less than 9'-0". Mechanical, electrical, and plumbing will all need to be accommodated in this space. Code requires all areas to be a minimum of 7'-0" clear, however it is the goal to achieve at least 7'-6" clearance where possible.                               |
| 16. | Electrical raceways will generally remain. Feeders will be replaced. The existing building generator will remain.                                                                                                                                                                                                                                                                    |
| 17. | Basement level (Level 0) will receive some renovation. Parking on this level will remain. Access will be primarily from the interior of the building down, however limited access from the roll-up doors for deliveries can be coordinated through the Sheriff's Department. A minimum of 24-hour notice will need to be given. The GCLEC space must remain secure from the outside. |
| 18. | Site staging is tight. There are 2 parking lots on the south side that will be made available to the GC for parking, storage, or staging. The parking lot will need to be repaired to its like condition after work is complete.                                                                                                                                                     |
| 19. | Panels were removed from a section of the south side during previous renovations. It is believed that this would be the logical location to removed panels for this renovation as well. The sealant joints are lighter where the panels were reinstalled and caulked.                                                                                                                |
| 20. | There is one central double helix stair in the building. The GC is advised that one side of the stair leads to the basement, and the other side leads to the main entry level.                                                                                                                                                                                                       |
| 21. | Several alternates are identified in the project manual. The main alternate is the upfit of Probation and Parole on Levels 3-5. The toilets, janitor closet, and shell perimeter walls are to be installed under the base bid.                                                                                                                                                       |
| 22. | Perimeter clerestory windows on Levels 3-8 are being replaced in the renovation and are part of the base bid, as are the vertical narrow windows. All vertical narrow windows on Level 3-8 & Level 1 will receive new glazing and stops.                                                                                                                                             |
| 23. | There is an alternate to clean the exterior of the building. Due to the age of the caulk joints, it is likely that the joints will be blown out if the exterior of the building is cleaned, therefore exterior caulking is also included as an alternate.                                                                                                                            |
| 24. | New landscaping is planned around the perimeter. Existing tree roots around curbing are to be removed.                                                                                                                                                                                                                                                                               |
| 25. | GC will need to coordinate all street closures with the City of Greensboro for this project. The GC may opt to apply for a single lane closure along Sycamore Street. It is not likely that the City will allow closure of S. Eugene Street during this renovation.                                                                                                                  |
| 26. | No DENR permits have been pulled for this project, as no grading is anticipated other than what is necessary to remove and replace main entry ramp/steps.                                                                                                                                                                                                                            |
| 27. | Demolition of the entry plaza and ramp will occur. A new ramp and storefront entrance are shown on the drawings.                                                                                                                                                                                                                                                                     |
| 28. | The pump room for the underground tank on the north end of the building has been abandoned & pump is believed to have been removed. Underground storage tank has been removed.                                                                                                                                                                                                       |
| 29. | GC's are reminded that their bids will be held for up to 90 days.                                                                                                                                                                                                                                                                                                                    |

|     | Items Discussed                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30. | The construction duration for the renovation is currently set at 420 days.                                                                                                                                                                                                                                                                                                                                                     |
| 31. | Pre-bid agenda, sign-in sheet, and minutes will be attached to the next addendum.                                                                                                                                                                                                                                                                                                                                              |
| 32. | Last day for questions is 7 days prior to bids.                                                                                                                                                                                                                                                                                                                                                                                |
| 33. | Yale Hardware is the preferred lockset brand for Guilford County. A preferred brand alternate will be included in the bid.                                                                                                                                                                                                                                                                                                     |
| 34. | Existing building controls are based on Alerton. Any other system being used that is pre-approved for bidding must be able to communicate with the Alerton Controls System.                                                                                                                                                                                                                                                    |
| 35. | Guilford County has identified an alternate to enlarge the existing slit windows to create larger windows. A unit price per window is being asked for in the event the quantity of windows being enlarged changes. Read the alternates section in the project manual for additional information.                                                                                                                               |
| 36. | Guilford County will be posting all items in the building marked "SELL" on govdeals.com for auction. Other items not marked or marked "DISPOSE" will be left behind and will be the responsibility of the General Contractor to remove. All fixed items have been unattached from the floor or wall for removal.                                                                                                               |
| 37. | Some of the door frames are identified as being reused. This information will be shared with the General Contractors by addendum. The Fire Department has removed and/or partially removed several frames in test exercises since the building was vacated. This will be evident in the walk-through. Regardless of the frames, all doors are planned to be replaced.                                                          |
| 38. | The main entry walkway entrance ramp is being replaced along with the entry storefront being removed and relocated further out towards Sycamore Street. These items are identified on the drawings.                                                                                                                                                                                                                            |
| 39. | The level below the main entrance is 2/3 parking garage. There is limited access to this level, and the General Contractor will need to coordinate any special delivery of material through the Sheriff's Department. In general, this space will only be accessible through the upper interior floors since it abuts the secure vehicular sally port area of the adjacent Guilford County Jail.                               |
| 40. | There is currently no sprinkler piping on the first two levels. It is the intention to re-use as much of the existing main sprinkler piping on the upper levels. Entire building is planned to be sprinkled.                                                                                                                                                                                                                   |
| 41. | Concrete planters, trees, etc. on the exterior, are being removed and replaced with low maintenance plants. A landscape plan has been provided in the drawings. There are two existing monitoring wells at the corner of Sycamore and South Eugene Streets. The successful General Contractor will need to confirm that these wells are now inactive.                                                                          |
| 42. | A soil bearing report has not been done, and due to the nature of the work, it is not anticipated that one will be provided. There are unit price quantity allowances for unsuitable soil in the specs.                                                                                                                                                                                                                        |
| 43. | There are several unit prices identified in the project manual, including unsuitable soil removal and stone fill. These items are also identified on the bid form.                                                                                                                                                                                                                                                             |
| 44. | The General Contractor will be responsible for providing the Independent Testing Lab for this project and Special Inspections.                                                                                                                                                                                                                                                                                                 |
| 45. | Affidavits A, B, and C are required to be notarized, signed, and included with each bid.                                                                                                                                                                                                                                                                                                                                       |
| 46. | The building is believed to be free of hazardous materials, based on previous renovation projects. If the General Contractor uncovers hazardous material during demolition or construction, they shall immediately bring this to the attention of the Architect and Owner, so it can be properly remediated. Owner will either have the material remediated or issue a change order to the General Contractor for remediation. |
| 47. | Questions brought up at the pre-bid meeting about clarifying structural foundation dimensions and recessed 5/16" steel angle picture frame requirements at existing window expansions will be clarified in Addendum #5.                                                                                                                                                                                                        |

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|     | Items Discussed                                                                                 |
| 48. | Clarifications to the Communications cabling and fiber optic specs will be made in Addendum #5. |

## Pre-bid Sign in Sheet

Project: Guilford County Law Enforcement Center  
Location: Greensboro, NC 27401  
Project #: 17-496

Date: 8/9/2018

| NAME             | FIRM                      | TELEPHONE / EMAIL                                |
|------------------|---------------------------|--------------------------------------------------|
| James Gentry     | Advance Concrete          | 919-710-1343 / j.gentry@advance-concrete.com     |
| Brian Pencil     | Mirajic R+D               | 336-420-4338 brian@mirajicrd.com                 |
| JR BURCHAM       | Sup H/E/C                 | 498-7600<br>jburcham@supmerch.com                |
| Ethan Eanes      | Mirajic R+D               | 336-608-1861<br>ethan@mirajicrd.com              |
| Brian Armstrong  | JM Thompson               | 919/851-1411 ex 121<br>estimating@JMThompson.com |
| John Rhodes      | Strategic Connections     | 336-624-1969<br>john.rhodes@strategicmail.net    |
| Adam Baker       | Delaware Elevator         | 443-366-4992<br>abaker@delawareelevator.com      |
| Jess Walters Sr  | Walters                   | 714-746-6091 Jess.walters1@aol.com               |
| Jess Walters Jr  | Walters                   | 704-746-7894                                     |
| Patty Parker     | Storr Office Environments | PParker@storr.com<br>919-868-2475                |
| JEREMY BATCHELOR | SCI                       | JBATCHELOR@SYSTEMS-CONTRACTORS.COM               |
| Jonathan Fox     | Resolute Elevator         | 336-792-0662 JFox@ResoluteElevator.com           |
| Kim Todd         | Resolute Elevator         | 919-9030189 ktodd@ResoluteElevator.com           |
| Keith Beaman     | Moonlite                  | 919-551-0792 kbeaman@MOONLITE-CONSTRUCTION.CO.   |
| Mark Snyder      | Blackstone Fire Control   | 336-707-8017 msnyder@blackstonefsi.com           |
| Travis Langley   | Lomax Construction        | 336-992-7000 mharvella@lomaxconstruction.com     |
| Chris Miller     | Miller Roofing            | 336-689-5055<br>mroofing1965.co@gmail            |
| SE Miller        | "                         | 336-616-2715<br>roof2u@gmail                     |
| Brad Palmer      | Orack Elevator            | 704-965-0165 brad.palmer@Orackelevator.com       |



|                       |                       |                                       |
|-----------------------|-----------------------|---------------------------------------|
| Henry Jockett         | ABC Supply            | henryjockett@abcsupply.com            |
| Shell McCain          | ABC Supply            |                                       |
| Emily Kemp            | H.M. Kern             | jhyler@hmKern.com / emilyKehmKern.com |
| Terry Lynch           | Premier Service       | Premierservice@TriadBiz.net           |
| BRUCE GUERINI         | BAR CONSTRUCTION Co   | LSMITH@BARCONSTRUCTION.COM            |
| NED Bryan             | Lingher Metalworks    | nlyan@linghermetalworks.com           |
| Clear Site Industrial | Jacob Bender          | jibender@clearsiteindustrial.com      |
| Clean Air Env Inc     | Ricky Delgado         | Cleanairinc@BellSouth.net             |
| Lisa Gilgeous         | Gilgeous Const        | lgilgeous@gilgeousconstruction.com    |
| Roderick Randolph     | NTG, INC              | Rod@NTG-INC.BIZ                       |
| Alex Ritchie          | Central Piedmont Fire | 704-647-9883                          |
| Susan Crofts          | GC Purchasing         | scrofts@guilfordcounty.nc.gov         |
| Shelbi Willett        | GC Purch.             | swillett@guilfordcounty.nc.gov        |
| Troy BAKER            | CES                   | TROY@CES-ENG.NET                      |
| Michael Reed          | GCF                   | mreed@guilfordCounty.nc.gov           |
| Chris Mathis          | GCSO                  | Cmathis@guilfordCounty.nc.gov         |
| GARY LAUGHLIN         | AMERICAN INDUSTRIAL   | GLAUGHLIN@AMERINDCONTR.COM            |
| Randy Moyer           | GC-15                 | RMoyer@guilfordcounty.nc.gov          |
| Taje' Lervigan        | GC-15                 | plervig@guilfordcounty.nc.gov         |
| Matt Messido          | Walter Robbs          | mattme@walterrobbs.com                |
|                       |                       |                                       |
|                       |                       |                                       |
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|                       |                       |                                       |
|                       |                       |                                       |

Pre-bid Sign in Sheet (Individual Tours)

Project: Guilford County Law Enforcement Center  
Location: Greensboro, NC 27401  
Project #: 17-496

Date: 8/9/2018

| NAME           | FIRM                   | CELL PHONE / EMAIL                          |
|----------------|------------------------|---------------------------------------------|
| Brian Perrell  | Mirajerd               | 336-420-4338 brian@miraierd.com             |
| John Rhodes    | Strategic Connections  | 336-624-8609 john.rhodes@strategicmail.net  |
| Jess Walters   | Walters & Son Painting | 704 746 091 JESSWALTERS@GMAIL.COM           |
| 11 11          | 11 11                  | 704 746 7894 11                             |
| Keith Beaman   | Moonlite Electric      | 919-591-0792 Kbeaman@MoonliteElectric.com   |
| Mark Snyder    | Blackstone Fire        | 336-707-2017 msnyder@blackstonefire.com     |
| Travis Langley | Lomax Construction     | 336-215-9956 mharvell@lomaxconstruction.com |
| Chris Turner   | Michael's              | 336-539-5059 mroose@nagale.com              |
| Scott Mitchell | "                      | 336-516-2155 scottmitchell@gmail.com        |
| Henry Jackoff  | ABC Supply             | 336-558-8898 henry.jackoff@abcsupply.com    |
| Shell McCain   | ABC Supply             | 919-619-6381 shell.mccain@abcsupply.com     |
| Chris Walker   | DARI                   | 336-382-8646 cwalker@dgriffin.com           |
| Terry Lynch    | Premier Service        | 336-420-0498 PremierService@TinaObiz.com    |
| Bruce Gudrum   | BAR CONSTR Co.         | 336-274-2477 LS MITCHE BARCONSTRUCTION.COM  |
| Paje Jernigan  | Guilford County IS     | 336-451-0541 pjeruig@guilfordcountync.gov   |
| Randy Moya     | Guilford County IS     | 336-641-4375 rmoya@guilfordcountync.gov     |
| Lisa Gilgeous  | Gilgeous Const         | 336-558-6572                                |

530 North Trade Street, Suite 301 Winston-Salem, NC 27101 336.725.1371 walterrobbs.com

WALTER ROBBS CALLAHAN & PIERCE ARCHITECTS, PA

Ralph Spencer Gilgeous Const 919-802-0544  
Rod Randolph NTG 336-280-1089 Rod@NTG-INC.COM  
Alex Ritten CFP 704-647-9883  
NED BRYAN Hughes Mechanical Works 336-706-1836 nbryan@hughesmechanicalworks.com

Bicky Delgad. Clean Air Environment (336) 768-4825  
Clean air inc Bell/South.net  
South.net

**Specification for  
Vertical Backbone Fiber Optic Cable  
401 West Sycamore Street  
Greensboro, North Carolina**

**CONTRACTOR'S QUALIFICATIONS**

The selected Contractor shall be fully capable and experienced in the wiring structure being submitted for bid. The Contractor shall have a minimum 5 years' experience in the system being submitted.

The Contractor must have a RCDD (Registered Communication Distribution Designer) on staff that will be ultimately responsible for this project. The RCDD must possess adequate knowledge and experience with the system being bid to lend support to the field forces during installation and warranty period. RCDD's resume should be attached to the bid response. Contractor shall not change RCDD assigned to the project without County's consent, unless the RCDD ceases to be employed by the contractor.

The contractor shall provide an on-site, full-time Project Manager, who is a BICSI certified technician. The Project Manager is to act as a single point of contact for all activities regarding this project. The Project Manager will be required to make on-site decisions regarding the scope of the work and any changes required by the work. The Project Manager must be on the job at any time work is being performed or workers are present. The Project Manager will be totally responsible for all aspects of the work and have the authority to make immediate decisions regarding implementation or changes to the work.

**COORDINATION AND MEETINGS**

Following award of the bid, the Cable Contractor shall schedule a preconstruction conference to be attended by General Contractor, Guilford County and Cable Contractor. The purpose of this meeting shall be to establish and incorporate the cable installation into the overall project schedule and to answer any questions the Cable Contractor has for the County regarding the cable requirements.

**SCOPE**

Install interior fiber riser cables between data closets. Install twelve (12) strand 50 Micron Multimode fiber optic cable from MDF data closet room 206 to each of the following data closets; 010, 157, 302A, 427A, 527A, 602A, 714A and 815A into the CommScope 2U fiber panel in the top of the data rack.

Upon completion, this infrastructure shall meet or exceed all criteria required to obtain manufacturer's warranty.

All work shall conform to the latest edition of the National Electrical Code®, the Building Code, and all local codes and ordinances, as applicable.

## QUALITY ASSURANCE

- The contractor shall have worked satisfactorily for a minimum of five (5) years on systems of this type and size.
- Upon request by the owner, the contractor shall furnish a list of references with specific information regarding type of project and involvement in providing of equipment and systems.
- Where equipment and materials have industry certification, labels, or standards (I.e., NEMA - National Electrical Manufacturers Association), this equipment shall be labeled as certified or complying with standards.
- Material and equipment shall be new, and conform to grade, quality, and standards specified. Equipment and materials of the same type shall be a product of the same manufacturer throughout.

## WARRANTY

Unless otherwise specified, unconditionally guarantee in writing the materials, equipment, and workmanship for a period of manufacturer's standard warranty, from date of acceptance by the owner. The owner shall deem acceptance as beneficial use.

Transfer manufacturer's warranties to the owner in addition to the General System Guarantee. Submit these warranties on each item in list form. Detail specific parts within equipment that are subject to separate conditional warranty. Warranty proprietary equipment and systems involved in this contract during the guarantee period. Final payment shall not relieve you of these obligations.

## PROJECT RECORD

Submit project record at conclusion of the project and include:

- Warranty documents for equipment.
- Certification fiber will run 10 gigabit speeds
- Fiber certification test results in electronic format

## PRODUCTS

Manufacture: **CommScope: Fiber patch panels and connectors** – No substitutes will be accepted unless otherwise requested and approved in advance and in writing by Guilford County Information Services department.

CommScope:

760231456 SD 2U sliding fiber panel

760066076 LazrSPEED® SC, 12 Fiber, Aqua Duplex Adapter, black panel

## **TERMINATION POINTS**

- MDF (data closet 206): Terminate all eighty-four (96) strands (12 strands to each floor) in new fiber rack mount enclosure(s) with "SC" connectors. Mount enclosure(s) at the top of the 7' x 19" rack.
- IDF (IT Storage 010): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 157): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 302A): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 427A): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 527A): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 602A): Terminate twelve (12) strands on a rack mount enclosure with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 714A): Terminate twelve (12) strands on a "6 -port rack mount enclosure" with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.
- IDF (data closet 815A): Terminate twelve (12) strands on a "6 -port rack mount enclosure" with "SC" connectors. Mount enclosure at the top of the 7' x 19" rack.

## **Conditions:**

- Fiber runs within the building will use Plenum rated inner duct where it is required.
- Quotes will include the following; placing, terminating, and testing of all the installed fiber.
- Installation of 50 Micron Multimode mode fiber shall be accordance with ITU specifications. Guilford County's expectation is to run 10 gigabit speed over each fiber pair.

**Specification for CAT6 Cabling  
Guilford County Office Building  
401 West Sycamore Street  
Greensboro, NC**

**CONTRACTOR'S QUALIFICATIONS**

The selected Contractor shall be fully capable and experienced in the wiring structure being submitted for bid. The Contractor shall have a minimum 5 years' experience in the system being submitted.

The Contractor must have a RCDD (Registered Communication Distribution Designer) on staff that will be ultimately responsible for this project. The RCDD must possess adequate knowledge and experience with the system being bid to lend support to the field forces during installation and warranty period. RCDD's resume should be attached to the bid response. Contractor shall not change RCDD assigned to the project without County's consent, unless the RCDD ceases to be employed by the contractor.

The contractor shall provide an on-site, full-time Project Manager, who is a BICSI certified technician. The Project Manager is to act as a single point of contact for all activities regarding this project. The Project Manager will be required to make on-site decisions regarding the scope of the work and any changes required by the work. The Project Manager must be on the job at any time work is being performed or workers are present. The Project Manager will be totally responsible for all aspects of the work and have the authority to make immediate decisions regarding implementation or changes to the work.

Guilford County is also requesting a "per drop" cost in the event additional cables are needed following award of this bid. Guilford County requests the per drop price remain effective for six (6) months from the date of award.

**COORDINATION AND MEETINGS**

Following award of the bid, the Cable Contractor shall schedule a preconstruction conference to be attended by General Contractor, Guilford County and Cable Contractor. The purpose of this meeting shall be to establish and incorporate the cable installation into the overall project schedule and to answer any questions the Cable Contractor has for the County regarding the cable requirements.

**SCOPE**

The scope of work detailed in this document is the installation of a new cabling infrastructure system including (but not limited to) the voice riser cables, data drops, associated racking, patch panels and various other products required to support the new infrastructure. This infrastructure shall be built to CAT 6 specifications with approximately (357) Cat-6 data cables being needed. The cabling infrastructure will include (8) 50 pair Cat-3 phone riser cables terminated in each data closet back to the MDF in room 206. broken down as follows:

Upon completion, this infrastructure shall meet or exceed all criteria required to obtain manufacturer's warranty.

All work shall conform to the latest edition of the National Electrical Code®, the Building Code, and all local codes and ordinances, as applicable. ANSI/TIA/EIA-568-B.1 through ANSI/TIA/EIA-568-B.3, NECS/BICSI-568 and ANSI/TIA/EIA-569-A shall be adhered to during all installation activities. Methodologies outlined in the latest edition of the BICSI Telecommunications Distribution Methods Manual shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have responsibility for making interpretation.

Cable shall be plenum-rated Category 6 UTP (unshielded twisted pair) as listed.

## **QUALITY ASSURANCE**

- The contractor shall have worked satisfactorily for a minimum of five (5) years on systems of this type and size.
- Upon request by the owner, the contractor shall furnish a list of references with specific information regarding type of project and involvement in providing of equipment and systems.
- Where equipment and materials have industry certification, labels, or standards (I.e., NEMA - National Electrical Manufacturers Association), this equipment shall be labeled as certified or complying with standards.
- Material and equipment shall be new, and conform to grade, quality, and standards specified. Equipment and materials of the same type shall be a product of the same manufacturer throughout.

## **WARRANTY**

Unless otherwise specified, unconditionally guarantee in writing the materials, equipment, and workmanship for a period of manufacturer's standard warranty, from date of acceptance by the owner. The owner shall deem acceptance as beneficial use.

Transfer manufacturer's warranties to the owner in addition to the General System Guarantee. Submit these warranties on each item in list form. Detail specific parts within equipment that are subject to separate conditional warranty. Warranty proprietary equipment and systems involved in this contract during the guarantee period. Final payment shall not relieve you of these obligations.

## **PROJECT RECORD:**

Submit project record at conclusion of the project and include:

- Warranty documents for equipment.
- Copper certification test results in electronic format.



## PRODUCTS

Manufacturer: **Commscope: CAT6 cabling, patch panels, faceplates and patch cables** – No substitutes will be accepted unless otherwise requested and approved in advance and in writing by Guilford County Information Services department.

| <u>Mfgr. Part No.</u>                                                    | <u>Item</u>          | <u>Description</u>                                         |
|--------------------------------------------------------------------------|----------------------|------------------------------------------------------------|
| 211009-1                                                                 | Faceplate            | 2 Port, Flush Faceplate, Almond                            |
| 1375055-1                                                                | Jack, Data           | Jack, Cat 6 568A/B, SL Series, Almond                      |
| 8773614/10 6504+                                                         | UTP,CMP              | Commscope,Cable, Cat 6, Plenum (Blue)                      |
| 760237041                                                                | Standard Patch Panel | 2U,Patch Panel,Cat 6,48 Port, Rack mount                   |
| 1375014-1                                                                | Standard Patch Panel | Patch Panel,Cat 6,24 Port, Rack mount                      |
| 9-1375055-2                                                              | SL110 Modular Jack   | SL series modular jack, RJ45                               |
| 406375-2                                                                 | Jack, Telecom        | CAT3-Jack, 110 Punch down, 6 pin                           |
| TCPC-6RUVB-BL10F                                                         | Patch Cable          | (10') CAT6 Slim line patch cable                           |
| <b><u>CableExpress (CXTEC)</u></b> Bridget Bearup (CXTEC) (315) 883-3661 |                      |                                                            |
| CBX-CPTA-M6CBBL-007                                                      | Patch Cable          | 7FT MINI CAT6 RJ45/RJ45 568B Slim<br>Clear Boot Blue Cable |

Manufacturer: **Chatsworth: Racks and Cable Management** – No substitutes will be accepted unless otherwise requested and approved in advance and in writing by Guilford County Information Services department.

| <u>Mfgr. Part No.</u> | <u>Item</u>      | <u>Description</u>                     |
|-----------------------|------------------|----------------------------------------|
| 12228-701             | Cable Ring       | Double Wide Cable Ring                 |
| 55053-503             | Floor Mount Rack | 19" x 84" Floor Mount Rack, Standard   |
| 30130-719             | Horizontal Mgmt. | 2U, Universal Horizontal Cable Manager |

**NOTE:** This is not to be considered a complete list of products that may be necessary to complete the installation. Other necessary products may include suspension hardware, fire barrier, etc.

## VOICE RISER CABLES

Category 3 UTP 24AWG, 50 pair pulled from the second floor MDF (room 206) to each data closet (010, 157, 302A, 427A, 527A, 602A, 714A and 815A) on the above floors. Terminate both ends to a 66-block w/89 B Mounting bracket. Add 1 66-block w/89 B Mounting bracket for the second floor phone termination.

Category 3 UTP 24AWG, 25 pair pulled and terminated to Category 6 SL Series Unshielded Patch Panel on each floor including the second floor. Terminate on the punch down blocks in the MDF to the patch panel in each closet.

(50) pair will be terminated to a 66 block and (25) pair will be terminated to the patch panel for a total of 75 pair per floor.

- Category 3 UTP-CMR 24AWG, 50 pair
- Category 3 UTP-CMR 24AWG, 25 pair
- DYNACOM 66 connect block w/89 B Mount Bracket
- Commscope Category 6 SL Series Unshielded Patch Panel

## **DATA EQUIPMENT RACK**

Chatsworth open frame 19 in. equipment rack, 7 foot 6 in. overall height with flange base. Racks are to be fixed to the floor through the holes in the mounting flange per the manufactures instructions. Racks are to be mounted to the floor at a distance of three feet from the wall to the back of the rack and a minimum of 6 inches from a side wall. Racks are to be anchored to the wall with ladder rack from the back of the rack to the wall. All Racks shall be properly grounded to prevent electrical shock.

## **DETAILS BY WIRING CLOSET**

**Level 0-IT Storage room (010)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 48 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (3) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor

**Level 1-Data Closet (157)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (3) 48 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (5) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 2-Data Closet (206)** – Contractor shall provide and install:

- (2) Equipment Racks with cable ladder
- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (2) Horizontal cable management

- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 3- Data Closet (302A)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (2) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 4- Data Closet (427A)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 48 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (2) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 5- Data Closet (527A)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 48 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (2) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 6- Data Closet (602A)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (1) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 7- Data Closet (714A)** – Contractor shall provide and install:

- (1) Equipment Rack with cable ladder
- (1) 48 port CAT 6 data patch panel

- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (3) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**Level 8- Data Closet (815A) – Contractor shall provide and install:**

- (1) Equipment Rack with cable ladder
- (1) 24 port CAT 6 data patch panel
- (1) 24 port CAT 6 data patch panel (to be used for voice)
- (2) Horizontal cable management
- (1) 50 pair voice riser to Second Floor data closet (206)
- (1) 66MI-50 blocks to terminate voice risers

Note: Fiber patch panel provided and installed by fiber vendor.

**INSTALLATION:**

- Adhere to manufacturer's published specifications for pulling tension, minimum bend radii, and sidewall pressure when installing cables.
- Where manufacturer does not provide bending radii information, minimum-bending radius shall be 15 times cable diameter. Arrange and mount equipment and materials in a manner acceptable to the engineer and the owner.
- Installation shall conform to the following basic guidelines:
- Use of approved wire, cable, and wiring devices
- Neat and uncluttered wire termination
- Once horizontal cables leave the pathway, they shall be supported by “J” hooks attached to permanent structure with suitable attachments at intervals of 48 to 60 inches. The Contractor may elect to install cable trays in the main hallways and corridors for easier cable installation.
- Install cables in one continuous piece. Splices WILL NOT be allowed.

**GROUNDING**

- Grounding shall conform to ANSI/TIA/EIA 607(A) - *Commercial Building Grounding and Bonding Requirements for Telecommunications*, *National Electrical Code*®, ANSI/NECA/BICSI-568 and manufacturer's grounding requirements as minimum.
- Bond and ground equipment racks, housings, messenger cables, and raceways.
- Connect cabinets, racks, and frames to single-point ground which is connected to building ground system via #6 AWG green insulated copper grounding conductor.

**LABELING**

Labeling shall conform to ANSI/TIA/EIA-606 (A) standards. In addition, provide the following:

- Label each outlet with permanent self-adhesive label with minimum 3/16 in. high characters.
- Use labels on face of data patch panels.
- Labels shall be machine-printed. Hand-lettered labels WILL NOT be accepted.

**Copies of the Guilford County data numbering convention will be given to the cabling contractor that is awarded the bid.**

## **TESTING**

A field channel test shall be performed on all data outlet locations. Test results shall be presented to The Customer in electronic format.

## **CHANNEL TEST DEFINITION FOR THE PROJECT**

A channel consists of up to 90 meters (295 feet) of horizontal cabling, a connection at the end, up to 7 meters for the cross-connect and equipment cable, and up to 3 meters for the work area equipment cable, a total length of up to 100 meters. Contractor shall use the same patch cables for all testing purposes and deliver all patch cables to Guilford County.

## **FIELD TEST TO BE PERFORMED**

Tests are to include, but are not limited to:

- Wire Map
- Length
- Attenuation
- Near-end Crosstalk (NEXT) loss
- Structured return loss (SRL)
- Power Sum NEXT loss (PSNEXT)
- Equal Length Far-end Crosstalk (ELFEXT)
- Power Sum Equal Length Far-end Crosstalk (PSELFEXT)

**Specification for  
Horizontal Backbone Fiber Optic Cable  
401 West Sycamore Street  
Greensboro, North Carolina**

**CONTRACTOR'S QUALIFICATIONS**

The selected Contractor shall be fully capable and experienced in the wiring structure being submitted for bid. The Contractor shall have a minimum 5 years' experience in the system being submitted.

The Contractor must have a RCDD (Registered Communication Distribution Designer) on staff that will be ultimately responsible for this project. The RCDD must possess adequate knowledge and experience with the system being bid to lend support to the field forces during installation and warranty period. RCDD's resume should be attached to the bid response. Contractor shall not change RCDD assigned to the project without County's consent, unless the RCDD ceases to be employed by the contractor.

The contractor shall provide an on-site, full-time Project Manager, who is a BICSI certified technician. The Project Manager is to act as a single point of contact for all activities regarding this project. The Project Manager will be required to make on-site decisions regarding the scope of the work and any changes required by the work. The Project Manager must be on the job at any time work is being performed or workers are present. The Project Manager will be totally responsible for all aspects of the work and have the authority to make immediate decisions regarding implementation or changes to the work.

**COORDINATION AND MEETINGS**

Following award of the bid, the Cable Contractor shall schedule a preconstruction conference to be attended by General Contractor, Guilford County and Cable Contractor. The purpose of this meeting shall be to establish and incorporate the cable installation into the overall project schedule and to answer any questions the Cable Contractor has for the County regarding the cable requirements.

**SCOPE**

Install twenty-four strands (24) 50 Micron Multimode fiber optic cable from the data closet (L11) at 201 South Eugene Street (New Courthouse) to the main data closet 206 at 401 West Sycamore St. (Law Enforcement Center).

Upon completion, this infrastructure shall meet or exceed all criteria required to obtain manufacturer's warranty.

All work shall conform to the latest edition of the National Electrical Code®, the Building Code, and all local codes and ordinances, as applicable.

## QUALITY ASSURANCE

- The contractor shall have worked satisfactorily for a minimum of five (5) years on systems of this type and size.
- Upon request by the owner, the contractor shall furnish a list of references with specific information regarding type of project and involvement in providing of equipment and systems.
- Where equipment and materials have industry certification, labels, or standards (I.e., NEMA - National Electrical Manufacturers Association), this equipment shall be labeled as certified or complying with standards.
- Material and equipment shall be new, and conform to grade, quality, and standards specified. Equipment and materials of the same type shall be a product of the same manufacturer throughout.

## WARRANTY

Unless otherwise specified, unconditionally guarantee in writing the materials, equipment, and workmanship for a period of manufacturer's standard warranty, from date of acceptance by the owner. The owner shall deem acceptance as beneficial use.

Transfer manufacturer's warranties to the owner in addition to the General System Guarantee. Submit these warranties on each item in list form. Detail specific parts within equipment that are subject to separate conditional warranty. Warranty proprietary equipment and systems involved in this contract during the guarantee period. Final payment shall not relieve you of these obligations.

## PROJECT RECORD

Submit project record drawings at conclusion of the project and include:

- Diagram depicting the routing of fiber optic cables
- Certification fiber will run 10 gigabit speeds
- Fiber certification test results in electronic format

## PRODUCTS

Manufacture: **CommScope: Fiber patch panels and connectors** – No substitutes will be accepted unless otherwise requested and approved in advance and in writing by Guilford County Information Services department.

CommScope:

760231456 SD 2U sliding fiber panel

760066076 LazrSPEED® SC, 12 Fiber, Aqua Duplex Adapter, black panel

## **TERMINATION POINTS**

- 201 South Eugene Street (room L11): Terminate all twenty-four (24) strands on a new rack mount enclosure with "SC" connectors. Mount patch panel enclosure in the existing 7' x 24" rack.
- 401 West Sycamore St. (main data closet 206): Terminate all twenty-four (24) strands with a new rack mount enclosure with "SC" connectors. Mount enclosure below the existing fiber enclosure in the existing 7' x 19" rack.

## **Conditions:**

- Fiber runs within the building will use Plenum rated inner duct where it is required.
- Quotes will include the following; placing, terminating, and testing of all the installed fiber.
- Installation of 50 Micron Multimode mode fiber shall be accordance with ITU specifications. Guilford County's expectation is to run 10 gigabit speed over each fiber pair.



## Data Cabling Numbering Scheme

**Labeling Station Faceplate:** The station faceplate will be labeled with a three segmented identifier.

- 1) The first segment will display the **Room Number** of the data closet in which the cable is terminated.
- 2) The second segment will display the unique identifier number of the **Patch Panel**.
- 3) The third segment will display the **Port Number** in which the cable is terminated in the patch panel.

**Example (for cable installed in room 205):** 244B-1-23 The label on this face plate example would indicate that the corresponding end of this cable would be in data closet with the room number “244B”, on the patch panel labeled “1” (see Labeling Patch Panels below), and on the “23<sup>rd</sup>” port of the patch panel.

The label on port 23 located on patch panel 1 in data closet 244B would be labeled with the identifying room number “205”. If there is more than one cable in a room, the cables must be sequentially numbered beginning with a slash then the next number. For example “205/2” indicates that this is cable number 2 in room 205.

(See Labeling Ports on the Patch Panels below).

### **Labeling Patch Panels:**

Each patch panel will have its unique identifier. This will be a sequential number beginning with one “1”.

### **Labeling Ports on the Patch Panels:**

Each port on the patch panel will be labeled with the office room (or cubical) number where the face plate is located.

NOTE: If there is more than one cable in the room, the ports must be sequentially numbered beginning with a slash then two “/2”.

Using the earlier example, the first cable in room 205 will be labeled on the patch panel port as “205”. The second cable installed in room 205 will be labeled on the patch panel port as “205/2”. A third cable in the room would be “205/3” and so on...

### **Data Closets:**

Will have a room number indicated on the floor plans for the building

## Specifications for Cabling Guilford County Office Buildings

### PRODUCTS

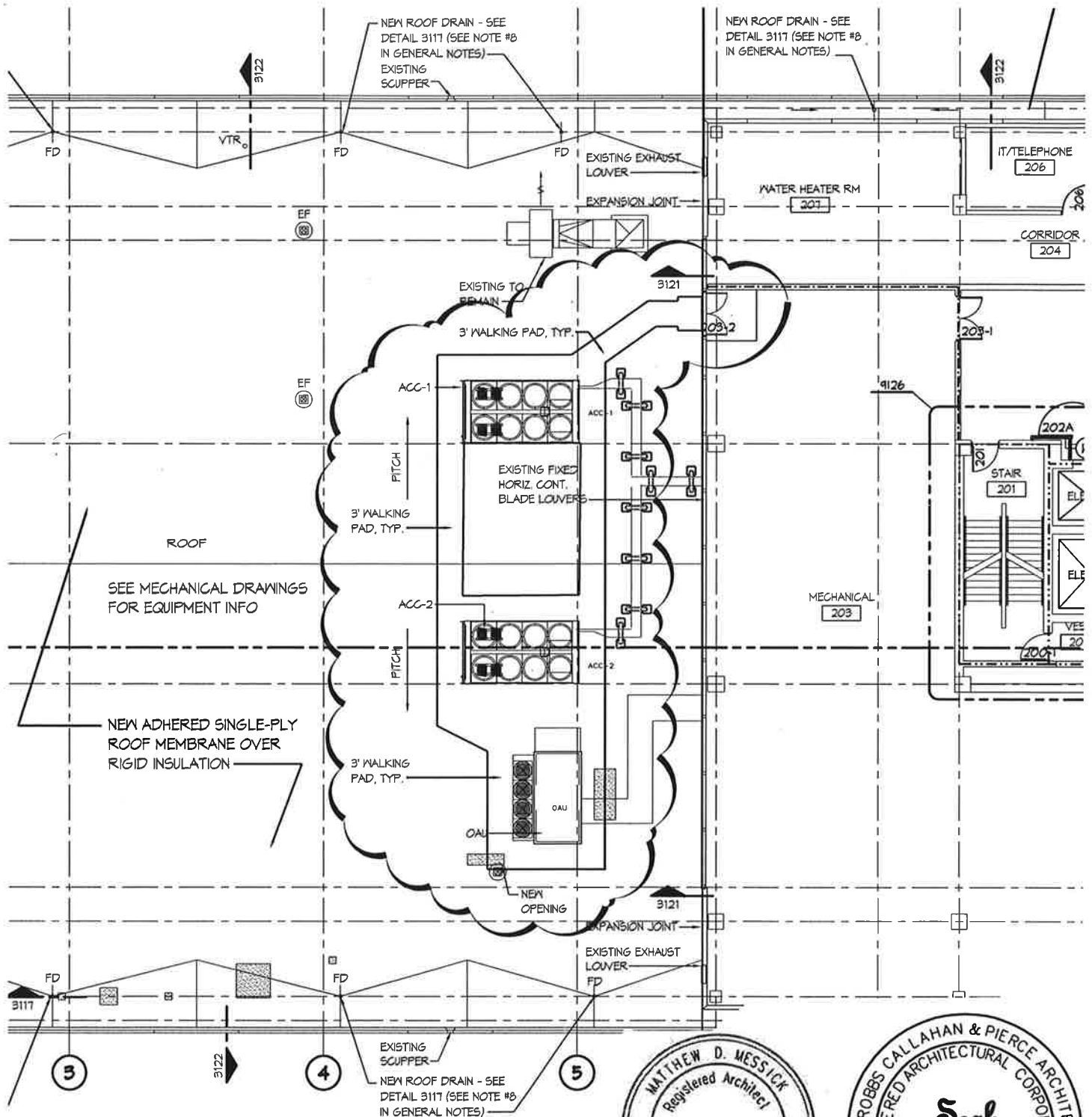
Manufacturer: **Commscope** – No substitutes will be accepted as this is to be a part of an existing system using these parts.

| <u>Mfgr. Part No.</u>                                                   | <u>Item</u>          | <u>Description</u>                                      |
|-------------------------------------------------------------------------|----------------------|---------------------------------------------------------|
| 211009-1                                                                | Faceplate            | 2 Port, Flush Faceplate, Almond                         |
| 1375055-1                                                               | Jack, Data           | Jack, Cat 6 568A/B, SL Series, Almond                   |
| 8773614/10 6504+                                                        | UTP,CMP              | Commscope,Cable, Cat 6, Plenum (Blue) <good>            |
| 760237041                                                               | Standard Patch Panel | 2U,Patch Panel,Cat 6,48 Port, Rack Mount                |
| 1375014-1                                                               | Standard Patch Panel | Patch Panel,Cat 6,24 Port, Rack Mount                   |
| 9-1375055-2                                                             | SL110 Modular Jack   | SL series modular jack, RJ45                            |
| 556438-1                                                                | Rack, Hardware       | Grounding Lug Kit                                       |
| 406375-2                                                                | Jack, Telecom        | CAT3-Jack, 110 Punch down, 6 pin                        |
| TCPC-6RUVB-BL10F                                                        | Patch Cable          | (10') CAT6 Slim line patch cable                        |
| <b><u>CablExpress (CXTEC)</u></b> Bridget Bearup (CXTEC) (315) 883-3661 |                      |                                                         |
| CBX-CPTA-M6CBBL-007                                                     | Patch Cable          | 7FT MINI CAT6 RJ45/RJ45 568B Slim Clear Boot Blue Cable |

Manufacturer: **Chatsworth**: Racks and Cable Management – any substitutions must be approved in advance by County.

| <u>Mfgr. Part No.</u> | <u>Item</u>      | <u>Description</u>                     |
|-----------------------|------------------|----------------------------------------|
| 12228-701             | Cable Ring       | Double Wide Cable Ring                 |
| 55053-503             | Floor Mount Rack | 19" x 84" Floor Mount Rack, Standard   |
| 30130-719             | Horizontal Mgmt. | 2U, Universal Horizontal Cable Manager |

**NOTE:** This should not to be considered a complete list of products that may be necessary to complete the installation. Other necessary products may include suspension hardware, fire barrier, etc.



**LEVEL 2 - MECHANICAL -**  
**2226 FLOOR PLAN - ROOF PLAN**  
 1/16"=1'-0"

BP000496

**walterrobbs**  
 ARCHITECTURE + INTERIORS + PLANNING

530 NORTH TRADE STREET, SUITE 301  
 WINSTON-SALEM, NORTH CAROLINA 27101 P 336.725.1371

Project:  
 GUILFORD COUNTY LAW  
 ENFORCEMENT DETENTION CTR  
 401 W. SYCAMORE STREET  
 GREENSBORO, NC 27401

Related Doc: A2.2

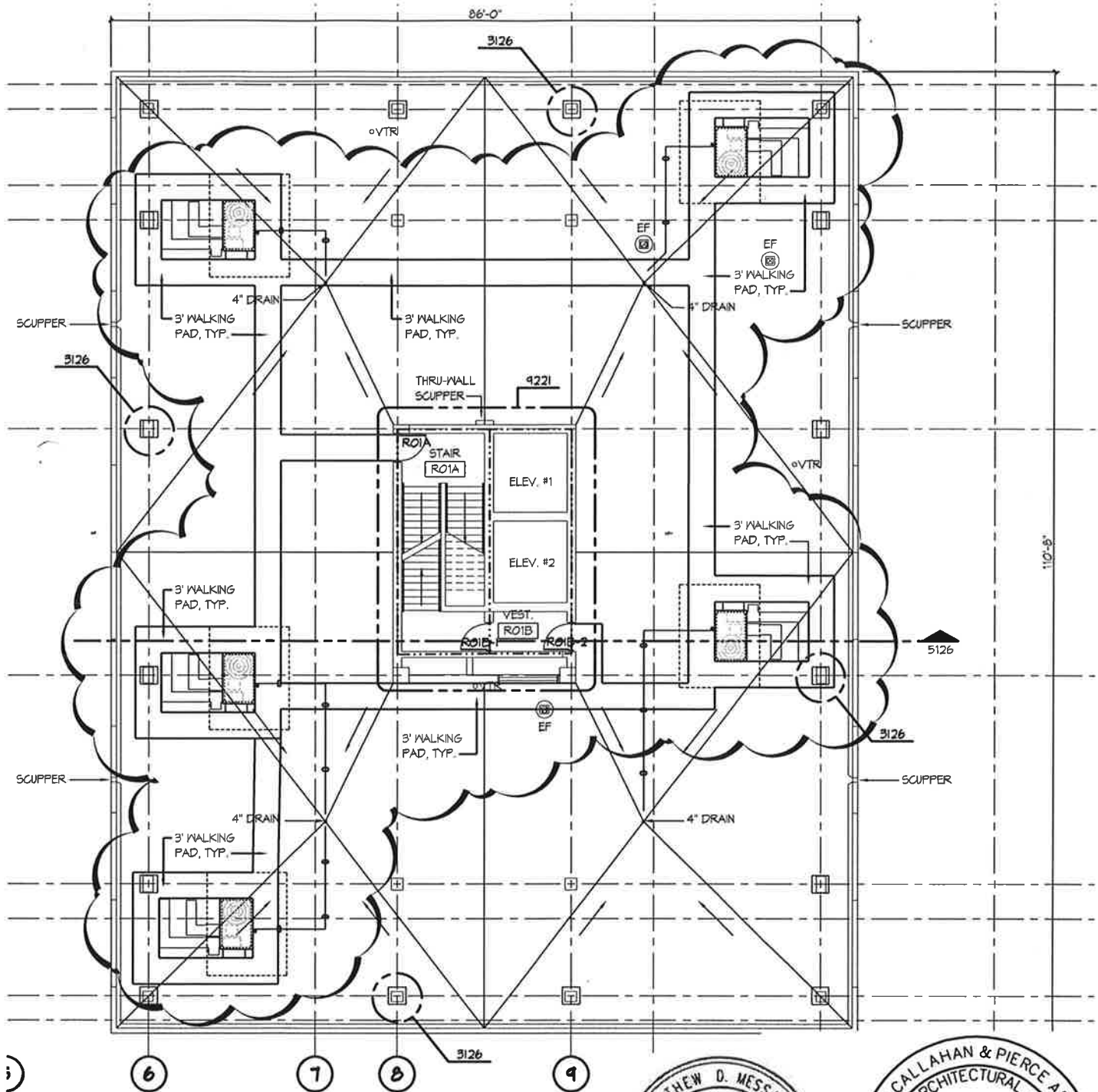


8/14/18  
 Consultant:



Project No: 17-496  
 Issue Date: 08-14-2018  
 Drawing No: 1 OF 2  
 Bulletin No:

**ADD-5-1**



# 3111 HIGH ROOF PLAN

1/16"=1'-0"

BP000496

**walterrobbs**  
ARCHITECTURE + INTERIORS + PLANNING

530 NORTH TRADE STREET, SUITE 301  
WINSTON-SALEM, NORTH CAROLINA 27101 P 336.726.1371

Project:

GUILFORD COUNTY LAW  
ENFORCEMENT DETENTION CTR  
401 W. SYCAMORE STREET  
GREENSBORO, NC 27401

Related Doc.:

A3.1



8/14/18

Consultant:



Project No:

17-496

Issue Date:

08-14-2018

Drawing No:

2 OF 2

Bulletin No:

ADD-5-2

**STRUCTURAL DESIGN:** EXISTING BUILDING DESIGNED UNDER 1967 NCSBC. NEW ALTERATIONS TO BE MINOR & COMPLY WITH SECTION 3404 OF THE 2012 NCSBC

**DESIGN LOADS:**

IMPORTANCE FACTORS: WIND ( $I_W$ ) 1.15 (NEW) - N/A (EXISTING)

SNOW ( $I_S$ ) N/A (EXISTING)

SEISMIC ( $I_E$ ) N/A (EXISTING)

LIVE LOADS: ROOF 80 PSF (HI)/20 PSF (LO) PSF

MEZZANINE - PSF

FLOOR 65 PSF TYP./100 PSF (1st) PSF

GROUND SNOW LOAD: N/A (EXISTING) PSF

WIND LOAD: BASIC WIND SPEED 90 mph (NEW) MPH (ASCE-7)

EXPOSURE CATEGORY B

WIND BASE SHEARS (FOR MWFRS)  $V_x =$  N/A  $V_y =$  N/A

SEISMIC DESIGN CATEGORY ☐ A ☐ B ☐ C ☐ D N/A (EXISTING)

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS: N/A (EXISTING)

OCCUPANCY CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV

SPECTRAL RESPONSE ACCELERATION  $S_s =$  - %g  $S_1 =$  - %g

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:  $V_x =$  -  $V_y =$  N/A (EXISTING)

ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☒ YES ☐ NO

LATERAL DESIGN CONTROL: EARTHQUAKE ☐ WIND ☐ N/A (EXISTING)

SOIL BEARING CAPACITIES:

FIELD TEST (PROVIDE COPY OF TEST REPORT) - PSF

PRESUMPTIVE BEARING CAPACITY 1000 PSF PSF

PILE SIZE, TYPE, AND CAPACITY 60 TONS

SPECIAL INSPECTIONS REQUIRED:

☒ YES ☐ NO

NEW RETAINING WALLS OVER 5 FT

NEW CAST IN PLACE CONCRETE

NEW SPRAY FIRE REISTANT MATERIALS

NEW FOUNDATIONS-SOILS



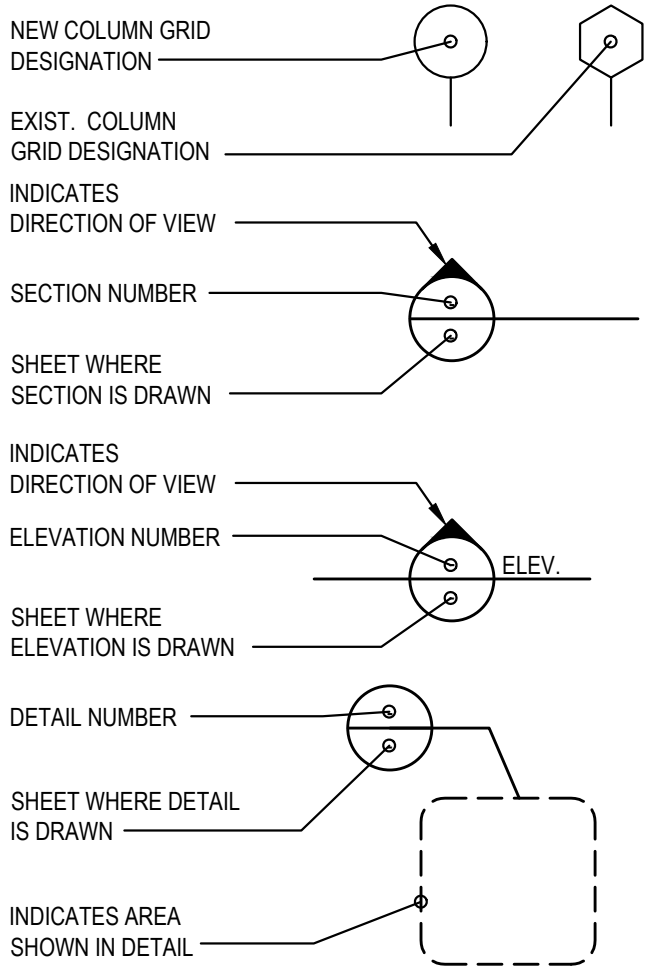
STRUCTURAL ABBREVIATIONS

Drawn by: ANNOT-ABBREVIATIONS-STRUCT-100

|        |                                            |          |                                    |         |                                |
|--------|--------------------------------------------|----------|------------------------------------|---------|--------------------------------|
| A.B.   | ANCHOR BOLT                                | G.B.     | GRADE BEAM                         | P.B.    | PRESTRESSED                    |
| ACI    | AMERICAN CONCRETE INSTITUTE                | GA.      | GAGE; GAUGE                        | PIT     | POST-TENSIONING                |
| A.F.F. | ABOVE FINISHED FLOOR                       | GALV.    | GALVANIZED                         | P.C.    | PRECAST CONCRETE               |
| AISC   | AMERICAN INSTITUTE OF STEEL CONSTRUCTION   | H.M.     | HOLLOW METAL                       | P.C.I.  | PRESTRESSED CONCRETE INSTITUTE |
| ATC    | AMERICAN INSTITUTE OF TIMBER CONSTRUCTION  | H.S.     | HIGH STRENGTH                      | PEN.    | PENETRATION                    |
| ALT.   | ALTERNATE                                  | HEX. HD. | HEXAGONAL HEAD                     | PERP.   | PERPENDICULAR                  |
| ARCH.  | ARCHITECTURAL                              | HSS      | HOLLOW STRUCTURAL SHAPE            | P.L.    | PLATE                          |
| ASTM   | AMERICAN SOCIETY FOR TESTING AND MATERIALS | HT.      | HEIGHT                             | PSF     | POUNDS PER SQUARE FOOT         |
| AVG.   | AVERAGE                                    | I.D.     | INSIDE DIAMETER                    | PSI     | POUNDS PER SQUARE INCH         |
| AWG    | AMERICAN WELDING SOCIETY                   | I.F.     | INSIDE FACE                        | P.T.    | PRESSURE TREATED               |
|        |                                            | INT.     | INTERIOR INTERSECTION              | PTI     | POST-TENSIONING INSTITUTE      |
| BLDG.  | BUILDING                                   | IBC      | INTERNATIONAL BUILDING CODE        | PVC     | POLYVINYL CHLORIDE             |
| BM     | BEAM                                       | INT.     | INTERIOR INTERSECTION              | R.      | RADIUS                         |
| B.P.   | BEARING PLATE/BASE PLATE                   | JST.     | JOIST                              | R.D.    | ROOF DRAIN                     |
| BRG.   | BEARING                                    | JT.      | JOINT                              | RAD.    | RADIUS                         |
|        |                                            | K        | KIP (1,000 LBS.)                   | REF.    | REFERENCE                      |
| C.I.   | CONSTRUCTION JOINT                         | KFT      | KIPS PER FOOT                      | REINF.  | REINFORCE(D); REINFORCING      |
| CMU    | CONCRETE MASONRY UNIT                      |          |                                    | REM.    | REMAINING; REMAINDER           |
| COS    | CENTER OF GRAVITY OF STEEL                 |          |                                    | REQD.   | REQUIRED                       |
| CL     | CENTERLINE                                 | LLBB     | LONG LEGS BACK TO BACK             | S.J.    | SAWED JOINT                    |
| CLG    | CEILING                                    | LH       | LONG LEG HORIZONTAL                | S.S.    | STAINLESS STEEL                |
| CLR    | CLEAR                                      | LLO      | LONG LEGS OUTSTANDING              | S.W.    | SHORT WAY                      |
| COL    | COLUMN                                     | LLV      | LONG LEG VERTICAL                  | SCHD.   | SCHEDULE                       |
| CONC.  | CONCRETE                                   | LW       | LONG WAY                           | SECT.   | SECTION                        |
| CONN.  | CONNECTION                                 | LB       | POUND                              | SHT     | SHEET                          |
| CONST. | CONSTRUCTION                               | LG       | LONG                               | SM      | SIMILAR                        |
| CONT.  | CONTINUOUS                                 | LN       | LINEAR                             | SJ      | STEEL JOIST INSTITUTE          |
| CRSI   | CONCRETE REINFORCING STEEL INSTITUTE       | LL       | LIVE LOAD                          | SLBB    | SHORT LEGS BACK TO BACK        |
|        |                                            | LT. WT.  | LIGHT WEIGHT                       | SLO     | SHORT LEG OUTSTANDING          |
| CTR    | CENTER                                     | M.O.S.   | MIDDLE OF SLAB                     | S.O.G.  | SECTION(S)                     |
|        |                                            | M.O.W.   | MIDDLE OF WALL                     | SPEC(S) | SPECIFICATION(S)               |
| D.C.J. | DOWELED CONTROL JOINT                      | MATL.    | MATERIAL                           | SQ.     | SQUARE                         |
| D.J.   | DOUBLE JOIST                               | MAX      | MAXIMUM                            | STD.    | STANDARD                       |
| D.S.   | DOWN SPOUT                                 | N        | NORTH                              | STL     | STEEL                          |
| DBL    | DOUBLE                                     | N.C.     | NORTH CAROLINA STATE BUILDING CODE | STLCT.  | STRUCTURAL                     |
| DET    | DETAIL                                     | NCSCB    | NORTH CAROLINA STATE BUILDING CODE | SYL     | SYMMETRICAL                    |
| DIA.   | DIAMETER                                   | NO       | NUMBER                             | T.O.C.  | TOP OF CONCRETE                |
| DIAG.  | DIAGONAL                                   | NOM      | NOMINAL                            | T.O.F.  | TOP OF FOOTING                 |
| DIM    | DIMENSION                                  | OC       | ON CENTER                          | T.O.S.  | TOP OF SLAB; TOP OF STEEL      |
| DL     | DEAD LOAD                                  | O.D.     | OUTSIDE DIAMETER                   | T.O.W.  | TOP OF WALL                    |
| DN     | DOWN                                       | OPNG.    | OPENING                            | T&B     | TOP AND BOTTOM                 |
| DWG(S) | DRAWING(S)                                 | OP       | OPPOSITE                           | TEMP.   | TEMPORARY                      |
|        |                                            | O.H.     | OPPOSITE HAND                      | THRU    | THROUGH                        |
| E.F.   | EACH FACE                                  | ORIG.    | ORIGINAL                           | TYP.    | TYPICAL                        |
| E.S.   | EACH SIDE                                  |          |                                    | U.L.    | UNDERWRITERS LABORATORIES      |
| E.W.   | EACH WAY                                   |          |                                    | U.N.O.  | UNLESS NOTED OTHERWISE         |
| E-W    | EAST-WEST                                  |          |                                    | W/O     | WITHOUT                        |
| EA     | EACH                                       |          |                                    | W/      | WITH                           |
| ELEV.  | ELEVATION; ELEVATOR                        |          |                                    | W.P.    | WORKING POINT                  |
| ENGR.  | ENGINEER                                   |          |                                    | W.W.F.  | WELDED WIRE FABRIC             |
| EQ.    | EQUAL                                      |          |                                    | X       | BY                             |
| EXIST. | EXISTING                                   |          |                                    |         |                                |
| EXP.   | EXPANSION JOINT                            |          |                                    |         |                                |
| EXT.   | EXTERIOR                                   |          |                                    |         |                                |
|        |                                            |          |                                    |         |                                |
| F.D.   | FLOOR DRAIN                                |          |                                    |         |                                |
| F.F.   | FAR FACE                                   |          |                                    |         |                                |
| FDN.   | FOUNDATION                                 |          |                                    |         |                                |
| FIN.   | FINISH                                     |          |                                    |         |                                |
| FL     | FLOOR                                      |          |                                    |         |                                |
| FLG.   | FLANGE                                     |          |                                    |         |                                |
| F.O.B. | FACE OF BRICK                              |          |                                    |         |                                |
| FT.    | FOOT; FEET                                 |          |                                    |         |                                |
| FTG.   | FOOTING                                    |          |                                    |         |                                |

DRAWING SYMBOL LEGEND

Drawn by: ANNOT-LEGEND-SYMB-100



GENERAL NOTES

Drawn by: ANNOT-GENERAL

CONSTRUCTION

- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE, OR LOSS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS, AND PRECAUTIONS REQUIRED TO ACCOMMODATE THE PROJECT. SAFETY REGULATIONS SHALL BE STRICTLY FOLLOWED AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. THE DESIGNER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION, AND ANY TEMPORARY BRACING OR SUPPORT REQUIRED TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED ON NEW AND/OR EXISTING STRUCTURES. SUCH LOADS SHALL NOT EXCEED THE CAPACITY OF THE STRUCTURE AT ANY TIME.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, FURNISHING, ERECTING, AND REMOVING ANY SHORING AND BRACING REQUIRED DURING CONSTRUCTION, INCLUDING BRACING REQUIRED FOR SIDES OF EXCAVATIONS DURING FOUNDATION CONSTRUCTION AND TEMPORARY BRACINGS FOR WALLS.
- THE CONTRACTOR SHALL INFORM THE DESIGNER, IN WRITING, OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY VIRTUE OF THE DESIGNER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE DESIGNER OF SUCH DEVIATION AT TIME OF SUBMISSION, AND THE DESIGNER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATION.
- NO OPENINGS NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE DESIGNER.
- WHERE CONSTRUCTION TOLERANCES ALLOW FOR VARIATIONS IN LOCATION, SIZE, ETC. OF STRUCTURAL ELEMENTS, THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MATERIALS AND LABOR NECESSARY TO MODIFY CONNECTION ELEMENTS AS REQUIRED TO PROVIDE A FINISHED PRODUCT WHICH IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. ANY SUCH MODIFICATIONS REQUIRED SHALL BE REVIEWED AND APPROVED BY THE DESIGNER PRIOR TO EXECUTION.
- THE DESIGNER SHALL BE NOTIFIED AT THE PROPER TIME WHEN ITEMS ARE READY FOR FIELD REVIEW. SUFFICIENT NOTICE SHALL BE GIVEN TO ALLOW SCHEDULING OF THE FIELD REVIEW.

DRAWINGS & COORDINATION

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND MECHANICAL DRAWINGS OF ALL TRADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THE WORK OF ALL TRADES IS COORDINATED WITH THE STRUCTURAL WORK.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS.
- ANYTHING WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE PLANS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE CONSTRUCTION OF THE AFFECTED WORK MAY PROCEED.
- DETAILS ARE MARKED AT THE SPECIFIC LOCATION WHERE THEY APPLY, BUT ALSO INDICATE GENERAL CONSTRUCTION REQUIREMENTS FOR OTHER LOCATIONS WITH SIMILAR CONDITIONS.
- DETAILS NOTED AS "TYPICAL" MAY NOT BE REFERENCED ON THE DRAWINGS. TYPICAL DETAILS APPLY AT ALL LOCATIONS WHERE THE TYPE OF CONSTRUCTION SHOWN IN THE TYPICAL DETAIL OCCURS.

CONCRETE

- CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED OTHERWISE. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28-DAY COMPRESSIVE STRENGTHS UNLESS NOTED OTHERWISE IN THE PLANS OR SPECIFICATIONS.

| FOOTINGS                              | 3,000 PSI |
|---------------------------------------|-----------|
| FOUNDATIONS WALLS                     | 4,000 PSI |
| SLAB                                  | 4,000 PSI |
| PERMANENTLY EXTERIOR EXPOSED CONCRETE | 4,500 PSI |
| BONDED TOPPING SLABS                  | 4,000 PSI |
| ALL OTHER CONCRETE                    | 4,000 PSI |
- CONCRETE PERMANENTLY EXPOSED TO WEATHER SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.42 AND SHALL CONTAIN APPROXIMATELY 6% ENTRAINMENT AIR. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS.
- CONCRETE SHALL BE BATCHED USING MATERIALS AND PROPORTIONS DESIGNATED IN THE APPROVED DESIGN MIXES. THE GENERAL CONTRACTOR SHALL PROVIDE QUALITY CONTROL OF THE CONCRETE MIX.
- CONCRETE SLUMP SHALL BE AS INDICATED IN THE SPECIFICATIONS.
- THE ADDITION OF WATER TO INCREASE SLUMPS ABOVE THE LEVEL SPECIFIED OR TO RETEMPER CONCRETE WHICH HAS EXPERIENCED SLUMP LOSS DUE TO EXCESSIVE MIXING OR HEAT BUILD-UP IS NOT PERMITTED.
- CONCRETE SHALL BE HANDLED, PLACED, AND CONSOLIDATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS.
- SEE SPECIFICATIONS FOR CURING AND HOT AND COLD WEATHER REQUIREMENTS FOR CONCRETE.
- PROVIDE PRE-MOLDED EXPANSION-JOINT FILLER AT EDGES OF SLABS ON GRADE AGAINST VERTICAL SURFACES UNLESS NOTED OTHERWISE.
- DOWELS FROM FOOTINGS SHALL BE ACCURATELY LOCATED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF THE CONCRETE. PLACEMENT OF DOWELS IN FRESH CONCRETE AFTER THE CONCRETE HAS BEEN PLACED WILL NOT BE PERMITTED. USE TEMPLATES FOR THE PLACEMENT OF DOWELS IN COLUMNS AND SHEAR WALLS.
- THE CONTRACTOR SHALL USE INSTRUMENTS TO MAINTAIN A CONTINUOUS CHECK OF THE ELEVATIONS OF THE TOP SURFACES OF SLABS DURING THE PLACEMENT AND FINISHING OF THE CONCRETE. ADJUSTMENTS SHALL BE MADE TO MAINTAIN THE SURFACES WITHIN THE SPECIFIED TOLERANCES.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL ANCHOR BOLTS, CLIPS, INSERTS, SLEEVES, AND OTHER REQUIRED ITEMS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND IN COOPERATION WITH OTHER TRADES PRIOR TO THE PLACING OF CONCRETE.
- CONCRETE FORMWORK SHALL NOT BE REMOVED UNTIL CONCRETE HAS REACHED SUFFICIENT STRENGTH TO NOT BE DAMAGED BY FORMWORK REMOVAL. SEE ALSO SPECIFICATIONS.

REINFORCED CONCRETE MASONRY

- DETAILS FOR MASONRY CONSTRUCTION ON THE STRUCTURAL DRAWINGS ARE LIMITED IN SCOPE TO SHOW STRUCTURAL REQUIREMENTS ONLY. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FURTHER REQUIREMENTS OF MASONRY CONSTRUCTION INCLUDING UNIT TYPES AND SIZES, PLACING PATTERNS, JOINT REINFORCING, VENEER TIES, CONTROL, ISOLATION, AND EXPANSION JOINTS; INSULATION, DAMPPROOFING, ETC. SEE DRAWINGS OF OTHER TRADES FOR OPENINGS AND OTHER SPECIAL REQUIREMENTS.
- MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530. CONCRETE MASONRY BLOCK SHALL CONFORM TO ASTM C90. THE PORTLAND CEMENT/PLASTER MORTAR SHALL CONFORM TO ASTM C270, TYPE-S. GROUT FOR FILLED MASONRY SHALL BE FINE OR COARSE GROUT APPROPRIATELY SELECTED FOR THE WIDTH OF GROUT SPACE PER ACI 530. GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" FOR COARSE GROUT AND A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C1019. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY SHALL BE AT LEAST 2000 PSI.
- PROPORTIONING OF ALL MORTAR SHALL BE ONLY BY VOLUME MEASUREMENT, NOT BY SHOVEL COUNT. MORTAR SHALL BE PROPORTIONED USING THE SAME PORTLAND CEMENT, HYDRATED LIME AND FINE AGGREGATE THAT ARE SELECTED AND APPROVED FOR THE ENTIRE PROJECT. MORTAR SHALL BE MIXED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C270, "SPECIFICATION FOR MORTAR FOR UNIT MASONRY".
- SOLID GROUT FILL SHALL BE PROVIDED IN ALL MASONRY BELOW GRADE. IN ALL CAVITIES WITH REINFORCING BARS, IN ALL CAVITIES WITH EMBEDDED OR DRILLED-IN ANCHORS, AND AS INDICATED. GROUT FILL SHALL COMPLETELY AND SOLIDLY FILL REQUIRED SPACES.
- ALL MASONRY CAVITIES WHICH ARE TO BE FILLED WITH GROUT SHALL BE FILLED IN LIFTS NOT EXCEEDING 1'-0". IF NECESSARY TO OBTAIN COMPLETE FILL, LIFT WEIGHT SHALL BE REDUCED. CARE SHALL BE TAKEN WHILE LAYING BLOCK TO PREVENT MORTAR AND OTHER DEBRIS FROM FALLING INTO THE CAVITIES AND PREVENTING THE GROUT FROM COMPLETELY FILLING THE CAVITIES. GROUT SHALL BE CONSOLIDATED AT PLACEMENT AND AGAIN AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED.
- WHERE REINFORCING IS SPECIFIED TO BE PLACED IN MASONRY CAVITIES, REINFORCING SHALL BE SECURELY TIED IN POSITION AT THE PROPER LOCATION WITHIN THE MASONRY PRIOR TO FILLING WITH GROUT. PROVIDE BAR SUPPORTS AND POSITIONERS AS REQUIRED. INSERTION OF UNSECURED REINFORCEMENT INTO MASONRY CAVITIES OR INTO GROUT FILL SHALL NOT BE PERMITTED.
- SEE TYPICAL DETAILS FOR REQUIRED LINTELS IN MASONRY WALLS NOT OTHERWISE SHOWN ON DRAWINGS.

REINFORCING STEEL

- DETAILING, FABRICATION, STORAGE, AND INSTALLATION OF REINFORCING, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315), BOTH BY THE AMERICAN CONCRETE INSTITUTE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING STEEL WELDED TO EMBEDDED STEEL PLATES OR SHAPES SHALL CONFORM TO ASTM A706. DO NOT WELD REINFORCING BARS TO EACH OTHER.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- UNLESS NOTED OTHERWISE ON PLANS OR IN DETAILS, REINFORCING BARS MARKED ON THE PLANS AS BEING CONTINUOUS SHALL BE LAPPED AT SPlice LOCATIONS AS SHOWN IN SCHEDULE, FOR SPLICES AT CORNERS OR INTERSECTIONS OF WALLS AND BEAMS, SEE TYPICAL DETAILS.
- REINFORCING STEEL SHALL BE CLEAN OF MUD, DEBRIS, LOOSE RUST, CEMENT GROUT, OR ANY OTHER MATERIAL WHICH MAY INHIBIT BOND BETWEEN THE STEEL AND THE CONCRETE.
- REINFORCING SHALL BE SECURELY TIED AND ANCHORED IN PLACE BEFORE CONCRETE PLACEMENT, TO PREVENT DISLOCATION.
- UNLESS OTHERWISE NOTED, CONCRETE COVERAGE ON REINFORCING STEEL SHALL BE AS FOLLOWS:

| FOOTINGS - ALL FACES                               | 3"     |
|----------------------------------------------------|--------|
| SLAB-ON-GRADE - TOP <td>2"</td>                    | 2"     |
| SLABS - INTERIOR - TOP <td>3/4"</td>               | 3/4"   |
| SLABS - EXTERIOR - TOP <td>1"</td>                 | 1"     |
| EXTERIOR COLUMNS/BEAMS <td>1 1/2"</td>             | 1 1/2" |
| WALLS - EXPOSED TO SOIL <td>2"</td>                | 2"     |
| WALLS - NOT EXPOSED TO SOIL - INTERIOR <td>1"</td> | 1"     |
| BONDED TOPPING - TOP <td>3/4"</td>                 | 3/4"   |
- BARS SHALL BE BENT ONLY USING APPROVED METHODS. BARS SHALL NOT BE BENT AFTER PARTIAL EMBEDMENT IN HARDENED CONCRETE.

STRUCTURAL STEEL

- ROLLED STEEL W-SHAPES SHALL CONFORM TO ASTM A992, GRADE 50, FY=50 KSI. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE-E, GRADE-B, FY=50 KSI. COLD FORMED STEEL TUBING SHALL CONFORM TO ASTM A1085, FY=50 KSI. ALL OTHER ROLLED STEEL SHAPES, PLATES, AND BARS, SHALL CONFORM TO ASTM A36, FY=36 KSI. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36.
- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS, COMMENTARY, AND CODE OF STANDARD OF PRACTICE.
- CONNECTIONS NOT DETAILLED ON THE PLANS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR AND APPROVED BY THE DESIGNER. CONNECTION DESIGNS SHALL COMPLY WITH THE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE AND AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, AISC 341-05 & AISC 341S1-05".
- WELDS:
  - ALL WELDS SHALL BE MADE IN ACCORDANCE WITH AWS D1.1 STRUCTURAL WELDING CODE - STEEL BY THE AMERICAN WELDING SOCIETY FOR THE MATERIAL BEING WELDED. WELDS SHALL BE MADE USING E70XX LOW-HYDROGEN ELECTRODES UNLESS OTHERWISE NOTED.
  - GALVANIZED STEEL SHALL BE WELDED IN ACCORDANCE WITH AWS D1.9 - WELDING ZINC COATED STEEL BY THE AMERICAN WELDING SOCIETY. STEEL SURFACES SHALL BE FREE OF ZINC IN THE AREA TO BE WELDED.
  - WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED BY TESTS AS PRESCRIBED IN AWS D1.1 BY THE AMERICAN WELDING SOCIETY, TO PERFORM THE TYPE OF WORK REQUIRED.
  - ALL SHOP WELDS SHALL BE A MINIMUM 3/16" AND ALL FIELD WELDS SHALL BE A MINIMUM 1/4" UNLESS NOTED OTHERWISE. INDICATED WELDING OF CONNECTED PARTS SHALL BE "CONTINUOUS" OR "ALL AROUND" AS APPLICABLE, UNLESS NOTED OTHERWISE.
  - WELDS SHALL BE CLEANED AND TOUCHED UP WITH THE APPROPRIATE PAINT OR ZINC COATING.
  - PROVIDE SEAL WELDS ON ALL WELDED STEEL JOINTS EXPOSED TO VIEW, MOISTURE, OR CORROSIVE CONDITIONS WHICH WOULD NOT OTHERWISE BE WELDED FOR STRENGTH.
- BOLTED CONNECTIONS SHALL BE MADE USING HIGH-STRENGTH BOLTS, 3/4" DIAMETER CONFORMING TO ASTM A325N, UNLESS OTHERWISE NOTED ON PLAN. SEE SPECIFICATIONS FOR BOLT TIGHTENING METHODS.
- SPLICES FOR ALL STEEL MEMBERS NOTED AS "CONTINUOUS" SHALL OCCUR OVER SUPPORTING MEMBERS.
- PROVIDE ADEQUATE SEPARATION BETWEEN STRUCTURAL STEEL AND ALUMINUM AND OTHER DISSIMILAR METALS TO PREVENT GALVANIC CORROSION. SEPARATION MATERIALS SHALL BE ADEQUATE TO TRANSFER LOADS.
- SEE ARCHITECTURAL DRAWINGS FOR FIREPROOFING REQUIREMENTS.

ANCHORS & FASTENERS

- GENERAL:
  - ALL ANCHOR AND FASTENER PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS BY PERSONNEL CERTIFIED BY THE MANUFACTURER IN THE USE OF THE PRODUCTS BEING INSTALLED. SUBMIT CERTIFICATION DOCUMENTS.
  - SEE DRAWINGS AND SPECIFICATIONS FOR SPECIFIC ANCHOR AND FASTENER REQUIREMENTS.
  - PRODUCT DATA SHALL BE SUBMITTED AND APPROVED PRIOR TO INSTALLATION.
  - WHERE THE MANUFACTURER IS IDENTIFIED IN THE CONTRACT DOCUMENTS, IT IS PROVIDED AS THE PERFORMANCE STANDARD FOR THE ANCHOR OR FASTENER PRODUCT. ALTERNATE PRODUCTS MAY BE SUBMITTED FOR APPROVAL AND MUST PROVIDE AT LEAST THE SAME PERFORMANCE FOR THE DETAILED INSTALLATION AS THE REFERENCED PRODUCT.
  - DAMAGE TO EXISTING MATERIALS DUE TO ANCHOR INSTALLATION SHALL BE REPAIRED USING PROCEDURES AND MATERIALS APPROVED BY THE ENGINEER.
- ANCHORAGE IN CONCRETE:
  - THE SUITABILITY OF POST-INSTALLED ANCHORS FOR USE IN CONCRETE SHALL HAVE BEEN DEMONSTRATED BY THE ACI PREQUALIFICATION TESTS AND SHALL HAVE CURRENT ICC-ES REPORTS INDICATING APPROVAL FOR USE UNDER IBC 2009 OR LATER.
  - THE INSTALLATION OF ANCHORS IN HARDENED CONCRETE SHALL NOT DAMAGE THE SURROUNDING CONCRETE OR ANYTHING EMBEDDED IN THE CONCRETE. PRIOR TO DRILLING FOR ANCHOR INSTALLATION, LOCATE MATERIALS EMBEDDED IN THE CONCRETE USING NON-DESTRUCTIVE METHODS. ADJUST ANCHOR LOCATIONS TO AVOID EMBEDDED MATERIALS. SUBMIT POSITIONS OF RELOCATED ANCHORS TO ENGINEER FOR APPROVAL PRIOR TO DRILLING. PRE-DRILL PROBE HOLES USING A SMALL DIAMETER DRILL BIT AT FINAL ANCHOR LOCATION TO CONFIRM A CLEAR DRILLING PATH.
  - ADHESIVE ANCHORS SHALL BE INSTALLED PER THESE NOTES AND PER TYPICAL DETAILS.

BUILDING CLEANING

- CLEAN ENTIRE EXTERIOR PRECAST AND CAST-IN-PLACE CONCRETE OF EXISTING BUILDING.

SEE DETAIL 7542 FOR CLEANING AGENT AND PROCEDURES

FOUNDATIONS

- ALL SUBGRADE PREPARATION SHALL BE PERFORMED AS DEFINED IN THE PLANS AND SPECIFICATIONS AND IN COOPERATION WITH THE OWNER'S GEOTECHNICAL TESTING SERVICE.
- SPECIAL FOUNDATIONS FOR THE SUPPORT OF MECHANICAL, ELECTRICAL, OR OTHER EQUIPMENT INSTALLED OR OUTSIDE OF THE BUILDING SHALL BE DESIGNED BY THE EQUIPMENT SUPPLIER(S) AND REVIEWED BY THE STRUCTURAL ENGINEER FOR COMPATIBILITY WITH THE BUILDING FOUNDATION SYSTEM. DRAWINGS OF THE FOUNDATIONS SHALL BE SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.
- FOUNDATION DRAINAGE AND GROUNDWATER CONTROL SYSTEMS MAY BE INDICATED IN PART ON THE STRUCTURAL DRAWINGS TO SHOW APPROXIMATE LOCATIONS RELATIVE TO CERTAIN STRUCTURAL COMPONENTS. FOUNDATION DRAINAGE AND GROUNDWATER CONTROL SYSTEMS ARE NOT A PART OF THE STRUCTURAL DESIGN. SEE OTHER DRAWINGS FOR DESIGN REQUIREMENTS OF THESE SYSTEMS.
- ALL FOOTINGS AND SLAB ARE DESIGNED TO BEAR ON RESIDUAL SOIL OR COMPACTED ENGINEERED FILL AND TO HAVE A MINIMUM BEARING CAPACITY AS LISTED UNDER "STRUCTURAL DESIGN DATA" IN THE GENERAL NOTES. FOOTING EXCAVATIONS ARE TO BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY FOR SUITABLE SOILS, BEARING PRESSURE, AND COMPACTION. COMPACTION OF SOIL UNDER FOOTINGS AND SLAB TO BE 100% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY.
- RETAINING WALLS:
  - ALL RETAINING WALLS SHOWN ON THE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED FOR THE LATERAL EARTH PRESSURES SHOWN IN THE GENERAL NOTES UNDER STRUCTURAL DESIGN DATA. RETAINING WALLS REQUIRE A FOUNDATION DRAINAGE SYSTEM WHICH IS DESIGNED TO PREVENT THE BUILD-UP OF HYDROSTATIC PRESSURE BEHIND THE WALL. BACKFILL SOILS TO BE CLASSIFIED AS "SWM" OR MORE GRANULAR, COMPACTED TO 100% OF THE MAXIMUM STANDARD PROCTOR DRY DENSITY.
  - DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL WALL MATERIALS HAVE REACHED THEIR REQUIRED STRENGTH AND ANY REQUIRED BRACING IS INSTALLED. BACKFILL NON-RETAINING FOUNDATION WALLS SIMULTANEOUSLY ON BOTH SIDES.
- SEE FOUNDATION PLAN NOTES FOR FURTHER REQUIREMENTS.

STRUCTURAL DESIGN DATA

- CODES AND STANDARDS FOR NEW CONSTRUCTION:
  - 2012 N. C. REVISIONS TO THE 2009 INTERNATIONAL BUILDING CODE.
  - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-05.
  - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318-08.
  - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530-08.
  - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-05.
- CODES AND STANDARDS EXISTING CONSTRUCTION ARE BASED ON REVIEW OF EXISTING DRAWINGS.
  - 1987 NORTH CAROLINA STATE BUILDING CODE VOLUME 1
- FOUNDATIONS:
  - FOOTINGS - ALLOWABLE SOIL BEARING PRESSURE 1,000 PSF
  - PILES:
    - CAPACITY (EXISTING) 60 TONS
  - RETAINING WALLS:
    - SOIL WEIGHT 120 PCF
    - ACTIVE PRESSURE COEFFICIENT 0.35
    - AT REST PRESSURE COEFFICIENT 0.55
    - PASSIVE PRESSURE COEFFICIENT 2.5
    - SLIDING FRICTION FACTOR 0.30
- GRAVITY LOADS:
  - FLOOR LIVE LOADS:
    - 1ST FLOOR 100 PSF
    - CORRIDORS ABOVE 1ST FLOOR 80 PSF
    - MECHANICAL ROOMS 100 PSF
    - OFFICES/ALL OTHER 65 PSF (INCLUDES 15 PSF FOR MOVEABLE PARTITIONS)
  - ROOF LIVE LOADS:
    - LOW ROOF 20 PSF
    - HIGH ROOF 80 PSF
  - ROOF SNOW LOADS:
    - GROUND SNOW LOAD 15 PSF
    - FLAT ROOF SNOW LOAD 16.5 PSF
    - OCCUPANCY CATEGORY III
    - IMPORTANCE FACTOR 1.10
    - EXPOSURE CATEGORY B
    - Ce 1.0
    - Cf 1.0
  - SUSPENDED DEAD LOADS (CEILING, M.E.P. SPRINKLERS, ETC.):
    - OVER MECHANICAL ROOMS 10 PSF
    - ALL OTHER 5 PSF
  - OTHER DEAD LOADS: PER CONSTRUCTION SHOWN ON DWGS
- WIND LOADS:
  - BASIC WIND VELOCITY 90 MPH
  - OCCUPANCY CATEGORY III
  - IMPORTANCE FACTOR 1.15
  - EXPOSURE CATEGORY B
  - INTERNAL PRESSURE COEFFICIENT +/-0.18
  - COMPONENTS & CLADDING DESIGN PRESSURES (EXISTING): (NCSCB 1967)
    - LESS THAN 30'-0" 15 PSF
    - 30'-0" TO 49'-0" 20 PSF
    - 49'-0" TO 99'-0" 25 PSF
    - 100'-0" TO 499'-0" 30 PSF
  - DESIGN BASE SHEAR - EXISTING
  - NEW COMPONENTS AND CLADDING DESIGN PRESSURES MIN. TRIBUTARY AREAS:

| ZONE            |             |
|-----------------|-------------|
| (1) ROOF        | +10/-31 PSF |
| (2) ROOF EDGE   | +10/-49 PSF |
| (3) ROOF CORNER | +10/-67 PSF |
| (4) WALL        | +25/-25 PSF |
| (5) WALL CORNER | +25/-41 PSF |
- EARTHQUAKE LOADS EXISTING BUILDING:
  - SEISMIC ZONE 2 (EXISTING)
  - SEISMIC FORCE RESISTING SYSTEM - EXISTING
  - ANALYSIS PROCEDURE - EXISTING
  - DESIGN BASE SHEAR - EXISTING
  - EXISTING BUILDING ALTERATIONS TO BE MINOR AND TO COMPLY WITH SECTION 3404 OF THE 2012 NCSCB.
- SPECIAL INSPECTIONS: SE SPECIFICATIONS FOR STATEMENT OF SPECIAL INSPECTIONS
  - CAST-IN-PLACE CONCRETE
  - SPRAYED FIRE RESISTANT MATERIALS
  - SOIL
  - RETAINING WALLS OVER 5FT.

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CONSTRUCTION DOCUMENTS

Project:  
GUILFORD COUNTY  
LAW ENFORCEMENT  
CENTER  
401 W. SYCAMORE ST.  
GREENSBORO, NC

Sheet Title:  
GENERAL NOTES,  
ABBREVIATIONS, DRAWING  
SYMBOL LEGEND, DRAWING  
INDEX

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S1.0

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