MEREDITH SQUARE PHASE 3

Apartments

ACCESSIBLE PARKING (SECTION 1106)

Buies Creek, North Carolina

| me of Projec | t. Marac | lith d | Sauara Pha | rea 3 Aparta | nents - Building Ty | ne l | | | | | | | | |
|----------------------------------|------------------------------|---------------|----------------------------|--------------------------------|--|--|-------------------------------|--|--|------------------|-------------------------|-------------------|--|-----------------------------|
| ldress: <u>603</u> | <u>Main Street</u> | , Bui | es Creek, | NC . | E-Mail: <u>castt</u> | oncc@gmail.com | | BUILDING ELEMENT | Fire separation Reg'd | Rating Provid | Deta | | n # Design # ted for rated | Design ‡ |
| nner/Authorize nned By: ≡ f | | | | | | Phone #: <u>919 697-69</u> 0 | 05 | | distance (Feet) | (W Reduc | * Shee | | bly penetrati | |
| ode Enforceme | ent Jurisdictic | n: [|] City ¯ □ C | | /County □ State | | | Bearing Walls Exterio | or | | | | | |
| me of Jurisdia | | <u>t Co</u> | unty | | | <u> </u> | | North East | | | | | | |
| ONTACT ESIGNER | : FIRM | | | NAME | LICENSE | TELEPHONE | | West | | | | | | |
| rchitectural | | | | A Jill B. Sn | nith 6448 | 919 807-1111 (252) 291-8887 | | South | | _ | | | | |
| vil ectrical | Turnkey En | | | | | (919) 235-0053 | | Interior Bearing Walls Nonbearing Walls Ext | | | | | | |
| re Alarm umbina | Turnkey En | aine | erina. PLLO | Michael | | (919) 235-0053 | | North | | | | | | |
| echanical | Turnkey En | | | | | (919) 235-0053 | | East West | | | | | | |
| orinkler-Stand :ructural | | Ass | ociates, P | A Jim Struf | Ffolino 15887 | (919) 833-0495 | | South | | | | | | |
| etaining Walls | > <u>5'</u> | | | | | | | Interior Non bearing Structural frame incl | | - | | | | |
| andscape russ Supplier | | | | | | | | columns, girders, tru | sses <u> </u> | | | | | |
| • | • | | • | be listed at a | end of Appendix B. | | | Floor construction, i supporting beams a | | | | | | |
| PROJECT | | | | -:-t£ 24 t | | والمراجع والجاران والموجود | . have a d | List construction typ | oe. <u>o</u> | | | | | |
| n four buildir | ngs. Three | buila | lings are tl | he same and | l designated as Ty | tments with six units upe I Building. The f | fourth | Floor Ceiling Assemb Columns Supporting F | | | | | | |
| | | | | | | ÿ apartments units s de summary is for th | | Roof construction in | cluding | | | | | |
| Type I buildir | ngs. Building | g c0 | nstruction i | includes rein | forced concrete s | slab on gráde with v | Nood | supporting beams \$ Roof Ceiling Assembl | | | | | | |
| | | | | | 13R fire sprinkler | low-E insulated viny system. | i Miriaons | Columns Supporting R | Roof N/A | | | | | |
| | | | | | | | | Shafts - Exit Enclosur Shafts - Other (desci | | | | | | |
| | | | | | | | | Corridor Separation | | | | | | |
| 2018 NC | BUILDING | 3 C | ODE: | New Bldg | Addition Renov | ation 🔲 lst Time Inter | Completion | Occupancy Separatio | on <u>o</u> | | | | | |
|]Shell/Core - | | | | | | II/Core (Local jurisdic | | Party/Fire Wall Separ Incidental Use Separa | | | | | | |
| 2018 NC | EXISTING | B | UILDING | CODE: | Prescriptive [| ☐ Repair ☐ Chap | oter 14 | Dwelling/Sleeping Unit | t Separation 📖 | | YII/A6 | <u> </u> | 341 | |
| | | | Alt | eration: | Level i [| ☐ Level II ☐ Leve | | Smoke Barrier Separ | | | | | | |
| | | | | | Historic Propert | - | nge of Use | Smoke Partition Tenant Separation | | | | | | |
| onstruct | | | | | | (Ch 3): | | * Indicate section n | number permittina re | duction | | | | |
| enovate | d: | | | Propose | ed Occupanci | y(s) (Ch 3): | | WALL LEGEND | | | | | | |
| ISK CAT | EGORY | (To | ble 160 | 94.5): curr | | ı 🛮 III 🗎 IV | | Fire Part 709 | | | | | | |
| | | | | Pro | posed: 🔲 I 🔲 I | | | LIFE SAFETY | | | | ш ш ног | 12011101 ASSET | noly 112 |
| BUILDING | | _ | | | | | | Emergency Lig | | INCLINE NO | l ⊅: □ Yes | | | |
| Mixed const | ruction: 🔼 🛚 | ■ No | ☐ Yes Typ | es | -B -A -B | | | Exit Signs: | J. 1511 19. | ■ No | □ Yes | | | |
| | | | | | | A 13D 🗆 Special Sup | pression | Fire Alarm: | | □ No | ■ Yes | | | |
| <u>standpipa</u> | | | | | □ III □ Wet □ □ | • | | Smoke Detect | | □ No | ■ Yes | □ Partial | | |
| fire Distr | _ | | | _ | d Hazard Area: ■ N Yes (Contact local | o □Yes jurisdiction additional | ramte) | Carbon Monox Panic Hardwar | | n □ No ■ No | ■ Yes □ Yes | | | |
| Building H | | | , | Number of St | | Jul Balculott adamenat | 1 dinis) | | | | | | | |
| 3asemen | | | | | | .ISE: ■ No □ Yes | | LIFE SAFETY | SYSTEM REQ | JIREMEN | TS: Life Sa | iety Plan Sl | neet #: | |
| Gross Bu | ildina Ar | ea | : | Life So | afety Plan Sheet # (il | provided) | | ☐ Fire and/or smoke☐ Assumed or Real | | | | 30' of the | proposed by | uildina |
| LOOR | EXISTING (S | | | N (SQ FT) | SUBTOTAL | ALLOWED | | Exterior wall oper | ning areā w/respect | to distance | to assumed | property li | nes (705.8) | _ |
| ird _ | | | | | 3,25I | 7,000 | | ☐ Occupancy Use for☐ Occupant loads for | or each area 🛮 🗀 | Common patl | h of travel d | listances (IC | 006.2.1 \$ 100 | 2) 6.3.2(1)) |
| Ind _ 1ezzanine _ | | | | | | | | □ Exit access trave□ Dead End length (| el distances 1017 🛛 | 🛚 Clear exit | t widths for e | each exit do | oor | |
| cround Floor_ | | | 3,632 | 2 | 3,632 | 7,000 | | ☐ Max calculated or | | | | | ; based on eq | gress |
| Basement _ | | | _ | | | | | width (1005.3) □ A separate sche | ematic plan indicatir | na where fir | e-rated floo | or/ceilina c | ınd/or roof s | tructure is |
| OTAL | | | 6,883 | | 6,883 | 14,000 | | provided for pur | poses of occupand | iý separatio | | , | , | ., |
| rea of Proje rea of Const | | erati | on/Renovati | on: | | | | □ Location of doors□ Location of doors | | | ne amount of | delay (1010 | .1.9.7) | |
| CCUPAN | | D V | ATION. | | | | | ☐ Location of doors | | | | | icane window | s (1030) |
| | | | | 1 A-I | A-3 | ∃Business Factoru. [|] F-1 Mod | ☐ Location of doors ☐ Square footage o | of each fire area (9) | 02) Squa | are footage | of each sm | oke compartn | nent (407.5) |
| Educational | Hazardous: | ☐ H- | Detonate | ☐ H-2 Deflag | grate 🗆 H-3 Combus | ∍ 🗆 H-4 Health 🗆 H | I-5 HPM | □ Note any code ex ——————————————————————————————————— | ceptions or table in | oles trial mo | ng nave been | | garaing these | |
| nstitutional: 🗆 esidential: 🗆 | | | | | □ □ 2 □ 3 □ 4 e: □ 5- Mod □ 5-: | | ile | EXIT REQUIRE | MENTS NUMBE | R & AR | RANGEM | ENT OF | EXITS: | |
| | | | | | | □ Utility and Miscelland | eous | Floor, Room and/or | 2 | | ravel Distanc | ce · | Arrangement | Means of |
| econdary Occ | | | N/A | Ассе | essory Occupancy: | | | Space Designation_ | Number of Exits Reg'd Shown | <u> </u> | | <u>E</u> c | gress ¹⁷³ (sect Required | <u>tion 1016)</u> Actual |
| cidental Use († 10ecial Us | | | | □ 405 □ 40 | 6 407 408 · | | 2 4 3 4 4 | | Plan | | el Dist | tance | Distance tween Exit | Distance Shown on |
| 415 🗆 416 | □ 4 7 □ 4 | 18 🗆 | 419 🗏 420 | 2 42 4 | 22 🗆 423 🗆 424 | 4 🗆 425 🗆 426 | □ 427 | 70 A | | (Table I | | | Doors | Plans |
| 1 | | | | | 9.4 □ 509.5 □ 5 _ Hr. Exception: | 09.6 🗆 509.7 🗆 5 | 509.8 | R2 Apartment Unit | <u> </u> | 250 | <u>''</u> | | N/A | |
| ı | , | | • | | • | | | | | | | | | |
| non-separa applying the | height and | o.s). area | ne requ :limitation | s for each o | of the applicable of | the building shall be occupancies to the a | entire building. | l Corridor dead end | ds (Section 1020.4) | | | | | |
| | - | | | | | to the entire building | - | 2 Section 1022 3 Common Path of E | Egress Travel (Section | on 1006.2.1) | | | | |
| the occupan | cy shall be : | such | that the s | oum of the ra | tios of the actual | ons. For each story floor area of each | y, the area of use divided | | | | | | | |
| - | | | | use shall not | | | | OCCUPANT LO | | a/b) | (a) | | Exit Width (| 2,3,45,6 |
| Actual Area Allowable Are | of Occupancy a of Occupar | A 1cu A | + <u>Actual</u> Allowab | Area of Occu ble Area of Oc | ipancy B cupancy B ≤ 1 | | | Use Group <u>(a)</u> And/Or Space Are | eal Areal Co | alculated E | (c) gress Width | Required | d Width | |
| | | | + | | , - | <u> </u> | | Designation sq. | Occupant La | ad | ér Occupant (1005.1) | (1005. (a/b) × | 1/ Show | ual Width In on Plans |
| | Ţ. | | • | Width of | INCREASE FF | RONTAGE | % | | (T 1004.1.1) (a) | | air Level | Stair | Level Stair | |
| xterior Iall | Actual Length | | Open Length | Public Wau Open Spa | or sprinki fra | | % | <u>2-bed 1060 </u> | <u>grs</u> 200 grs 6 | <u> </u> | <u> 0.2</u> | <u> </u> | 2 | <u>72</u> |
| orth | | | · • | >30' | FRONTAGE | INCREASE FORMUL. E AREA FORMULA | A | | | | | | | |
| outh ast | | | | >30' >30' | | P - 0.25] x W/30 | | | | | | | | |
| lest | | | | >30' | Building and | l Tenant must be inc | dicated on this | See table 1004.13 | 21 to determine who | ether net or | gross area | is applica | able. | |
| OTAL | | P | | F >30' | W chart. | (-) | | Minimum stairway (Section 1010.1.1). | width (Section IOII | .2); min. corr | rídor width (9 | bection 101 | 20); min. door | · width |
| TORY Descri | otion & Use | | | (A) | (B) | (C) 4 AREA | (D) ALLOWABLE | 3 Minimum width of | | | 4.2) | | | |
| No. | 3 | | | BLD AF | REA TABLE 506 ORY AREA | .2 FRONTAGE INCREASE ^{1,5} | AREA PER STORY OR 2,3 | 4 See Section 100 | 5.6 for converging | exits. | | | citu to loss t | han 50 |
| | | | | (ACTUA | | | UNLIMITED 2,3 | 5 The loss of one me percent of the total | | | oo hid avall | auto capac | 1114 10 1622 [| HUIT JU |
| | | | | | | | | 6 Assembly occupa | • | | | | | |
| | | | | | | | | ASSEMBLY OC | CUPANCY INF | FORMAT | ION THIS S | ECTION FO | R ASSEMBLY | USF AREA/ |
| | | | | | | | | Space Description | Area - SQ.FT | Occupant | Occupa | ant | Exit Exit | t |
| Frontage ass | ea increases | from | Section 50 | 6.3 are compl | uted thus. | | | | | Load Fact | | | Midth Qua | antity |
| a. Perimet | er which fron | ts a | public way c | or open spaċe | | width = | ft <i>(</i> F) | N/A | | | | | | |
| c. Ratio (f | uilding Perime =/P) = | | (F/P) | ft (P) ' | | | | TOTAL | | | | | | |
| d. W = Mir | imum width of | publ | ic way = | ft (M | | (a .) | | ACCECCIDI E | | TG /CF | TION !!O= | | | |
| Unlimited a | rea applica | ble | under cond | ditions of Sec | | | | ACCESSIBLE I | | | | | | |
| Maximum Bui | lding Area = | total | number of s | stories in the | building x D (maximun | n 3 stories) (506.2). 5 4 | | Total # accessible Units | units Type A Type Units Units Ovided Roald Roa | Units | Units Acc | etal # essible | Note: | l |
| Frontage i | ncrease is b | uper oase | ed on the u | ınsprinklered | t comply with 406. I area value in Tal | ole 506.2. | | Required Pro | ovided Req'd Pro | v'd Req'd O | Prov'd Unite | rov'd | Notes | |
| OST RESTRIC | TIVE USE | | ALL | OWABLE HEIG | SHT SHOWN ON PLAN | S CODE REFERE | NCE ¹ | | | | | | | |

FIRE PROTECTION REQUIREMENTS:

2018 APPENDIX B

(TABLE 504.3)

I Provide code reference if the "shown on plans" quantity is not based on Table 504.3 or 504.4.

2 The maximum height of air traffic control towers must comply with Table 412.3.1. 3 The maximum height of open parking garages must comply with Table 406.5.4.

Building Height in Feet (Table 504.3)² H = 60 ft Building Height in Stories (Table 504.4) 3 |S = 3

BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

| Parking Area | | Red | quired | Pro | video | , | Kegul Acces | ar w/5' ss Aisle | Van 132" Access A | V A | an 8 Acce | | Accessik Provide | ole d |
|--|--|-------------------------------------|---|-----------------------------------|------------------------|---------------------|---------------------------|-------------------------------|----------------------------------|------------------------|--------------------------|---------------------|-----------------------|--|
| R-2 Apt | | | 72 | | 12 | | (| 0 | 0 | | | 4 | 4 | |
| | | | | | | | | | | | | | | |
| PECIAI tate, NCD PLUMBI Space | 01, 0 NG | SC, [| DIRI | HHS, IC | X, e | tc.) | able | 290 | oprovals 22.1) Sprinking | | | | | _ |
| | М | F | Unisex | | М | F | Unisex | 1 | Regular | Acces | sible | | | |
| R-2 | | | 1/unit | 0 | | | 1/unit | 1/unit | 0 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| ENERGY special a furnish the method, s for the pi Existing b | ttribu e req tate ropos | te re juired the d sed d | aquirea I porti Innual Iesign | d to m ions o ener <u>o</u> | neet f the gy co | the pro st fo | enera ject i or the | gy code informat stando | shall als tion for th | o be ne plo ence | pro an d | vided. ata she | Each Des et. If pe | signer sl erformar |
| Exempt b | | | | | • | | | | ry reference. | | | | | |
| METHOD (| OF C | OMPL | -IANC | | | Co | de | □ Pro | sscriptive rformanc Scheck | 3 [| Pr | rescript erformo | tive ance | |
| CLIMATE | ZONE | ≣: | □ : | 3A 🔳 | 4A | | 5A | | | | | | | |
| Exterior I Descript U-Value R-Value Openinas | squation (ion cost to of to of in win | each of as: otal consulations | ootag asse sembl assem ion: or o | mbly) y: Re bly: loors | pair with | onl | y to e | ach ass existing | _ | | | | | |
| Sola | r Hec ectio Value | at Go n fac e: R= | ain coi tor (U= | O SHO | ent: SCC | | - (eac | h asse | mbly) | | | | | |
| None U-Value R-Value Opening U-Value Opening Door R- | of ir s (wir alue c e rec | nsulat ndows of as: quired | ion or o sembl | doors | | gla | zing) | | | | | | | |
| Malls belo Descript U-Value R-Value | tion of to | of as | sembl assem | u | mbly, |): N | l/A | | | | | | | |
| Floors ov (each as Descripti U-Value o R-Value | semb on ol of to | oly) Fass tal a | embly ssemb | • | ice: | | | | | 1 | 1 | | 1 | RESci |
| Floor slab Description J-Value of R-Value of | f tota | al as ulatic | sembl on: R | ly: | | y): | | | | | | V | | |
| Horizontal Heated sl | /yert | ical | requir | remen | t: | | | | | Pro | jec | t Title: | : Mered | ith Squ |
| | | | | | | | | | | Proje | tion: struct ect T | lion Type ype: | : L | North Car Lillington Multifami New cons |



dith Square Apartments Phase 3 Bldg Type 1

Heating Degree Days:

North Carolina Energy Conservation Code Lillington, North Carolina Multifamily New construction

It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Construction Site: 603 Main Street Buies Creek, NC 27546

Owner/Agent: Meredith Square LLC PO Box 143 Dunn, NC 28335 919 697-6505

Designer/Contractor: Jill Smith Jill B Smith Architect PA PO Box 18161 Raleigh, NC 27619-8161 919 807-1111

info@jillbsmitharchitect.com

Maximum UA: 963 Your UA: 948 Maximum SHGC: 0.30 Your SHGC: 0.30 Compliance: 1.6% Better Than Code The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules.

casttoncc@gmail.com

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Glazing or Door U-Factor | UA |
|--|-------------------------------|-------------------|------------------|--------------------------------|-----|
| Floor 1: Slab-On-Grade:Unheated Insulation depth: 1.0' | 315 | | 10.0 | | 278 |
| Ceiling 1: Flat Ceiling or Scissor Truss | 3491 | 38.0 | 0.0 | | 105 |
| Wall 1: Wood Frame, 16" o.c. | 5889 | 15.0 | 0.0 | | 407 |
| Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E SHGC: 0.30 | 51 | | | 0.310 | 16 |
| Window 2: Wood Frame:Double Pane with Low-E SHGC: 0.30 | 162 | | | 0.310 | 50 |
| Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E SHGC: 0.30 | 144 | | | 0.310 | 45 |
| Door 1: Solid | 120 | | | 0.140 | 17 |
| Door 2: Solid | 120 | | | 0.250 | 30 |

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the North Carolina Energy Conservation Code requirements in REScheck Version 4.6.2.1 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Report date: 10/03/19 Project Title: Meredith Square Apartments Phase 3 Bldg Type 1 Data filename: \\SERVER\JBSA Projects\Meredith Square Townhouse Apts\REScheck\REScheck Bldg Type 1 091819.rck Page 1 of 1

PROJECT TEAM

MEREDITH SQUARE LLC OWNER: Contact Lucia Turlington PO BOX 143, Dunn, NC 28335 (910) 892-0463

JILL B. SMITH ARCHITECT, PA

ARCHITECT: Contact Jill B. Smith

PO BOX 18161, RALEIGH, NC 27619-8161 (919) 807-1111 HERRING-SUTTON & ASSOCIATES, PA

CIVIL ENGINEER: Contact Richard Herring 2201 NASH STREET NW, WILSON, NC 27896-1735 (252) 291-8887

LYSAGHT & ASSOCIATES, PA

STRUCTURAL ENGINEER : CONTACT Jim Struffolino, PE 120 ST MARY'S STREET, RALEIGH, NC 27605 (919) 833-0495

TURNKEY ENGINEERING, PLLC PME ENGINEERING : CONTACT Michael Duclos, PE PO BOX 253, FRANKENMUTH, MI 48734 (919) 235-0053

DRAWING INDEX

COY-CODE SUMMARY BLDG TYPE I APARTMENTS, PROJECT TEAM, DRAWING INDEX COY-2 CODE SUMMARY BUILDING TYPE 2 APARTMENTS & RESCHECK COV-3 LIFE SAFETY BUILDING PLANS COY-4 UL ASSEMBLIES COY-5 UL ASSEMBLY

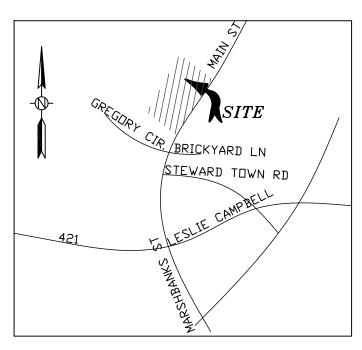
ARCHITECTURAL

AO.OI NOTES, DOOR & WINDOW ELEVATIONS & SIGNAGE AO.02 DOOR & WINDOW DETAILS ALOI TYPE I BUILDING & UNIT FLOOR & ROOF PLANS A1.02 TYPE 2 BUILDING & UNIT FLOOR & ROOF PLANS A2.01 BUILDING EXTERIOR ELEVATIONS A2.02 BUILDING SECTIONS A5.01 BATH & KITCHEN ELEVATIONS & NOTES

STRUCTURAL

SO.01 STRUCTURAL NOTES SIJI TYPE I FOUNDATION PLAN S1.12 TYPE I UPPER FLOOR FRAMING PLAN S1.13 TYPE I ROOF FRAMING PLAN S1.21 TYPE 2 FOUNDATION PLAN 51.22 TYPE 2 UPPER FLOOR FRAMING PLAN 51.23 TYPE 2 ROOF FRAMING PLAN 62.01 FOUNDATION DETAILS 53.01 FLOOR FRAMING DETAILS 54.01 ROOF FRAMING DETAILS

ELECTRICAL EO.OI ELECTRICAL LEGEND & DETAILS EI.OI ELECTRICAL BUILDING I REG PLAN E1.02 ELECTRICAL BUILDING I REG PLAN EI.03 ELECTRICAL BUILDING 2 ADA PLAN E1.04 ELECTRICAL BUILDING 2 ADA PLAN E6.01 ELECTRICAL LIGHTING SCHEDULE

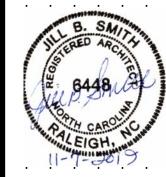


VICINITY MAP

NOT TO SCALE

் Ra .1111





Permit Set

A6.01 WALL SECTIONS & DETAILS

54.02 ROOF FRAMING DETAILS

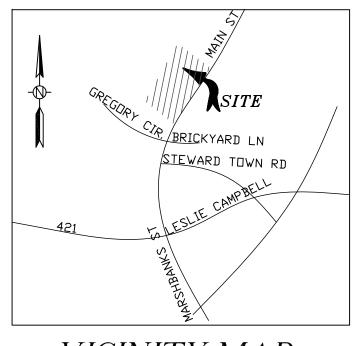
<u>PLUMBING</u>

PO.01 PLUMBING LEGEND & SCHEDULES PI.01 PLUMBING BUILDING 1 REG PLAN P1.02 PLUMBING BUILDING I REG PLAN PI.03 PLUMBING BUILDING 2 ADA PLAN P1.04 PLUMBING BUILDING 2 ADA PLAN P5.01 PLUMBING DETAILS P9.01 PLUMBING RISERS P9.02 PLUMBING RISERS

<u>MECHANICAL</u>

MO.01 MECHANICAL LEGEND & SCHEDULES MI.OI MECHANICAL BUILDING I REG PLANI MI.02 MECHANICAL BUILDING I REG PLAN MI.03 MECHANICAL BUILDING 2 ADA PLAN MI.04 MECHANICAL BUILDING 2 ADA PLAN M5.01 MECHANICAL DETAILS

E6.02 ELECTRICAL POWER CALCS & SCHEDULES E9.01 ELECTRICAL RISER DIAGRAM



Summary,

REVISIONS

BUIES CLIENT:

MEREDITH SQUARE PHASE 3 Apartments

Buies Creek, North Carolina

ACCESSIBLE PARKING (SECTION 1106)

| 2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS | FIRE PROTECTION REQUIREMENTS: |
|--|--|
| Name of Project: Meredith Square Phase 3 Apartments - Building Type 2 Address: 603 Main Street, Buies Creek, NC E-Mail: casttoncc@gmail.com Owner/Authorized Agent: Meredith Square LLC Phone #: 919 697-6905 | BUILDING ELEMENT Fire <u>Rating</u> Detail # Design # |
| Owned By: Private City / County State | (Feet) Reduction) |
| Code Enforcement Jurisdiction: □ City ■ County □ City/County □ State Name of Jurisdiction: Harnett County | Bearing Walls Exterior |
| CONTACT: | North <u>O</u> |
| DESIGNER FIRM NAME LICENSE TELEPHONE | West |
| Architectural Jill B. Smith Architect, PA Jill B. Smith 6448 919 807-1111 Civil Herring-Sutton \$ Assoc. Ronnie L Sutton 10180 (252) 291-8887 | South |
| Electrical <u>Turnkey Engineering, PLLC Michael Duclos</u> <u>32042 (919) 235-0053</u> Fire Alarm | Nonbearing Walls Exterior |
| Plumbing Turnkey Engineering, PLLC Michael Duclos 32042 (919) 235-0053 | East |
| Mechanical <u>Turnkey Engineering, PLLC Michael Duclos</u> 32042 (919) 235-0053 Sprinkler-Standpipe | West |
| Structural Lysaght & Associates, PA Jim Struffolino 15887 (919) 833-0495 Retaining Walls > 5' | South |
| Landscape | Structural frame including columns, girders, trusses <u> </u> |
| Truss Supplier Note: Special Inspections and Inspectors to be listed at end of Appendix B. | Floor construction, including |
| PROJECT SUMMARY: | supporting beams and joists. List construction type |
| Scope of Work: Project consists of 24 two-bedroom apartments with six units housed in four buildings. One building is designed with an accessible Type A building and designated in | Floor Ceiling Assembly |
| these drawings as the Type 2 Building. Type 2 has four two-story apartments units and two | Columns Supporting Floors <u>N/A</u> |
| one-story apartments units stacked. The ground level unit is a one-story Type A unit. This code summary is for the Type 2 building. Building construction includes reinforced concrete slab on | supporting beams \$ joists <u>o</u> |
| grade with wood framing, wood floor and roof trusses clad in brick \$ vinyl siding with low-E insulated vinyl windows and insulated doors. The building has a NFPA I3R fire sprinkler system. | Roof Ceiling Assembly _O |
| There is a non-separated 52 storage occupancy under the private staircase to the one-story | Shafts - Exit Enclosures <u>N/A</u> |
| unit above the Type A unit. | Shafts - Other (describe) N/A |
| 2018 NC BUILDING CODE: ■New Bldg □Addition □Renovation □Ist Time Inter Completion | Occupancy Separation <u>NS</u> |
| Shell/Core - (Local jurisdiction reamts) Phased Construction - Shell/Core (Local jurisdiction reamts) | Party/Fire Wall Separation <u>O</u> |
| 2018 NC EXISTING BUILDING CODE: Prescriptive Repair Chapter 14 | Dwelling/Sleeping Unit Separation |
| Alteration: Level Le | Smoke Barrier Separation N/A |
| Historic Property Change of Use | Smoke Partition _O |
| Constructed: Current Occupancy(s) (Ch 3): | * Indicate section number permitting reduction |
| Renovated: Proposed Occupancy(s) (Ch 3): | WALL LEGENDS: Fire Walls 706 Fire Barriers 707 Shaft Enclosure 708 |
| RISK CATEGORY (Table 1604.5): current: | Fire Part 709 Smoke Barriers 710 Smoke Partitions 711 Horizontal Assembly 712 |
| Proposed: | LIFE SAFETY SYSTEM REQUIREMENTS: |
| | Emergency Lighting: |
| Construction Type: -A -B -A -B -A -B -B -B -B | Exit Signs: |
| Standpipes: No Tes Class | Fire Alarm: NO Yes Smoke Detection Systems: NO Tyes Partial |
| Fire District: No Yes Flood Hazard Area: No Yes | Carbon Monoxide Detection DNO TYPES |
| Special Inspection Required: ■ No □ Yes (Contact local jurisdiction additional ramts) | Panic Hardware: |
| Building Height: Feet_25 Number of StoriesTwo Basement: No Yes Mezzanine: No Yes HIGH RISE: No Yes | LIFE SAFETY SYSTEM REQUIREMENTS: Life Safety Plan Sheet #: |
| | ☐ Fire and/or smoke-rated wall locations (Chapter 7) |
| Gross Building Area: Life Safety Plan Sheet # (if provided) FLOOR EXISTING (SQ FT) NEW (SQ FT) SUBTOTAL ALLOWED | ☐ Assumed or Real Property Lines ☐ Existing structures within 30' of the proposed building ☐ Exterior wall opening area w/respect to distance to assumed property lines (705.8) |
| 3rd | \square Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2) \square Occupant loads for each area \square Common path of travel distances (1006.2.1 $\$$ 1006.3.2(1)) |
| 2nd <u>3500</u> <u>1,000</u> | \square Exit access travel distances IOI7 $\;\;\square\;\;$ Clear exit widths for each exit door |
| Ground Floor 3782 3782 7,000 | □ Dead End length (1020.4) □ Actual occupant load for each exit door □ Max calculated occupant load capacity each exit door can accommodate based on egress |
| Basement | width (1005.3) \Box A separate schematic plan indicating where fire-rated floor/ceiling and/or roof structure is |
| TOTAL 1282 1282 14,000 | provided for purposes of occupancy separation. |
| | |
| Area of Project Tenant/Alteration/Renovation: | \Box Location of doors with panic hardware (IOIO.1.10) \Box Location of doors w/delayed egress locks and the amount of delay (IOIO.1.9.7) |
| Area of Construction: | □ Location of doors w/delayed egress locks and the amount of delay (IOIO.1.9.7) □ Location of doors w/electromagnetic egress locks (IOIO.1.9.9) □ Location of doors with hold-open devices □ Location of emergency escape windows (IO3O) |
| Area of Construction: OCCUPANCY INFORMATION: | □ Location of doors w/de ayed egress locks and the amount of delay (IOIO.1.9.7) □ Location of doors w/electromagnetic egress locks (IOIO.1.9.9) □ Location of doors with hold-open devices □ Location of emergency escape windows (IO3O) □ Sayare footage of each fire area (902) □ Sayare footage of each smake compartment (407) |
| Area of Construction: | □ Location of doors w/de layed egress locks and the amount of delay (1010.1.9.7) □ Location of doors w/electromagnetic egress locks (1010.1.9.9) □ Location of doors with hold-open devices □ Location of emergency escape windows (1030) □ Sayare footage of each fire area (902) □ Sayare footage of each fire area (902) |
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| Area of Construction: | □ Location of doors w/de layed egress locks and the amount of delay (IOIO.I.9.7) □ Location of doors w/electromagnetic egress locks (IOIO.I.9.9) □ Location of doors with hold-open devices □ Location of emergency escape windows (IO3O) □ Square footage of each fire area (9O2) □ Square footage of each smoke compartment (4OT: □ Note any code exceptions or table notes that may have been utilized regarding these items. EXIT REQUIREMENTS NUMBER |
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| Area of Construction: OCCUPANCY INFORMATION: Primary Occupancy: Assembly: A- A-2 A-3 A-4 A-5 Business Factory: F- Mod Educational Hazardous: H- Detonate H-2 Deflagrate H-3 Combus H-4 Health H-5 HPM Institutional: I- I-2 I-3 I-4 Use Condition: I 2 3 4 5 Mercantile Residential: R- R-2 R-3 R-4 Storage: S- Mod S-2 Low High-piled Parking Garage Open Enclosed (406.4) Repair Garage Utility and Miscellaneous Secondary Occupancy: S Accessory Occupancy: Incidental Use (Table 509): NA | □ Location of doors w/de layed egress locks and the amount of delay (IOIO.I.9.7) □ Location of doors w/electromagnetic egress locks (IOIO.I.9.9) □ Location of doors with hold-open devices □ Location of emergency escape windows (IO3O) □ Square footage of each fire area (902) □ Square footage of each smoke compartment (407: □ Note any code exceptions or table notes that may have been utilized regarding these items. EXIT REQUIREMENTS NUMBER |
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| Area of Construction: OCCUPANCY INFORMATION: Primary Occupancy: Assembly: A- A-2 A-3 A-4 A-5 Business Factory: F- Mod Educational Hazardous: H- Detonate H-2 Deflagrate H-3 Combus H-4 Health H-5 HPM Institutional: I- I-2 I-3 I-4 Use Condition: I 2 3 4 5 Mercantile Residential: R- | Location of doors w/delayed egress locks and the amount of delay (IOIO.I.9.7) Location of doors w/electromagnetic egress locks (IOIO.I.9.9) Location of doors with hold-open devices Location of emergency escape windows (IO3O) Square footage of each fire area (4O2) Square footage of each smoke compartment (4O7. Square |
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| Area of Construction: OCCUPANCY INFORMATION: Primary Occupancy: Assembly: A-1 A-2 A-3 A-4 A-5 Business Factory: F-1 Mod Educational Hazardous: H-1 Detonate H-2 Deflograte H-3 Combus H-4 Health H-5 HPM Institutional: H-1 H-2 H-3 H-4 Use Condition: H-2 B-2 R-3 R-4 Storage: S-1 Mod S-2 Low High-piled Parking Garage Open Enclosed (406.4) Repair Garage Utility and Miscellaneous Secondary Occupancy: M/A Special Uses: 402 403 404 405 406 407 408 409 410 411 412 413 415 416 417 418 419 420 421 422 423 424 425 426 427 Special Provisions 509.2 509.3 509.4 509.5 509.6 509.1 509.8 Mixed Occupancy No Yes Separation: Hr. Exception: Non-Separated Use (508.3). The required type of construction for the building shall be determine applying the height and area limitations for each of the applicable occupancies to the entire building. Separated Mixed Occupancy (508.4). See below for area calculations. For each story, the area the occupancy shall be such that the sum of the ratios of the actual floor area of each use shall not exceed Actual Area of Occupancy A Actual Area Occupancy A Actual Area Occupancy A Actual Area Occupancy A Actual Area Allowate Area Occupancy | |
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| Area of Construction: OCCUPANCY INFORMATION: Primary Occupancy: Assembly: An An 2 An 3 An 4 An 5 | □ □ □ □ □ □ □ □ □ □ |

Building Height in Stories (Table 504.4) 3 |S = 2

Provide code reference if the "shown on plans" quantity is not based on Table 504.3 or 504.4.

The maximum height of air traffic control towers must comply with Table 412.3.1.

The maximum height of open parking garages must comply with Table 406.5.4.

| REQU | IREME | ENTS: | | | | | ACCE | SSIBL | E F | PARKING | (Si | ECTION | 11106 |) | | | | |
|---------------------------|------------------------|-----------------------------------|----------------------------|-----------------------|---|------------------------------|--------------------|-----------------------|------------------|------------------------------|-------------|-------------|---------------------|----------------------|------------------|--------------------------|------------------------|--------------------------|
| | | | | | | | Lot or Parkina | | Tot | al # parking | g Spa | ces # of | Access | ible Spac | es Provid | ded a=+ | Total # | |
| e cotion E | Ra ea'd | ting Provided | _ Detail # | Design # | Design # | Design # | Parking Area | ı | Red | quired Pro | video | d Acce | iar W/5 ss Aisle | Van 132" Access A | Van Aisle Acc | ort ess Aisle | Accessible Provided | e 1 |
| ration R ance et) | eqa | Provided (W* Reduction) | and Sheet# | assembly | d for rated penetrati | d for ons rated joints | REFER | TO COV | 1 DWG | ē | | | | | | | | |
| • | | | | | | | | A1 1 | | 30) (1) | / | | | | N | _1 | 10 - 10 | |
| | | | | | | | | | | ROVAL: OPI, DHHS, I | | | pecial ap | pprovals | from loc | al jurisd | lictions, Co | ounty or |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | PLUM | BING | REC | QUIREME | NTS | (Table | e 290 | 2.1) | | | | |
| | 2 | | _ | - | | | Space | Mate | er Cla | oset Urinals | Lav | vatories . | Shower & Tubs | SDrinking | Fountain | Notes o | and Except | tions |
| | | | | | | | B 3 | М | F | Unisex | М | F Unise | × | Regular | Accessible | e | | |
| | | | | | | | R-2 | | | I/unit | | /uni | t I/unit | N/A | N/A | | | |
| | | | | | | | | | | | | | | | |] | | |
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| | | | | | _ | | ENER | | וייוטכ | MARY: | | | | | | | | |
| g sts. | | | | | | | ENER | GY R | EQU | IREMEN | TS: | The follo | owing da | ıta shall k | oe consid | dered mi | inimum and | any |
| | | | | | | | specia | l attribu | ite re | equired to r d portions o | neet | the ener | qu code | shall als | so be pro | vided. | Each Des | igner shall |
| | | | | | | | method | d, state | the c | an'nual ener | gy co | st for the | stando | ard refer | ence des | sign vs c | annual ene | rgy cost |
| 3 | | | | | | | | propos | | _ | | | | | | | | |
| | | | | | | | - | • | _ | velope cor | | s with co | de: ■ | Yes □N | 0 | | | |
| | | | | | | | ⊏xempt | . Dullaine | y: ∟ |]Yes ■ No | (Pr | rovide code | or statuto | ry reference | s) | | | |
| _1 | V/A | | | | | | METHO | D OF C | OMPL | LIANCE: EI | nergy | Code | □ Pro | escriptiv | | rescript | | |
| | | | | | | | | | _ | | | E 90.1 | | rformand Scheck | ,c ⊔ F | Performa | ar ICE | |
| _1 | <u> </u> | | | | | | CLIMA ⁻ | TE ZON | E: | □ 3A ■ | 1 4A | □ 5A | | | | | | |
| | | | | | | | THERI | MAL E | ENV | ELOPE | (Pr | escriptiv | e Metho | od only) | | | | |
| | | | | _ <u>UL U</u> 341 | | | | | | mbly (each | asse | mbly) | | | | | | |
| | | | | | _ | | Descr U-Valu | iption of to | of ass otal a | sembly. Issembly: | | SEE | ATTAC | HED RES | ocheck (| ERTIFIC | CATE | |
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| permilli | ng reduct | _ | | | | | | | | ootage of | - | gnts in e | acn ass | embly | | | | |
| | | ☐ Fire Barri | | _ | | | Descr | ription o | of as | assembly) sembly: R | | only to | existing | l | | | | |
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| EM K | EQUIK | EMENTS: | Y o c | | | | . Ñ- | Value o | of ass | or doors sembly 0.0 | <i>20</i> . | glazing) | | | | | | |
|): | | | Yes Yes | | | | | olar Hed Ojectio | | ain coéffici ctor O | ent: | | | | | | | |
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| <u>Syster</u> | | □ No ■ | Yes □ P | 'artial | | | None | - | | uncondition | ed sp | pace (ea | ch asse | mbly) | | | | |
| Detec | tion | | Yes | | | | U-Valı | ue of to lue of in | otal d | assembly tion | | | | | | | | |
| | | ■ No □ | Y <i>e</i> s | | | | Openi | | ndows | s or doors | with | glazing) | | | | | | |
| EM R | EQUIR | REMENTS: | Life Safety | y Plan Shee | et #: | | lo | w e red R-Valu | quirea | d, if application | able | | | | | | | |
| d wall lo | cations (| (Chapter 7) | - | | | ildina | | | _ | (each asse | emblu. |): N/A | | | | | | |
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| t load co | ctual occ apacity e | upant load fo each exit door | r each exit r can accon | aoor mmodate b | ased on eq | gress | Descri | iption o | f ass | | | | | | | | | |
| | | where fire-ra | | | | | | e of to | | ssembly ion | | | | | | | | RESch |
| of occi | pancy s | eparation. | 100170 | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | DI 00001 0 10 | Floor sl | lab on g | grade | e (each ass | embl | ly): | | | | 4 | | Con |
| | | 010.1.10) ks and the am | ount of del | ay (1010.1.9 | 1.7) | | Descrip U-Value | | | - | | _ | | | | | / | COI |
| ctromag | netic egr | ress locks (l0 s_□ Locatio | 10.1.9.9) | | | = (1030) | R-Value | e of ins | ulatic | on: R requiremen | nt: | | | | | | | |
| i fire are | ea (902) | 🗆 🗆 Square fo | ootage of a | each smoke | ė compartn | nent (407.5) | Heated | l slab: | N/A | , | | | | | | | | |
| ns or tal | ole note: | s that may hav | ve been util | ızed regar | aing these | Items. | | | | | | | | | Pr | oject T | itle: Mer | edith Squ |
| TS NIII | MBFR | # ARRAI | NGFMFN | IT OF F | XITS. | <u> </u> | | | | | | | | | | ergy Code: | : | North Car |
| Minimum' | _ | | NOLIMEN Distance | | .XIII): | Means of | | | | | | | | | Cor | ation: estruction | | Lillington Multifamil |
| mber of ea'd S | Exits | Allowable | Actual Tre | Eare | ess ^{1,3} (sect | | | | | | | | | | | ject Type: zing Area | Percentage: | New cons |
| -4u <i>-</i> | Plan | Travel Distance | Distance Shown | ce _ Dis | quirea stance een Exit | Distance Shown on | | | | | | | | | Hea | ating Degra mate Zone | ee Days: | 3502 4 |
| | | (Table 1016.1, |) <u>On Pla</u> | ins Do | ors | Plans | | | | | | | | | Co | nstruction | n Site: | |
| $\frac{1}{1} \frac{2}{1}$ | | <u>250'</u> 250' | _ <u>53'</u> 74' | | / <u>A</u> /A | | | | | | | | | | 60 | 3 Main St | treet | |
| | | | | <u>N</u> | | | | | | | | | | | В | uies Creek | , NC 27546 | |



Fitle: Meredith Square Apartments Phase 3 Bldg Type 2

North Carolina Energy Conservation Code Lillington, North Carolina Multifamily ea Percentage: Jegree Days:

> Lucia Turlington Dunn, NC 28335 919 697-6505

Designer/Contractor: Jill B Smith Architect PA Raleigh, NC 27619-8161 info@jillbsmitharchitect.com

Compliance: 1.7% Better Than Code Maximum UA: 999 Your UA: 982 Maximum SHGC: 0.30 Your SHGC: 0.30 The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

casttoncc@gmail.com

| Assembly | Area or Perimeter | R-Value | R-Value | or Door U-Factor | |
|---|----------------------|---------|---------|---------------------|-----|
| Floor 1: Slab-On-Grade:Unheated Insulation depth: 1.0' | 315 | | 10.0 | | 278 |
| Ceiling 1: Flat Ceiling or Scissor Truss | 3613 | 38.0 | 0.0 | | 108 |
| Wall 1: Wood Frame, 16" o.c. | 6099 | 15.0 | 0.0 | | 419 |
| Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E SHGC: 0.30 | 51 | | | 0.310 | 16 |
| Window 2: Wood Frame:Double Pane with Low-E SHGC: 0.30 | 81 | | | 0.310 | 25 |
| Window 3: Vinyl/Fiberglass Frame:Double Pane with Low-E SHGC: 0.30 | 287 | | | 0.310 | 89 |
| Dcor 1: Solid | 120 | | | 0.140 | 17 |
| Door 2: Solid | 120 | | | 0.250 | 30 |

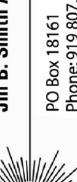
Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the North Carolina Energy Conservation Code requirements in REScheck Version 4.6.2.1 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

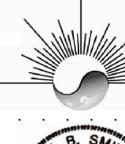
Project Title: Meredith Square Apartments Phase 3 Bldg Type 2

Report date: 10/03/19

Data filename: \\SERVER\JBSA Projects\Meredith Square Townhouse Apts\REScheck\REScheck Bldg Type 2 091819.rck

Page 1 of 1



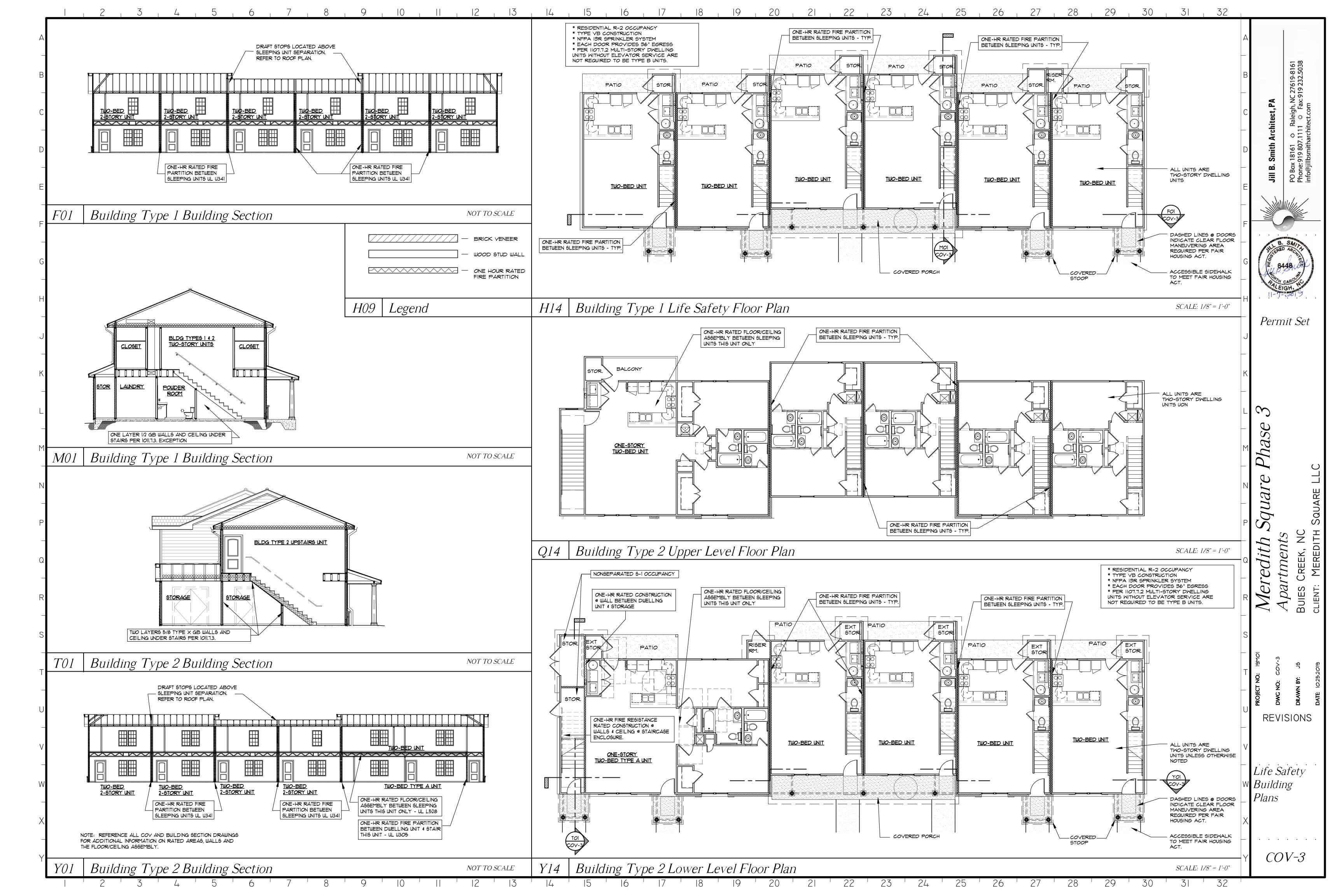


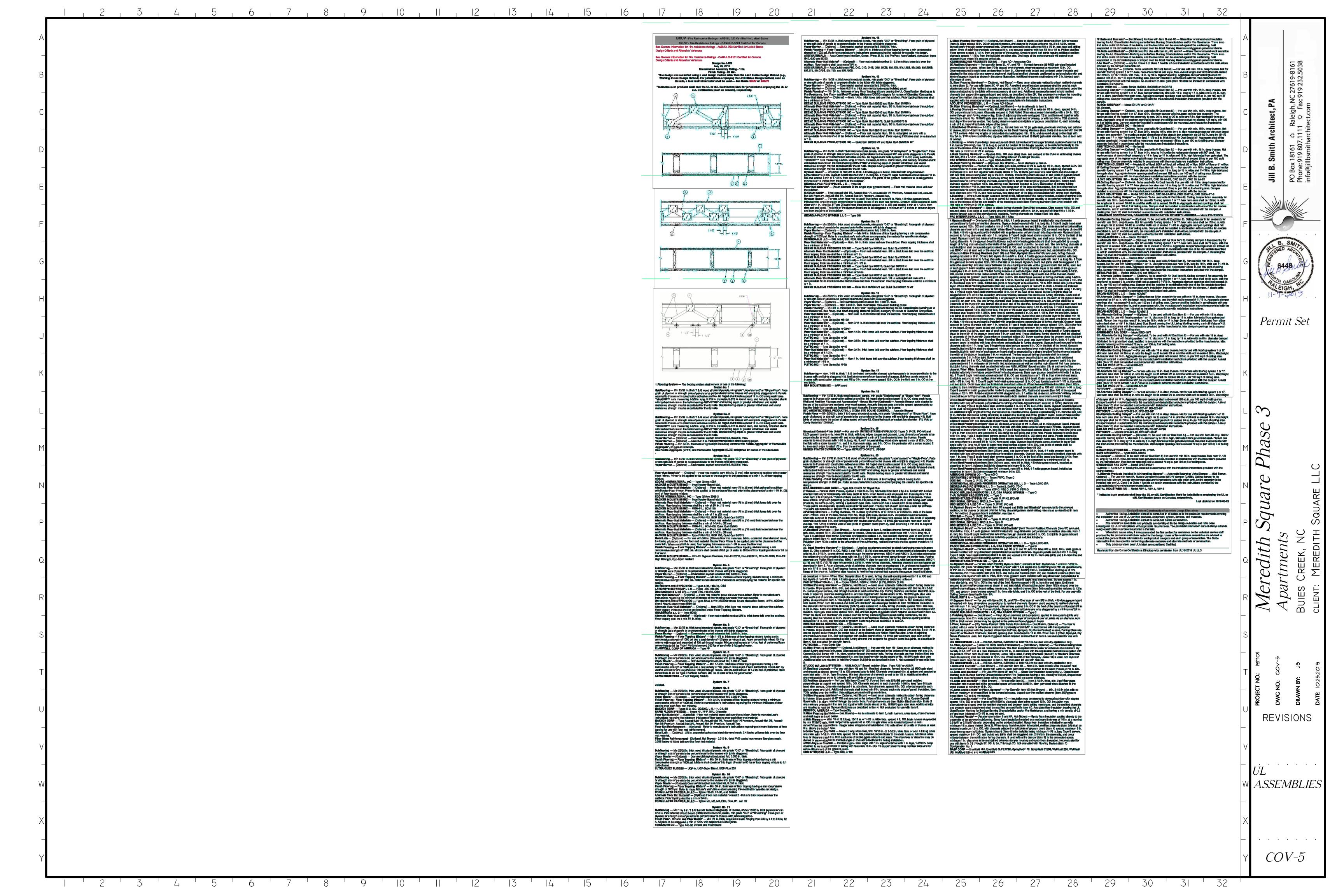


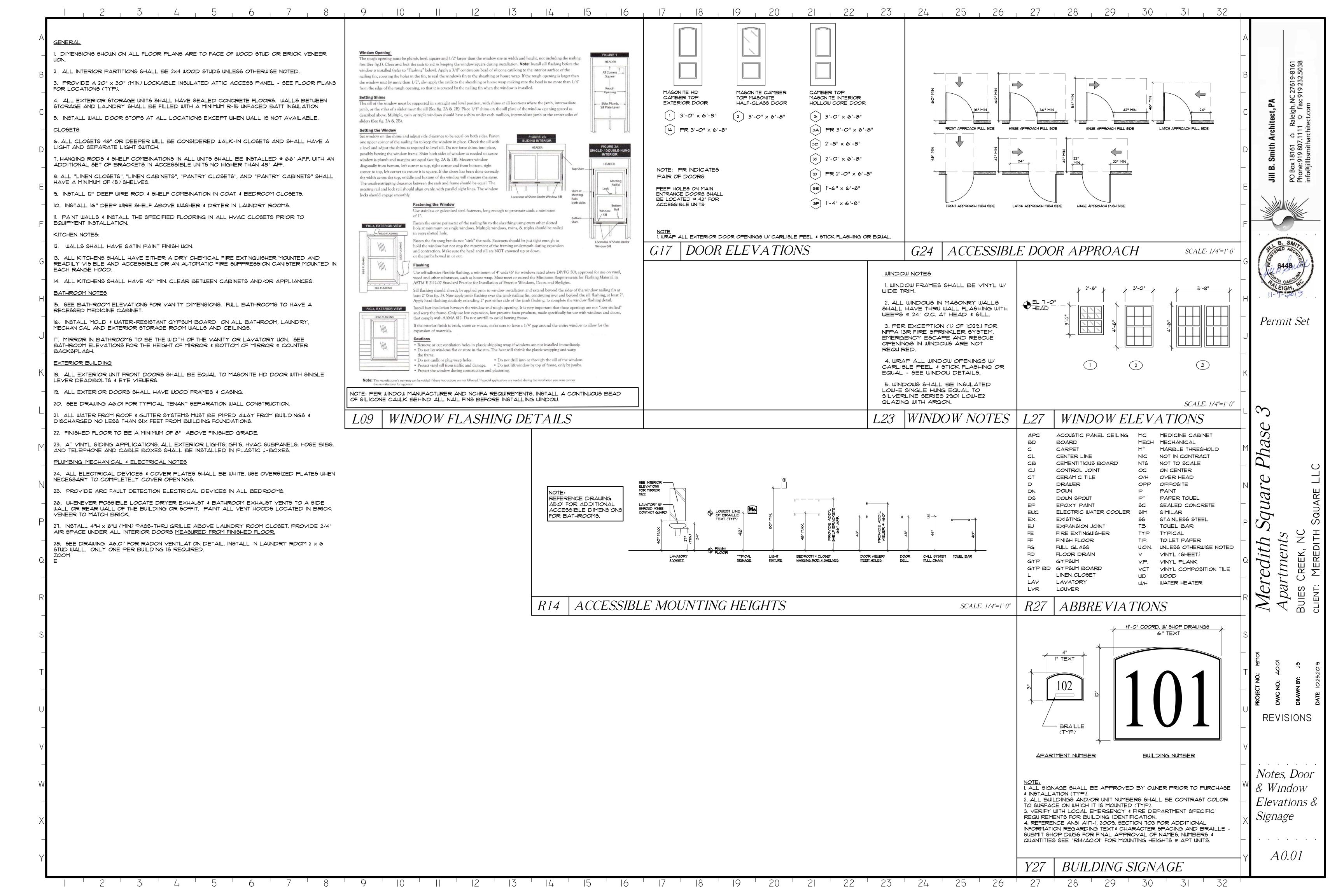
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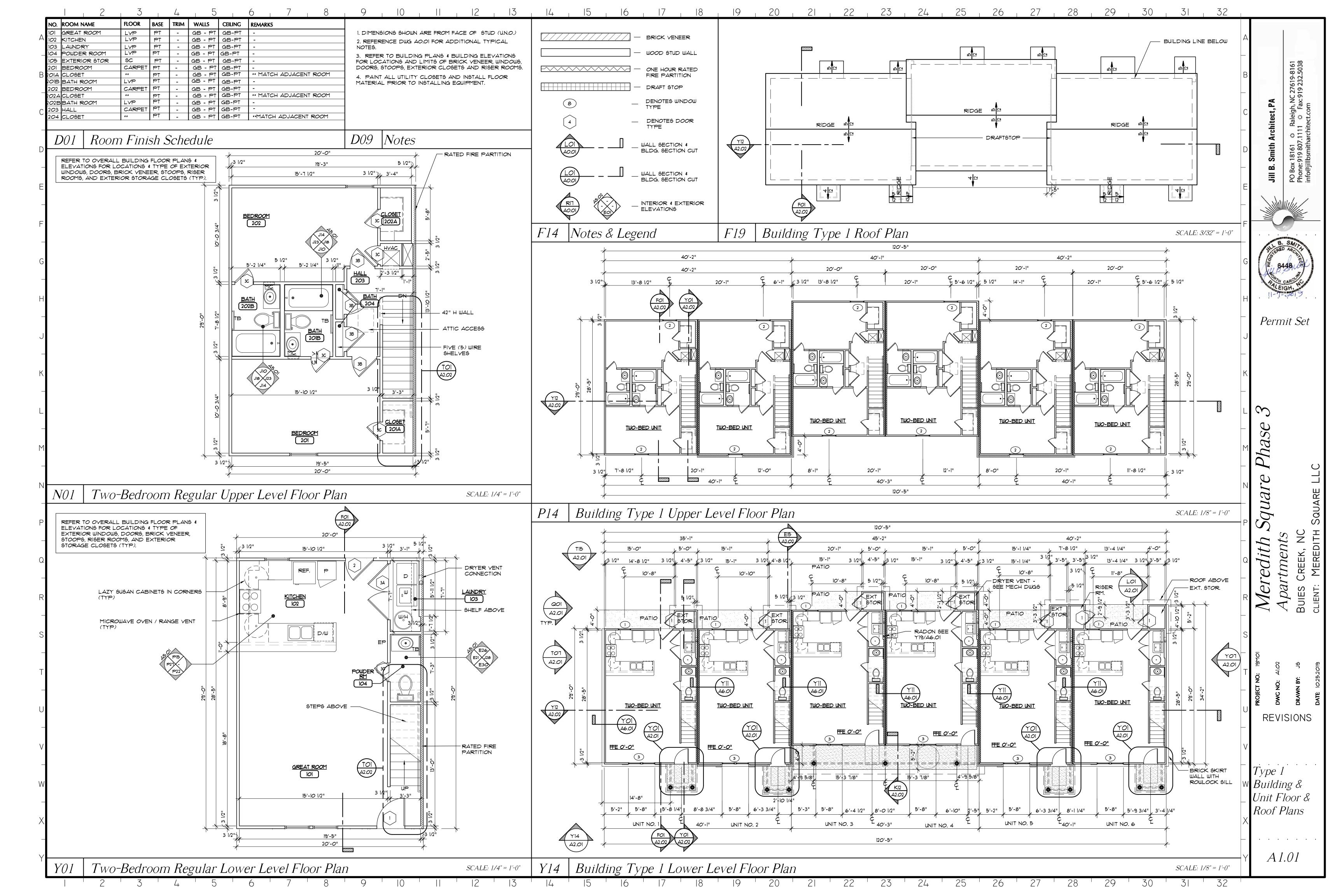
REVISIONS

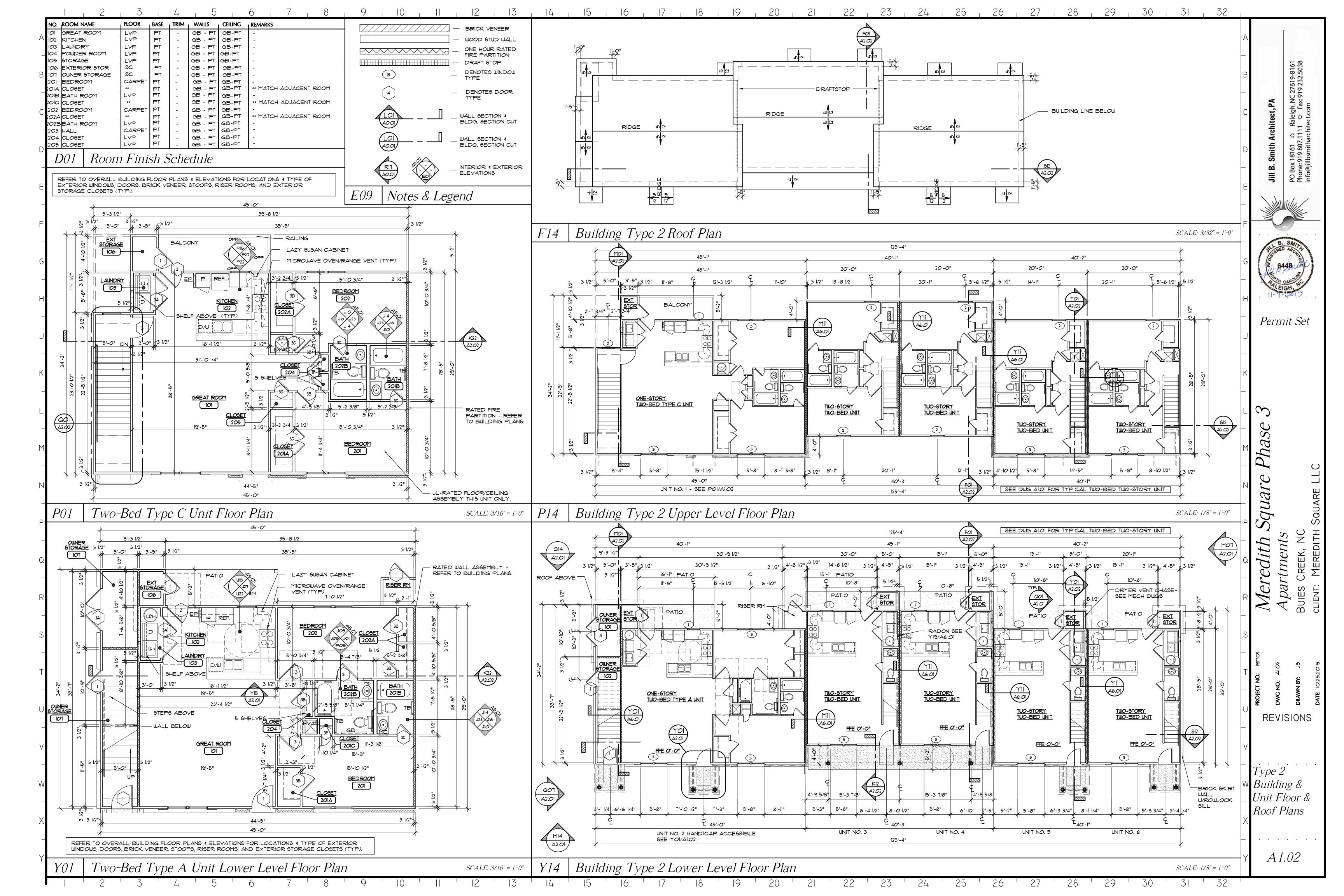
COV-2



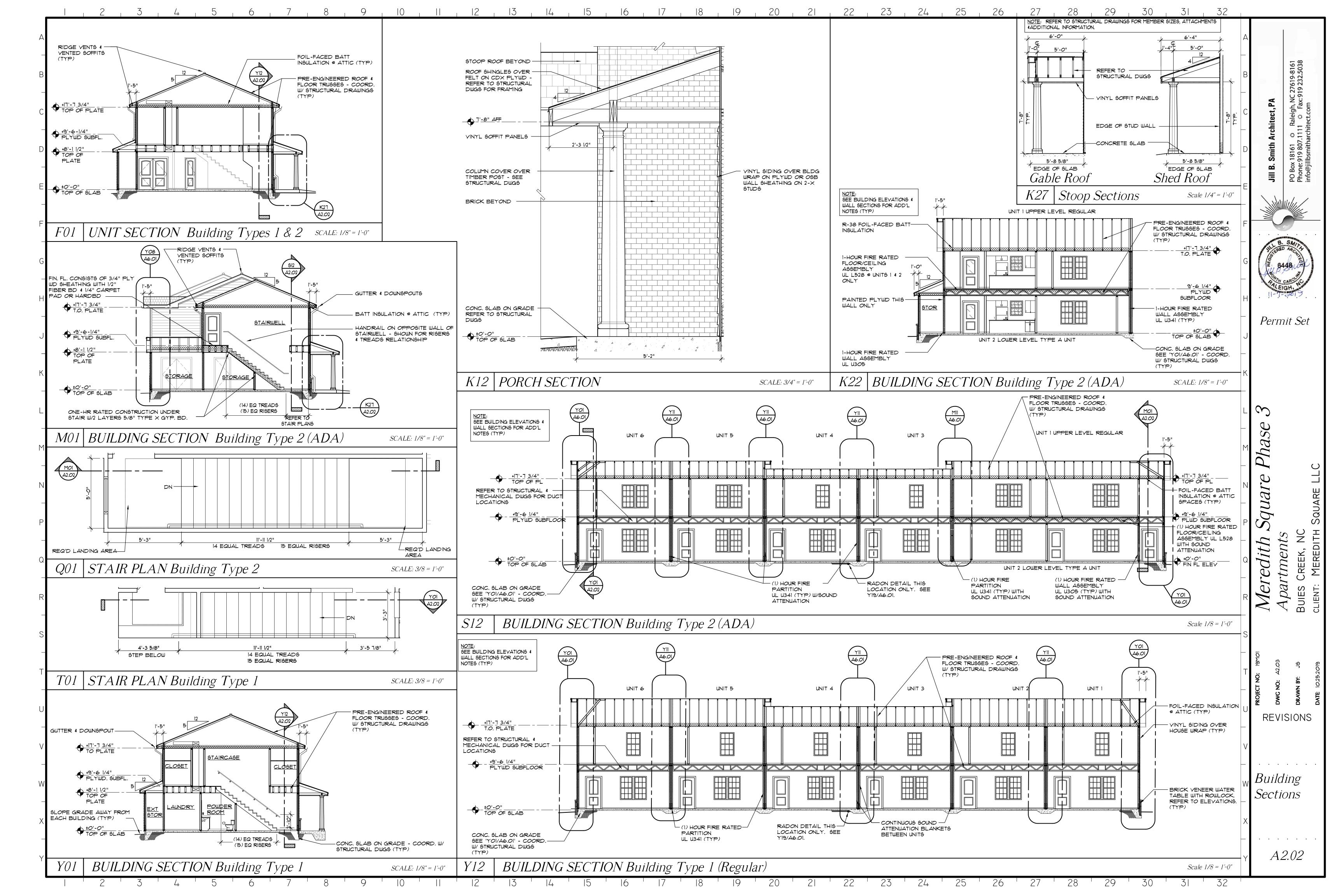


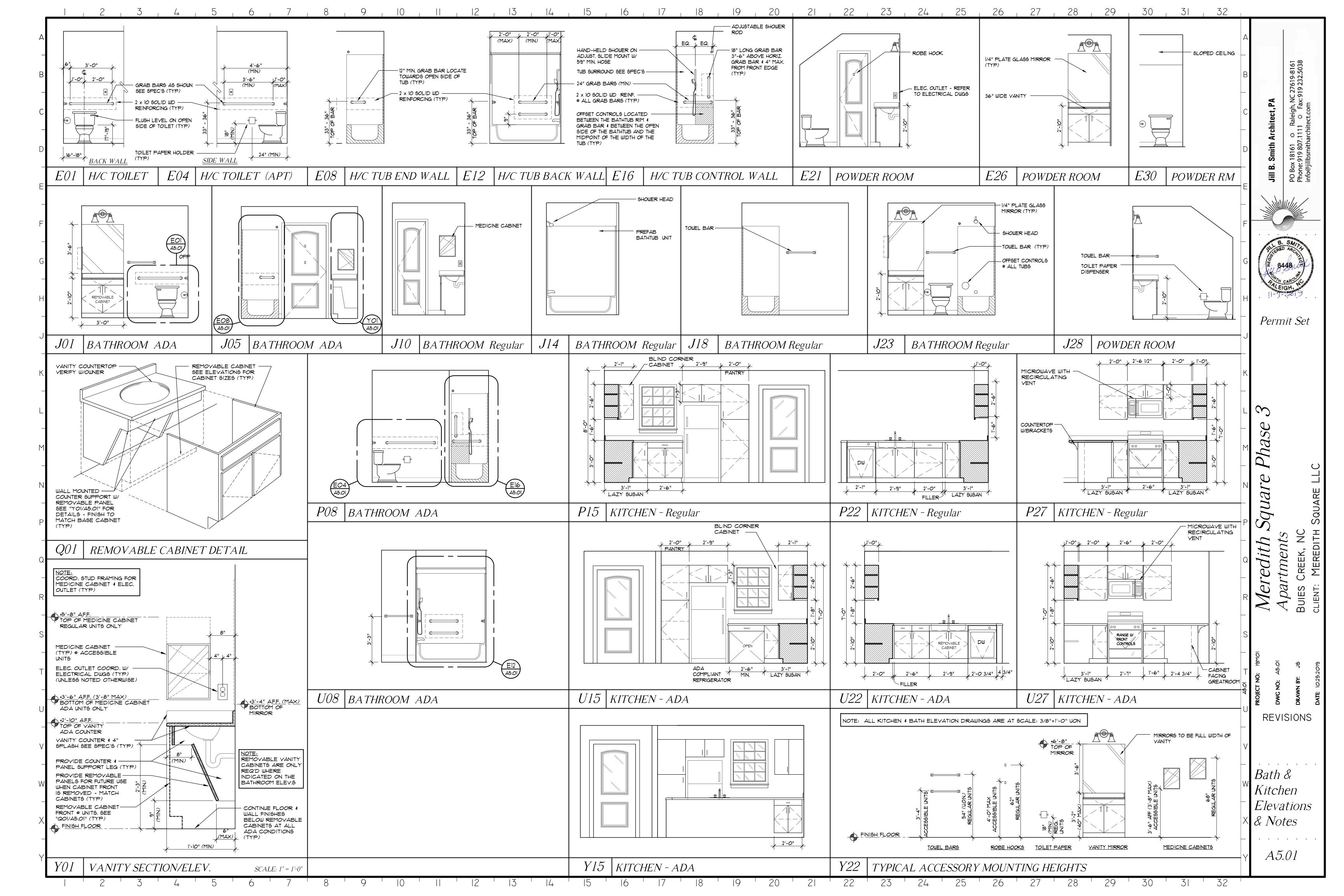


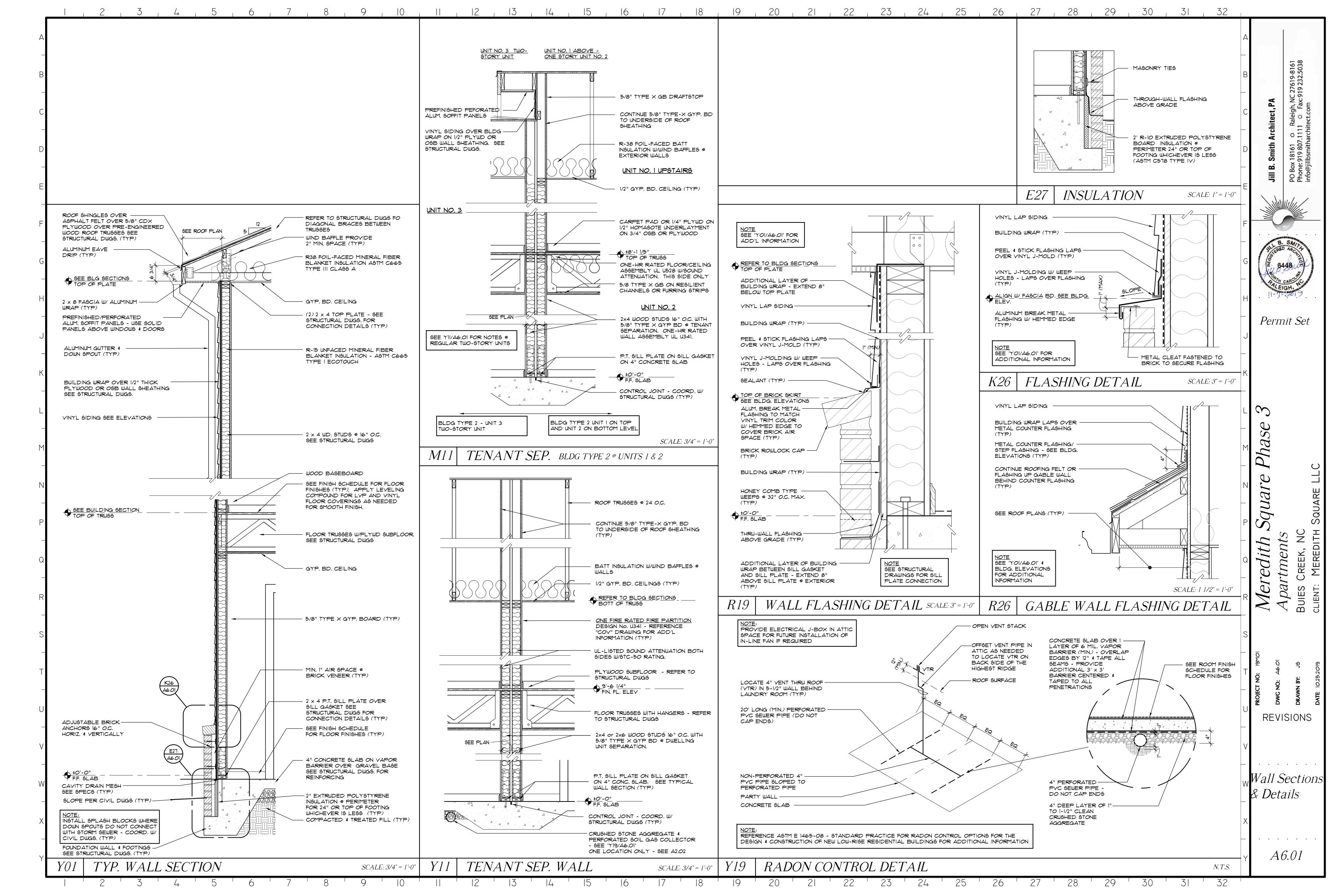












THESE DRAWINGS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF LYSAGHT & ASSOCIATES, P.A., FOR USE SOLELY WITH THIS PROJECT AND SHALL NOT BE REPRODUCED FOR OTHER PURPOSES.

THE PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE PROJECT STRUCTURAL ENGINEER-OF-RECORD (SER) WHO BEARS LEGAL RESPONSIBILITY FOR THE PERFORMANCE OF THE STRUCTURAL FRAMING RELATING TO PUBLIC HEALTH, SAFETY, AND WELFARE. NO OTHER PARTY, WHETHER OR NOT A PROFESSIONAL ENGINEER, MAY COMPLETE, CORRECT, REVISE. DELETE. OR ADD TO THESE CONSTRUCTION DOCUMENTS OR PERFORM INSPECTIONS OF THE WORK WITHOUT THE WRITTEN PERMISSION OF THE SER.

USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH JOB SPECIFICATIONS, AND OTHER DRAWINGS.

SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR

ALL NON-STRUCTURAL ELEMENTS INDICATED ON THE STRUCTURAL DRAWINGS HAVE BEEN SHOWN IN GENERAL RELATIONSHIP TO THE STRUCTURAL ELEMENTS. THEY SHALL NOT BE ASSUMED TO BE ACCURATE AND REFERENCE MUST BE MADE TO THE APPROPRIATE CONSULTANT(S) PLANS AND SPECIFICATIONS.

CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND TAKE ALL NECESSARY FIELD MEASUREMENTS.

THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING TO STABILIZE THE BUILDING DURING CONSTRUCTION.

SCOPE OF STRUCTURAL ENGINEERING SERVICES

LYSAGHT & ASSOCIATES, P.A. HAS PERFORMED THE STRUCTURAL DESIGN AND PREPARED THE STRUCTURAL WORKING DRAWINGS FOR THIS PROJECT. "CONSTRUCTION REVIEW" SERVICES ARE NOT A PART OF THIS CONTRACT. THE CONSTRUCTION MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE STRUCTURAL DRAWINGS. ANY DEVIATION FROM THE DRAWINGS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. ERRORS AND/OR OMISSIONS FOUND ON THE STRUCTURAL DRAWINGS MUST BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION IMMEDIATELY.

PORTIONS OF THE STRUCTURAL DESIGN (AS NOTED ON THE DRAWINGS AND IN THESE NOTES) ARE THE RESPONSIBILITY OF THE MATERIAL SUPPLIERS. SHOP DRAWINGS FOR EACH OF THE STRUCTURAL COMPONENTS MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION AND ERECTION.

THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR THE DESIGN OF THE PRIMARY STRUCTURAL SYSTEM, EXCEPT FOR THE COMPONENTS NOTED ABOVE. RESPONSIBILITY FOR ANY SECONDARY STRUCTURAL AND NON-STRUCTURAL SYSTEMS NOT SHOWN ON THE STRUCTURAL PLANS RESTS WITH SOMEONE OTHER THAN THE STRUCTURAL ENGINEER.

THE STRUCTURAL ENGINEER HAS NOT DONE A SUBSURFACE INVESTIGATION (HE IS NOT A SOILS SPECIALIST). THE FOUNDATION DESIGN IS BASED UPON AN ASSUMED ALLOWABLE BEARING PRESSURE AS SHOWN IN THE "FOUNDATION" STRUCTURAL NOTES. THIS ALLOWABLE BEARING PRESSURE MUST BE VERIFIED BY THE CONTRACTOR OR OWNER. IF PROBLEMS ARE ENCOUNTERED, A SOILS ENGINEER SHALL BE RETAINED TO EVALUATE THE CONDITIONS AND RECOMMEND THE APPROPRIATE FOUNDATION SYSTEM.

THE STRUCTURAL ENGINEER HAS NOT DESIGNED THE STRUCTURAL SLAB CONSTRUCTION FOR CONCENTRATED LOADS DUE TO VEHICULAR OR FORKLIFT TRAFFIC. THE SLAB IS DESIGNED FOR UNIFORM LOADING AS NOTED IN THE "DESIGN LOADS" PORTION OF THE STRUCTURAL NOTES AND CONCENTRATED LOADS IN ACCORDANCE WITH REQUIREMENTS OF THE BUILDING CODE.

THE STRUCTURAL ENGINEER HAS NOT DESIGNED THE STRUCTURE FOR SPECIFIC VIBRATION LIMITS. VIBRATION LIMITATIONS ARE BASED ON STANDARD ENGINEERING PRACTICES AND PAST EXPERIENCE WITH SIMILAR CONSTRUCTION.

THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL HE BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FIELD MEASUREMENTS AND THE VERIFICATION OF FIELD DIMENSIONS ARE NOT PART OF THE STRUCTURAL ENGINEER'S RESPONSIBILITY.

ABBREVIATIONS

ABOVE FINISH FLOOR CONTROL OR CONSTRUCTION JOINT IN SLAB EXPANSION JOINT EDGE OF SLAB E.O.S. FACH WAY NOT TO SCALE ON CENTER POWDER ACTUATED FASTENER PRESSURE TREATED SPRUCE PINE FIR LUMBER SOUTHERN YELLOW PINE LUMBER TOP OF FOOTING

TOP OF STEEL U.N.O. UNLESS NOTED OTHERWISE W.W.F. WELDED WIRE FABRIC

SEISMIC BASE SHEAR (Bldg 2)

SEISMIC BASE SHEAR (Bldg 1

ANALYSIS PROCEDURE

LATERAL DESIGN CONTROL

T.O.S.

NORTH CAROLINA STATE BUILDING CODE - 2018 EDITION (IBC 2015) STRUCTURAL LOADING PER ASCE 7-2010 BUILDING RISK CATEGORY (NCSBC 2018 TABLE 1604.5

DESIGN LOADS

| ROOF DEAD LOAD ROOF LIVE LOAD ATTIC LIVE LOAD FLOOR DEAD LOAD FLOOR LIVE LOAD FLOOR LIVE LOAD FLOOR LIVE LOAD (Balcony) | 20 PSF 20 PSF See Truss Notes 15 PSF 40 PSF 60 PSF |
|---|---|
| SNOW LOAD DATA: GROUND SNOW LOAD SNOW EXPOSURE FACTOR SNOW LOAD IMPORTANCE FACTOR THERMAL FACTOR FLAT ROOF SNOW LOAD ROOF SLOPE FACTOR PITCHED ROOF SNOW LOAD | 15 PSF 1.0 1.0 1.1 11.6 PSF 1.0 11.6 PSF |
| WIND LOAD DATA: ULTIMATE DESIGN WIND SPEED, Vult NOMINAL DESIGN WIND SPEED, Vasd WIND EXPOSURE INTERNAL PRESSURE COEFFICIENTS WIND BASE SHEAR (Bldg 1, x-x direction) WIND BASE SHEAR (Bldg 1, y-y direction) WIND BASE SHEAR (Bldg 2, x-x direction) WIND BASE SHEAR (Bldg 2, y-y direction) WIND BASE SHEAR (Bldg 2, y-y direction) WIND PRESSURE FOR COMPONENTS / CLADDING | 70.0 KIPS |
| SEISMIC DESIGN CATEGORY BASIC STRUCTURAL SYSTEM SEISMIC RESISTING SYSTEM Light F RESPONSE MODIFICATION COEFFICIENT | S1 0.085 D SDS 0.191 SD1 0.136 C Bearing Wall System ramed Walls w/ Shear Panels R 6.50 (x-x) 2.00 (y-y) |
| DEFLECTION AMPLIFICATION FACTOR SEISMIC RESPONSE COEFFICIENT | lega 3.00 (x-x) 2.50 (y-y) Cd 4.00 (x-x) 2.00 (y-y) Cs 0.029 (x-x) 0.095 (y-y) |

Equivalent Lateral Force

8.5 KIPS (x-x) 28.0 KIPS (y-y) 9.0 KIPS (x-x) 29.0 KIPS (y-y)

FOUNDATIONS

ALL FOOTINGS SHALL REST ON SOIL CAPABLE OF SAFELY SUPPORTING 2000 PSF. CONTACT STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE **ENCOUNTERED**.

FOOTINGS SHALL BE CARRIED TO A LOWER ELEVATION THAN THOSE INDICATED ON THESE DRAWINGS IF NECESSARY TO REACH FIRM UNDISTURBED SOIL.

THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 16" BELOW FINISHED GRADE UNLESS NOTED OTHERWISE.

SLAB ON GRADE SHALL BE FOUNDED ON STABLE NATURAL SOIL OR CONTROLLED

COMPACTED FILL. THE MINIMUM BEARING CAPACITY SHALL BE 2000 PSF. ALL FILL SHALL BE PLACED IN 8" MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY AS DETERMINED

IN ACCORDANCE WITH ASTM D-698 (STANDARD PROCTOR METHOD). THIS REQUIREMENT SHOULD BE INCREASED TO 98 PERCENT OF ASTM D-698 IN THE FINAL FOOT BENEATH FOOTINGS, FLOOR SLABS, AND PAVEMENTS.

WALLS ACTING AS RETAINING WALLS SHALL NOT BE BACKFILLED WITHOUT BRACING UNTIL ALL SUPPORTING SOIL AND SLABS ARE IN PLACE.

CONCRETE

CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH ACI 318. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE". ANY ADMIXTURES MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

ADMIXTURES CONTAINING CHLORIDE SALTS ARE NOT PERMITTED.

MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI. USE NORMAL WEIGHT CONCRETE FOR FOOTINGS AND SLABS ON GRADE. CONCRETE EXPOSED TO EXTERIOR CONDITIONS SHALL BE AIR-ENTRAINED WITH A TOTAL AIR CONTENT OF 6 PERCENT (+/-1.5%)

DO NOT CAST CONCRETE IN WATER OR ON FROZEN GROUND. FOR SLABS ON GRADE, LIGHTLY DAMPEN THE SUBGRADE BEFORE PLACING CONCRETE TO PREVENT THE SUBGRADE FROM ABSORBING WATER FROM THE CONCRETE MIX. APPLY WATER AT NEARLY THE SAME RATE IT SOAKS INTO THE SUBGRADE SURFACE.

CRACK CONTROL JOINTS SHALL BE PLACED IN SLABS ON GRADE IN SQUARE PATTERNS AT A MAXIMUM SPACING OF 15' UNLESS NOTED OTHERWISE. PLACE CONTROL JOINTS TO AVOID REENTRANT CORNERS. MAKE SAWCUTS TO FORM WEAKENED PLANE CONTROL JOINTS AS SOON AFTER CONCRETE PLACEMENT AS

START CURING FOR SLABS ON GRADE AS SOON AS THE FINISHERS ARE DONE. APPLY THE CURING COMPOUND IN TWO COATS AT RIGHT ANGLES TO EACH OTHER AND NOT MORE THAN 300 SQUARE FEET PER GALLON. ABOUT 15 MINUTES APART DURING HOT WEATHER, USE A FOG SPRAY TO KEEP THE SURFACE DAMP BEFORE APPLYING A CURING COMPOUND.

REINFORCING STEEL

ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. CLEAR CONCRETE COVER OVER BARS SHALL BE 3" FOR FOOTINGS

ALL SLABS ON GRADE SHALL BE REINFORCED WITH 6 x 6 W 1.4 x W 1.4 W.W.F SUPPORT THE MESH AS REQUIRED TO INSURE THAT IT WILL BE LOCATED IN THE UPPER THIRD OF THE SLAB THICKNESS.

PROVIDE CORNER BARS AT ALL FOOTING STEPS AND CORNERS. BARS SHALL BE A MINIMUM OF 2'-6" LONG AND SHALL HAVE THE SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.

LAP ALL SPLICES IN CAST-IN-PLACE CONCRETE AS SPECIFICALLY CALLED FOR, BUT AT LEAST 50 BAR DIAMETERS.

SUBMIT SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

BRICK MASONRY

BRICK VENEER SHALL BE OF A QUALITY AT LEAST EQUAL TO THAT REQUIRED BY ASTM SPECIFICATIONS (C216). THE COMPRESSIVE STRENGTH OF BRICK UNITS

MORTAR SHALL BE OF A QUALITY AT LEAST EQUAL TO THAT REQUIRED BY ASTM "STANDARD SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY" (C270). USE TYPE "M" OR "S" MORTAR BELOW GRADE. TYPE "N" MORTAR IS PERMITTED ABOVE GRADE MASONRY ANCHORS FOR BRICK VENEER SHALL BE CORROSION RESISTANT (HOT DIP

GALVANIZED AFTER FABRICATION) AND SHALL HAVE A MAXIMUM SPACING OF 16"

HORIZONTALLY AND VERTICALLY. REFER TO THE ARCHITECTURAL PLANS FOR LOCATIONS OF BRICK EXPANSION JOINTS, OR IF NOT SHOWN, COORDINATE WITH ARCHITECT. IN GENERAL CONTROL JOINTS SHOULD BE LOCATED WITH A MAXIMUM SPACING OF 30'-0"

STRUCTURAL STEEL

FABRICATE AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 360-10)

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RUST-INHIBITIVE PAINT THE STEEL USED SHALL HAVE THE FOLLOWING MINIMUM YIELD STRESS

CHANNELS, ANGLES, PLATES, MISC. SHAPES 36 KSI (A36) USE ASTM F1554 (GRADE 36) BOLTS FOR ALL ANCHOR BOLTS U.N.O. STRAIGHT ANCHOR BOLTS SHALL BE THREADED RODS WITH A NUT INSTALLED AT THE EMBEDDED EMBEDDED END OF THE BOLT.

ALL EXPANSION ANCHORS SHALL BE INSTALLED WITH STANDARD EMBEDMENT DEPTH (3-1/2" FOR 5/8" DIA. ANCHORS). EXPANSION

ANCHORS MUST BE LOCATED 1-3/8" MINIMUM FROM VERTICAL MORTAR JOINTS FOR MISCELLANEOUS STEEL NOT SHOWN ON THESE DRAWINGS, SEE ARCHITECTURAL

AND OTHER ENGINEERING DRAWINGS. SUBMIT ERECTION AND SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

_' 9 ' 10 ' 11 ' 12 ' 13 ' 14 ' 15 ' 16 ' 17 ' 18 ' 19 ' 20 |

WOOD TRUSSES

THE WOOD TRUSS FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF THE WOOD TRUSSES. SUBMIT CALCULATIONS WITH THE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN NORTH CAROLINA TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32

LUMBER DEFECTS SUCH AS WANE OR KNOTS OCCURRING IN THE CONNECTOR PLATE AREA MUST NOT AFFECT MORE THAN TEN PERCENT OF REQUIRED PLATE AREA OR NUMBER OF EFFECTIVE TEETH REQUIRED FOR EACH TRUSS MEMBER. CONNECTOR PLATES SHALL BE APPLIED TO BOTH FACES OF TRUSS AT EACH JOINT. AND SHOULD PROVIDE FIRM EVEN CONTACT BETWEEN THE PLATE AND THE WOOD. ALI WOOD MEMBERS SHALL BE ACCURATELY CUT AND FABRICATED SO THAT ALL MEMBERS HAVE GOOD BEARING AND ALL COMPLETED TRUSS UNITS ARE UNIFORM. SEE LATEST EDITION OF TRUSS PLATE INSTITUTE "QUALITY CONTROL MANUAL" FOR TOLERANCES AND OTHER SPECIAL REQUIREMENTS.

THE DESIGN, FABRICATION AND ERECTION OF THE WOOD TRUSSES SHALL COMPLY WITH THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". AND THE 'NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS

ALL TRUSSES MUST BE SECURELY BRACED BOTH DURING ERECTION AND AFTER PERMANENT INSTALLATION IN ACCORDANCE WITH WTCA & TRUSS PLATE INSTITUTE DOCUMENT "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES (BCSI)'

THE TRUSS FABRICATOR SHALL SHOW ALL RECOMMENDED BRACING, BOTH TEMPORARY AND PERMANENT, ON THE TRUSS SHOP DRAWINGS. ALSO, THE DRAWINGS MUST SHOW ALL RECOMMENDED DETAILS FOR CONNECTING THE TRUSSES TO EACH OTHER AND/OR THEIR SUPPORTS (IN GENERAL, USE HURRICANE CLIPS)

TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, DRILLED, NOTCHED, SPLICED, OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN PERMISSION FROM THE DESIGN ENGINEER.

SOLID WOOD FRAMING, HEADERS AND PLYWOOD

ALL SOLID WOOD FRAMING SHALL COMPLY WITH THE ANSI/AWS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH SUPPLEMENT.

ALL SOLID FRAMING SHALL BE SPRUCE-PINE-FIR #2 UNLESS NOTED OTHERWISE ON THE PLANS.

PLYWOOD SHALL CONFORM TO THE AMERICAN PLYWOOD ASSOCIATION "PLYWOOD DESIGN SPECIFICATION." PLYWOOD SHALL BE CDX (UNO). PLYWOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APA "DESIGN/CONSTRUCTION GUIDE - RESIDENTIAL AND COMMERCIAL"

ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE NORTH CAROLINA STATE BUILDING

MICROLLAM HEADERS (LVL'S) ARE MANUFACTURED BY Weyerhouser iLevel Trus Joist. (THE CONTRACTOR MAY SUBSTITUTE EQUIVALENT HEADERS IF PROPERLY DESIGNED BY THE MANUFACTURER.) MICRO-LAM HEADERS ARE ALWAYS DOUBLED AND MUST BE NAILED TOGETHER WITH 2 ROWS OF 10d NAILS @ 12" O.C. STAGGERED. PROVIDE CONTINUOUS LATERAL SUPPORT FOR TOP OF HEADER.

BUILT-UP STUD COLUMNS MUST BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. PROVIDE (2) 10d NAILS SPACED 12" ON CENTER FULL

NOT LESS THAN THREE STUDS SHALL BE INSTALLED AT EVERY CORNER OF AN EXTERIOR WALL.

WOOD SILLS SHALL BE ATTACHED TO CONTINUOUS FOUNDATION WALLS WITH 5/8" DIAMTER BOLTS SPACED NOT MORE THAN 4' APART AND WHICH ARE EMBEDDED AT LEAST 6" IN CONCRETE OR 15" IN MASONRY UNITS. ALTERNATE ATTACHMENT SYSTEMS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

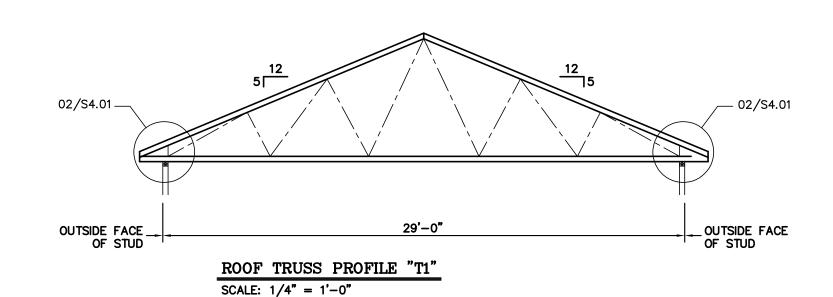
ALL WOOD IN CONTACT WITH MASONRY OR EXPOSED TO THE WEATHER SHALL BE PRESSURE PRESERVATIVE TREATED TO THE RETENTIONS REQUIRED BY SECTION 2303 OF THE BUILDING CODE.

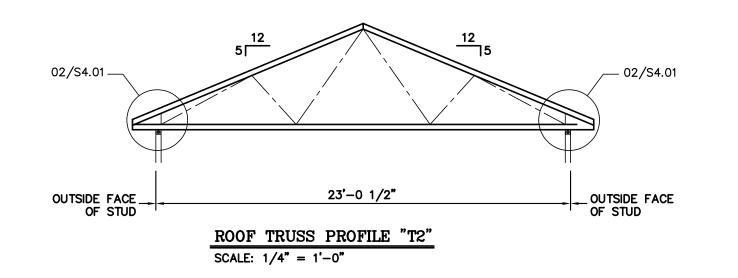
NAIL SIZES SPECIFIED ON PLANS AND DETAILS ARE "STANDARD COMMON NAILS". ALL WOOD FRAMING SHALL BE FASTENED IN ACCORDANCE WITH TABLE 2304.10.1 OF THE BUILDING CODE.

TRUSS DESIGN NOTES

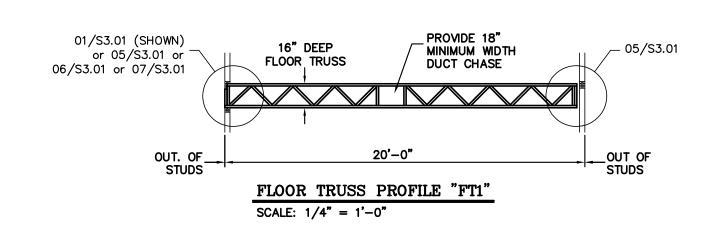
RECORD PRIOR TO FABRICATION.

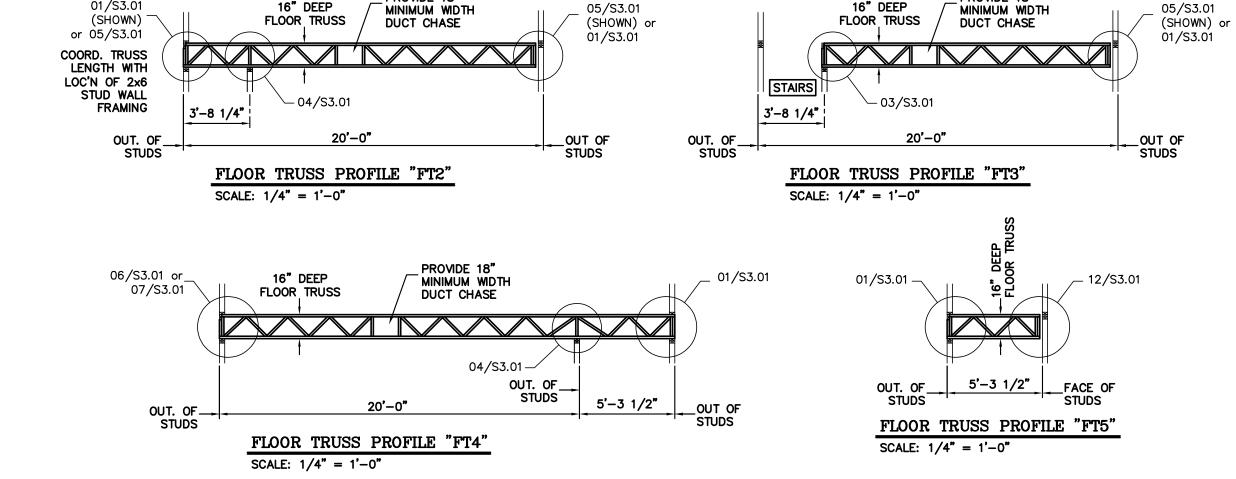
- I. THE GENERAL CONTRACTOR SHALL VERIFY DIMENSIONS FOR ALL TRUSS TYPES IN THE FIELD PRIOR TO FABRICATION. TRUSS PROFILE DIMENSIONS ARE TO FACE OF STUD.
- 2. ROOF TRUSSES SHALL BE SPACED AT 24" O.C. MAX. UNLESS OTHERWISE NOTED ON THE FRAMING PLANS.
- 3. FINAL ROOF/FLOOR TRUSS WEB CONFIGURATIONS ARE TO BE DETERMINED BY THE FABRICATOR.
- 4. THE SUPPLIER SHALL PROVIDE CALCULATIONS FOR ALL TRUSS TYPES, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN NORTH CAROLINA, FOR REVIEW BY THE PROJECT STRUCTURAL ENGINEER OF
- 5. FLOOR TRUSS SPACING SHALL BE DETERMINED BY THE SUPPLIER, NOT TO EXCEED 24" O.C. MAXIMUM. TRUSS DEFLECTION SHALL BE LIMITED TO L/480 UNDER LIVE LOAD AND L/360 UNDER DEAD+LIVE LOAD.
- 6. THE SUPPLIER SHALL DESIGN ALL ROOF TRUSS TYPES FOR A TOTAL ROOF DEAD LOAD OF 20 PSF (10 PSF AT THE TOP CHORD & 10 PSF AT THE BOTTOM CHORD). THE DESIGN ROOF LIVE LOAD IS 20 PSF ON THE TOP CHORD. DESIGN TRUSS BOTTOM CHORDS FOR A LIVE LOAD OF 20 PSF, APPLIED TO PORTIONS OF THE BOTTOM CHORD WHERE THERE ARE TWO OR MORE ADJACENT TRUSSES WITH THE SAME WEB CONFIGURATION CAPABLE OF SUPPORTING A RECTANGLE 42" HIGH BY 24" WIDE OR GREATER, LOCATED WITHIN THE PLANE OF THE TRUSS. THE RECTANGLE SHALL FIT BETWEEN THE TOP OF THE BOTTOM CHORD AND THE BOTTOM OF ANY OTHER TRUSS MEMBER. DESIGN THE REMAINING PORTION OF TRUSS BOTTOM CHORDS FOR A CONCURRENT LIVE LOAD OF 10 PSF. THE BOTTOM CHORD LIVE LOAD SHALL BE APPLIED CONCURRENTLY WITH ALL OTHER DEAD & LIVE LOADS.
- IN ADDITION TO THE DESIGN DEAD AND LIVE LOADS NOTED ABOVE, THE ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ASCE 7-10 FOR A DESIGN WIND SPEED OF 118 MPH WITH EXPOSURE C'. 10 PSF MAXIMUM SHALL BE USED FOR THE DEAD LOAD WITH ALL WIND LOAD CASES.
- 7. FLOOR TRUSSES SHALL BE DESIGNED FOR A FLOOR DEAD LOAD OF 15 PSF (8 PSF AT THE TOP CHORD & 7 PSF AT THE BOTTOM CHORD). THE DESIGN FLOOR LIVE LOAD IS 40 PSF AT THE TOP CHORD.
- 8. SEE FRAMING DETAILS FOR SPECIFICATION OF HURRICANE ANCHORS AT ROOF TRUSS SUPPORTS.
- 9. IN ADDITION TO PERMANENT DESIGN LOADS NOTED ABOVE. ALL FLOOR & ROOF TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 13 (OR NFPA13R) FOR A CONCENTRATED CONSTRUCTION LIVE LOAD OF 250 LBS APPLIED AT ANY LOCATION ALONG THE BOTTOM CHORD WITH AN IMPACT LOAD DURATION FACTOR OF 2.0. SNOW LOAD, ROOF LIVE LOAD, AND FLOOR LIVE LOAD NEED NOT BE APPLIED SIMULTANEOUSLY WITH THE CONSTRUCTION LOAD.
- 10. SPLICES IN TRUSSES SHALL BE LOCATED AS REQUIRED BY THE FABRICATOR AND NOTED ON THE ERECTION
- 11. THE ERECTION DRAWINGS SHALL NOTE ALL LOCATIONS OF TEMPORARY BRIDGING OR BRACING REQUIRED TO STABILIZE THE TRUSSES DURING ERECTION, PRIOR TO THE INSTALLATION OF ROOF SHEATHING.
- 12. THE CONTRACTOR SHALL CONSULT THE LATEST EDITION OF BCSI FOR ERECTION BRACING GUIDELINES. PROPER WOOD TRUSS HANDLING AND ERECTION BRACING ARE THE RESPONSIBILITY OF THE CONTRACTOR.





PROVIDE 18





 \Box REVISIONS

structural engineer

120 SAINT MARY'S ST.

RALEIGH, NC 27605

PH: (919) 833-0495

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FIRM LICENSE NO. C-0621

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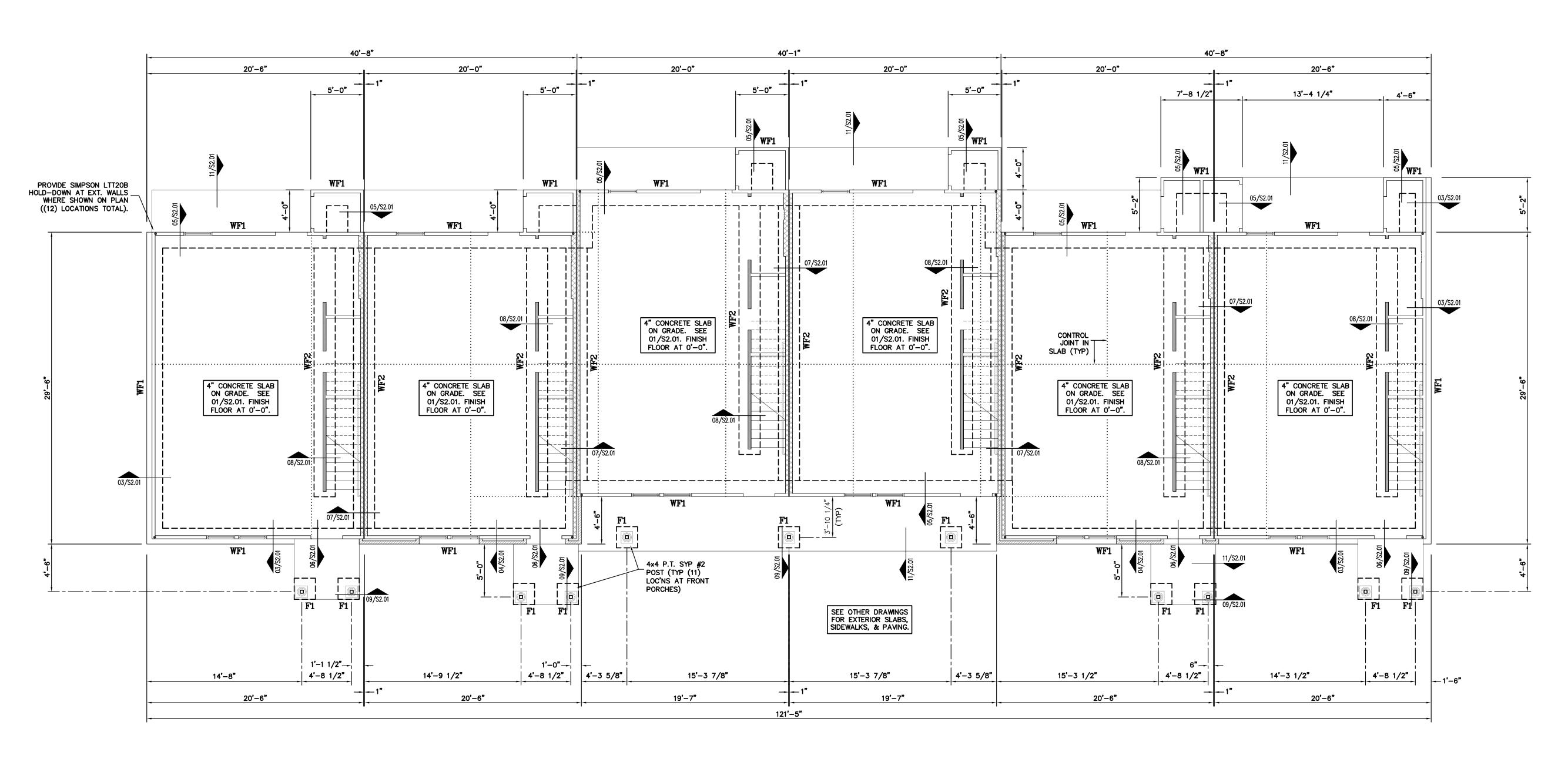
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FOUNDATION PLAN



FOUNDATION PLAN NOTES :

SCALE: 3/16" = 1'-0"

- 1. THE REFERENCE FINISH FLOOR ELEVATION = 0'-0" (SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION). SEE DETAIL 01/S2.01 FOR TYPICAL SLAB ON GRADE CONSTRUCTION.
- SEE DETAIL 02/S2.01 FOR STEPPED FOOTING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL LOCATE FOOTING STEPS AS REQUIRED TO SUIT FINISH GRADES.
- 3. SEE THE ARCHITECTURAL PLANS FOR LOCATIONS OF BRICK CONTROL (EXPANSION) JOINTS. REFER TO STRUCTURAL NOTES FOR MASONRY CONTROL JOINT SPACING LIMITATIONS.
- 4. INTERIOR LOAD BEARING STUD WALLS & SHEAR WALLS HAVE BEEN SHADED ON THE PLAN.
- 5. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE THICKENED SLAB FOUNDATION (WHICH IS ALSO OUTSIDE FACE OF BRICK WHEN BRICK IS PRESENT) EXCEPT WHERE NOTED OTHERWISE. SEE THE ARCHITECTURAL DRAWINGS FOR WALL DIMENSIONS NOT NOTED ON THIS PLAN. SEE SHEET S1.12 FOR DIMENSIONS TO OUTSIDE FACE OF STUD FRAMING.
- 6. SEE SHEET SO.01 FOR ADDITIONAL STRUCTURAL NOTES.

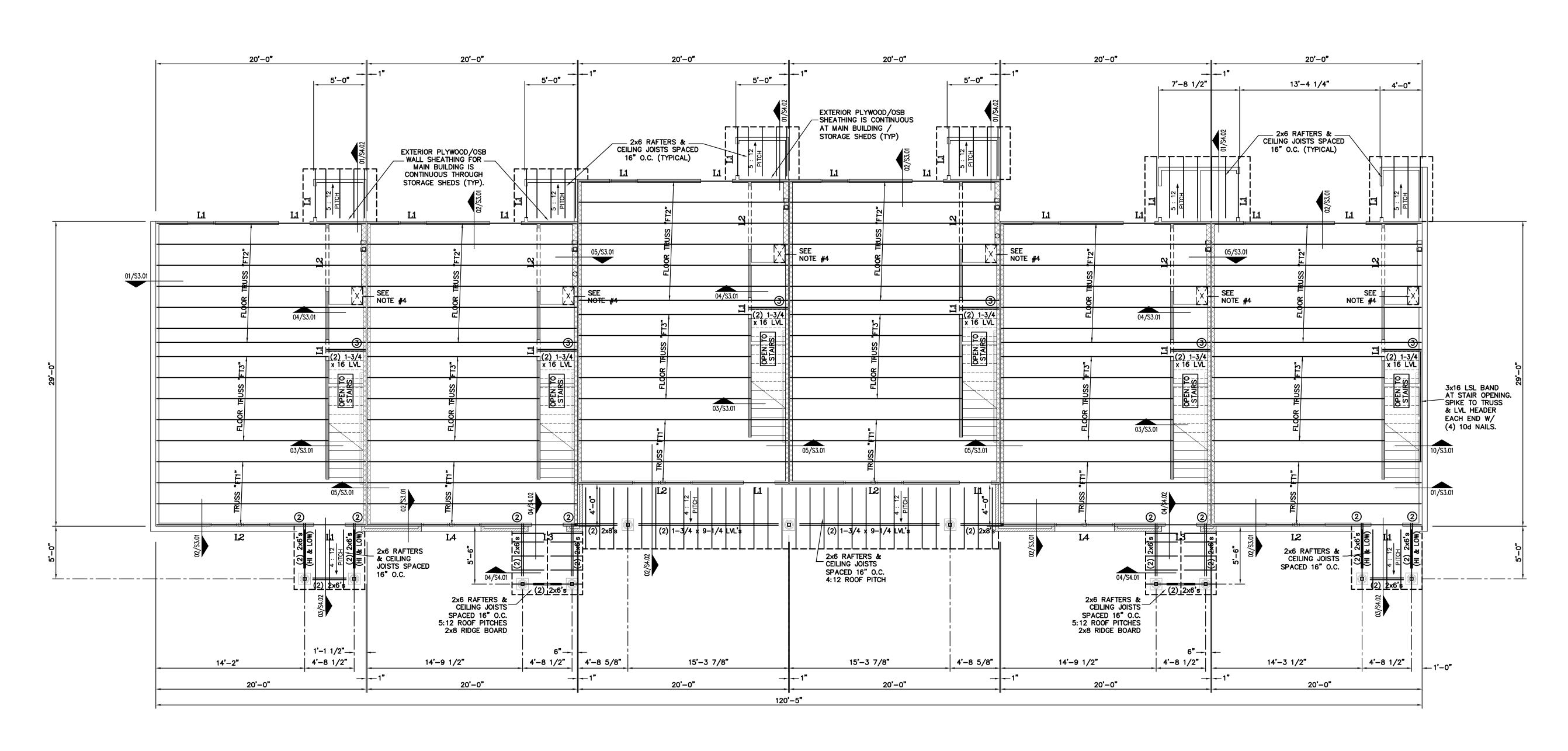
| FO | OTING SCHED | ULE |
|--------------|---------------------------------|--|
| MARK | SIZE | REINFORCING |
| WF1 | SEE DETAIL | (3) #4 CONT. & #4 TIES 48" O.C. |
| WF2 F1 | SEE DETAIL 2'-0" x 2'-0" x 24" | (2) #5 CONT. & #4 TIES 48" O.C. NONE REQUIRED |

| WALL LEGEND | |
|---|----|
| EXTERIOR WALL 2x4 STUD FRAMING + BRICK VENEER (2x6 FRAMING SOME LOCATIONS) | |
| EXTERIOR WALL 2x4 STUD FRAMING + PARTIAL HEIGHT BRICK VENEER (2x6 FRAMING SOME LOC'NS) | |
| EXTERIOR WALL 2x4 STUD FRAMING (2x6 SOME LOCATIONS) | |
| INTERIOR PARTITION WALL NON-STRUCTURAL | |
| INTERIOR BEARING WALL 2x4 STUD FRAMING | |
| INTERIOR BEARING PARTY WALL: BUILDING SHEAR WALL, 2x4 STUD FRAMING (2x6 FRAMING SOME LOCATIONS) | |
| | |
| 28 29 30 | 31 |

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SECOND FLOOR FRAMING PLAN

PLAN N

FLOOR FRAMING PLAN NOTES

SCALE: 3/16" = 1'-0"

- 1. THE TYPICAL FLOOR TRUSS BEARING ELEVATION SHALL BE 8'-1 1/2" ABOVE THE REFERENCE FINISH FIRST FLOOR ELEVATION UNLESS NOTED OTHERWISE. THE FINISH SECOND FLOOR ELEVATION (TOP OF SHEATHING) IS AT 9'-6 1/4".
- 2. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE OF STUD.
- 3. ALL FLOOR FRAMING SHALL BE 16" DEEP WOOD TRUSSES SPACED 24" O.C. MAXIMUM, EXCEPT WHERE NOTED OTHERWISE. THIS IS NOT A TRUSS PLACING PLAN, REFER TO WOOD TRUSS SHOP DRAWINGS. THE G.C. SHALL VERIFY THAT TRUSS LOCATIONS ON THE ERECTION PLAN DO NOT INTERFERE WITH PLUMBING ROUGH—INS. FLOOR TRUSSES MAY NOT BE NOTCHED OR CUT IN THE FIELD. SEE SHEET SO.01 FOR TRUSS FABRICATION / ERECTION NOTES.
- 4. TRUSS PLACEMENT TO ALLOW 12"x20" PENETRATION AT DUCT CHASES.
- 5. FLOOR CONSTRUCTION CONSISITS OF 3/4" THICK, 48/24 APA RATED, T&G PLYWOOD OR OSB FLOOR SHEATHING. ATTACH SHEATHING TO FRAMING W/ GLUE AND 10d NAILS 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD.
- 6. INTERIOR LOAD BEARING STUD WALLS & SHEAR WALLS HAVE BEEN SHADED ON THE PLAN.
- 7. SEE THE ARCHITECTURAL PLANS FOR DIMENSIONS LOCATING INTERIOR WALLS AND WALL OPENINGS WHERE NOT SHOWN ON THIS PLAN. SEE THE LINTEL SCHEDULE ON SHEET
- S1.13 FOR HEADER CONSTRUCTION AT WALL OPENINGS.

 8. SEE SHEET S0.01 FOR ADDITIONAL STRUCTURAL NOTES.

WOOD STUD WALL FRAMING NOTES:

EXTERIOR WALL STUDS SHALL BE 2x4's S-P-F #2 GRADE MATERIAL (EXCEPT 2x6's STUD GRADE MAT'L OR BETTER AT 2x6 WALLS) SPACED 16" O.C. SEE THE HEADER SCHEDULE ON SHEET S1.13 FOR HEADER CONSTRUCTION AT EXTERIOR AND LOAD BEARING INTERIOR WALL OPENINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS LOCATING WALL OPENINGS.

LOAD BEARING AND NON-LOAD BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH WITH S-P-F STUD GRADE MATERIAL OR BETTER 2x4's (EXCEPT 2x6's WHERE SPECIFIED BY ARCHITECT) AT 16" O.C. MAXIMUM.

USE THREE STUDS (MINIMUM) IN EACH CORNER. PROVIDE PRESERVATIVE TREATED SILL PLATES AT ALL WOOD STUD WALLS.

WOOD SILLS SHALL BE ATTACHED TO CONTINUOUS FOUNDATION WALLS WITH 5/8" DIAMETER BOLTS (TYPE SPECIFIED ON DETAILS) SPACED NOT MORE THAN 48" APART.. ALTERNATE ATTACHMENT SYSTEMS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

ALL EXTERIOR STUD WALLS SHALL BE SHEATHED WITH 1/2" PLYWOOD OR OSB SHEATHING TO RESIST LATERAL LOADS ON THE BUILDING. SHEATHING SHALL BE NAILED TO STUDS WITH 8d NAILS SPACED 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD — EXCEPTION: ATTACH SHEATHING W/ 8d NAILS SPACED 4" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD AT LOWER LEVEL FRONT WALLS. PROVIDE SOLID BLOCKING BETWEEN STUDS AT ALL HORIZONTAL JOINTS IN WALL SHEATHING.

3 DENOTES THREE FULL HEIGHT 2x4 STUDS FOR BEAM SUPPORT. BUILT-UP STUD COLUMNS MUST BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. USE (2) 10d NAILS FOR EACH STUD AT 12" O.C. FULL HEIGHT.

SEE 14/S3.01 FOR STUD WALL CAP PLATE SLICE REQUIREMENTS AND LAP SPLICE AT BUILDING

| WALL LEGEND | |
|--|---|
| EXTERIOR WALL 2x4 STUD FRAMING + BRICK VENEER (2x6 FRAMING SOME LOCATIONS) | 777777777777777777777777777777777777777 |
| EXTERIOR WALL 2x4 STUD FRAMING + PARTIAL HEIGHT BRICK VENEER (2x6 FRAMING SOME LOC'NS) | |
| EXTERIOR WALL 2x4 STUD FRAMING (2x6 SOME LOCATIONS) | |
| INTERIOR PARTITION WALL NON-STRUCTURAL | |
| INTERIOR BEARING WALL 2x4 STUD FRAMING | |
| INTERIOR BEARING PARTY WALL: | |

BUILDING SHEAR WALL, 2x4 STUD FRAMING

(2x6 FRAMING SOME LOCATIONS)

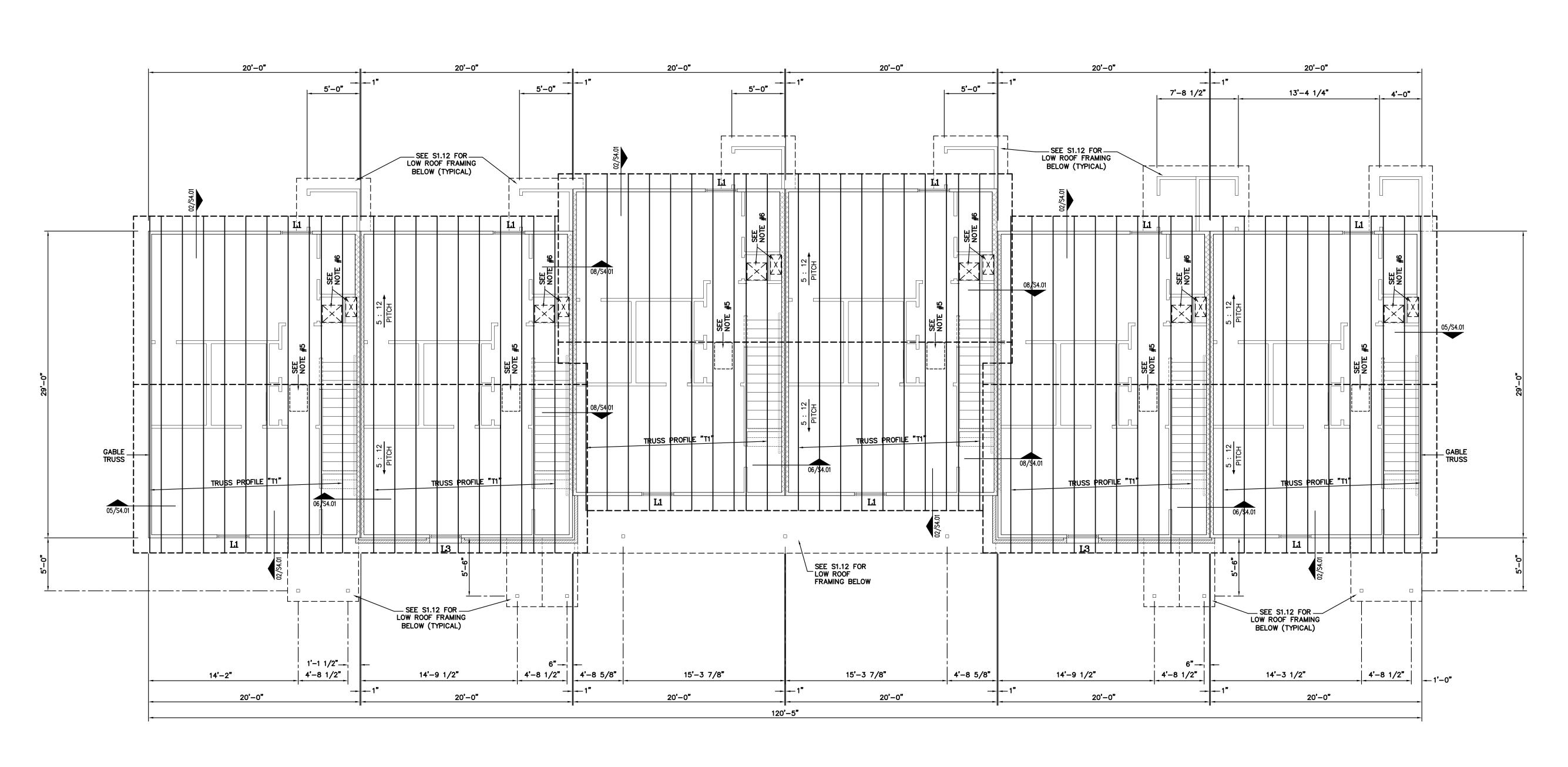
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REVISIONS

Type 1
Upper Floor
Framing Plan

S1.12



2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 1

____7___8___9___10___11___12___13___14___15___16___17___18___19____20___21___22___23___24___25___26___27___28___29___30___31___32___

ROOF FRAMING PLAN 0



ROOF FRAMING PLAN NOTES

SCALE: 3/16" = 1'-0"

- 1. THE TYPICAL ROOF TRUSS BEARING ELEVATION SHALL BE 17'-7 3/4" ABOVE THE REFERENCE FINISH FIRST FLOOR ELEVATION EXCEPT WHERE NOTED OTHERWISE.
- 2. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE OF STUD.
- 3. THE ROOF SHEATHING SHALL BE 5/8" THICK, 40/20 MIN. APA RATED CDX PLYWOOD OR OSB. ATTACH SHEATHING TO FRAMING WITH 10d NAILS SPACED 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORT LOCATIONS. SEE DETAIL 01/S4.01.
- 4. SEE SHEET S1.12 FOR WOOD STUD WALL CONSTRUCTION NOTES, INCLUDING EXTERIOR SHEATHING MATERIAL & ATTACHMENT REQUIREMENTS. SEE THE LINTEL SCHEDULE ON THIS SHEET FOR HEADER CONSTRUCTION AT EXTERIOR AND LOAD BEARING INTERIOR WALL OPENINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS LOCATING WALL OPENINGS.
- 5. COORDINATE ATTIC ACCESS OPENING WITH ARCH. DRAWINGS. TRUSS LAYOUT TO ALLOW OPENING TO BE CENTERED IN CORRIDOR. PROVIDE DOUBLE 2x4 BETWEEN TRUSSES (CONNECTED W/ SIMPSON "LU24" JOIST HANGER EACH END) ON EACH SIDE OF ATTIC ACCESS OPENING.
- 6. TRUSS PLACEMENT TO ALLOW 18"x18" CLEARANCE OVER AHU AND 12"x20" CLEARANCE AT DUCT CHASE
- FOR DUCT PENETRATION INTO/FROM ATTIC.

 7. GYPSUM SHEATHING IS TO BE ATTACHED DIRECTLY TO THE UNDERSIDE OF ALL TRUSS BOTTOM CHORDS. IF RESILIENT CHANNELS ARE USED TO SUPPORT SHEATHING, CONTACT THE STRUCTURAL ENGINEER FOR TRUSS BOTTOM CHORD BRACING THAT IS NECESSARY TO STABILIZE THE TRUSSES WHEN SUBJECTED TO NET WIND UPLIFT LOADS.
- 8. SEE SHEET SO.01 FOR ROOF TRUSS PROFILES. TRUSSES SHALL BE SPACED AT 24" O.C., MAXIMUM (UNLESS NOTED OTHERWISE). THIS IS NOT A TRUSS PLACING PLAN, REFER TO TRUSS SHOP DRAWING SUBMITTAL.
- 9. SEE SHEET SO.01 FOR ADDITIONAL STRUCTURAL NOTES.

| L | INTEL SCHED | ULE | |
|------------|--|--------|-------|
| MARK | SIZE | DETAIL | NOTES |
| I 1 | (2) 2x8 (S-P-F #2) W/ PLYWOOD FILLER | | 1 |
| L2 | (2) 2x10 (S-P-F #2) W/ PLYWOOD FILLER | | 1 |
| L3 | (2) 2x8 (S-P-F #2) W/ PLYWOOD FILLER L4x4x1/4 BRICK SHELF | | 1, 2 |
| L4 | (2) 2x10 (S-P-F #2) W/ PLYWOOD FILLER L4x4x1/4 BRICK SHELF | | 1, 2 |

HEADER SCHEDULE NOTES

- HEADER BEARS ON SINGLE STUD, DOUBLE STUDS EXTEND FULL HEIGHT OF WALL ON EACH SIDE OF OPENING.
- 2. PROVIDE A L4x4x1/4 BRICK SHELF ANGLE WITH 8" MINIMUM BEARING EACH END.

| WALL LEGEND | | | | |
|---|---|--|--|--|
| EXTERIOR WALL 2x4 STUD FRAMING + BRICK VENEER (2x6 FRAMING SOME LOCATIONS) | 777777777777777777777777777777777777777 | | | |
| EXTERIOR WALL 2x4 STUD FRAMING + PARTIAL HEIGHT BRICK VENEER (2x6 FRAMING SOME LOC'NS) | | | | |
| EXTERIOR WALL 2x4 STUD FRAMING (2x6 SOME LOCATIONS) | | | | |
| INTERIOR PARTITION WALL NON-STRUCTURAL | | | | |
| INTERIOR BEARING WALL 2x4 STUD FRAMING | | | | |
| INTERIOR BEARING PARTY WALL: BUILDING SHEAR WALL, 2x4 STUD FRAMING (2x6 FRAMING SOME LOCATIONS) | | | | |

S1.13

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REVISIONS

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|Framing Plan

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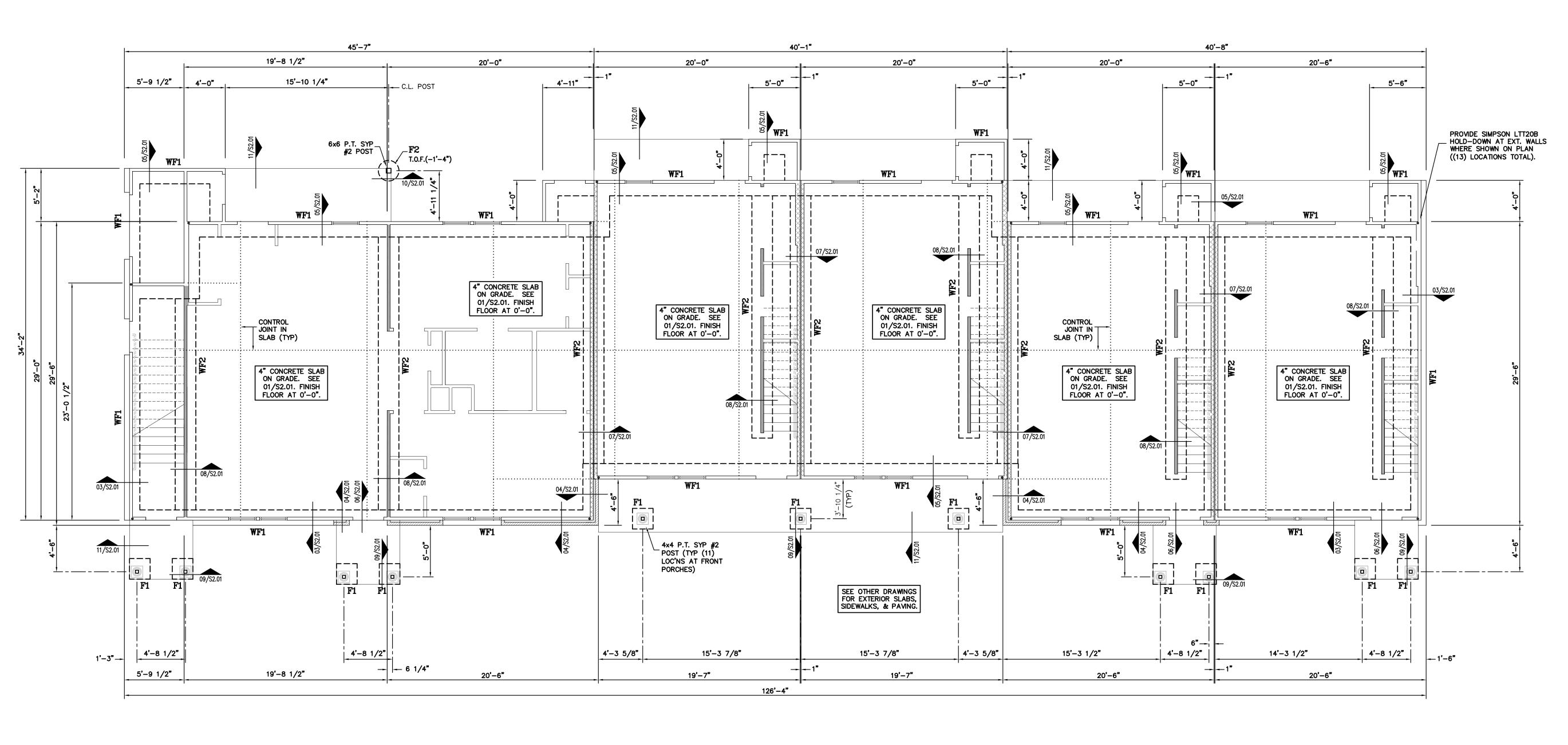
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SEAL

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FOUNDATION PLAN 01



FOUNDATION PLAN NOTES :

SCALE: 3/16" = 1'-0"

- 1. THE REFERENCE FINISH FLOOR ELEVATION = 0'-0" (SEE CIVIL DRAWINGS FOR ACTUAL ELEVATION). SEE DETAIL 01/S2.01 FOR TYPICAL SLAB ON GRADE CONSTRUCTION.
- 2. SEE DETAIL 02/S2.01 FOR STEPPED FOOTING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL LOCATE FOOTING STEPS AS REQUIRED TO SUIT FINISH GRADES.
- 3. SEE THE ARCHITECTURAL PLANS FOR LOCATIONS OF BRICK CONTROL (EXPANSION) JOINTS. REFER TO STRUCTURAL NOTES FOR MASONRY CONTROL JOINT SPACING LIMITATIONS.
- 4. T.O.F.(-1'-4") DENOTES A TOP OF FOOTING LOCATED 1'-4" BELOW THE FINISH FLOOR.
- 5. INTERIOR LOAD BEARING STUD WALLS & SHEAR WALLS HAVE BEEN SHADED ON THE PLAN.
- 6. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE THICKENED SLAB FOUNDATION (WHICH IS ALSO OUTSIDE FACE OF BRICK WHEN BRICK IS PRESENT) EXCEPT WHERE NOTED OTHERWISE. SEE THE ARCHITECTURAL DRAWINGS FOR WALL DIMENSIONS NOT NOTED ON THIS PLAN. SEE SHEET S1.22 FOR DIMENSIONS TO OUTSIDE FACE OF STUD FRAMING.
- 7. SEE SHEET SO.01 FOR ADDITIONAL STRUCTURAL NOTES.

| FO | OTING SCHEDU | LE |
|------|---------------------|---------------------------------|
| MARK | SIZE | REINFORCING |
| WF1 | SEE DETAIL | (3) #4 CONT. & #4 TIES 48" O.C. |
| WF2 | SEE DETAIL | (2) #5 CONT. & #4 TIES 48" O.C. |
| F1 | 2'-0" x 2'-0" x 24" | NONE REQUIRED |
| F2 | 2'-0"ø x 3'-4" PIER | NONE REQUIRED |

WALL LEGEND

EXTERIOR WALL
2x4 STUD FRAMING + BRICK VENEER
(2x6 FRAMING SOME LOCATIONS)

EXTERIOR WALL
2x4 STUD FRAMING + PARTIAL HEIGHT
BRICK VENEER (2x6 FRAMING SOME LOC'NS)

EXTERIOR WALL
2x4 STUD FRAMING (2x6 SOME LOCATIONS)

INTERIOR PARTITION WALL
NON-STRUCTURAL

INTERIOR BEARING WALL
2x4 STUD FRAMING

INTERIOR BEARING WALL
2x4 STUD FRAMING
(2x6 FRAMING SHEAR WALL, 2x4 STUD FRAMING
(2x6 FRAMING SOME LOCATIONS)

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Type 2
Foundation
Plan

\$1.21

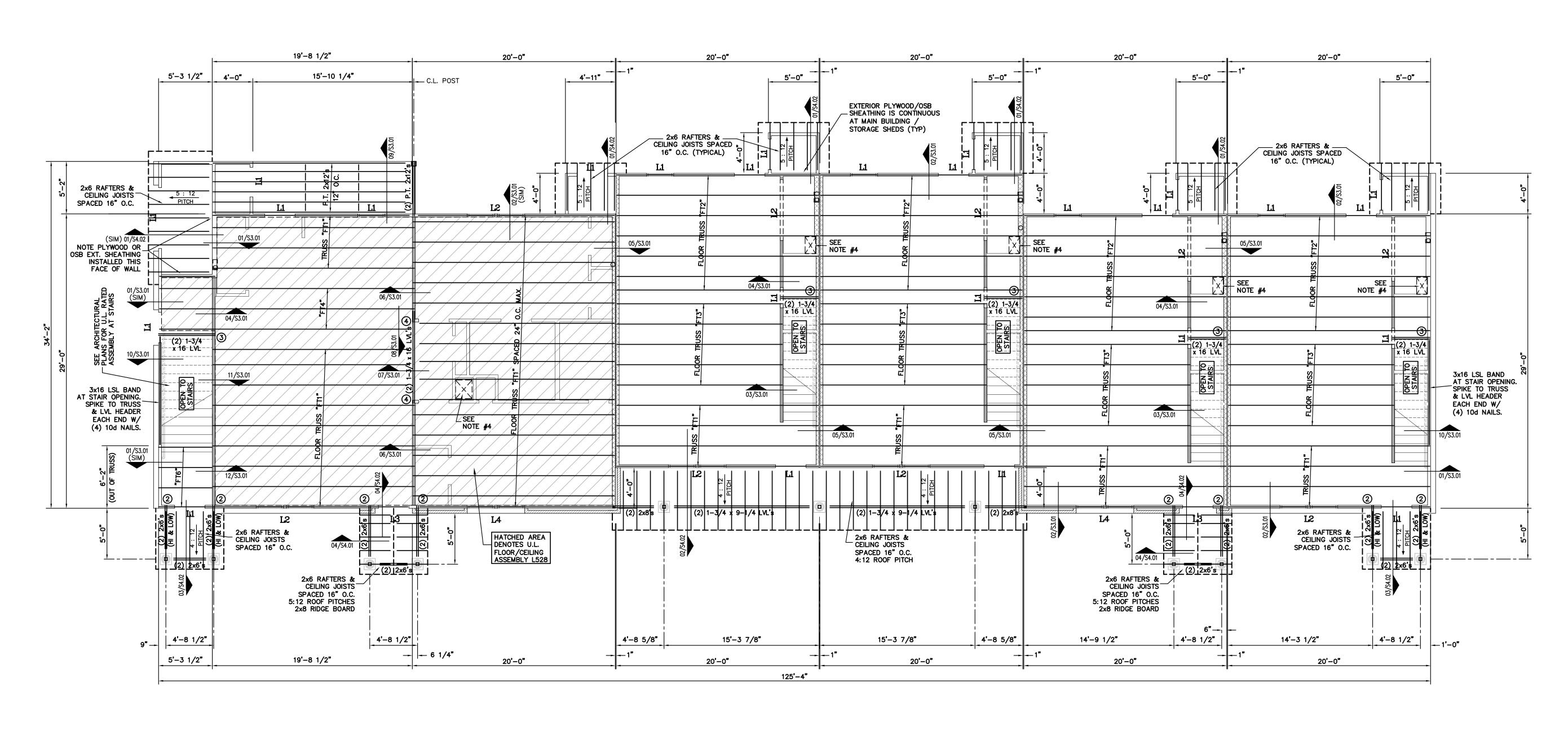
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SEAL



SECOND FLOOR FRAMING PLAN

SCALE: 3/16" = 1'-0"



2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

FLOOR FRAMING PLAN NOTES

- 1. THE TYPICAL FLOOR TRUSS BEARING ELEVATION SHALL BE 8'-1 1/2" ABOVE THE REFERENCE FINISH FIRST FLOOR ELEVATION UNLESS NOTED OTHERWISE. THE FINISH SECOND FLOOR ELEVATION (TOP OF PLYWOOD/OSB SHEATHING) IS AT 9'-6 1/4". THE HATCHED PLAN AREA DENOTES U.L. FLOOR/CEILING ASSEMBLY L528 WITH 1/2" HOMASOTE BOARDS PLACED OVER PLYWOOD/OSB SHEATHING. REFER TO ARCHITECTURAL PLANS FOR FINISH FLOOR MATERIALS.
- 2. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE OF STUD.
- 3. ALL FLOOR FRAMING SHALL BE 16" DEEP WOOD TRUSSES SPACED 24" O.C. MAXIMUM, EXCEPT WHERE NOTED OTHERWISE. THIS IS NOT A TRUSS PLACING PLAN, REFER TO WOOD TRUSS SHOP DRAWINGS. THE G.C. SHALL VERIFY THAT TRUSS LOCATIONS ON THE ERECTION PLAN DO NOT INTERFERE WITH PLUMBING ROUGH-INS. FLOOR TRUSSES MAY NOT BE NOTCHED OR CUT IN THE FIELD. SEE SHEET SO.01 FOR TRUSS FABRICATION / ERECTION NOTES.
- 4. TRUSS PLACEMENT TO ALLOW 12"x20" PENETRATION AT DUCT CHASES. TRUSS PLACEMENT TO ALLOW 16"x16" CEILING PENETRATION OVER MECHANICAL UNIT AT TWO-BED TYPE A UNIT.
- 5. FLOOR CONSTRUCTION CONSISITS OF 3/4" THICK, 48/24 APA RATED, T&G PLYWOOD OR OSB FLOOR SHEATHING. ATTACH SHEATHING TO FRAMING W/ GLUE AND 10d NAILS 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD.
- 6. INTERIOR LOAD BEARING STUD WALLS & SHEAR WALLS HAVE BEEN SHADED ON THE PLAN.
- 7. SEE THE ARCHITECTURAL PLANS FOR DIMENSIONS LOCATING INTERIOR WALLS AND WALL OPENINGS WHERE NOT SHOWN ON THIS PLAN. SEE THE LINTEL SCHEDULE ON SHEET
- S1.23 FOR HEADER CONSTRUCTION AT WALL OPENINGS. 8. SEE SHEET SO.01 FOR ADDITIONAL STRUCTURAL NOTES.

WOOD STUD WALL FRAMING NOTES:

EXTERIOR WALL STUDS SHALL BE 2x4's S-P-F #2 GRADE MATERIAL (EXCEPT 2x6's STUD GRADE MAT'L OR BETTER AT 2x6 WALLS) SPACED 16" O.C. SEE THE HEADER SCHEDULE ON SHEET S1.13 FOR HEADER CONSTRUCTION AT EXTERIOR AND LOAD BEARING INTERIOR WALL OPENINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS LOCATING WALL OPENINGS.

LOAD BEARING AND NON-LOAD BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH WITH S-P-F STUD GRADE MATERIAL OR BETTER 2x4's (EXCEPT 2x6's WHERE SPECIFIED BY ARCHITECT) AT 16" O.C. MAXIMUM.

USE THREE STUDS (MINIMUM) IN EACH CORNER. PROVIDE PRESERVATIVE TREATED SILL PLATES AT ALL WOOD STUD WALLS.

WOOD SILLS SHALL BE ATTACHED TO CONTINUOUS FOUNDATION WALLS WITH 5/8" DIAMETER BOLTS (TYPE SPECIFIED ON DETAILS) SPACED NOT MORE THAN 48" APART.. ALTERNATE ATTACHMENT SYSTEMS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

ALL EXTERIOR STUD WALLS SHALL BE SHEATHED WITH 1/2" PLYWOOD OR OSB SHEATHING TO RESIST LATERAL LOADS ON THE BUILDING. SHEATHING SHALL BE NAILED TO STUDS WITH 8d NAILS SPACED 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD — EXCEPTION: ATTACH SHEATHING W/ 8d NAILS SPACED 4" O.C. AT PANEL EDGES AND 12" O.C. IN THE PANEL FIELD AT LOWER LEVEL FRONT WALLS. PROVIDE SOLID BLOCKING BETWEEN STUDS AT ALL HORIZONTAL JOINTS IN WALL SHEATHING.

3 DENOTES THREE FULL HEIGHT 2x4 STUDS FOR BEAM SUPPORT. BUILT-UP STUD COLUMNS MUST BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. USE (2) 10d NAILS FOR EACH STUD AT 12" O.C. FULL HEIGHT.

SEE 14/S3.01 FOR STUD WALL CAP PLATE SLICE REQUIREMENTS AND LAP SPLICE AT BUILDING

| | VALL | LEGEND |
|--|------|--------|
|--|------|--------|

EXTERIOR WALL 2x4 STUD FRAMING + BRICK VENEER (2x6 FRAMING SOME LOCATIONS) EXTERIOR WALL
2x4 STUD FRAMING + PARTIAL HEIGHT BRICK VENEER (2x6 FRAMING SOME LOC'NS) 2x4 STUD FRAMING (2x6 SOME LOCATIONS) INTERIOR PARTITION WALL NON-STRUCTURAL

INTERIOR BEARING WALL 2x4 STUD FRAMING INTERIOR BEARING PARTY WALL: BUILDING SHEAR WALL, 2x4 STUD FRAMING

(2x6 FRAMING SOME LOCATIONS)

|Framing Plan

REVISIONS

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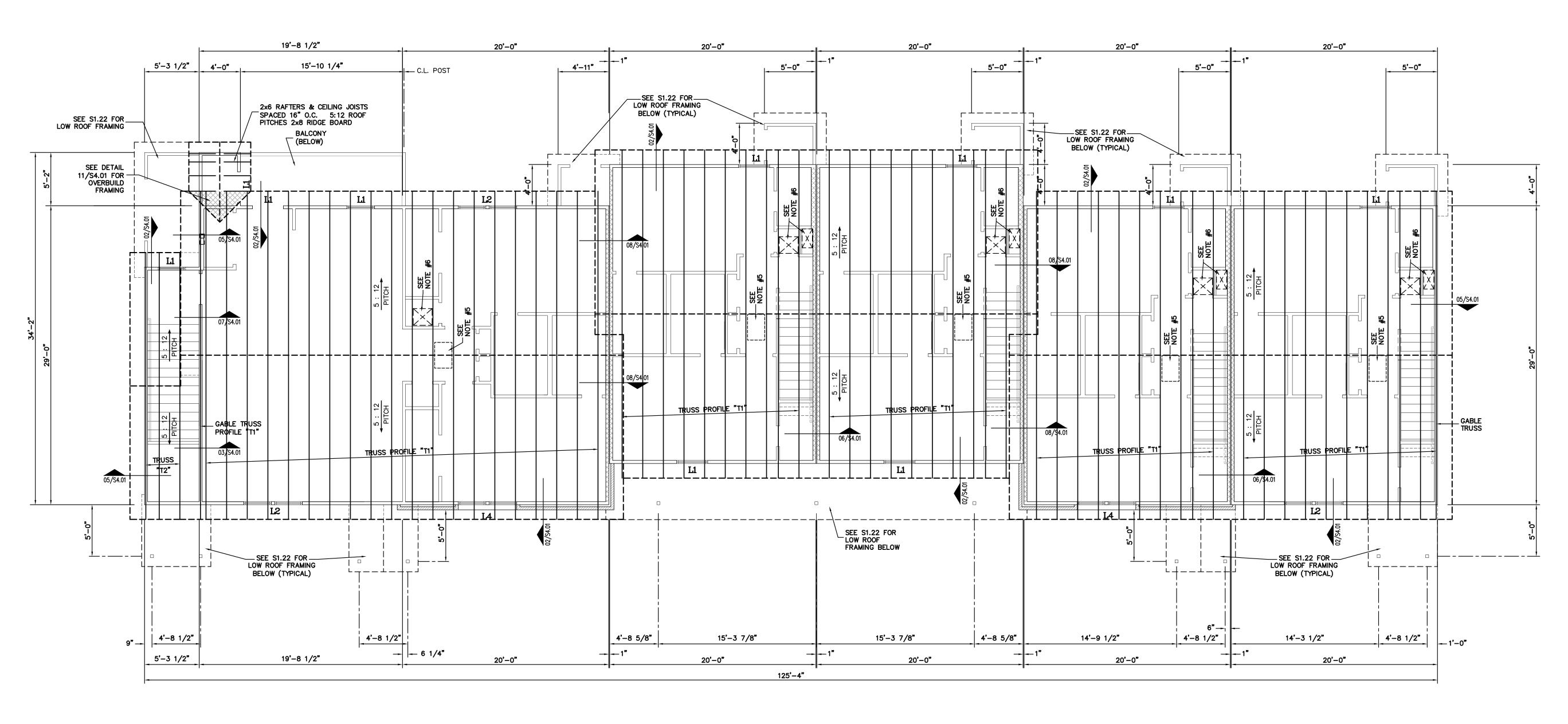
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ROOF FRAMING PLAN



ROOF FRAMING PLAN NOTES

SCALE: 3/16" = 1'-0"

- 1. THE TYPICAL ROOF TRUSS BEARING ELEVATION SHALL BE 17'-7 3/4" ABOVE THE REFERENCE FINISH FIRST FLOOR ELEVATION EXCEPT WHERE NOTED OTHERWISE.
- 2. DIMENSIONS AT EXTERIOR WALLS ON THIS PLAN ARE TO OUTSIDE FACE OF STUD.
- 3. THE ROOF SHEATHING SHALL BE 5/8" THICK, 40/20 MIN. APA RATED CDX PLYWOOD OR OSB. ATTACH SHEATHING TO FRAMING WITH 10d NAILS SPACED 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORT LOCATIONS. SEE DETAIL 01/S4.01.
- 4. SEE SHEET S1.22 FOR WOOD STUD WALL CONSTRUCTION NOTES, INCLUDING EXTERIOR SHEATHING MATERIAL & ATTACHMENT REQUIREMENTS. SEE THE LINTEL SCHEDULE ON THIS SHEET FOR HEADER CONSTRUCTION AT EXTERIOR AND LOCATING WALL OPENINGS. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS LOCATING WALL OPENINGS. DIMENSIONS LOCATING WALL OPENINGS.
- 5. COORDINATE ATTIC ACCESS OPENING WITH ARCH. DRAWINGS. TRUSS LAYOUT TO ALLOW OPENING TO BE CENTERED IN CORRIDOR. PROVIDE DOUBLE 2x4 BETWEEN TRUSSES (CONNECTED W/ SIMPSON "LU24" JOIST HANGER EACH END) ON EACH SIDE OF ATTIC ACCESS OPENING.
- 6. TRUSS PLACEMENT TO ALLOW 18"x18" CLEARANCE OVER AHU AND 12"x20" CLEARANCE AT DUCT CHASE
- FOR DUCT PENETRATION INTO/FROM ATTIC. 7. GYPSUM SHEATHING IS TO BE ATTACHED DIRECTLY TO THE UNDERSIDE OF ALL TRUSS BOTTOM CHORDS. IF RESILIENT CHANNELS ARE USED TO SUPPORT SHEATHING, CONTACT THE STRUCTURAL ENGINEER FOR TRUSS BOTTOM CHORD SHACING THAT IS NECESSARY TO STABILIZE THE TRUSSES WHEN SUBJECTED TO NET WIND LIPIT LOADS. NET WIND UPLIFT LOADS.
- 8. SEE SHEET SO.01 FOR ROOF TRUSS PROFILES. TRUSSES SHALL BE SPACED AT 24" O.C., MAXIMUM (UNLESS NOTED OTHERWISE). THIS IS NOT A TRUSS PLACING PLAN, REFER TO TRUSS SHOP DRAWING SUBMITTAL.
- 9. SEE SHEET SO.01 FOR ADDITIONAL STRUCTURAL NOTES.

| L | INTEL SCHEDU | JLE | |
|------|--|--------------|-------|
| MARK | SIZE | DETAIL | NOTES |
| L1 | (2) 2x8 (S-P-F #2) W/ PLYWOOD FILLER | | 1 |
| L2 | (2) 2x10 (S-P-F #2) W/ PLYWOOD FILLER | | 1 |
| L4 | (2) 2x10 (S-P-F #2) W/ PLYWOOD FILLER L4x4x1/4 BRICK SHELF | January 1992 | 1, 2 |

HEADER SCHEDULE NOTES 1. HEADER BEARS ON SINGLE STUD, DOUBLE STUDS EXTEND

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 1

7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |

FULL HEIGHT OF WALL ON EACH SIDE OF OPENING. 2. PROVIDE A L4x4x1/4 BRICK SHELF ANGLE WITH 8" MINIMUM BEARING EACH END.

| WALL LEGEND | |
|---|--|
| EXTERIOR WALL 2x4 STUD FRAMING + BRICK VENEER (2x6 FRAMING SOME LOCATIONS) | |
| EXTERIOR WALL 2x4 STUD FRAMING + PARTIAL HEIGHT BRICK VENEER (2x6 FRAMING SOME LOC'NS) | |
| EXTERIOR WALL 2x4 STUD FRAMING (2x6 SOME LOCATIONS) | |
| INTERIOR PARTITION WALL NON-STRUCTURAL | |
| INTERIOR BEARING WALL 2x4 STUD FRAMING | |
| INTERIOR BEARING PARTY WALL: BUILDING SHEAR WALL, 2x4 STUD FRAMING (2x6 FRAMING SOME LOCATIONS) | |

REVISIONS |Framing Plan

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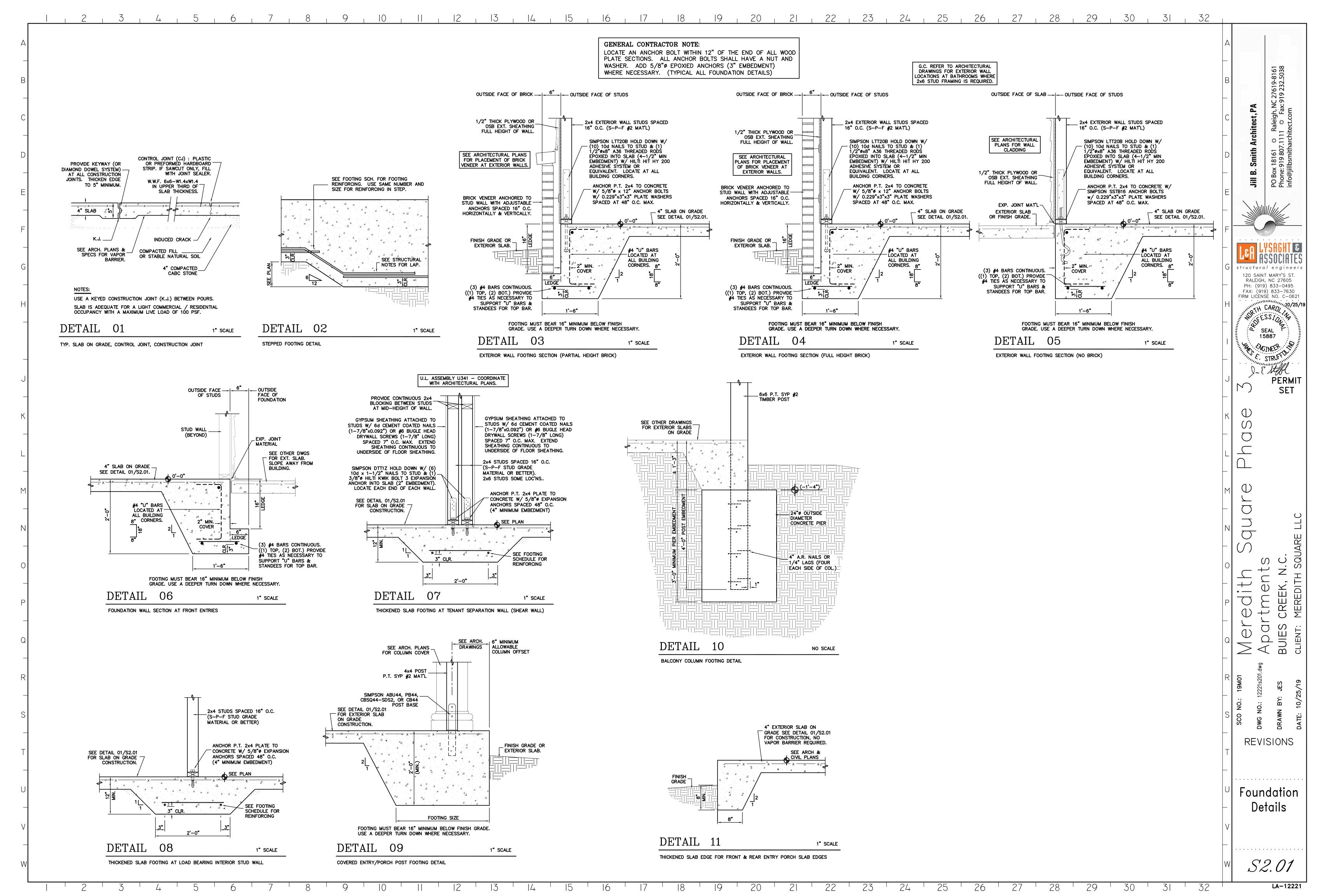
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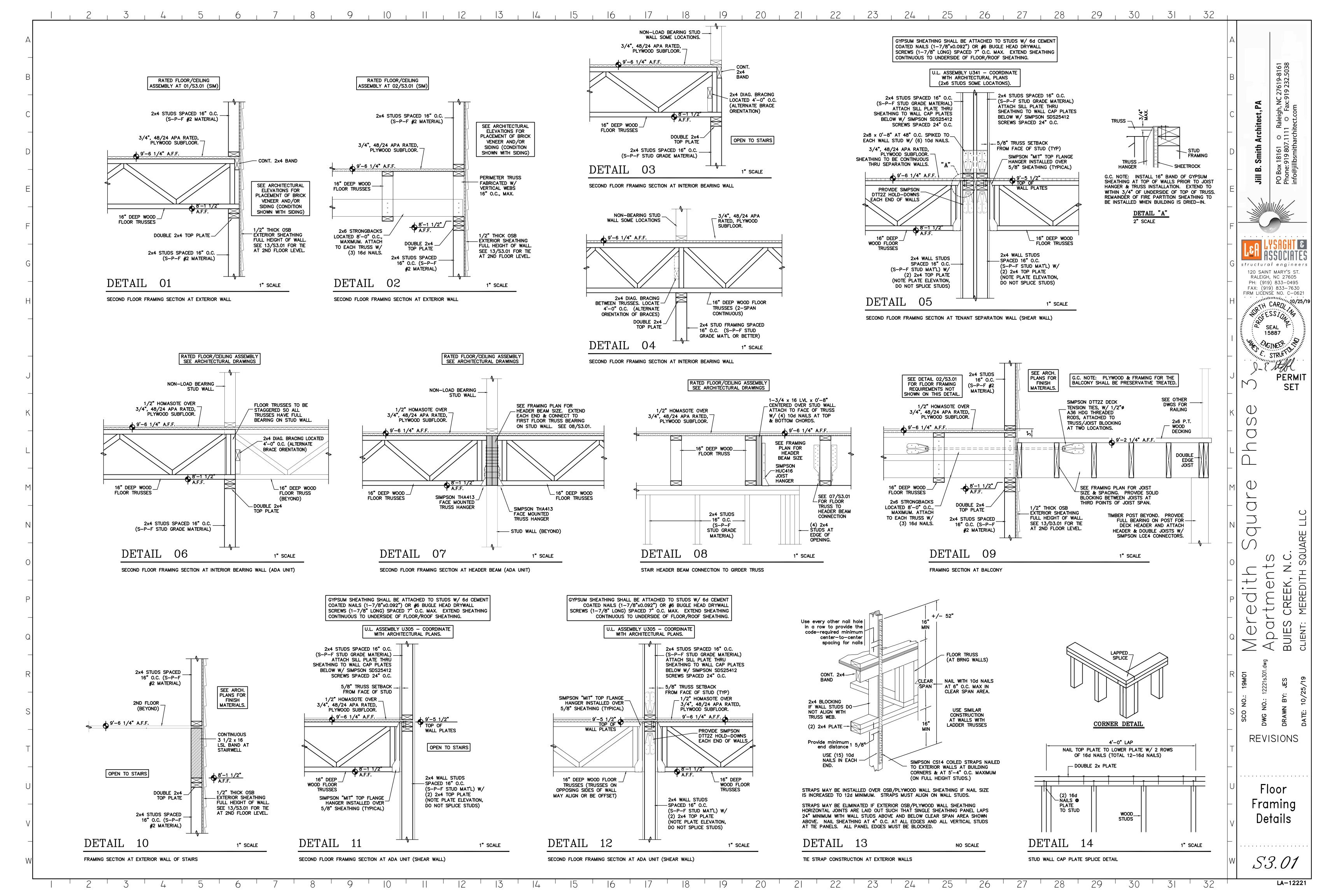
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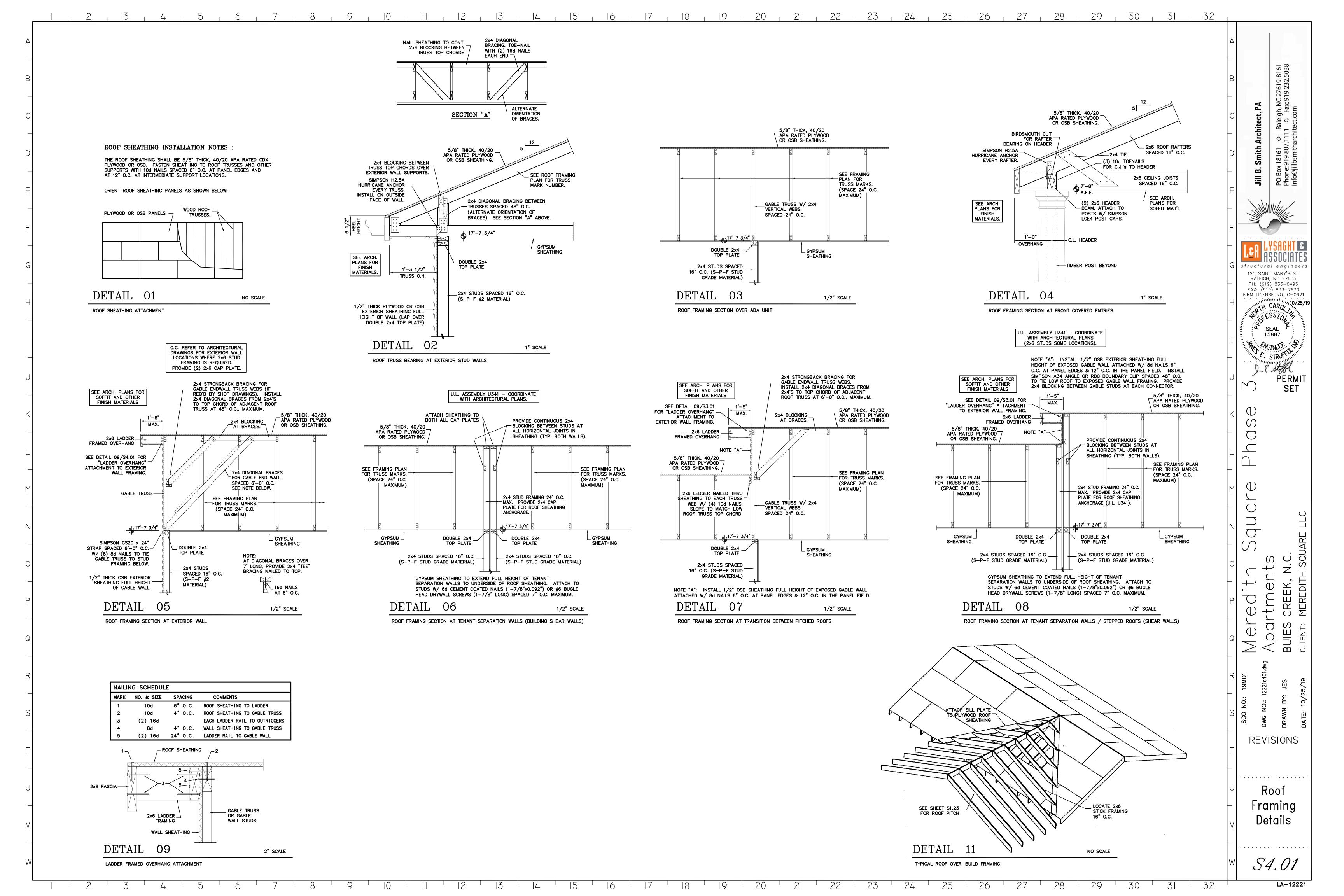
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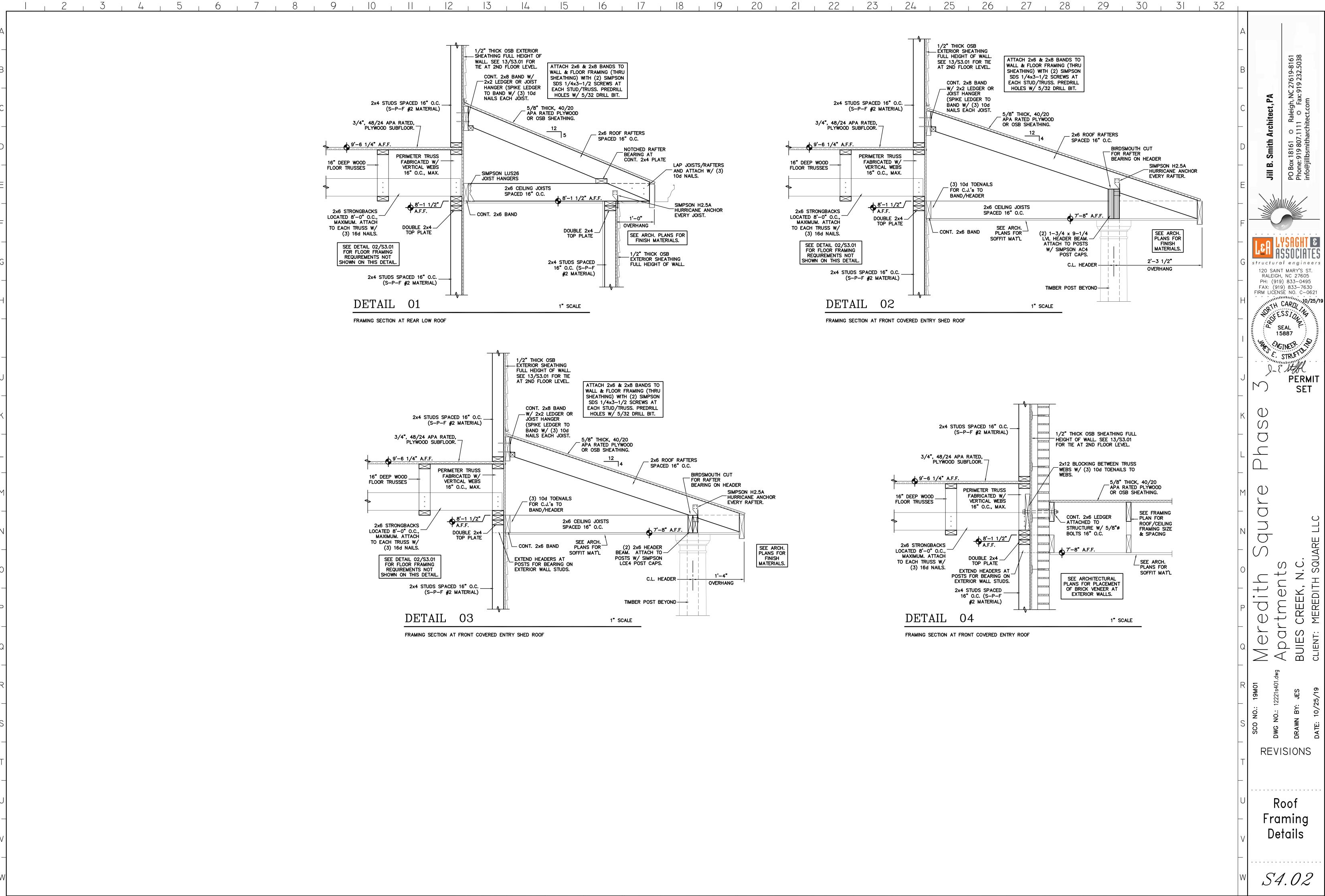
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GENERAL NOTES

- 1. THE PC SHALL OBTAIN AND PAY FOR ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC. REGARDING THE PLUMBING PORTION OF THIS PROJECT.
- 2. POTABLE WATER PIPING ABOVE SLAB FOR PIPE LARGER THAN 1" MAY BE CPVC PIPING COMPLYING WITH ASTM D2846 OR ASTM F441 AND ASTM D1784 EQUAL TO FLOWGUARD GOLD OR CORZAN. WHEN FILLED WITH WATER, CPVC PIPING SHALL HAVE A FLAME DENSITY RATING NOT EXCEEDING 25 AND A SMOKE DENSITY RATING NOT EXCEEDING 50. POTABLE WATER PIPING ABOVE SLAB FOR PIPE SIZES 1" AND SMALLER MAY BE CPVC AS LISTED ABOVE OR PEX-A BY UPONOR (WIRSBO) OR REHAU, MFG. BY THE ENGEL METHOD ONLY. PEX PIPING THAT UTILIZES MECHANICAL CRIMP RING TYPE FITTINGS WILL BE REJECTED. PEX PIPING SHALL HAVE A FLAME DENSITY RATING NOT EXCEEDING 25 AND A SMOKE DENSITY RATING NOT EXCEEDING 50. UPONOR REQUIRES PIPING TO BE SPACED NO CLOSER THAN 18" TO ACHIEVE THIS. CPVC FITTINGS 2" AND SMALLER SHALL COMPLY WITH ASTM D2846 AND BE SOLVENT CEMENT JOINTS WITH A CEMENT COMPLYING WITH ASTM F493. CPVC FITTINGS LARGER THAN 2" SHALL COMPLY WITH ASTM F439 AND BE SOLVENT CEMENT JOINTS WITH A CEMENT COMPLYING WITH ASTM F493. PEX PIPING FITTINGS SHALL COMPLY WITH ASTM F1960 OR ASTM F2080 (COLD EXPANSION), FITTINGS COMPLYING WITH ASTM F1807 ARE NOT ALLOWED (MECHANICAL CRIMP RINGS). COMPLETE PIPING SYSTEM AND FITTINGS SHALL BE PROVIDED WITH A 25 YEAR MFG. WARRANTY. PC MUST BE A MFG. TRAINED AND CERTIFIED INSTALLER OF THEIR PRODUCT AND FITTINGS. COPPER TUBE TYPE 'L' COMPLYING WITH ASTM B88 IS ALSO ACCEPTED. COPPER FITTINGS 3/4" AND SMALLER MAY BE OF THE COMPRESSION TYPE WHEN THE FITTING IS BOTH EXPOSED AND ACCESSIBLE. ALL COPPER SWEAT FITTINGS SHALL COMPLY WITH EITHER ASME B16.18 OR ASME B16.22 AND THE SOLDER USED MUST BE A MIN. OF 95/5, CONTAINING NO LEAD.
- 3. POTABLE WATER PIPING BELOW SLAB SHALL BE TYPE 'K' COPPER TUBE COMPLYING WITH ASTM B88, OR IF PIPE IS 2" OR SMALLER, PEX AS OUTLINED ABOVE. CONTINUOUS LENGTHS ONLY, NO JOINTS ALLOWED. IF COPPER, SLEEVE PIPE WITH SEALED ELASTOMERIC INSULATION. IF PEX, WRAP WITH 2 LAYERS OF NON-CHLORIDE (ELECTRICAL)
- 4. ALL POTABLE WATER PIPING SHOWN IN UNITS IS LOCATED UNDER SLAB OR WITHIN WALLS U.O.N. NO OVERHEAD WATER PIPING IS ALLOWED (ATTIC).
- 5. ALL WATER PIPING SHALL BE RUN IN AREAS NOT SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE RAN ON THE CONDITIONED SIDE OF THE WALL INSULATION. IF ROUTED IN UNCONDITIONED AREAS OR ROOMS WITH THE ONLY EXIT TO THE OUTDOORS, OR OUTSIDE OF THE BUILDING INSULATED ENVELOPE (IE UNCONDITIONED, VENTILATED ATTIC), ALL PIPING AND PIPING ACCESSORIES (MANIFOLDS, VALVES, WHA, ETC.) MUST BE INSULATED WITH A MINIMUM OF R-6.5 IN ACCORDANCE WITH ASTM C177 (INSULATION THICKNESS TO ACHIEVE R-6.5 WILL VARY BY MFG.). COPPER COLD WATER PIPING SHALL HAVE A MIN. 1/2" THICK INSULATION. COPPER HOT WATER PIPING SHALL HAVE A MIN. 1" THICK INSULATION. CPVC OR PEX HOT WATER PIPING SHALL HAVE A MIN. 1/2" THICK INSULATION FOR THE PIPING WITHIN 8' OF THE WATER HEATER. INSULATION SHALL BE OF THE CLOSED CELL ELASTOMERIC TYPE WITH A FLAME DENSITY RATING NOT EXCEEDING 25 AND A SMOKE DENSITY RATING NOT EXCEEDING 50. INSULATION SHALL NOT CONTRIBUTE SIGNIFICANTLY TO FIRE. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS EXCEPT WHEN PENETRATING A FIRE RATED ASSEMBLY THAT DOES NOT HAVE INSULATION AS PART OF THE ASSEMBLY. UNLESS INSTALLED FOR FREEZE PROTECTION, INSULATION CONDUCTIVITY (k) RATING SHALL NOT EXCEED 0.27 BTU PER INCH/H*FT2*°F.
- COPPER AND BRASS PIPING AND FITTINGS SHALL BE PROTECTED AGAINST CONTACT WITH CONCRETE, MASONRY, OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER, COPPER PLATED, BRASS, OR INERT PLASTIC. COPPER PIPING MAY BE CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING IF SATISFACTORY AND COMPLETE ELECTROLYTIC ISOLATION MATERIAL PROTECTS THE COPPER AGAINST CONTACT WITH OTHER METALS. ALL HANGERS AND SPACING SHALL BE IN ACCORDANCE WITH THE LOCAL PLUMBING CODE.
- WHERE COPPER OR BRASS PIPING OR FITTINGS ARE PASSING THROUGH OR ARE CONCEALED IN CONCRETE OR MASONRY, PVC SLEEVES SHALL BE REQUIRED. INSULATE THE PIPE OR FITTING WITH A MIN. 1/2" THICK CLOSED CELL TYPE INSULATION BY ARMACELL OR EQUAL. PROPERLY SEAL THE INSULATION IN ACCORDANCE WITH MFG. INSTRUCTIONS. PVC SLEEVE TO HAVE 1/2" MIN. CLEARANCE AROUND THE PIPE AND INSULATION. PROPERLY SEAL THE ANNULAR SPACE WITH COAL TAR, ASPHALTUM COMPOUND, OR OTHER MATERIAL APPROVED BY MFG. & AHI.
- 8. DIELECTRIC CONNECTIONS SHALL BE USED BETWEEN FERROUS AND NON-FERROUS PIPING.
- 9. PROVIDE DRAIN VALVES IN THE HOT AND COLD WATER SYSTEM AT ALL LOW POINTS TO ALLOW FOR COMPLETE DRAINAGE.
- 10. EXTERIOR (SITE) WATER AND WASTE PIPING SHALL BE KEPT A MINIMUM OF 5 FEET APART. WHEN PIPES CROSS OR THEY ARE CLOSER THAN 5 FEET, WATER PIPE SHALL BE AT LEAST 12 INCHES ABOVE CROWN OF SEWER PIPE.
- 11. WASTE AND VENT PIPING ABOVE SLAB SHALL BE PVC-DWV PIPE SCHEDULE 40 OR HEAVIER COMPLYING WITH ASTM D2665 OR ASTM F891. PVC SLIPJOINTS ARE ONLY ALLOWED TO BE USED FOR DRAIN CONNECTION IN THE FOLLOWING LOCATIONS; TRAP OUTLET, TRAP INLET, AND WITHIN TRAP SEAL, AND ONLY WHERE THESE LOCATIONS ARE ACCESSIBLE. USE PVC SOLVENT CEMENTED JOINTS AT ALL OTHER LOCATIONS. ALL PVC FITTINGS SHALL COMPLY WITH EITHER ASTM D3311 OR ASTM
- 12. WASTE AND VENT PIPING BELOW SLAB SHALL BE PVC-DWV PIPE SCHEDULE 40 OR HEAVIER COMPLYING WITH ASTM D2665. USE PVC SOLVENT CEMENTED JOINTS. ALL FITTINGS SHALL COMPLY WITH EITHER ASTM D3311 OR ASTM D2665. CELLULAR CORE IS NOT ALLOWED BELOW SLAB.
- 13. ALL SOIL, WASTE, AND VENT LINES SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION (SOIL AND WASTE ARE BELOW GRADE OR WITHIN WALLS UON.) (VENT IS ABOVE CEILING OR WITHIN WALLS UON.). WHERE DIFFERENT TYPES OF PIPE MEET, THE JOINT SHALL BE MADE WITH AN APPROVED ADAPTER FITTING.
- 14. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE WASTE PIPING IS INSTALLED SO THAT PROPER SLOPES WILL BE MAINTAINED. MINIMUM WASTE SLOPE IS 1/8" PER FOOT FOR PIPE 3" AND LARGER. MIN. WASTE SLOPE IS 1/4" PER FOOT FOR PIPE SMALLER THAN 3". COORDINATE ALL UNDERGROUND PIPING WITH ALL
- 15. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR (4) HORIZONTAL 45° TURNS, AND AT EVERY 100 FEET. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS.
- 16. ALL BUILDING PENETRATIONS SHALL BE COORDINATED WITH THE GC. PROVIDE ALL FLASHING MATERIAL REQUIRED UNLESS PROVIDED BY THE GC. ALL VENTS SHALL BE LOCATED A MIN. OF 10'-0" FROM ANY OUTSIDE AIR INTAKE.
- 17. ALL PLUMBING FIXTURES AND PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE WITH ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS, ESCUTCHEONS, ETC. SEE FIXTURE SCHEDULES. FURNISH AND INSTALL COMPLETE SYSTEMS OF SOIL, WASTE, VENT, HOT AND COLD WATER PIPING FROM ALL PLUMBING FIXTURES, AND/OR OTHER EQUIPMENT. ALL DRAIN PIPING AND SUPPLY LINES SHALL BE PROTECTED PER ADA REQUIREMENTS.
- 18. PROVIDE QUARTER TURN, FULL PORT, BRASS BALL VALVES WITH BLOW-OUT PROOF STEMS WITH TEFLON OR OTHER NON-RUBBER SEATS AND CHROME PLATED BALL ON ALL BRANCH LINES OF THE HOT AND COLD WATER DISTRIBUTION SYSTEM, ALL FIXTURES WHERE A STOP OR SUPPLY KIT WOULD BE UNACCESSIBLE, AND AS SHOWN ON PLANS, SCHEDULES, RISERS, AND SCHEMATIC DETAILS.
- 19. PROVIDE ACCESS DOORS FOR ALL VALVES AND DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE UNACCESSIBLE CEILINGS.
- 20. VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED. VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED.
- 21. PENETRATIONS AND SEALANTS OF FIRE RATED WALL ASSEMBLIES AND FIRE RATED CEILING/FLOOR AND CEILING/ROOF ASSEMBLIES SHALL BE PER A UL LISTED SYSTEM EQUAL TO OR EXCEEDING THE FIRE RATING OF THE PENETRATED ASSEMBLY.
- WHEN PEX WATER PIPING IS USED, THE DISINFECTION PROCEDURE REQUIRING THE LOWEST CONCENTRATION OF CHLORINE (PPM) FOR THE SHORTEST AMOUNT OF TIME ACCEPTABLE TO THE AHJ SHALL BE USED.

22. ALL PIPING SYSTEMS SHALL BE TESTED AS REQUIRED IN THE STATE PLUMBING CODE. POTABLE WATER SYSTEMS SHALL BE DISINFECTED PER STATE AND/OR LOCAL CODES.

- 23. FURNISH ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES, REQUIREMENTS OF AHJ, AND APPLICABLE STANDARDS INCLUDING ANSI, ASSE, ASME, NSF, CSA, AND ARI.
- 24. CEILING AREA HAS LIMITED SPACE. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO BE PROPERLY INSTALLED WHILE AVOIDING CONFLICT WITH THE PLUMBING SYSTEMS.
- 25. DRAWINGS AND RISERS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW REQUIRED FITTINGS AND OFFSETS REQUIRED FOR ACTUAL INSTALLATION.
- 26. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

| | | | | | PI | LUMBING | FIXTUE | RES SCH | EDU | LE | | | | | | | |
|-------|--------------|-----------------------------------|--------------|----------------|--------------------|-----------------------|------------------------------|---------------------|-------|------|------------|--------|----------------------|--------|----------------|--------------------|--|
| TAG | FIXTURE | ТҮРЕ | MANUFACTURER | MODEL NO. | MATERIAL | | FAUCET/VALVE | | | | PIPE SIZES | | | N | MOUNTING | SUPPLIES & | REMARKS |
| IAG | FIXTURE | TIFE | MANUFACTURER | MODEL NO. | MATERIAL | MFG/MODEL | SPOUT | HANDLES | CNTRS | CW | HW | WASTE | TYPE | SIZE | MOUNTING | STOPS | KEWIAKKS |
| P-1 | WATER CLOSET | ELONGATED 1.6 GPF | MANSFIELD | ALTO 135-160 | VITREOUS CHINA | GRAVITY FLUSH TANK | - | - | - | 1/2" | - | 3" | TRAPWAY | 2" | FLOOR | NOTE 1 | NOTES 2, 4, STD. HEIGHT |
| P-1HC | WATER CLOSET | ELONGATED ADA 1.6 GPF | MANSFIELD | ALTO 137-160 | VITREOUS CHINA | GRAVITY FLUSH TANK | - | - | - | 1/2" | - | 3" | TRAPWAY | 2" | FLOOR | NOTE 1 | NOTES 2, 4, ADA HEIGHT |
| P-2 | LAVATORY | SINGLE OVAL BOWL WITH OVERFLOW | ZURN | Z5114 | VITREOUS CHINA | PEERLESS P136LF-M | CENTERSET 1.2 GPM | ADA SINGLE LEVER | 4" | 1/2" | 1/2" | 2" | METAL POP-UP | 1-1/4" | COUNTER TOP | NOTE 1 | NOTES 4, ADA HEIGHT |
| P-3 | KITCHEN SINK | 8" DEEP DOUBLE BOWL 4 HOLE | DAYTON | ELITE DSE23322 | STAINLESS STEEL | PEERLESS P115LF | 6" HIGH ARC W/ SIDE SPRAY | ADA SINGLE LEVER | 8" | 1/2" | 1/2" | 1-1/2" | D1125 STRAINER | 3-1/2" | COUNTER TOP | NOTE 1 | NOTE 4 |
| Р-3НС | KITCHEN SINK | 5 3/8" DEEP DOUBLE BOWL 4 HOLE | DAYTON | GE23322 | STAINLESS STEEL | PEERLESS P115LF | 6" HIGH ARC W/ SIDE SPRAY | ADA SINGLE LEVER | 8" | 1/2" | 1/2" | 1-1/2" | LKAD35 STRAINER | 3-1/2" | COUNTER TOP | NOTE 1 | NOTE 4, ADA HEIGHT |
| P-4 | TUB/SHOWER | 60"x32" GELCOAT TUB/SHOWER | BATHCRAFT | 7504 | GELCOAT | DELTA MONITOR 13 | T13420 1.5 GPM MAX | SINGLE LEVER | - | 1/2" | 1/2" | 2" | BRASS W/ SS COVER | 2" | FLOOR | W/ MIXING VALVE | NOTE 4 |
| P-4HC | TUB/SHOWER | 60"x32" GELCOAT TUB/SHOWER | AQUATIC BATH | 2603SMTE | GELCOAT | DELTA MONITOR 13 | T13420 1.5 GPM MAX | ADA SINGLE LEVER | - | 1/2" | 1/2" | 2" | BRASS W/ SS COVER | 2" | FLOOR | , | NOTES 3, 4, PROVIDE W/ REMOVABLE SEAT |

NOTES:

- 1. COPPER STUBOUT TO CHROME PLATED QUARTER TURN BRASS BALL STOP WITH TEFLON OR CERAMIC SEATS. RISER MAY BE COPPER OR BRAIDED STAINLESS STEEL.
- 2. FLUSH HANDLE TO BE ON WIDE SIDE OF STALL IN ADA AREAS. IN DWELLING UNITS, FLUSH HANDLE TO BE ON LAVATORY SIDE. CLOSED FRONT SEAT, MANSFIELD SB200 FOR DWELLING UNITS, OPEN FRONT SEAT FOR ADA UNITS.
- 3. ALL ADA TUBS AND SHOWERS MUST HAVE THE CONTROL OFFSET TOWARDS THE FRONT OF THE TUB/SHOWER, SEE ARCH, PLANS FOR GRAB BARS AND CLEAR SPACE.
- 4. CATALOG NUMBERS AND MFG'S ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MFG'S FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE.

| | | | | | WAT | ER HE | ATER | SCHE | DULE | | | | | | | |
|------|----------------|-----------------|--------|-----------|----------------|--------|----------|--------|---------------------------|-------------|------|-------|--------|------|----------------------|-------|
| TAC | MANILIEACTURER | MODEL NO | CTVI E | STORAGE | RECOVERY (GPH) | ENERGY | EHEL | ELF | ECTRICAL | GAS | | CONNE | CTIONS | I | DRAIN | NOTEC |
| TAG | MANUFACTURER | MODEL NO. | STYLE | (GALLONS) | @ 90°F RISE | FACTOR | FUEL | VOLT/Ø | ELEMENTS | INPUT (MBH) | FLUE | CW | HW | SIZE | TYPE | NOTES |
| WH-1 | AMERICAN | AE103-50H-045DV | TALL | 50 | 21 | 0.95 | ELECTRIC | 240/1 | (2) 4.5 KW INTERLOCKED | - | - | 3/4" | 3/4" | 1" | 1/16" PLASTIC PAN | 1, 2 |
| WH-2 | AMERICAN | E6N-40LB | LOWBOY | 38 | 21 | 0.92 | ELECTRIC | 240/1 | (2) 4.5 KW INTERLOCKED | - | - | 3/4" | 3/4" | 1" | 1/16" PLASTIC PAN | 1, 2 |

NOTES:

- 1. CATALOG NUMBERS AND MFG'S ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MFG'S FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE.
- 2. PROVIDE AMTROL MODEL ST-5 THERM-X-TROL EXPANSION TANK.

| | | PLU | MBING AC | CESSORI | ES SCHED | ULE | | |
|-------|------------------------|------------------------------------|--------------|-------------|----------------------------------|--------------------|----------------------|---|
| TAG | FIXTURE | ТҮРЕ | MANUFACTURER | MODEL NO. | MATERIAL | INLET SIZE/TYPE | MOUNTING | REMARKS |
| C-G | GRADE CLEAN-OUT | ADJUSTABLE PVC BODY AND PLUG | ZURN | CO-2410 | PVC BODY AND TOP | MATCH LINE SIZE | GRADE | NOTE 5 |
| C-W | WALL CLEAN-OUT | PVC BODY AND PLUG | ZURN | CO-2411 | PVC BODY, SS COVER (CO-2530) | MATCH LINE SIZE | WALL | NOTE 5 |
| FD | FLOOR DRAIN | ADJ. CAST IRON, MEMBRANE CLAMP | ZURN | ZB415-B-TSP | CAST IRON BODY, BRONZE TOP | MATCH LINE SIZE | FLOOR | TRAP SEAL DEVICE, NOTE 5 |
| IMB | ICE MAKER BOX | WITH HAMMER ARRESTER | WATER-TITE | W9700 HA | PLASTIC | 1/2" | WALL BOX | NOTES 1, 3, 5 |
| WF | WALL FAUCET | FREEZELESS BACKFLOW PREVENTER | WOODFORD | 27 | CAST BRASS | 3/4" CW | WALL | DRAINS WITH OR W HOSE, NOTES 1, 2, 5 |
| WMB | WASHING MACHINE BOX | WITH HAMMER ARRESTER | WATER-TITE | W2700 HA | PLASTIC | 1/2" | RECESSED WALL BOX | NOTES 1, 3, 5 |
| WMB-2 | WASHING MACHINE BOX | FIRE RATED WITH HAMMER ARRESTER | GUY GRAY | FR12SHA | FLAME RESISTANT PLASTIC RESIN | 1/2" | RECESSED WALL BOX | NOTES 1, 4, 5 |

NOTES:

- 1. WHERE THE LISTED MFG. OFFERS A MODEL WITH A PEX-a CONNECTION SPECIFIC TO THE PEX MFG. BEING INSTALLED, THAT MODEL MAY BE SUBSTITUTED
- 2. PROVIDE WITH INTEGRAL VACUUM BREAKER AND A LOOSE KEY HANDLE.
- 3. QUARTER TURN BRASS BALL STOP WITH TEFLON SEATS AND INTEGRAL HAMMER ARRESTER.
- 4. CHROME PLATED QUARTER TURN BALL STOP. WMB IS A WARNOCK HERSEY LISTED FIRESTOP DEVICE. IPS/PV 120-01, 1 & 2 HR RATED.
- 5. CATALOG NUMBERS AND MFG'S ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MFG'S FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE.

PLUMBING LEGEND

POTABLE COLD WATER PIPING ----- POTABLE UNDERSLAB WATER PIPE POTABLE (120°F) HOT WATER ---- VENT PIPING WASTE (SANITARY SEWER) **- - - - -** STORM PIPING UNDERSLAB FULL PORT SHUT-OFF VALVE SHUT-OFF BALL VALVE WATER HAMMER ARRESTOR PIPE UP PIPE DOWN

FLOOR DRAIN

GRADE OR FLOOR CLEANOUT HOSE BIBB OR WALL FAUCET

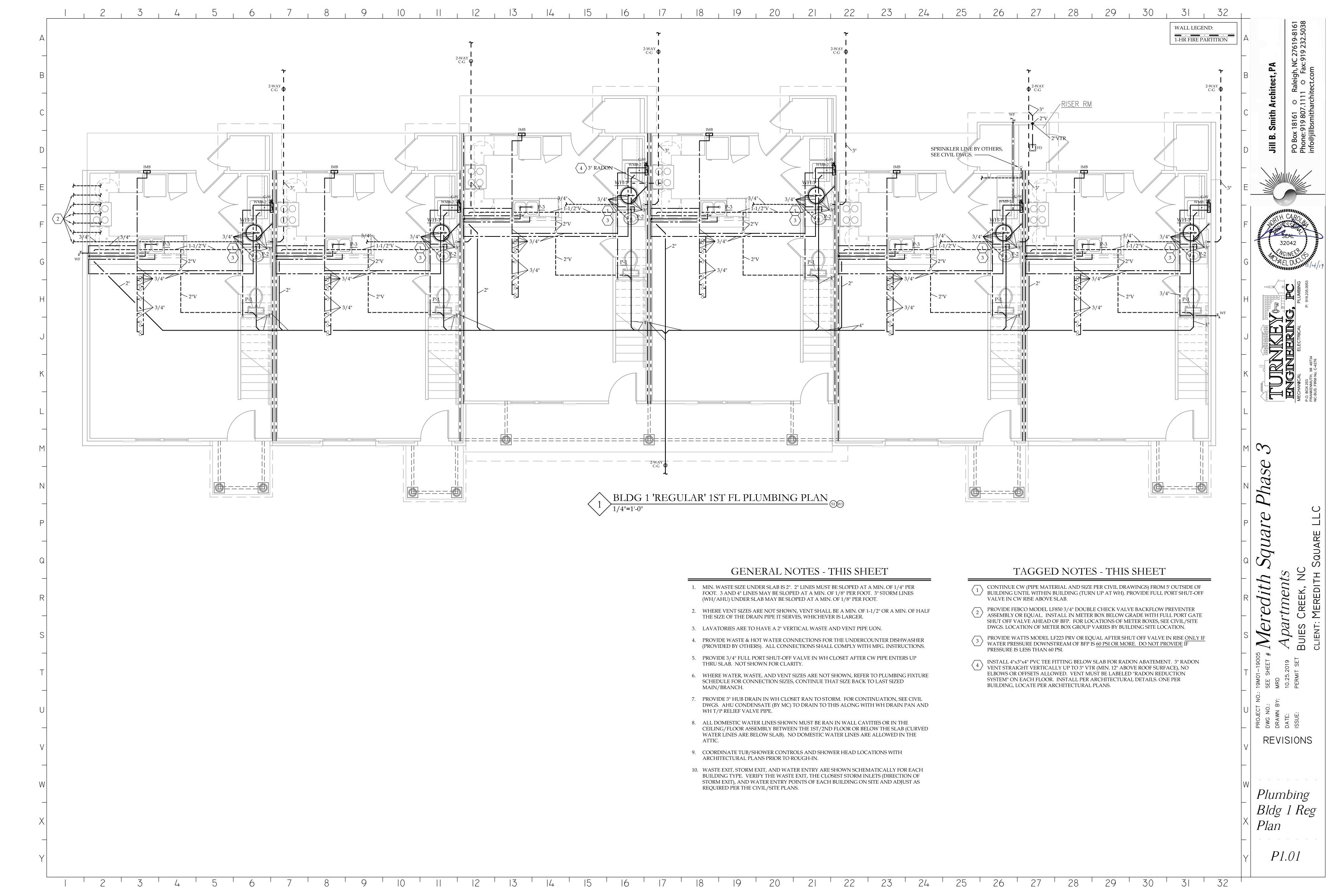
WALL CLEANOUT

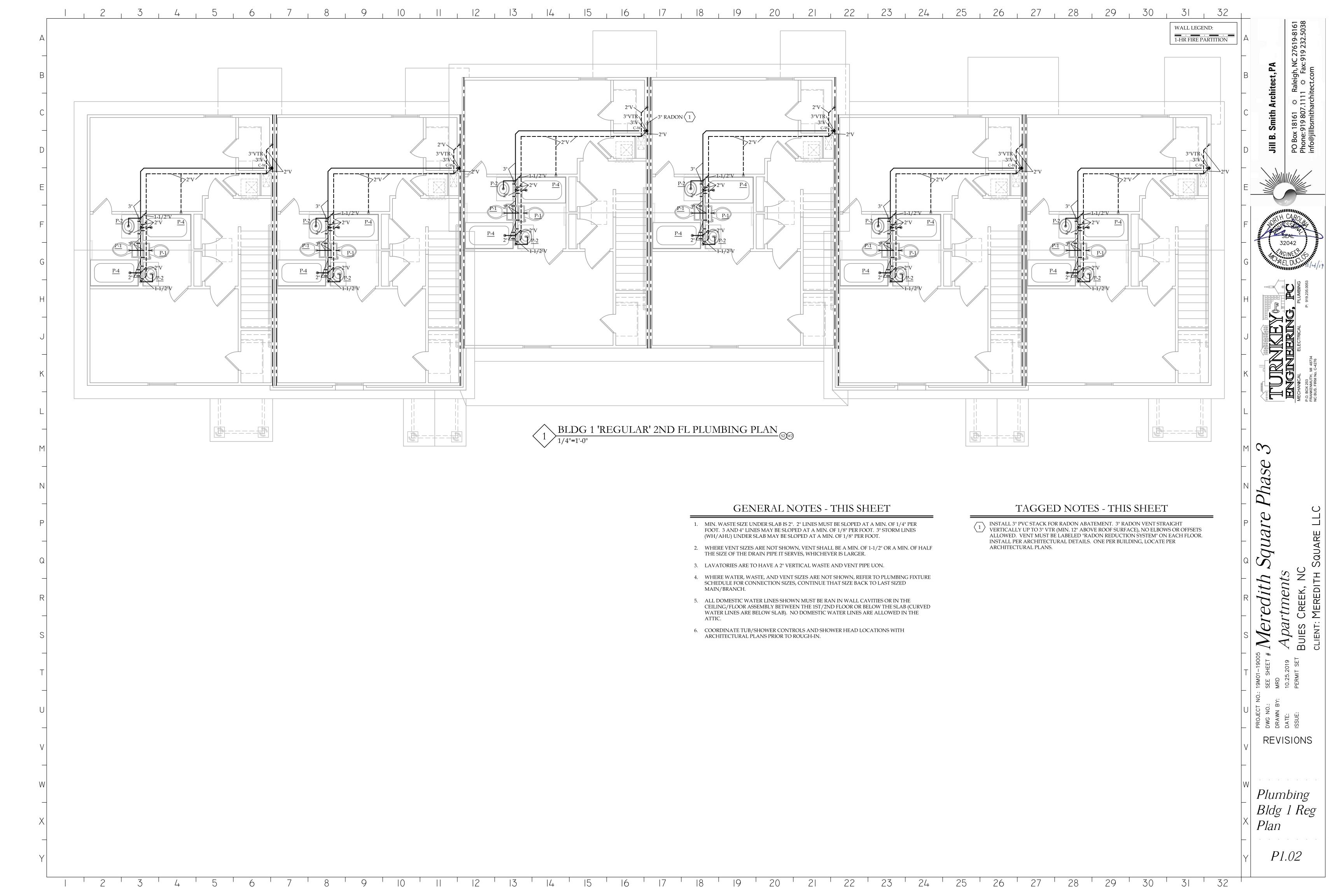
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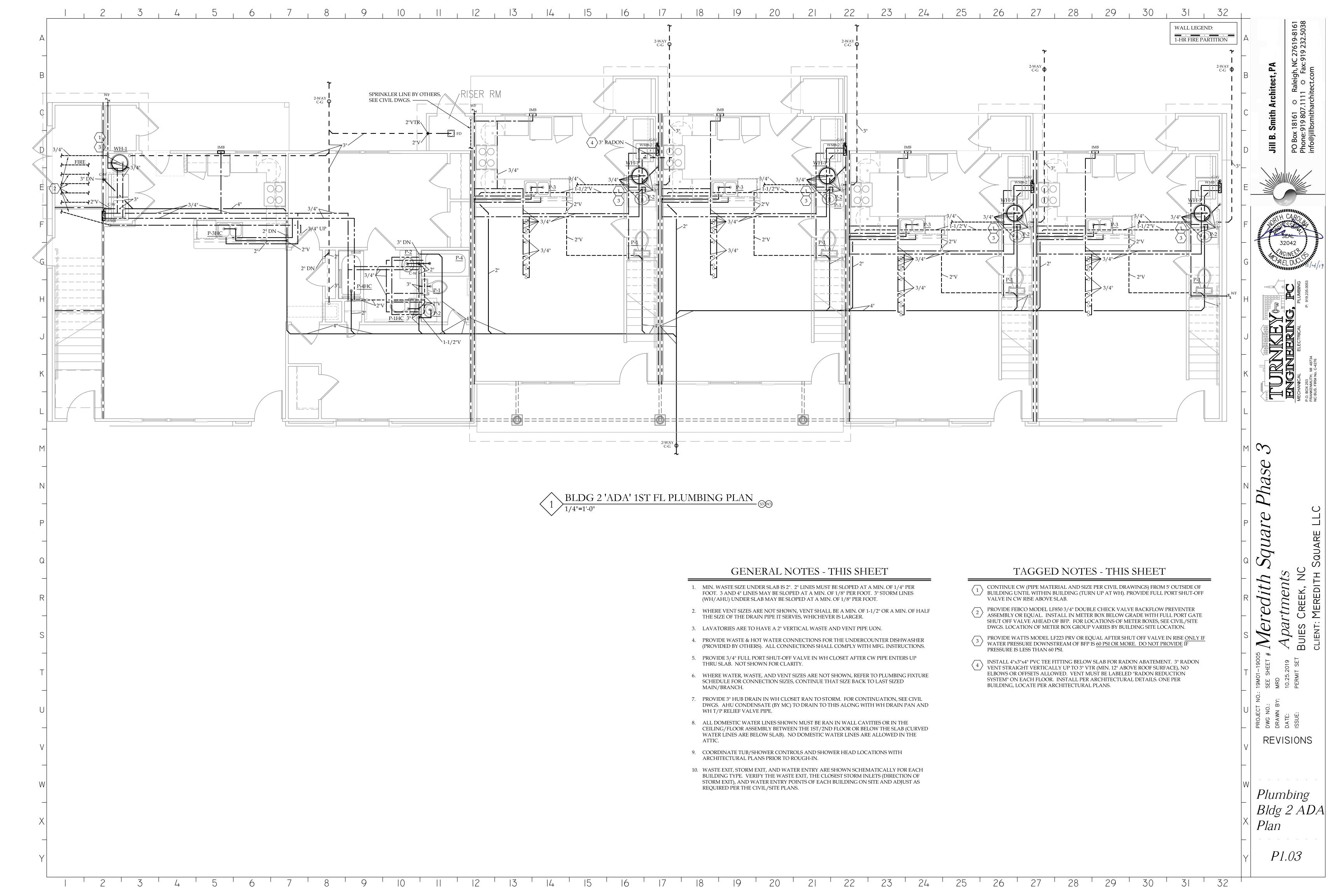
| AFF | ABOVE FINISHED FLOOR | MBH | 1,000 BTU/HR |
|------|--|-------|---------------------------------|
| AAV | AIR ADMITTANCE VALVE | MFG | MANUFACTURER |
| A | AMPS | MOCP | MAXIMUM OVERCURRENT PROTECTIO |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE | MC | MECHANICAL CONTRACTOR |
| ARI | AMERICAN REFRIGERATION INSTITUTE | MIN | MINIMUM |
| ASME | AMERICAN SOCIETY OF MECHANICAL ENGINEERS | MCA | MINIMUM CIRCUIT AMPACITY |
| ASSE | AMERICAN SOCIETY OF SANITARY ENGINEERING | NSF | NATIONAL SANITATION FOUNDATION |
| ASTM | AMERICAN SOCIETY FOR TESTING AND MATERIALS | PPM | PARTS PER MILLION |
| ADA | AMERICANS WITH DISABILITIES ACT | PH | PHASE |
| AHJ | AUTHORITY HAVING JURISDICTION | PC | PLUMBING CONTRACTOR |
| AUX | AUXILLARY | PSI | POUNDS PER SQUARE INCH |
| BFP | BACKFLOW PREVENTER | PRV | PRESSURE REDUCING VALVE |
| CLG | CEILING | REQ'D | REQUIRED |
| CO-F | CLEANOUT (FLOOR) | RPM | REVOLUTIONS PER MINUTE |
| CO-G | CLEANOUT (GRADE) | SS | SANITARY SEWER |
| CO-W | CLEANOUT (WALL) | STD | STANDARD |
| CW | COLD WATER (POTABLE) | SD | STORM DRAIN |
| CU | COPPER | TEL | TOTAL EQUIVALENT LENGTH |
| DN | DOWN | UV | ULTRA-VIOLET |
| EFF | EFFICIENCY | UL | UNDERWRITERS' LABORATORIES |
| EWC | ELECTRIC WATER COOLER | UON | UNLESS OTHERWISE NOTED |
| EC | ELECTRICAL CONTRACTOR | V | VENT |
| FD | FLOOR DRAIN | V | VOLTS (ELECTRICAL SYSTEMS ONLY) |
| FS | FLOOR SINK | VTR | VENT THROUGH ROOF |
| GC | GENERAL CONTRACTOR | WF | WALL FAUCET |
| GW | GREASE WASTE | W | WASTE |
| HP | HORSEPOWER | W | WATTS (ELECTRICAL SYSTEMS ONLY) |
| HB | HOSE BIBB | WC | WATER COLUMN |
| HW | HOT WATER (POTABLE) | WHA | WATER HAMMER ARRESTER |
| HD | HUB DRAIN | WH | WATER HEATER |
| IMB | ICE MAKER BOX | | |
| | | | |

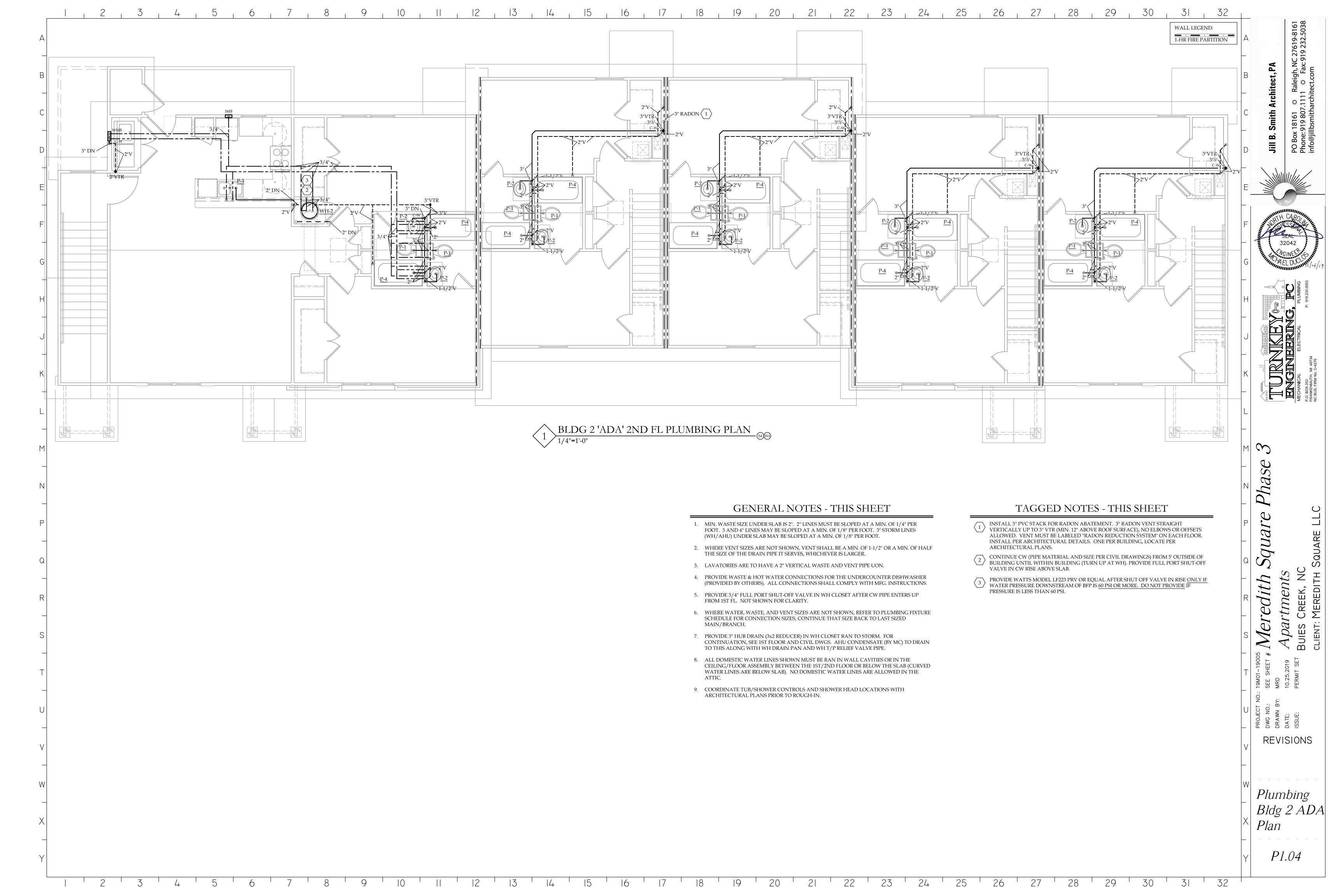
Schedules

REVISIONS

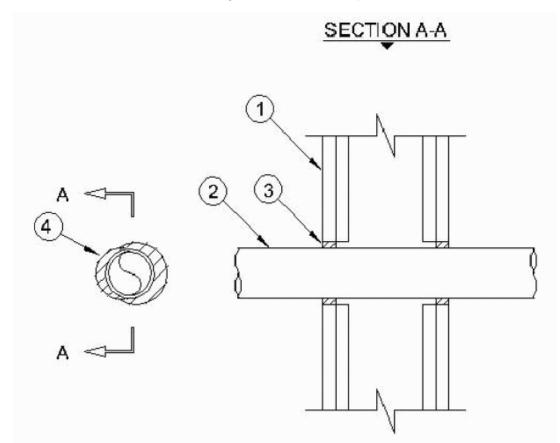








System No. W-L-2474
May 22, 2006
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/Sq Ft
L Rating at 400 F — 4 CFM/Sq Ft



1. Wall Assembly — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL fire Resistance Directory and shall include the construction features noted below:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and

Partition Design. Max diam of opening is 3 in. (76 mm). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrants — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and the periphery of the opening shall be min 0 in. (point contact) to a max 1/2 in. (13 mm). The following types and sizes of nonmetallic pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) cellular or solid core Schedule 40

(or heavier) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

C. Crosslinked Polyethylene (PEX) Tubing — Nom 2 in. (51 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems.

D. Rigid Nonmetallic Conduit (RNC)+ — Nom 2 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

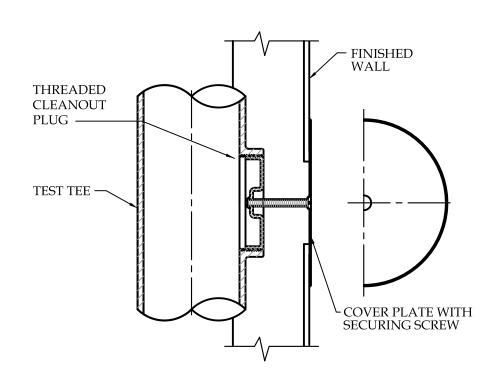
3. Fill, Void or Cavity Material* - Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall. At point contact location, a min 1/2 in. (13 mm) diam bead of fill material shall be applied to the wall/penetrant interface on both surfaces of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant

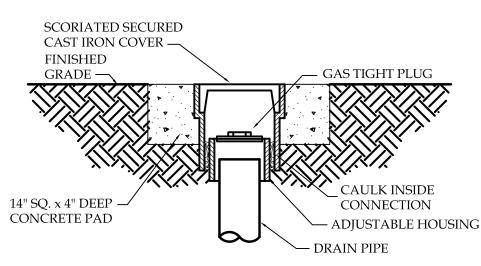
*Bearing the UL Classification Mark

+ Bearing the UL Listing Mark

1 UL PENETRATION DETAIL 1 N.T.S.

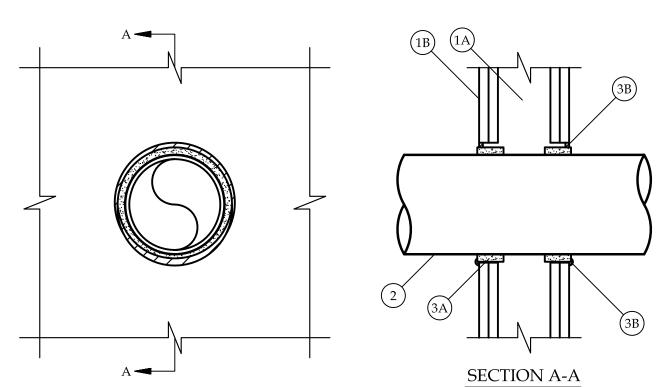






5 EXTERIOR GRADE CLEANOUT

System No. W-L-2406
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1/2 and 3/4 Hr (See Item 2)
L Rating At Ambient - 1.2 CFM/sq ft (See Item 3B)
L Rating At 400 F - Less Than 1 CFM/sq ft (See Item 3B)



| Nom Pipe Diam, in. (mm) | Wrap Strip | Wrap Strip Size, thick. X width, in. (mm) | Max Diam of Opening, in. (mm) | Annular Space, in. (mm) | | | |
|----------------------------|-------------------|--|----------------------------------|----------------------------|------------|--|--|
| | | width, itt. (iiiii) | Opermig, in: (min) | Min | Max | | |
| 1-1/2 (38) | CP 648S - 1.5" US | 3/16 x 1 (5 x 25) | 2-3/8 (60) | 3/16 (5) | 5/16 (8) | | |
| 2 (51) | CP 648S - 2" US | 3/16 x 1 (5 x 25) | 3 (76) | 3/16 (5) | 5/16 (8) | | |
| 3 (76) | CP 648S - 3" US | 3/16 x 1-3/4 (5 x 44) | 4 (102) | 3/16 (5) | 5/16 (8) | | |
| 4 (102) | CP 648S - 4" US | 3/8 x 1-3/4 (10 x 44) | 5-3/8 (137) | 3/8 (10) | 1/2 (13) | | |
| 6 (152) | CP 648S - 6" US | 1/2 x 1-3/4 (13 x 44) | 8 (203) | 9/16 (14) | 13/16 (21) | | |

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — One or two layers of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. See Table under Item 3B for max diam of opening.

2. Through-Penetrants — One nonmetallic pipe installed within the firestop system. See Table under Item 3B for annular space required in the firestop system. Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 6 in. (152 mm) diam (or smaller) SDR 13.5

CPVC pipe for use in closed (process or supply) piping system.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

The T Rating for 2 hr fire-rated walls is 0 hr. The T Rating for 1 hr fire-rated walls is 3/4 hr for nom 1-1/2, 2 and 3 in. (38, 51 and 76 mm) diam through penetrants. The T Rating for 1 hr fire-rated walls is 1/2 hr for nom 4 and 6 in. (102 and 152 mm) diam through penetrants.

3. Firestop System — The firestop system shall consist of the following:

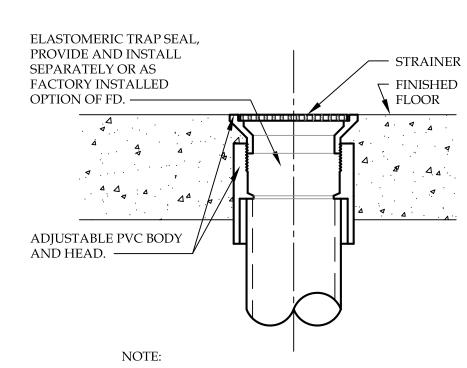
A. Fill, Void or Cavity Material* — Wrap Strip — See Table under Item 3B for min size of intumescent wrap strip. The wrap strip is continuously wrapped around the outer circumference of the pipe once and slid into the annular space such that approx 1/8 in. (3 mm) of the wrap strip protrudes from the wall surface. Wrap strip is held in place with integral fastening tape. Wrap strip installed on each

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648S - 1.5" US, CP 648S - 2" US, CP 648S - 3" US, CP 648S - 4" US and CP 648S - 6" US

B. Fill, Void or Cavity Material* — Caulk — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 2 hr fire-rated walls, 1/4 in. (6 mm) bead fill material also applied at wrap strip/gypsum wall interface. In 1 hr fire-rated walls, fill material is optional for nom 1-1/2, 2, 3 and 4 in. (38, 51, 76 and 102 mm) diam penetrants. In 2 hr fire-rated walls, fill material is optional for nom 1-1/2, 2 and 3 in. (38, 51 and 76 mm) diam penetrants. Fill material is required to be used to attain L Ratings.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant *Bearing the UL Classification Mark

UL PENETRATION DETAIL

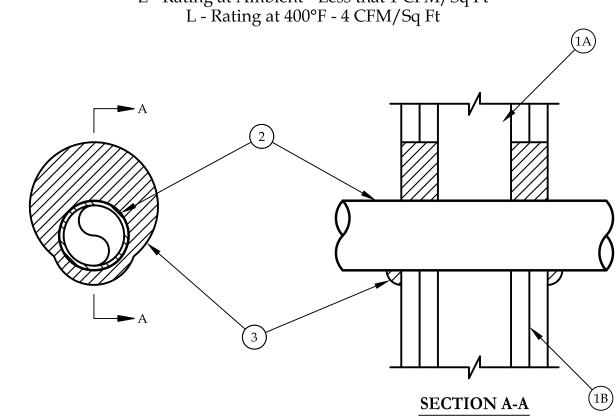


1. ALL FLOOR DRAINS TO BE PROVIDED WITH 4" DEEP TRAP SEALS.

2. ALL FLOOR DRAINS TO HAVE INTEGRAL MEMBRANE CLAMPS.



System No. W-L-2377
F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Ratings - 1 and 2 Hr (See Items 1 and 3)
L - Rating at Ambient - Less that 1 CFM/Sq Ft



1. Wall Assembly - The 1 and 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide by 1-3/8 in. deep channels spaced max 24 in OC.

B. Gypsum Board* - The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3 in.

The hourly F and T Rating of the firestop system is equal to the hourly fire rating of the wall

2. Through Penetrant - One nonmetallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min of 0 in. (point contact) to a max 1-1/4 in. Pipe to be rigidly supported on both sides of wall

assembly. The following types and sizes of nonmetallic pipes may be used:

A. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 2 in. diam (or smaller) FLOWGUARD
GOLD® SDR11 CPVC pipe for use in closed (process or supply) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe - Nom 2 in. diam (or smaller) BLAZEMASTER®
SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

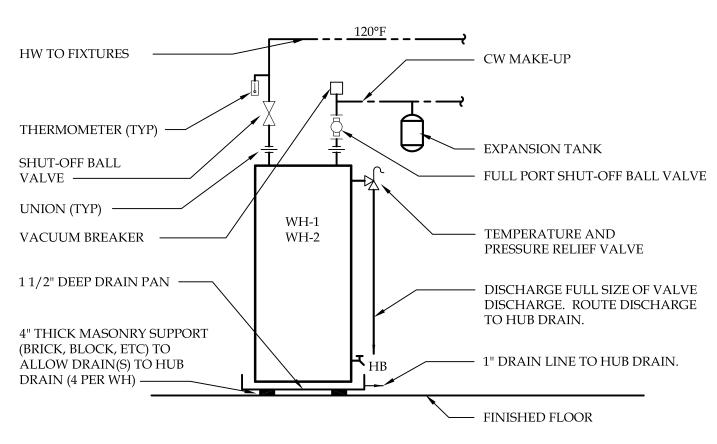
3. Fill, Void or Cavity Material* - Sealant - Min 5/8 in. and 1-1/4 in. thickness of fill material applied within annulus, flush with both surfaces of wall for 1 and 2 hr rated assemblies, respectively. At point contact location, a min 1/2 in. diam bead of fill material shall be applied to the wall/penetrant interface on both surfaces of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-ONE Sealant

*Bearing the UL Classification Mark

assembly in which it is installed.



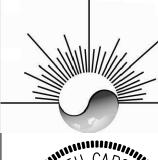


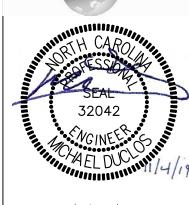
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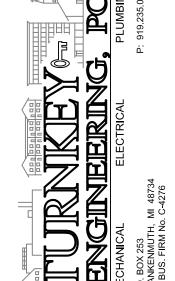
INSTALL WATER HEATER PER MANUFACTURER REQUIREMENTS.
 PROVIDE HEAT TRAP ON CW AND HW LINES PER ENERGY CODE.



PO Box 18161 ⇔ Raleigh Phone: 919 807.1111 ⇔ F







are Phase 3

Apartments
Buies Creek, NC

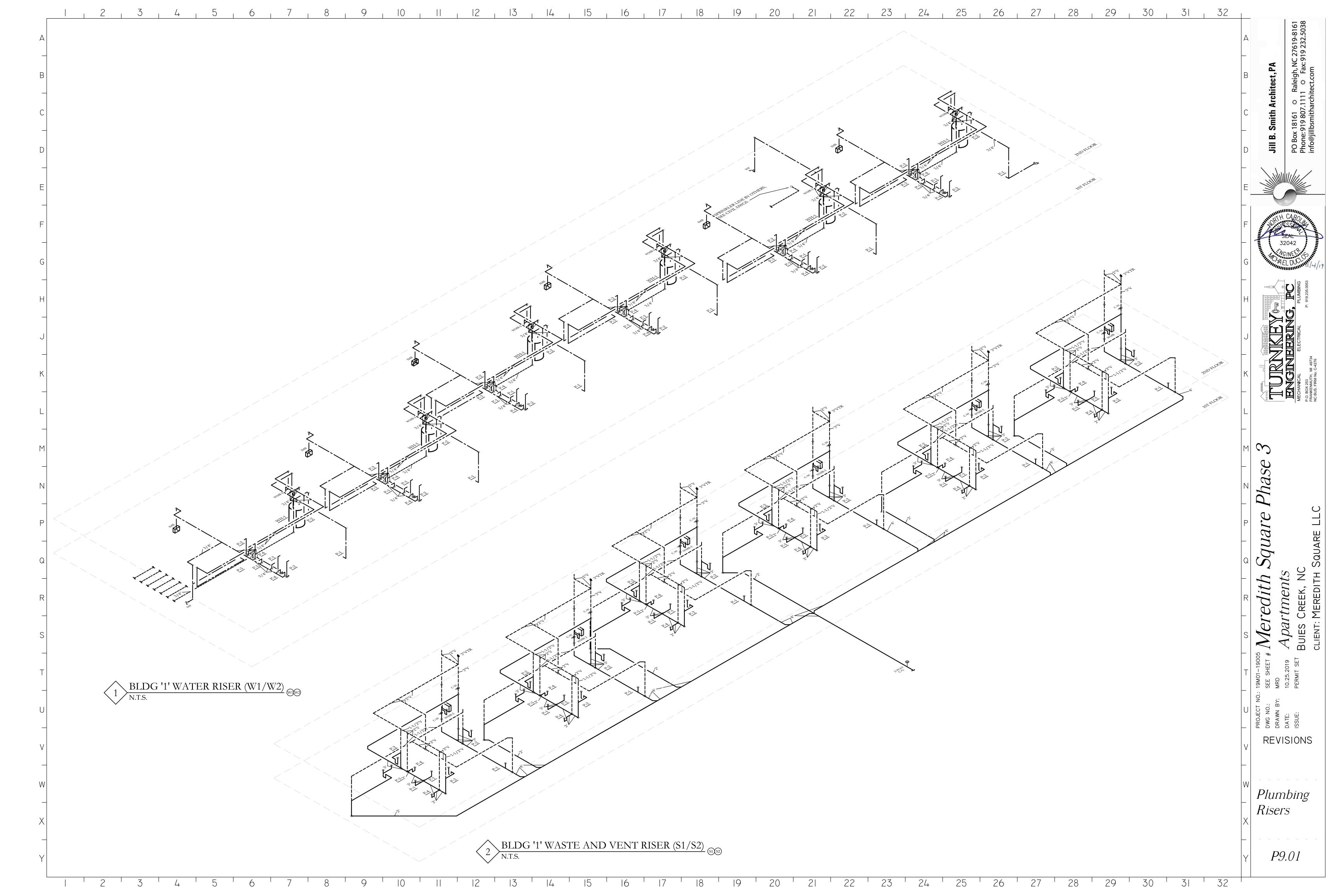
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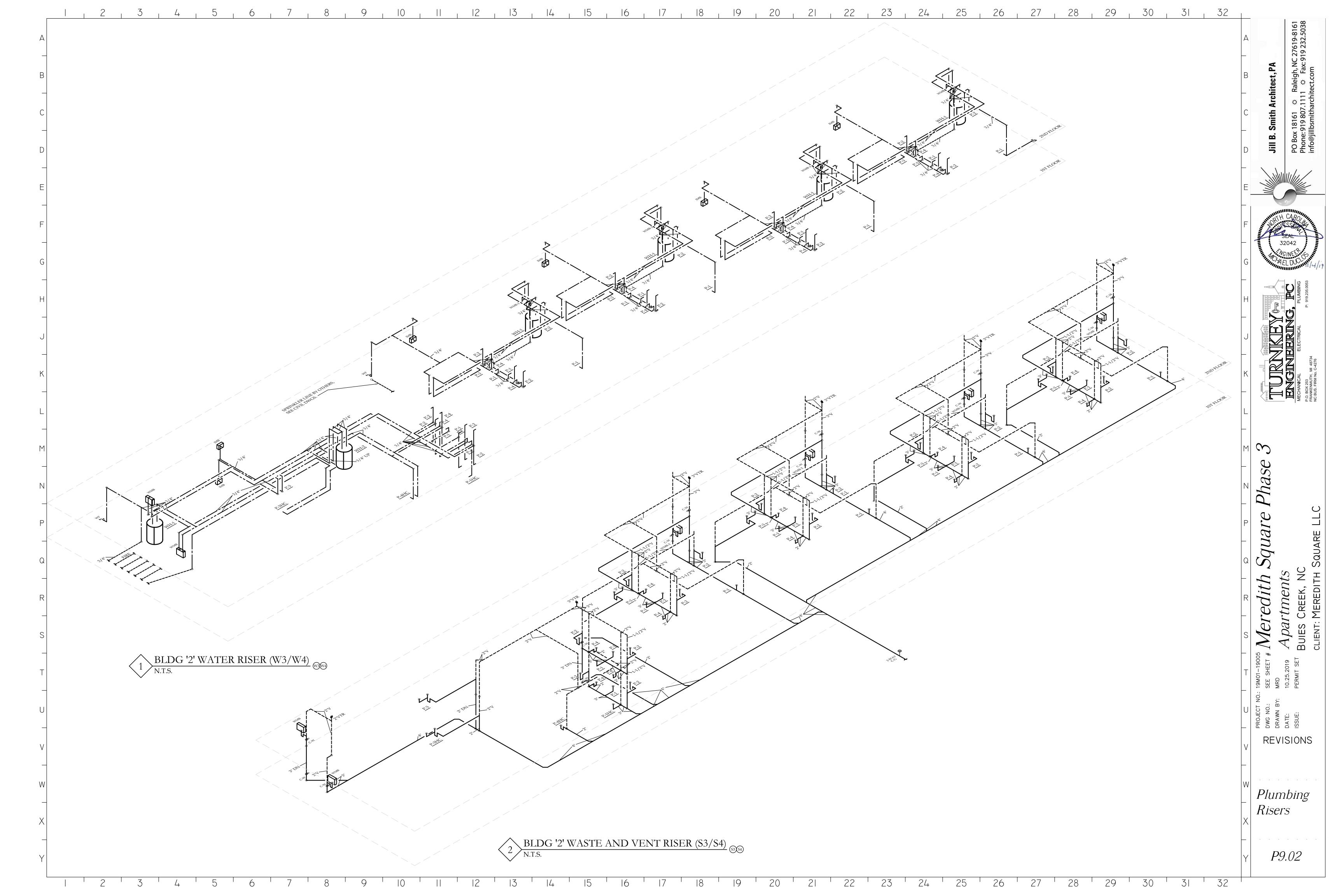
REVISIONS

Plumbing Details

P5.01

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30





- 1. THE MC SHALL FURNISH AND INSTALL ALL MATERIAL AND EOUIPMENT IN STRICT ACCORDANCE WITH APPLICABLE CODES AND STANDARDS, AND PER MFG DIRECTIONS. THE MC SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS, LICENSE(S), INSPECTIONS, APPROVALS, AND FEES.
- 2. THE MC SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES BEFORE INSTALLATION OF ANY MATERIALS OR EQUIPMENT. THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW GENERAL LOCATION AND ARRANGEMENT OF ALL MATERIALS, DUCTWORK, PIPING, AND EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION AND ALL OTHER WORK WILL PERMIT, EXACT ROUTING AND PLACEMENT MUST BE DETERMINED IN THE FIELD. VARIANCES BETWEEN THE REQUIREMENTS OF THESE DRAWINGS AND THE CONDITIONS OR DIMENSIONS IN THE FIELD SHALL BE REPORTED TO THE ENGINEER PRIOR TO ORDERING OR PERFORMANCE OF ANY WORK.
- 3. DO NOT SCALE DRAWINGS FOR MEASUREMENTS. ALL DUCT DIMENSIONS SHOWN ARE INTERIOR DUCT DIMENSIONS.
- 4. ALL PENETRATIONS THROUGH EXTERIOR WALLS & ROOF SHALL BE FLASHED & COUNTERFLASHED IN A WATERPROOF MANNER (COLOR TO MATCH EXTERIOR). INSTALL ESCUTCHEONS WHERE PIPING PENETRATES A WALL IN AN EXPOSED LOCATION.
- 5. WHERE FIRE DAMPERS ARE NOT REO'D, SEAL ALL PENETRATIONS OF RATED WALLS WITH SEALANT MATERIAL APPROVED BY LOCAL CODE.
- 6. ALL SUSPENDED MATERIALS AND EQUIPMENT SHALL BE INDIVIDUALLY SUPPORTED FROM THE BUILDING STRUCTURE. DO NOT SUSPEND ITEMS FROM THE CEILING OR ITS SUPPORT SYSTEM.
- 7. INSTALL ALL CONTROL DEVICES, INCLUDING THERMOSTATS AND SWITCHES, 5'-0" AFF TO TOP OF DEVICE UON, 4'-0" AFF TO TOP OF DEVICE IN ADA UNITS. PROVIDE THE REQ'D DEVICE(S) FOR ALL SYSTEMS WHETHER LOCATED ON THE PLANS OR NOT.
- 8. PROVIDE MFG RECOMMENDED CLEARANCES AROUND MECHANICAL UNITS FOR MAINTENANCE AND FILTER REMOVAL
- 9. ALL PIPING AND DUCTWORK LOCATIONS SHALL BE COORDINATED W/ WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS, TO AVOID INTERFERENCE. WHERE POSSIBLE, DUCTWORK AND PIPING SHALL BE INSTALLED AS TIGHT AND AS HIGH AS POSSIBLE TO THE BUILDING ELEMENTS (ROOF, WALLS, FLOORS, STRUCTURE, ETC.) TO PROVIDE THE MOST SPACE AND CLEARANCE. ADDITIONAL FITTING AND/OR OFFSETS NEEDED TO COMPLY SHALL BE PROVIDED.
- 10. ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED. WITHIN CONDITIONED SPACE MIN. R-VALUE = 4. IN AN UNCONDITIONED SPACE, BUT WITHIN THE BUILDING THERMAL ENVELOPE, MIN. R-VALUE = 5. OUTDOORS, OR WITHIN THE BUILDING BUT OUTSIDE OF THE THERMAL ENVELOPE (THIS INCLUDES UNCONDITIONED ATTICS), MIN. R-VALUE = 8. CONCEALED SHEET METAL SHALL BE EXTERNALLY INSULATED WITH MINERAL FIBERBOARD OR BLANKET WITH A FOIL-SCRIM KRAFT JACKET HAVING A MAX. THICKNESS OF 2". CONSTRUCT ALL JOINTS, SEAMS, AND CONNECTIONS FOR METAL DUCTWORK IN ACCORDANCE WITH THE LATEST EDITION OF "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", BY SMACNA. SEALING METHODS INCLUDE MASTICS, OR MASTICS EMBEDDED WITH FABRIC TAPES, TAPES ALONE ARE NOT ALLOWED. ALL MASTICS SHALL BE LISTED AND LABELED WITH UL 181A FOR METAL DUCTWORK AND UL 181B FOR FLEXIBLE DUCTS AND CONNECTORS. FLEX BRANCHES MUST BE SEALED AND MECHANICALLY FASTENED AT THE TAKEOFF. ALL INSULATION, COVERINGS, LININGS, OR ADHESIVES USED SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 USING PROCEDURES OF ASTM E 2231. ANY AND ALL INSULATION AND SEALING PROCEDURES THAT ARE NECESSARY TO COMPLY WITH ANY ENERGY STAR REQUIREMENTS SHALL SUPERSEDE THIS PARAGRAPH EXCEPT FOR ANY PERTAINING TO ASTM TESTING OR UL LISTINGS.
- 11. MC SHALL BALANCE SYSTEMS TO AIR QUANTITIES INDICATED ON PLANS AND PROVIDE OWNER'S REPRESENTATIVE WITH COMPLETE BALANCE REPORT. MC SHALL HAVE ALL SYSTEMS OPERATING PRIOR TO BALANCING (ALL UNITS OPERATING, CONTROLS, ALL DUCTWORK COMPLETE, FILTERS, ETC.). (4) ADDITIONAL COPIES OF SAID REPORT SHALL BE PROVIDED. (1) TO GC, (1) TO MC, (1) TO ARCHITECT, AND (1) TO ENGINEER. PROVIDE NEW AIR FILTERS FOR EACH UNIT PRIOR TO BALANCE.
- 12. ALL SYSTEMS (RTU'S, AH'S, EF'S, ETC.), OUTSIDE AIR CONNECTIONS, AND AIR DEVICES SHALL BE BALANCED TO DESIGN CFM VALUES UON. TOLERANCES FROM DESIGN CFM VALUES SHALL BE PER EITHER AABC OR NEBB STANDARDS, WHICHEVER ASSOCIATION THE TB CONTRACTOR IS USING. BALANCING STANDARD MUST BE APPROVED BY THE USGBC OR ACCEPTED BY SMACNA'S HVAC SYSTEMS - TESTING, ADJUSTING AND BALANCING MANUAL.
- 13. AS REQUIRED BY LOCAL CODES, AND WHERE SHOWN ON PLANS, MC SHALL PROVIDE UL LISTED FIRE DAMPERS FOR DUCTWORK AND/OR RADIATION DAMPERS FOR AIR DEVICES WHERE REQ'D FOR FIRE PROTECTION REQUIREMENTS OF THE HVAC SYSTEM & THE UL WALL OR CEILING ASSEMBLY. ACCESS PANELS SHALL BE PROVIDED IN THE DUCTWORK FOR ALL FIRE DAMPERS AND DUCT MOUNTED EQUIPMENT. LOCATE PANELS AS CLOSE TO DEVICE AS
- 14. PROVIDE MIN. 1 YEAR WARRANTY ON INSTALLATION AND MATERIALS, IN ADDITION TO SPECIFIED MFG. STD. WARRANTY ON ALL EQUIPMENT
- 15. ALL INTAKE OPENINGS SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ALL EXHAUST AND PLUMBING VENT LOCATIONS.
- 16. CONDENSATE DRAIN PIPING AND FITTINGS SHALL BE SCH 40 PVC. DRAINS FROM MECHANICAL EQUIPMENT SHALL BE TRAPPED. MAINTAIN A MIN. 1% SLOPE. IF ROUTED IN UNCONDITIONED AREAS OR ROOMS WITH THE ONLY EXIT TO THE OUTDOORS, OR OUTSIDE OF THE BUILDING INSULATED ENVELOPE (IE UNCONDITIONED, VENTILATED ATTIC), ALL PIPING MUST BE INSULATED WITH A MIN. OF R-6.5 IN ACCORDANCE WITH ASTM C177 (INSULATION THICKNESS TO ACHIEVE R-6.5 WILL VARY BY MFG.). INSULATION SHALL BE OF THE CLOSED CELL TYPE WITH A FLAME DENSITY RATING NOT EXCEEDING 25 AND A SMOKE DENSITY RATING NOT EXCEEDING 50. INSULATION SHALL NOT CONTRIBUTE SIGNIFICANTLY TO FIRE. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS.
- 17. ALL MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", BY SMACNA. INDIVIDUAL SUPPLY, RETURN, TRANSFER, AND COMMON AREA EXHAUST RUNOUTS MAY BE INSULATED FLEX DUCT CONFORMING TO THE REQUIREMENTS OF UL 181 FOR CLASS 1 INSULATED FLEX AIR DUCTS AND NFPA 90A AND 90B. ALL SUPPLY DUCTWORK SHALL BE RATED FOR 1" WC POSITIVE STATIC PRESSURE AND ALL RETURN AND EXHAUST DUCTWORK SHALL BE RATED FOR 0.5" WC NEGATIVE STATIC PRESSURE. COMPOSITION SHALL BE SPIRAL WOUND, CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER, COVERED WITH INSULATION WITH VAPOR BARRIER. FLEX DUCT INSULATION R-VALUES PER GENERAL NOTES.
- 18. THE MC SHALL PROVIDE LOW VOLTAGE CONTROL LINES TO ALL MECHANICAL EQUIPMENT. COORDINATE ROUTING AND INSTALLATION WITH THE GC. EC TO PROVIDE ALL HIGH VOLTAGE ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO ALL MECHANICAL EQUIPMENT. ALL FINAL ELECTRICAL CONNECTIONS ARE BY EC.
- 19. OUTSIDE AIR DUCTWORK SHALL BE INSULATED WITH A MIN. R-VALUE = 8. WHEN USING RIGID DUCT, INSULATION SHALL BE EXTERNAL WRAP OF AT LEAST 1
- 20. REFRIGERANT PIPING, NOT SHOWN ON PLANS, SHALL BE SIZED & INSTALLED IN ACCORDANCE WITH THE MFG. RECOMMENDATIONS, INSTALLATION INSTRUCTIONS AND LOCAL CODES. COORDINATE ROUTING AND INSTALLATION WITH THE GC. OIL TRAPS MUST BE INSTALLED AT MINIMUM DISTANCES INDICATED BY THE MFG. ALL SUCTION LINE PIPING MUST BE INSULATED WITH A MIN. THICKNESS OF 1-1/2" AND THE INSULATION SHALL HAVE A CONDUCTIVITY (k) RATING NOT EXCEEDING 0.27 BTU/((IN/HR)*FT2*°F). LIQUID LINE PIPING, WHEN RAN IN UNCONDITIONED ATTICS, SHALL ALSO BE INSULATED TO THE SPECIFICATIONS IN THIS NOTE. INSULATION SHALL BE OF THE CLOSED CELL TYPE WITH A FLAME DENSITY RATING NOT EXCEEDING 25 AND A SMOKE DENSITY RATING NOT EXCEEDING 50. INSULATION SHALL NOT CONTRIBUTE SIGNIFICANTLY TO FIRE. INSULATION OUTDOORS SHALL BE PROVIDED WITH A UV RESISTANT PVC JACKET FOR SUN AND ANIMAL PROTECTION. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS UNLESS DOING SO WILL VOID A UL LISTED ASSEMBLY FOR FIRE RATED PENETRATIONS.
- 21. MC SHALL VERIFY LOCATION OF ALL PENETRATIONS FOR RELIEF AND OA HOODS, LOUVERS, AND ROOF AND WALL CAPS WITH ARCHITECT & OWNER PRIOR
- 22. PENETRATIONS OF RATED WALLS, PARTITIONS AND FLOORS OF NON-COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH NONCOMBUSTIBLE MATERIALS. PENETRATIONS OF NONRATED WALLS, PARTITIONS, AND FLOORS OF COMBUSTIBLE CONSTRUCTION SHALL BE FIRESTOPPED WITH MATERIALS EQUIVALENT TO TWO INCHES OF WOOD. FIRESTOPPING SHALL COMPLY WITH ASTM E-814.
- 23. ALL CUTTING AND PATCHING OF WALLS AND FLOORS FOR MECHANICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE MC. MC IS ALSO RESPONSIBLE FOR PAINTING ALL MECHANICAL EQUIPMENT WHEN SHOWN ON PLANS, WHEN NECESSARY, OR WHEN REQUESTED BY THE ARCHITECT OR OWNER PRIOR TO INITIAL START OF WORK. CONFIRM PAINT COLORS WITH ARCHITECT AND OWNER PRIOR TO PURCHASE. MC SHALL BE RESPONSIBLE FOR CLEANLINESS OF
- 24. ALL MECHANICAL EQUIPMENT SHALL BE LISTED AND LABELED BY UL OR AN EQUIVALENT TESTING AGENCY ACCEPTABLE TO LOCAL CODES AND AHJ.
- 25. MC SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND A WRITTEN CONTROL SEQUENCE NARRATIVE ON EACH SYSTEM TO THE OWNER WITH COPIES TO THE ENGINEER PRIOR TO CONTRACTOR'S SUBMISSION OF APPENDIX 5 TO THE AHJ.
- 26. A COMPLETE SYSTEM OF SEISMIC RESTRAINTS SHALL BE DESIGNED BY MASON INDUSTRIES & SEALED BY THEIR REGISTERED ENGINEER & INSTALLED BY THIS CONTRACTOR, IF REQ'D BY APPLICABLE CODES FOR THE LOCALE OF THIS PROJECT.

ABBREVIATIONS

| AFF | ABOVE FINISHED FLOOR | GC | GENERAL CONTRACTOR | RPM | REVOLUTIONS PER MINUTE |
|---------|----------------------------------|-------|--------------------------------|---------|----------------------------------|
| A | AMPS | HP | HORSEPOWER | SEER | SEASONAL ENERGY EFFICIENCY RATIO |
| ARI | AMERICAN REFRIGERATION INSTITUTE | MBH | 1,000 BTU/HR | SGL DEF | SINGLE DEFLECTION |
| AHJ | AUTHORITY HAVING JURISDICTION | MFG | MANUFACTURER | ST | SOUND TRAP |
| AUX | AUXILIARY | MOCP | MAXIMUM OVERCURRENT PROTECTION | STD | STANDARD |
| BDD | BACK DRAFT DAMPER | MC | MECHANICAL CONTRACTOR | SA | SUPPLY AIR |
| CO2 | CARBON DIOXIDE | MIN | MINIMUM | TB | TEST AND BALANCE CONTRACTOR |
| CLG | CEILING | MCA | MINIMUM CIRCUIT AMPACITY | TEL | TOTAL EQUIVALENT LENGTH |
| CFM | CUBIC FEET PER MINUTE | MD | MOTORIZED DAMPER | TRANS | TRANSFER |
| DBL DEF | DOUBLE DEFLECTION | OA | OUTSIDE AIR | TO | TRANSFER OPENING |
| EFF | EFFICIENCY | PC | PLUMBING CONTRACTOR | UL | UNDERWRITERS' LABORATORIES |
| EC | ELECTRICAL CONTRACTOR | PERF | PERFORATED | UON | UNLESS OTHERWISE NOTED |
| EER | ENERGY EFFICIENCY RATIO | PH | PHASE | V | VOLTS |
| ESP | EXTERNAL STATIC PRESSURE | RH | RELATIVE HUMIDITY | VD | MANUAL VOLUME DAMPER |
| FIX BLD | FIXED BLADE | REQ'D | REQUIRED | WC | WATER COLUMN |
| HZ | FREQUENCY | RET | RETURN | W | WATTS |
| | | | | | |

| | | | | | | | | SPLIT | SYSTI | EM HE | EAT PU | JMP U | NIT S | CHEI | DULE | | | | | | |
|-------------|---|------------------------|------------|------------------|---------------|-------------|------|-----------------------|-------|------------------------|-------------------|------------|-------------|-------------|------------------------|---------|----------------|-------------------|------------|-------------|----------|
| | AIR HANDLING UNIT DATA HEAT PUMP | | | | | | | | | | | | | | | | | | | | |
| | FAN DATA COOLING HEATING ELECTRICAL DATA GENERAL DATA ELECTRICAL DATA | | | | | | | | | | | | | | | | | | | | |
| UNIT TAG | AREA SERVED | MANUF. MODEL | FAN CFM | ESP (" OF WC) | MOTOR (HP) | OA (CFM) | | SENSIBLE NET (MBH) | | AUX. ELEC. (kW@240) | VOLTAGE (V/PH) | MCA (A) | MOCP (A) | UNIT TAG | MANUF. MODEL | TONNAGE | EFF. (SEER) | VOLTAGE (V/PH) | MCA (A) | MOCP (A) | NOTES |
| AHU-1 | TOWN HOMES | GOODMAN AVPTC33C14 | 750 | 0.60" | 1/2 | -0- | 23.4 | 18.6 | 14.4 | 5.0 | 240/1Ø | 29.9 | 30 | HP-1 | GOODMAN DSZC160241A | 2.0 | (15.0) | 240/1Ø | 15.8 | 25 | 1-9 |
| AHU-2 | FLAT UNITS | GOODMAN AWUF310516A | 750 | 0.50" | 1/2 | -0- | 22.8 | 18.2 | 13.0 | 5.0 | 240/1Ø | 29.9 | 30 | HP-2 | GOODMAN GSZ140241K | 2.0 | (14.5) | 240/1Ø | 14.6 | 25 | 1-4, 6-9 |

- 1. COOLING CAPACITIES ARE RATED IN ACCORDANCE WITH ARI STANDARD 210/240 AT 95°F AMBIENT OUTDOOR AIR TEMP., 80°F DRY BULB, 67°F WET BULB ENTERING AIR TEMP., AND AIR QUANTITY LISTED BY MFG. UNITS ABOVE 5 TONS SHALL BE TESTED IN ACCORDANCE WITH ARI STANDARD 340.
- REFRIGERANT PIPING TO BE SIZED PER INSTALLED T.E.L. LONG-LINE APPLICATION KIT TO BE PROVIDED WHENEVER MFG. STD. LENGTHS ARE EXCEEDED, INCLUDING LIQUID LINE SOLENOID VALVES, ACCUMULATOR, ETC. MAX T.E.L. IS PER MFG.
- 3. PROVIDE SINGLE POINT ELECTRICAL CONNECTION FOR AIR HANDLING UNIT.
- PROVIDE MFG'S 24 HR, 7 DAY PROGRAMMABLE 1 COOL/2 HEAT THERMOSTAT W/ MANUAL OVERRIDE FOR AHU-2'S. FOR AHU-1'S, PROVIDE HONEYWELL HZ432 TRUEZONE PANEL WITH FOCUS PRO (3 HEAT/2 COOL) PROGRAMMABLE THERMOSTATS FOR EACH ZONE.

- 5. TWO-STAGE COMPRESSOR, CONDENSER FAN, AND VARIABLE SPEED AIR HANDLER ARE REQUIRED TO
- 6. OUTDOOR SENSOR TO LOCK-OUT ELECTRIC HEAT WHEN TEMPERATURE IS 45°F OR HIGHER. PROVIDE UNIT WITH EMERGENCY HEAT OVERRIDE OPTION.
- 7. FREEZE PROTECTION, AND ANTI-SHORT CYCLE.
- 8. PROVIDE 2 SETS OF NEW FILTERS FOR EACH UNIT. PROVIDE ONE AT INSTALLATION, AND ONE AT TURNOVER TO OWNER.
- 9. CATALOG NUMBERS AND MFG.'S ARE TO INDICATE TYPE AND QUALITY OF UNIT DESIRED

| FANS SCHEDULE | | | | | | | | | | | | | |
|---------------|---------|-------------|-----|---------------|-----|--------------------------|-------------------------|-------------------------|--------|---------|-------|--|--|
| TAG | USE | AREA SERVED | CFM | ESP (" WC) | RPM | STYLE AND ARRANGEMENT | MOTOR HP AND VOLTAGE | MANUFACTURER & MODEL | DRIVE | CONTROL | NOTES | | |
| EF-1 | EXHAUST | BATHROOMS | 70 | 0.10" | MFG | CEILING FAN/LIGHT | 142 W - 1.2 A 120/1Ø | BROAN A70L | DIRECT | A | 1-6 | | |

| NOTES: | |
|--------|--|

1. BIRDSCREEN AT EXTERIOR PENETRATION.

ROOF/WALL. ROOF JACKS MAY BE BLACK.

4. INTEGRAL DISCONNECT SWITCH.

A. W/ ROOM LIGHTS.

CONTROL METHOD:

DISCHARGE OR PART OF EXTERIOR PENETRATION. 3. COLOR OF DISCHARGE DEVICE BY ARCHITECT, OR MATCH

2. BACKDRAFT DAMPER. MAY BE EITHER INTEGRAL AT FAN

WALL CAP 885BL PAINTED TO MATCH EXTERIOR. 6. PROVIDE AND INSTALL 13W CFL BULB.

5. PROVIDE FACTORY ROOF JACK DISCHARGE 636 OR

| | AIR DEVICE SCHEDULE | | | | | | | | | | |
|-----|---------------------|-----------|------------|-----------|----------|----------|--------|-------------------------|-------|--|--|
| TAG | FACE SIZE | NECK SIZE | FRAME TYPE | PATTERN | MATERIAL | USE | FINISH | MANUFACTURER & MODEL | NOTES | | |
| A | NECK + 2" | 12x6 | SURFACE | 2-WAY | STEEL | SUPPLY | STD. | HART & COOLEY 682M | 1, 2 | | |
| В | NECK + 2" | 12x4 | SURFACE | 2-WAY | STEEL | SUPPLY | STD. | HART & COOLEY 682M | 1, 2 | | |
| С | NECK + 2" | 8x4 | SURFACE | 2-WAY | STEEL | SUPPLY | STD. | HART & COOLEY 682M | 1, 2 | | |
| D | NECK + 2" | 20×24 | SURFACE | FIX. BLD. | STEEL | TRANSFER | STD. | HART & COOLEY 672 | | | |
| E | NECK + 2" | 14x8 | SURFACE | FIX. BLD. | STEEL | TRANSFER | STD. | HART & COOLEY 672 | | | |

NOTES:

- 1. WHERE SUPPLY DEVICES ARE INSTALLED IN A NON-PLENUM CEILING OR WALL, PROVIDE FACTORY INSTALLED INSULATION BACKING TO PREVENT CONDENSATION. ALTERNATIVELY, FIELD SUPPLY AND INSTALL.
- 2. SUPPLY DEVICES WITH SQUARE NECKS SHALL BE EQUIPPED WITH A SQUARE TO ROUND TRANSITION BOOT. ROUND SIZE PER PLAN CFM

| UNIT HEATER SCHEDULE | | | | | | | | | | |
|----------------------|-------------|---|-----|--------|----------------|---------|--|--|--|--|
| TAG | AREA SERVED | CD CAPACITY ELECTRICAL DATA MANUFACTURER (BTU/HR) WATTS VOLTAGE & MODEL NOTES | | | | | | | | |
| UH-1 | RISER ROOM | 1,706 | 500 | 120/1Ø | MARKEL RPH1-5A | 1, 2, 3 | | | | |

NOTES:

1. U.L. LISTED.

3. MOUNT A MIN. OF 12" AFF.

2. INTERNAL THERMOSTAT.

MECHANICAL LEGEND

RECTANGULAR DUCT (WIDTH BY DEPTH) RIGID ROUND METAL DUCT

ELBOW WITH TURNING VANES VOLUME DAMPER

FLEX ROUND DUCT

SUPPLY/RETURN/EXHAUST TAP WITH VOLUME DAMPER

SUPPLY/RETURN/EXHAUST TAP

SUPPLY DIFFUSER/GRILLE OR RISER RETURN REGISTER/GRILLE OR RISER EXHAUST REGISTER/GRILLE OR RISER

SUPPLY SIDEWALL DIFFUSER/GRILLE

TRANSFER REGISTER/GRILLE OR RISER

RETURN SIDEWALL DIFFUSER/GRILLE

TRANSFER SIDEWALL GRILLE

CEILING EXHAUST FAN

----- CONDENSATE DRAIN T-STAT

REMOTE DUCT MOUNTED TEMP SENSOR (HONEYWELL C7/35A1UUU)

1" DOOR UNDER CUT

ROUND OR RECTANGULAR VVT ZONE DAMPER, SIZE PER FLOOR PLAN. EQUAL TO HONEYWELL DM7600 SERIES (RD), D2 SERIES (RECT), BOTH WITH

XFMR, EC TO POWER. AIR DEVICE TAG ---- AIR DEVICE CFM

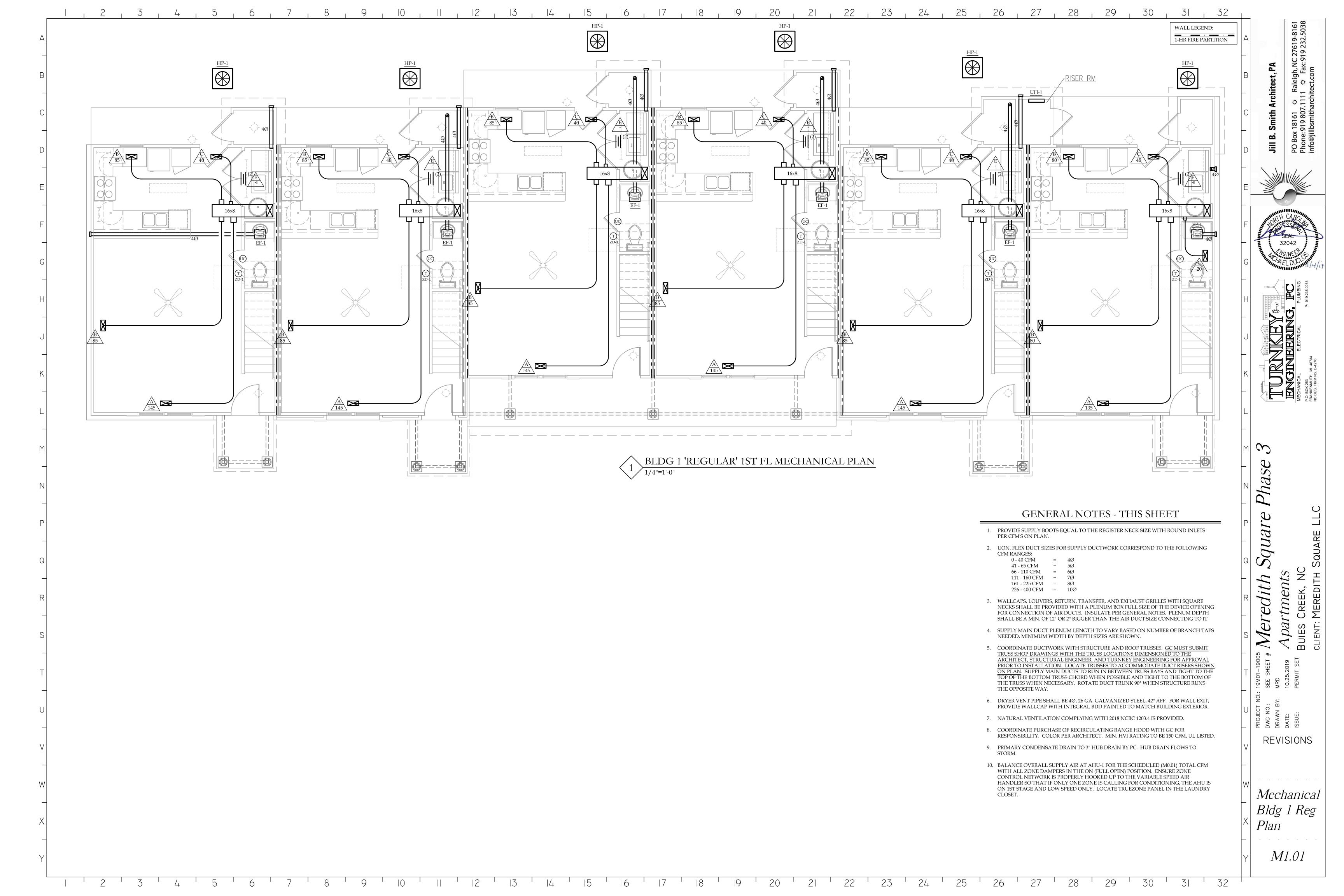
U.L. FIRE DAMPER W/ ACCESS DOOR

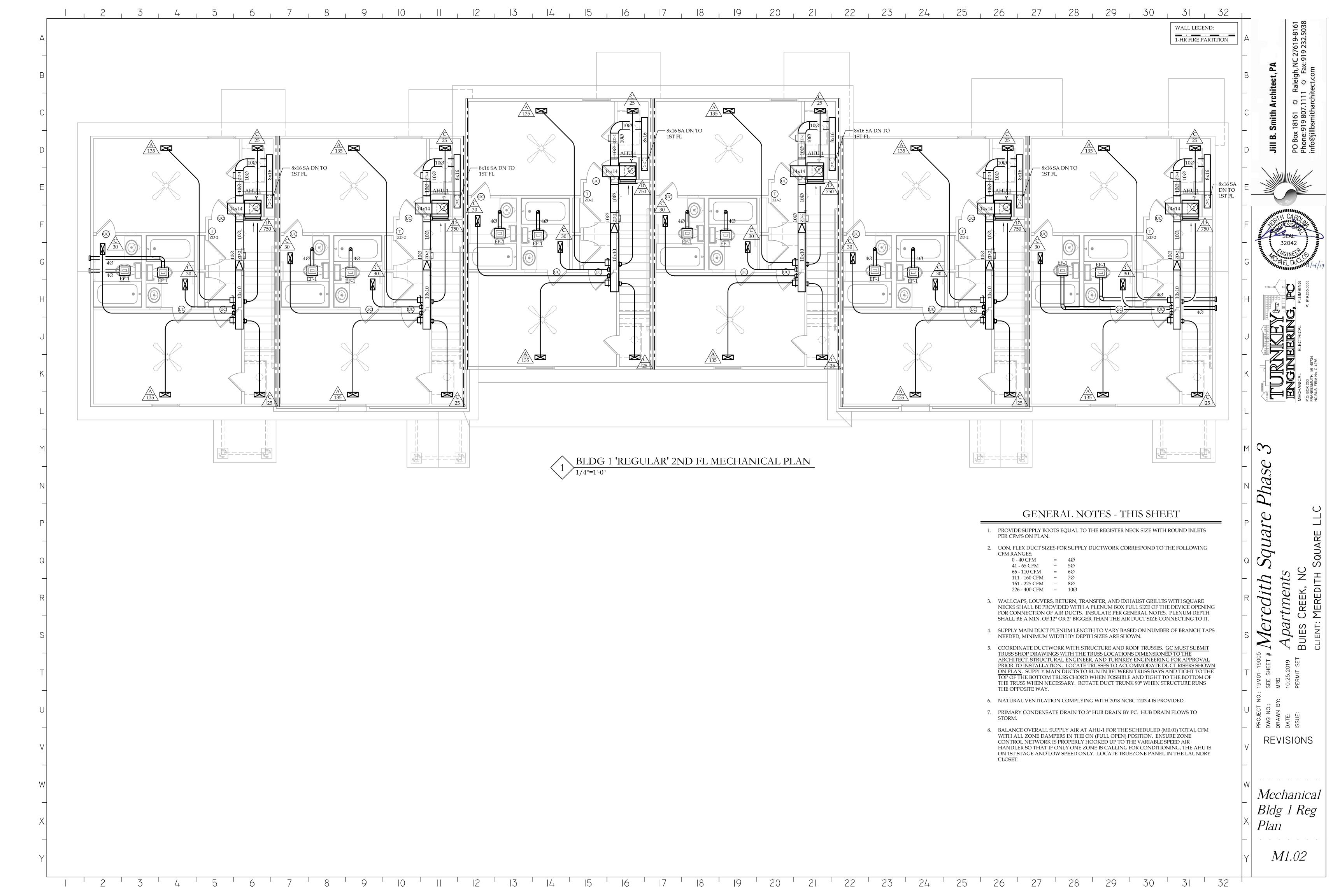
ML6161 ACTUATOR (24V). PROVIDE U.L. RADIATION DAMPER

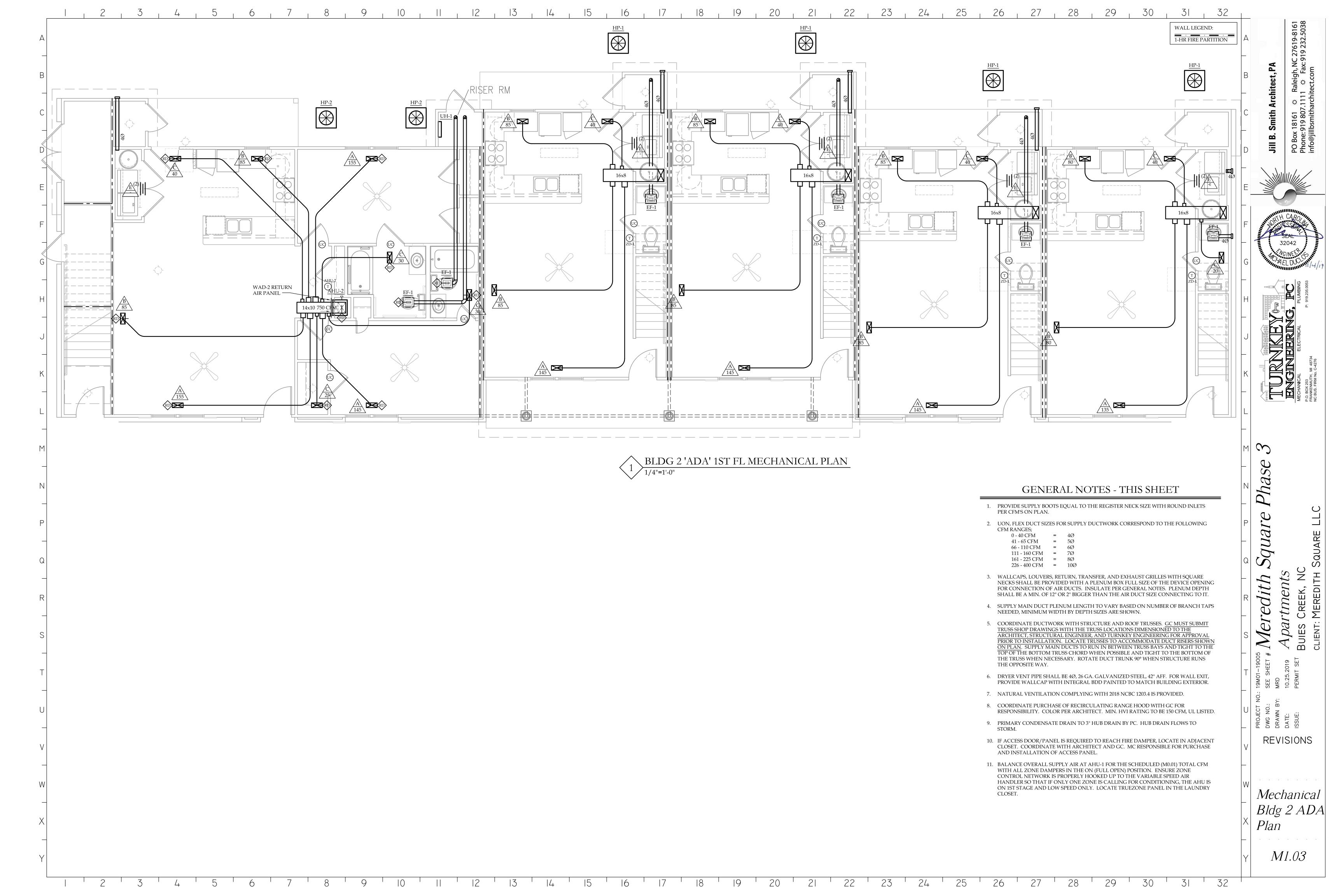
REVISIONS

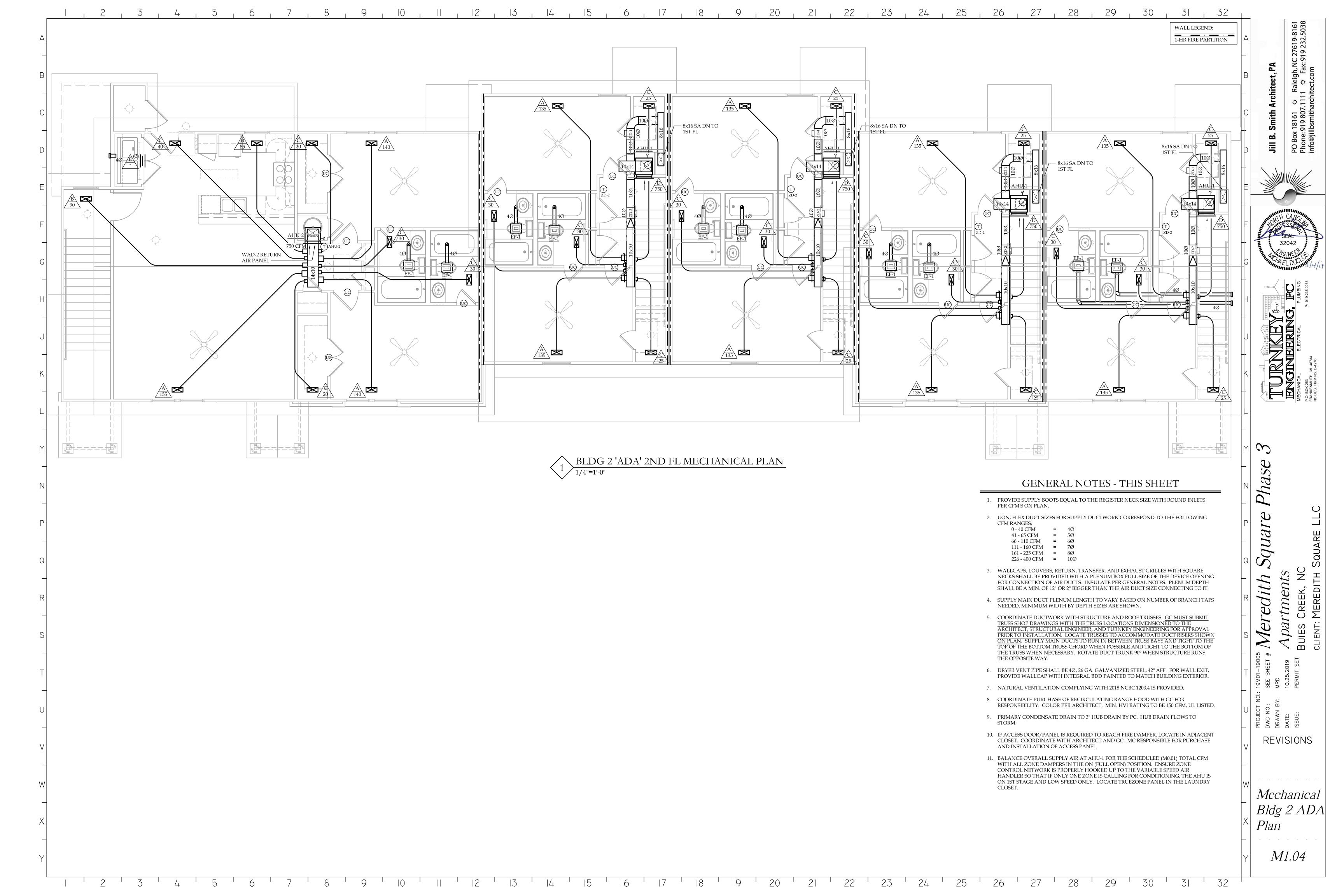
Mechanical Schedules

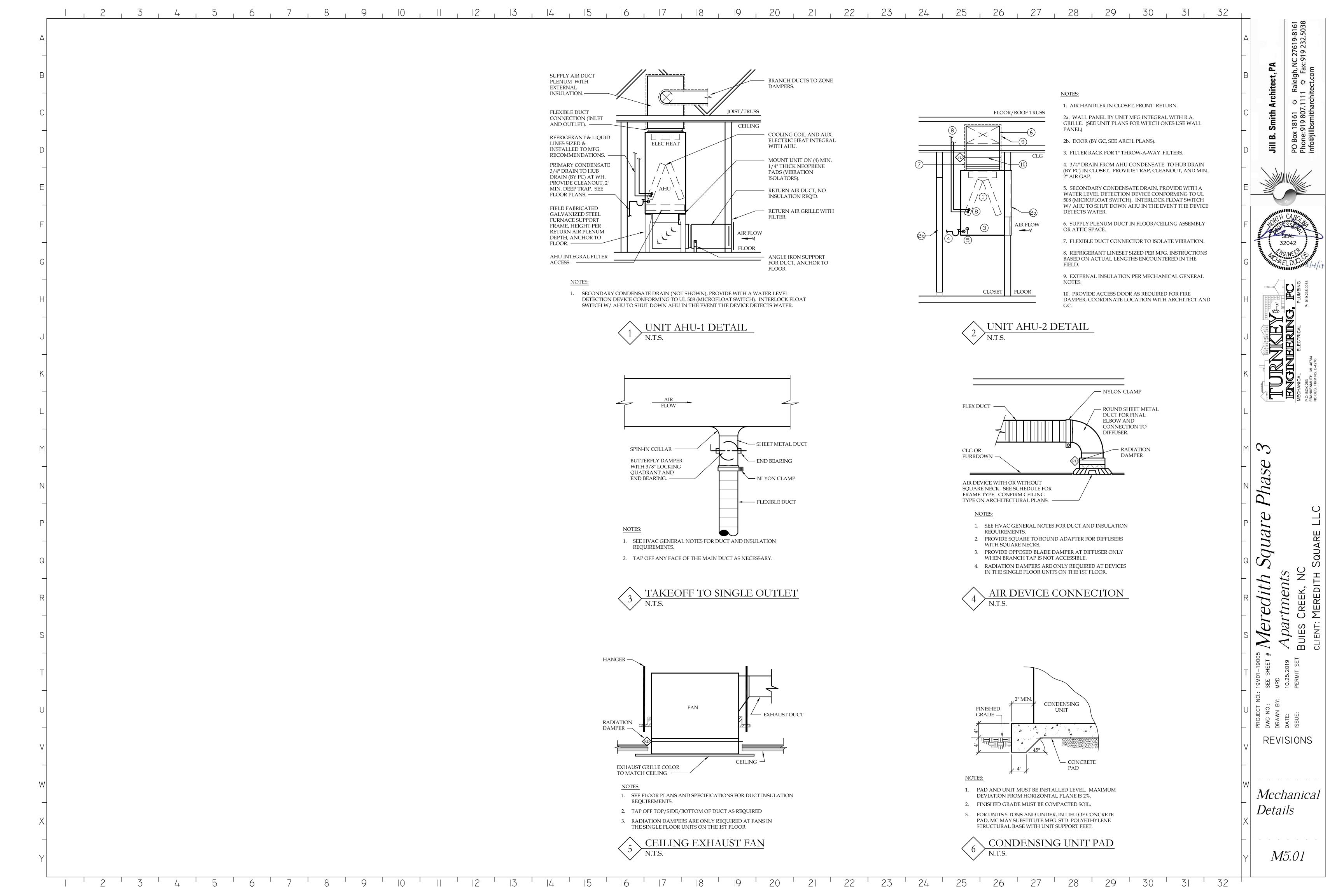
M0.01











DATA OUTLET LOCATION, 18" AFF TO CENTER, UON. PROVIDE CAT 6 CABLE RAN BACK TO PHONE DEMARC (UNITS). PROVIDE 6' OF LENGTH AT LOCATION OF DEMARC. TAG CABLE WITH APT # AND ROOM ON EACH CABLE VISIBLE BELOW CEILING OR AT DEMARC. LOCATED OUTSIDE. "NF" INDICATES NON-FUSED. REQUIRED. # INDICATES WHICH FAN. SEE SHEET M0.01 FOR MORE DETAILS. (SD)_{177cd} CANDELA RATED. DETECTOR. (FS) TS T SPRINKLER OR BACKFLOW PREVENTER TEMPERATURE SENSOR.

ELECTRICAL SYMBOL LEGEND

System No. W-L-3111 F Ratings - 1 and 2 Hr T Rating - 0 Hr **SECTION A-A**

1. Wall Assembly The fire - rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified if the individual U300 or U400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:

A. Studs Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide, fabricated from min 25 MSG galvanized steel, spaced max 24 in. OC.

and sheet orientation shall be as specified in the individual U300 or U400 Series Designs in the UL Fire Resistance Directory. Max diam of opening is 4 in.

friction fit into wall assembly and installed flush with wall surfaces.

of the opening. The annular space between the cable bundle and the periphery of the opening to be $\min 1/8$ in. to max 3/4 in. Cables to be rigidly supported on both sides of the wall assembly. Any combination of the following

D. The 2/C No. 10 AWG cable with ground with polyvinyl (PVC) insulation and jacket.

*Bearing the UL Classification Marking

pipe and wall, a min 1/2 in. diam. bead of fill material shall be applied at the pipe covering/wall interface on

IL PENETRATION DETAIL

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant

*Bearing the UL Classification Mark

UL PENETRATION DETAIL

Details

E0.01

Ph Ph

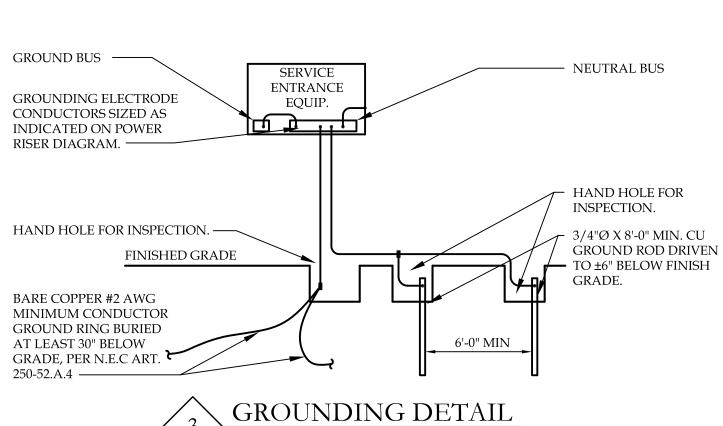
BUIES

REVISIONS

Electrical Legend &

2. FOR RECEPTACLES MOUNTED ABOVE A COUNTERTOP WITH A BREAKFAST BAR ABOVE THE COUNTERTOP, ROTATE RECEPTACLES HORIZONTALLY IF THERE IS NOT ENOUGH SPACE BETWEEN COUNTERTOP AND BREAKFAST BAR FOR A VERTICAL INSTALLATION. **DEVICE MOUNTING HEIGHTS**

WITHIN RANGE, BUT AT LEAST 6" BELOW CLG.



GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC SECTION 250. ALL GROUNDING ELECTRODE CONDUCTORS SIZED AS INDICATED ON POWER RISER DIAGRAM. ALL METHODS OF CREATING THE GROUNDING SYSTEM MAY NOT BE REQUIRED OR AVAILABLE.

HEAVY DUTY FUSIBLE/NON-FUSIBLE DISCONNECT SWITCH, NUMBERS INDICATE FRAME SIZE, NUMBER OF POLES AND FUSING. PROVIDE NEMA 1 ENCLOSURE INSIDE. PROVIDE NEMA 3R ENCLOSURE WITH WEATHERPROOF COVER FOR ALL SWITCHES

"FPN" INDICATES FUSE PER EQUIPMENT NAMEPLATE.

"HVAC" INDICATES HVAC PULL-OUT STYLE.

240/120V/1Ø PANEL, SURFACE OR RECESS MOUNTED, SEE SCHEDULE FOR DETAILS. FAN WITH LIGHT, FAN PROVIDED AND INSTALLED BY MC, LIGHT PROVIDED AND INSTALLED BY MC, FAN WIRED BY EC. PROVIDE DISCONNECTING MEANS AS

METER BASE FOR APARTMENT BUILDINGS. DASHED METER ASSEMBLY SHOWS PREFERRED LOCATION, MORE THAN ONE LOCATION IS SHOWN FOR EACH BUILDING, ACTUAL LOCATION BASED ON SITE ARRANGEMENT.

CEILING MOUNTED HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP FOR THE APARTMENTS. 2 OR MORE DETECTORS SHALL BE INTERLOCKED SO THAT IF ONE DETECTOR IS SET OFF, ALL DETECTORS GO INTO ALARM (MULTI-STATION).

CEILING MOUNTED HARD WIRED COMBINATION SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP FOR THE APARTMENTS. MUST BE INTERLOCKED WITH THE REST OF THE UNITS DETECTORS (MULTI-STATION).

CEILING MOUNTED HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP WITH STROBE TYPE FOR SIGHT AND HEARING IMPAIRED APARTMENTS ONLY, WITH CANDELA RATING AS SPECIFIED ON PLANS. 2 OR MORE DETECTORS SHALL BE INTERLOCKED SO THAT IF ONE DETECTOR IS SET OFF, ALL DETECTORS GO INTO ALARM (MULTI-STATION). 'SC' REPRESENTS COMBINATION SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR.

CALL SYSTEM ALARM INDICATING DEVICE, MINI HORN/STROBE, UL WET LISTED, 177cd

CELLULAR COMMUNICATOR LOCATION WITH GSM SIGNALING TECHNOLOGY AND CONTACT ID FORMAT. CELLULAR SYSTEM MUST BE OPERATIONAL TO PROVIDE DIAL OUT ACCESS FOR FACE.

FIRE ALARM CONTROL PANEL, SURFACE MOUNTED, 5'-6" AFF TO CENTERLINE.

FIRE ALARM SYSTEM ADDRESSABLE CEILING/WALL MOUNTED SMOKE

SPRINKLER OR BACKFLOW PREVENTER WATERFLOW SWITCH.

SPRINKLER OR BACKFLOW PREVENTER TAMPER SWITCH

B. Gypsum Board* 5/8 in. 4 ft wide with square or tapered edges. The gypsum wallboard type, number of layers

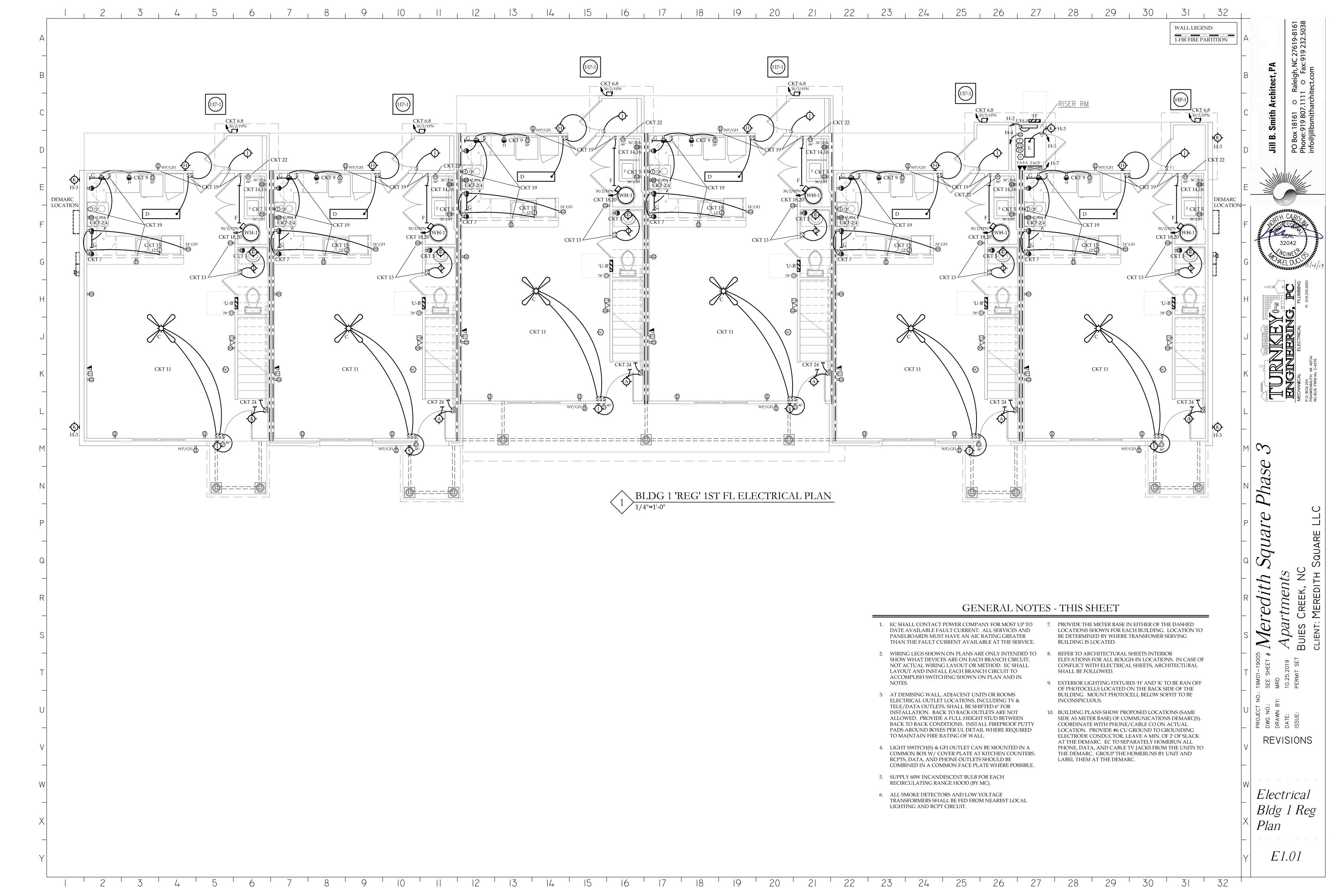
2. Metallic Sleeve - Optional The nominal 4 in. diam steel electrical metallic tubing (EMT) or Schedule 5 steel pipe

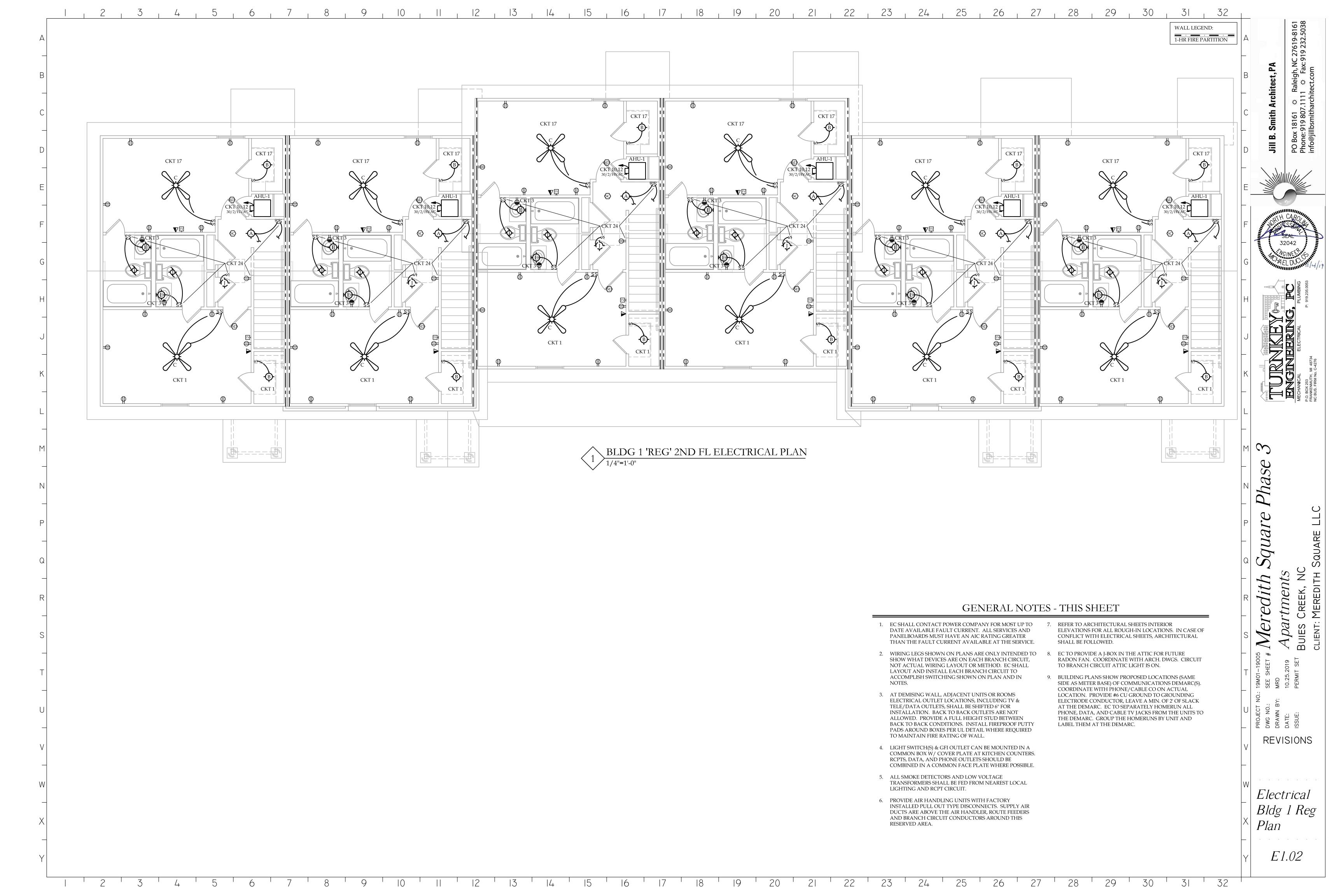
3. Cables Aggregate cross - sectional area of cables in cable tray to be max 25 percent of the cross - sectional area

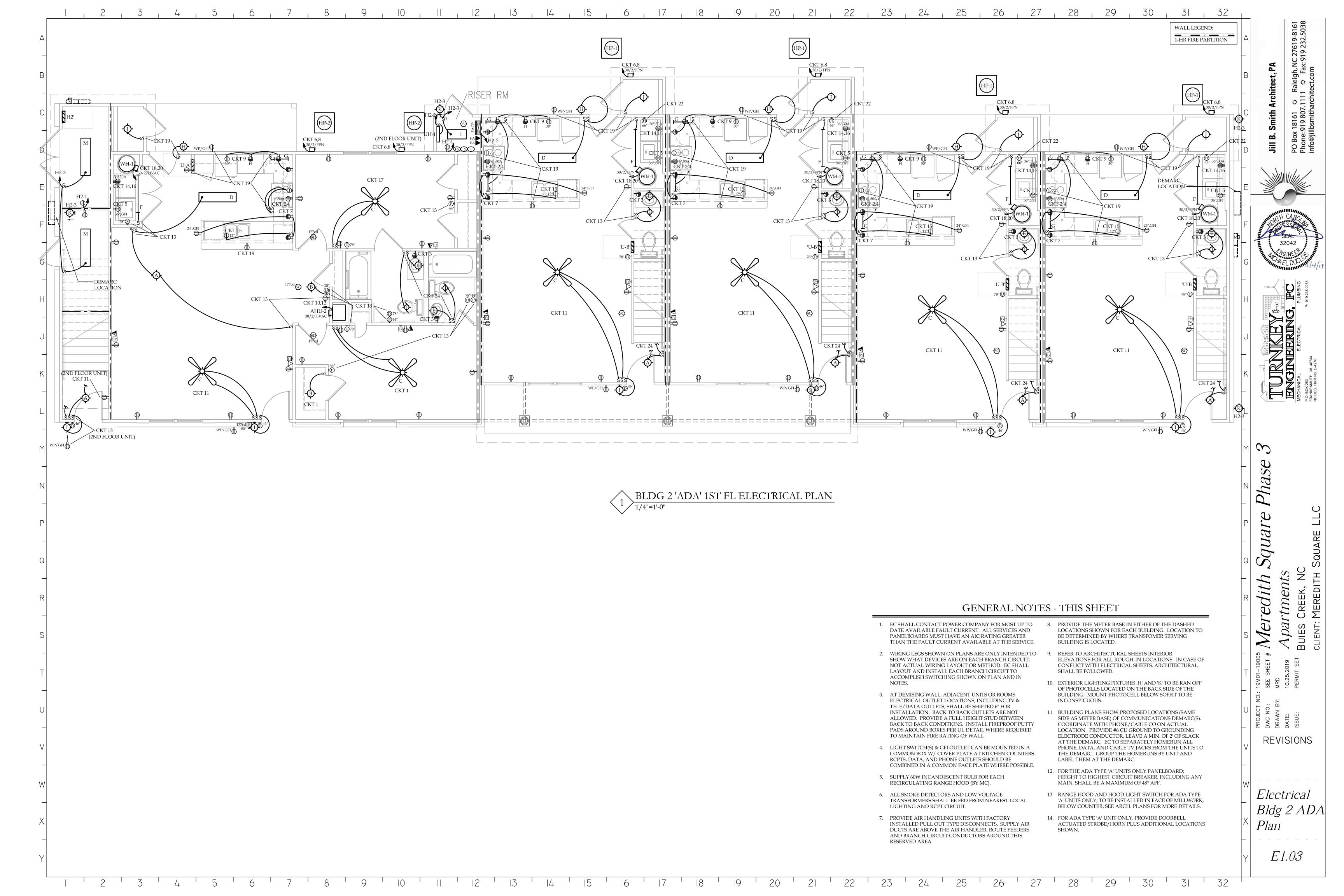
types and sizes of cables may be used: A. 6 pair - No. 24 AWG telephone cable with polyvinyl chloride (PVC) insulation and PVC jacket. B. 24 fiber optic cable with polyvinyl chloride (PVC) outer and subunit jacket. C. Type RGU/59 coaxial cable with polyethylene (PE) insulation and polyvinyl (PVC) jacket.

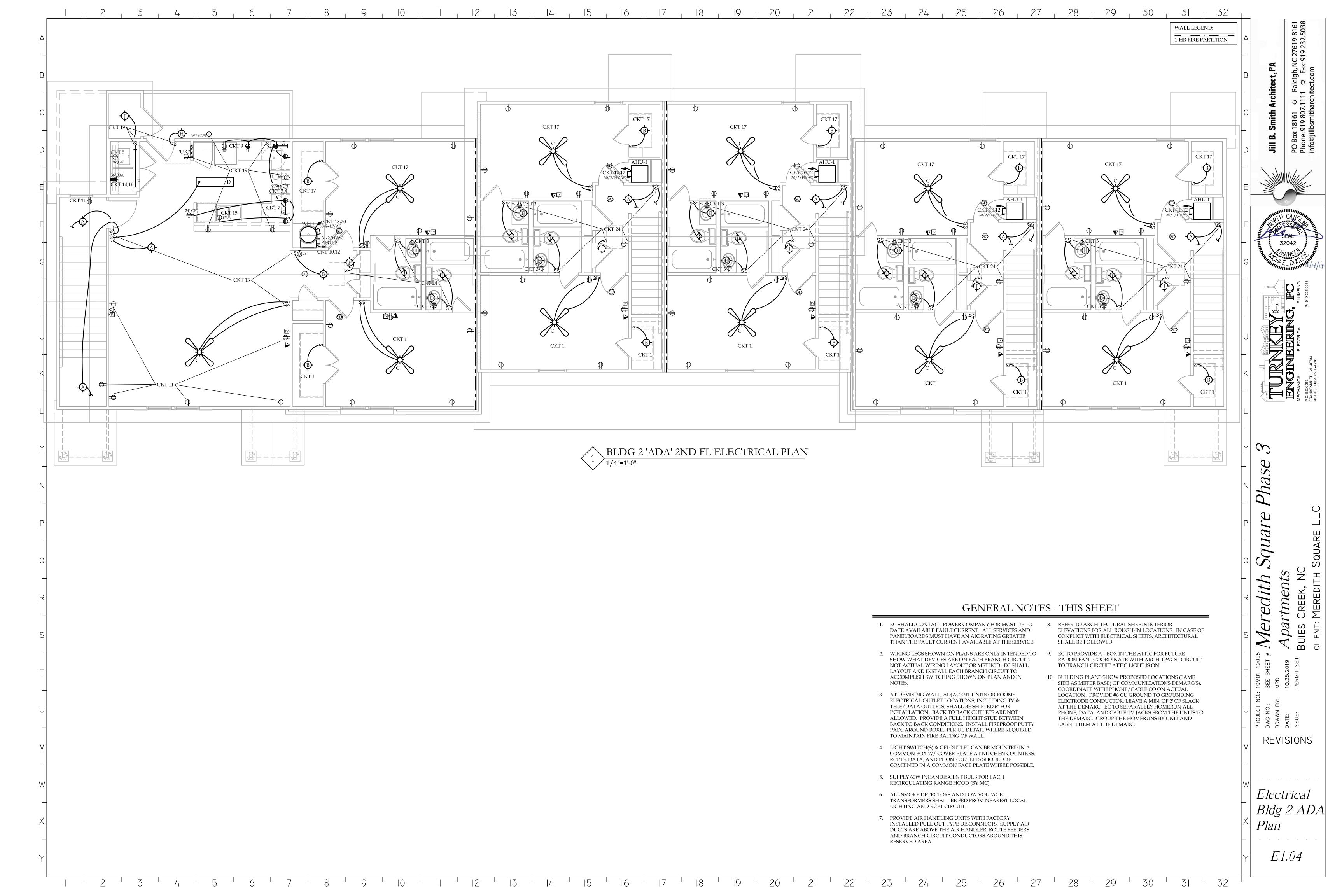
E. 3/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation in a nominal 1/2 in. flexible metal conduit. 4. Fill, Void or Cavity Material* Putty - Min 5/8 in. thickness of fill material applied within annulus flush with both surfaces of wall. Fill material to be forced into interstices of cable bundle to the max extent possible on both

Additional fill material to be installed such that a min 1/4 in. crown is formed around the cable bundle and lapped over the steel sleeve. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP618 Firestop Putty Stick









| | | | L | GHTING FI | XTURE SCHEDULE | 1 |
|--|---|------------------------------|----------------------------------|-----------------------------------|--|---|
| | MARK MANUF. | CATALOG NUMBER | LAMP I | OATA VOLTS BA | ALLAST DATA INPUT MOUNTIN WATTS | DESCRIPTION |
| | A ROYAL PACIFIC | 4346-15 | | LUMEN 120 1 | DIMMABLE 30 SURFACE | CLOSE TO CEILING 15" BRUSHED NICKEL LED FIXTUR ALABASTER GLASS BOWL. ENERGY STAR LABELED. |
| | B ROYAL PACIFIC | 4346-11 | 1 1500 L | LUMEN 120 1 | DIMMABLE 17 SURFACE | CLOSE TO CEILING 11" BRUSHED NICKEL LED FIXTURI ALABASTER GLASS BOWL. ENERGY STAR LABELED. |
| | C ROYAL PACIFIC | 1057-WW-WW | 3 CF1 | 3W GU24 830 120 3 | SELF BALLAST 39 SUSPENDE | WHITE 5 BLADE CEILING FAN W/ ALABASTER GLASS FLUORESCENT LIGHT KIT. |
| | D NUVO | 60-903R | 3 F3 | 2 T8 830 120 1 | INSTANT ELECTRONIC 96 SURFACE <20% THD | GENERAL DUTY 4' x 1' NARROW LOW PROFILE WHITE FLUORESCENT FIXTURE WITH ACRYLIC HEMISPHERE AND BRUSHED NICKEL TRIM. |
| | E ROYAL PACIFIC | 4901CH-G313-ES | | 3W GU24 827 120 3 | SELF BALLAST 39 WALL | THREE LIGHT CHROME BATH WALL FIXTURE W/ ALA SHADES. UL DAMP LISTED. MOUNT FACING DOWN. I STAR LABELED. |
| | F ROYAL PACIFIC | 4312WH | 1 1600 L | LUMEN 120 1 | NON- DIMMABLE 20 SURFACE | GENERAL DUTY 4' LOW PROFILE STRIP WHITE LED FIX WITH OPAL ACRYLIC DIFFUSER. ENERGY STAR LABEL MOUNT ON WALL ABOVE DOORS. |
| | G ROYAL PACIFIC | 8962 | | LUMEN 120 1 | TRIAC 10 UNDER CABINET | GENERAL DUTY 18" UNDERCABINET LED FIXTURE WIT ACRYLIC LENS. DIRECT CONNECTION. ENERGY STAR |
| | H NUVO | 60-638 | | SON A19 ED BASE 120 - | - 60 WALL MOU | SURFACE MOUNTED BLACK CLEAR GLASS EXTERIOR : FIELD PROVIDE PHOTOCELL AHEAD OF SWITCH. UL V LISTED. PROVIDE LED LAMP. MOUNT PC AT BACK. |
| | I NUVO | 60-638 | 1 EDI | SON A19 ED BASE 120 - | - 60 WALL MOU | SURFACE MOUNTED BLACK CLEAR GLASS EXTERIOR OF UL WET LISTED. PROVIDE LED LAMP. |
| | J N/A | N/A | | SON A19 ED BASE 120 - | - 60 SURFACE | INCANDESCENT PORCELAIN KEYLESS FIXTURE. UL D. LISTED. PROVIDE LED LAMP. |
| | K N/A | N/A | 2 MA | ED 15W X EACH 120 - 000°K - | - 30W WALL | DOUBLE LED PAR FLOODLIGHT WITH MOTION SENSO ALUMINUM HOUSING, UL WET LISTED. FIELD PROVIL PHOTOCELL AHEAD OF MOTION SENSOR. COLOR PEI |
| | L ROYAL PACIFIC | 4115WH-EM | 1 2200 L | LUMEN 120 1 | NON- DIMMABLE 20 SURFACE | GENERAL DUTY 2' ENCLOSED STAIRWELL WHITE LED |
| | M ROYAL PACIFIC | 4116WH | 1 3,50 L | LUMEN 120 1 | NON- DIMMABLE 35 SURFACE | GENERAL DUTY 4' ENCLOSED STAIRWELL WHITE LED WITH ACRYLIC LENS. |
| | | | | | OF FIXTURE DESIRED. SUBMIT CUTS | HEETS OF THESE AND ALTERNATE MANUFACTURERS FOR |
| | 2. EXIT AND EMERGEN WITH 2 LAMPS MUS | | SHALL BE CIRCU TH LAMPS ON DU | ITED AHEAD OF ANY S | | AL LIGHTING CIRCUIT, UON. EXTERIOR EMERGENCY FIXT IXTURES (INCLUDING MOTION SENSING FIXTURES) SHAL |
| | | IDC / FIVELIDEC MILICE DE DA | | | | |

- 3. ALL EXTERIOR LAMPS/FIXTURES MUST BE RATED FOR 0°F.
- 4. REFER TO SHEET E0.01 FOR ADDITIONAL GENERAL NOTES AND ELECTRICAL LEGEND.
- 5. PROVIDE PLUG TYPE DISCONNECTS WITHIN THE FIXTURE FOR ALL LINEAR FIXTURES.
- 6. UNDER LAMP DATA TYPE COLUMN, A 3 DIGIT NUMBER, IE: 835 REFERS TO THE LAMP CRI AND °K COLOR TEMPERATURE. FOR INSTANCE 835 IS SPECIFYING LAMPS WITH A MIN CRI OF 80 AND A COLOR TEMPERATURE OF 3500°K.

SEAL 32042

MEINING INC.

ELECTRICAL PLUMBING

TUTE Phase 3

Meredith Square I

BUIES CREEK, NC

CLIENT: MEREDITH SQUARE LLC

WG NO.: SEE SHEET # IMCRAWN BY: MRD
ATE: 10.25.2019 ApcSUE: PERMIT SET DILLES

REVISIONS

Electrical Lighting Schedule

E6.01

TOTAL DEMAND kVA: 24.16 = 101 AMPS

H-INDICATES HACR BREAKER.

SWD/HID RATED FOR LTS CKTS

| SERV | ICE ENT. RATED: | NO | | BUS S | IZE: | 125A | | | | | |
|------|-------------------|-------|------|-------|-------|------------|------------------|--------|--------|--------------------|-----|
| NEM | A 1 | | | VOLT | AGE: | 240/120 | v 1 Ø , 3 | 3 WIRE | | | |
| мсв | OR MLO: | MLO | | MOUN | TING: | FLUSH | | MIN. | AIC: | 22,000 | |
| СКТ | LOAD SERVED | TRIP | POLE | kVA | kVA/I | PHASE B | kVA | POLE | TRIP | LOAD SERVED | СКТ |
| 1 | BED LTS/RCPTS | 15AF | 1 | 1.44 | 5.44 | | 4.00 | 2 | 40 | RANGE | 2 |
| 3 | BATHROOM RCPTS | 20 | 1 | 0.54 | | 4.54 | 4.00 | 1 - | 40 | KANGE | 4 |
| 5 | WASHER | 20 | 1 | 1.50 | 2.98 | | 1.48 | 2 | 25H | HP-1 | 6 |
| 7 | SMALL APPLIANCE | 20 | 1 | 1.50 | | 2.98 | 1.48 | | 2311 | 111-1 | 8 |
| 9 | SMALL APPLIANCE | 20 | 1 | 1.50 | 4.25 | | 2.75 | 2 | 30H | AHU-1 | 10 |
| 11 | LIVING LTS/RCPTS | 15AF | 1 | 1.44 | | 4.19 | 2.75 |] ~ | 5011 | A110-1 | 12 |
| 13 | LTS/RCPTS | 15AF | 1 | 0.72 | 3.22 | | 2.50 | 2 | 30 | DRYER | 14 |
| 15 | DISHWASHER | 15 | 1 | 1.20 | | 3.70 | 2.50 |] _ | 30 | DRIER | 16 |
| 17 | BED LTS/RCPTS | 15AF | 1 | 1.26 | 3.51 | | 2.25 | 2 | 30 | WH-1 | 18 |
| 19 | KITCHEN LTS | 15AF | 1 | 1.44 | | 3.69 | 2.25 | | 50 | VVII-1 | 20 |
| 21 | SPARE | 15 | 1 | | 0.50 | | 0.50 | 1 | 15 | HVAC ZONE PANEL | 22 |
| 23 | | | | | | 1.44 | 1.44 | 1 | 15AF | BATH/HALL LTS | 24 |
| 25 | | | | | 0.00 | | | | | | 26 |
| 27 | | | | | | | | | | | 28 |
| 29 | | | | | | | | | | | 30 |
| | | | | TALS: | 19.90 | 20.54 | | | | | • |
| ГОТА | AL CONNECTED KVA: | 40.44 | | | | | | AF-IN | DICAT | ES ARC FAULT BREAK | ER. |
| | | | | | | | | H-INI | DICATI | ES HACR BREAKER. | |

SWD/HID RATED FOR LTS CKTS

TOTAL DEMAND kVA: 24.21 = 101 AMPS

| CEDY | ICE ENT DATED | NIO | | DITCC | 1717 | _ | ` | | | OADCENTER | |
|--|-----------------|-------|------|-------|--------|---------|--------------------|------------|----------|-------------------|----|
| | ICE ENT. RATED: | NO | | BUS S | | 125A | (X . | 2 W.T.D.E. | | | |
| NEM | | | | VOLT | | 240/120 | ر اهر ₍ | | | | |
| MCB | OR MLO: | MLO | 1 | MOUI | NTING: | | | MIN. | AIC: | 22,000 | 1 |
| СКТ | LOAD SERVED | TRIP | POLE | kVA | | PHASE | kVA | POLE | TRIP | LOAD SERVED | CE |
| | DED THE /D OPEN | 1=1= | | 1.01 | A | В | 1.00 | | | | |
| 1 | BED LTS/RCPTS | 15AF | 1 | 1.26 | 5.26 | | 4.00 | 2 | 40 | RANGE | 2 |
| 3 | BATHROOM RCPTS | 20 | 1 | 0.36 | | 4.36 | 4.00 | | | | |
| 5 | WASHER | 20 | 1 | 1.50 | 2.87 | | 1.37 | 2 | 25H | HP-2 | (|
| 7 | SMALL APPLIANCE | 20 | 1 | 1.50 | | 2.87 | 1.37 | | | | 8 |
| 9 | SMALL APPLIANCE | 20 | 1 | 1.50 | 4.34 | | 2.84 | 2 | 30H | AHU-2 | 1 |
| 11 | LIVING RCPTS | 15AF | 1 | 1.26 | | 4.10 | 2.84 |] - | 5011 | 71110 2 | 1 |
| 13 | LTS/RCPTS | 15AF | 1 | 1.26 | 3.76 | | 2.50 | 2 | 30 | DRYER | 1 |
| 15 | DISHWASHER | 15 | 1 | 1.20 | | 3.70 | 2.50 | 1 - | 30 | DRIER | 1 |
| 17 | BED LTS/RCPTS | 15AF | 1 | 1.44 | 3.69 | | 2.25 | 2 | 30 | WH-1 | 1 |
| 19 | KITCHEN LTS | 15AF | 1 | 1.62 | | 3.87 | 2.25 | 1 - | 30 | VV II-1 | 2 |
| 21 | | | | | 0.00 | | | 1 | 15 | SPARE | 2 |
| 23 | | | | | | 0.72 | 0.72 | 1 | 15AF | BATH LTS | 2 |
| 25 | | | | | 0.00 | | | | | | 2 |
| 27 | | | | | | | | | | | 2 |
| 29 | | | | | | | | | | | 3 |
| | | 1 | TO | TALS | 19.92 | 19.62 | | 1 | <u> </u> | | |
| TOTAL CONNECTED KVA: 39.54 AF-INDICATES ARC FAULT BREAKER. | | | | | | | | | | | |
| | | | | | | | | | | ES HACR BREAKER. | |
| тота | AL DEMAND kVA : | 24.16 | = | 101 | AMPS | | | | | ATED FOR LTS CKTS | |

OPT. LOAD FOR SINGLE FAMILY DWELLING

2ND FLOOR UNIT FLAT ('U-C')

1.50 2

1.50

8.00

5.00 1

1.20 1

4.50 1

0.85 | 1 | 100%

5.00 1 65%

3.36 1

3.36 1

17.08

LTS & RCPTS:

LAUNDRY:

APPLIANCES:

1 RANGE

2 DRYER

4 WH# 1

HP# 2

COOLING

AHU# 2

HEAT SUBTOTAL

COOLING SUBTOTAL

TOTAL KVA DEMAND LOAD:

MINIMUM DEMAND AMPERES:

3 DISHWASHER

FIRST 10,000VA @ 100%:

REMAINING kVA @ 40%:

GENERAL LOAD SUBTOTAL:

HEAT (HP W/ AUX. ELEC.)

AHU# 2 (BLOWER ONLY)

AHU# 2 (AUX. HEAT ONLY)

SMALL APPLIANCE:

kVA QTY FACTOR SQFT DEMAND kVA

40%

3.88

3.00

1.50

8.00 5.00

1.20

4.50

10.00

6.83

16.83

0.85

3.25

3.36 7.46

0.85

3.36 4.21

> 24.29 240

| PA | NEL 'H' | | PANEL 'H' s | | | | | | р ном | ELINE LOADCENTER | |
|-----|---------------------|------|-------------|-------|---------------|---------------------------------|--------|-------|-------|-------------------------|-----|
| | VICE ENT. RATED: | NO | | | US SIZE: 125A | | | | | EEEIVE EOMBCEIVIER | |
| NEM | | 1,0 | | VOLT. | | E: 240/120V 1 Ø , 3 WIRE | | | | | |
| MCB | OR MLO: | MLO | | MOUN | NTING: | SURFAC | Œ | MIN. | AIC: | 22,000, SEE RISER DIAGI | RAM |
| СКТ | LOAD SERVED | тртр | POLE | kVA | kVA/P | HASE | 1-X7 A | POLE | тртр | LOAD SERVED | СКТ |
| CKI | LOAD SERVED | IKII | POLE | KVA | A | В | KVA | FOLE | IKII | LOAD SERVED | CKI |
| 1 | | | | | 0.50 | | 0.50 | 1 | 20 | RISER RM UH-1 | 2 |
| 3 | RISER RM/MOTION LTS | 20 | 1 | 0.17 | | 0.35 | 0.18 | 1 | 20 | RISER RM RCPT | 4 |
| 5 | | | | | 0.00 | | | | | | 6 |
| 7 | FACP | 20L | 1 | 0.40 | | 0.40 | | | | | 8 |
| 9 | | | | | 0.00 | | | | | | 10 |
| 11 | | | | | | 0.00 | | | | | 12 |
| | | | TO | TALS: | 0.50 | 0.75 | | | | | • |
| TOT | AL CONNECTED KVA: | 1.25 | | , | | | - | | | | |
| | | | | | | | | L-IND | ICATE | S LOCK-ON DEVICE | |
| TOT | AL DEMAND kVA: | 1.74 | = | 7 | AMPS | | | SWD/ | HID R | ATED FOR LTS CKTS | |

| | 8 | | 5 |
|-----------|-----|---|-----------|
| | 10 | _ | Smith Aro |
| | 12 | С | <u> </u> |
| | | | 7 |
| | | | Ü |
| DEVICE | | | 6 |
| TS CKTS | | | <u> </u> |
| | | D | = |
| | | | |
| | | | |
| CENTER | | | |
| | | | 19 |
| | | Е | |
| SER DIAGI | RAM | _ | |

| PA | NEL 'H2' | | STYLE | Ξ: | EQUAL TO SQUARE D HOMELINE LOADCENTER | | | | | | | |
|-------|---------------------|--|-------|--|---------------------------------------|------|--------|------|--------|---------------|-----|--|
| ERV | ICE ENT. RATED: | NO | | BUS S | IZE: | 125A | | | | | | |
| EM | A 1 | | | VOLTAGE: 240/120V 1 Ø , 3 WIRE | | | | | | | | |
| 1CB | OR MLO: | R MLO: MLO MOUNTING: SURFACE MIN. AIC: 22,000, SEE RISER DIAGRAM | | | | | | RAM | | | | |
| кт | LOAD SERVED | TDID | POLE | 1-X7 A | kVA/P | HASE | 1-37 A | POLE | тртр | LOAD SERVED | СКТ | |
| ,1X 1 | LOAD SERVED | 1 1(11 | I OLL | KVA | A | В | KVA | IOLL | 1 1(11 | LOAD SERVED | CKI | |
| 1 | STORAGE RCPTS | 20 | 1 | 0.36 | 0.86 | | 0.50 | 1 | 20 | RISER RM UH-1 | 2 | |
| 3 | RISER RM/MOTION LTS | 20 | 1 | 0.24 | | 0.42 | 0.18 | 1 | 20 | RISER RM RCPT | 4 | |
| 5 | | | | | 0.00 | | | | | | 6 | |
| | | | | | | | | | | | | |

TOTALS: 0.86 0.82 TOTAL CONNECTED KVA: 1.68

'H2' LOAD SUMMARY (PANEL 'H' SIMILAR)

TOTAL DEMAND kVA: 1.74 = 7 AMPS

HVAC LOAD OTHER THAN HEATING LOAD

ELECTRIC HEATING LOAD

FIRST 10000 RECPEPTACLES

MISCELLANEOUS

REMAINDER OF RECEPTACLES 50%

TOTAL AVAILABLE AMPERES 120/240/1

LIGHTS

L-INDICATES LOCK-ON DEVICE SWD/HID RATED FOR LTS CKTS

DEMAND KVA

0.00

0.50

0.30

0.54

0.00

0.40

FACTOR

1.00

1.25

1.00

0.50

1.00

| _ | PLUMBING | P 919 235 0053 |
|---|------------|----------------|
| H | PLU | P. 919 |
| J | ELECTRICAL | |

| | | | ġ. |
|----------|------|------------|---|
| J | | ELECTRICAL | 4 |
| \ | TURE | MECHANICAL | P.O. BOX 253 FRANKENMUTH, MI 48734 NC BLIS FIRM NO C-4276 |

| ENTIRE BUILDING SUBTOTAL | 1.68 | 1.74 |
|-----------------------------|------|-------|
| | | |
| DEMAND LOAD KVA | | 1.74 |
| DEMAND AMPERES 120/240/1 | | 7 |
| | • | |
| CONNECTED LOAD KVA | | 1.68 |
| CONNECTED AMPERES 120/240/1 | | 7 |
| | | |
| TOTAL AVAILABLE LOAD KVA | | 14.40 |

TOTAL KVA

0.00

0.50

0.24

0.54

0.00

0.40

| | | ADA 1ST FLO | OOR U | NIT | FLAT | ('U-A | .') |
|--------------|--------|------------------|-------|-----|-------------|-------|------------|
| | | | kVA | QTY | FACTOR | SQFT | DEMAND kVA |
| LTS & RC | CPTS: | | | | 3 | 1180 | 3.54 |
| SMALL A | APPLIA | NCE: | 1.50 | 2 | | | 3.00 |
| LAUNDR | RY: | | 1.50 | 1 | | | 1.50 |
| APPLIAN | ICES: | | | | | | |
| 1 RANG | GΕ | | 8.00 | 1 | | | 8.00 |
| 2 DRYE | R | | 5.00 | 1 | | | 5.00 |
| 3 DISHWASHER | | | 1.20 | 1 | | | 1.20 |
| 4 WH# | 1 | | 4.50 | 1 | | | 4.50 |
| FIRST 10, | 000VA | . @ 100%: | 10.00 | | 100% | | 10.00 |
| REMAIN] | ING kV | VA @ 40%: | 16.74 | | 40% | | 6.70 |
| GENERA | L LOA | D SUBTOTAL: | | | | | 16.70 |
| НЕАТ (Н | PW/ A | AUX. ELEC.) | | | | | |
| AHU# | 2 | (BLOWER ONLY) | 0.85 | 1 | 100% | | 0.85 |
| AHU# | 2 | (AUX. HEAT ONLY) | 5.00 | 1 | 65% | | 3.25 |
| HP# | 2 | | 3.36 | 1 | | | 3.36 |
| HEAT SU | BTOT | AL | | | | | 7.46 |
| COOLING | G | | | | | | |
| AHU# | 2 | | 0.85 | 1 | | | 0.85 |
| HP# | 2 | | 3.36 | 1 | | | 3.36 |
| COOLING | G SUBT | TOTAL | | | | | 4.21 |
| TOTAL k | (VA D | EMAND LOAD: | | | | | 24.16 |
| VOLTAG | E: | | | | | | 240 |
| MINIMU | M DE | MAND AMPERES: | | | | | 101 |

| | | REGULAR UN | OT TIV | DWN | HOME | E ('U- | B') |
|--|--------------|------------------------------|--------|------------|--------|--------|-----------|
| | | | kVA | QTY | FACTOR | SQFT | DEMAND kV |
| LTS & RCPT | S: | | | | 3 | 1180 | 3.54 |
| SMALL APF | LIA | NCE: | 1.50 | 2 | | | 3.00 |
| LAUNDRY: | | | 1.50 | 1 | | | 1.50 |
| APPLIANCI | ES: | | | | | | |
| 1 RANGE | | | 8.00 | 1 | | | 8.00 |
| 2 DRYER | | | 5.00 | 1 | | | 5.00 |
| 3 DISHWA | SHI | ER | 1.20 | 1 | | | 1.20 |
| 4 WH# | 1 | | 4.50 | 1 | | | 4.50 |
| FIDOT 10.00 | NT 7 A | @ 1000/ | 10.00 | | 100% | | 10.00 |
| FIRST 10,000 | | | 10.00 | | 40% | | 6.70 |
| REMAINING kVA @ 40%: GENERAL LOAD SUBTOTAL: | | 10./4 | | 40 /0 | | 16.70 | |
| • | V/ A 1 | AUX. ELEC.) (BLOWER ONLY) | 0.63 | 1 | 100% | | 0.63 |
| AHU# | 1 | (AUX. HEAT ONLY) | 5.00 | 1 | 65% | | 3.25 |
| HP# | 1 | | 3.63 | 1 | | | 3.63 |
| HEAT SUBT | OT. | AL | | | | l | 7.51 |
| COOLING | | | | | | | |
| AHU# | 1 | | 0.63 | 1 | | | 0.63 |
| | 1 | | 3.63 | 1 | | | 3.63 |
| COOLING S | UB7 | TOTAL | | | | | 4.26 |
| TOTAL kV | A D] | EMAND LOAD: | | | | | 24.21 |
| VOLTAGE: | | | | | | | 240 |
| N AT N TTN AT TN A | DE | MAND AMPERES: | | | | | 101 |

| CONDUCTOR SCHEDULE REG UNIT | | | | | | | | | |
|-----------------------------|----------|------|------|------------|--------|------|--|--|--|
| CONDUCTOR SCHEDULE REGUNIT | | | | | | | | | |
| DEVICE | VOLTS/PH | MCA | моср | COND | EG | С | | | |
| HP-1 | 240/1 | 15.8 | 25H | (2) 10 AWG | 10 AWG | 3/4" | | | |
| AHU-1 | 240/1 | 29.9 | 30H | (2) 10 AWG | 10 AWG | - | | | |
| DRYER | 240/1 | 20.8 | 30 | (2) 10 AWG | 10 AWG | - | | | |
| RANGE | 240/1 | 33.3 | 40 | (2) 8 AWG | 10 AWG | - | | | |
| WH-1 | 240/1 | 23.4 | 30 | (2) 10 AWG | 10 AWG | - | | | |

| COND | CONDUCTOR SCHEDULE ADA/FLATS | | | | | | | | | | |
|--------|------------------------------|------|------|------------|--------|------|--|--|--|--|--|
| DEVICE | VOLTS/PH | MCA | моср | COND | EG | С | | | | | |
| HP-2 | 240/1 | 14.6 | 25H | (2) 10 AWG | 10 AWG | 3/4" | | | | | |
| AHU-2 | 240/1 | 29.9 | 30H | (2) 10 AWG | 10 AWG | - | | | | | |
| DRYER | 240/1 | 20.8 | 30 | (2) 10 AWG | 10 AWG | - | | | | | |
| RANGE | 240/1 | 33.3 | 40 | (2) 8 AWG | 10 AWG | - | | | | | |
| WH-1 | 240/1 | 23.4 | 30 | (2) 10 AWG | 10 AWG | - | | | | | |

| METER CENTER BLDG '1' 3 REG UNITS ('U-B') | | | | | | | |
|---|---------------|-----|--------|------|------------|--|--|
| | kVA | QTY | FACTOR | SQFT | DEMAND kVA | | |
| LTS & RCPTS (PANEL U-B): | | 3 | 3 | 1180 | 10.62 | | |
| SMALL APPLIANCE: | 1.50 | 6 | | | 9.00 | | |
| LAUNDRY: | 1.50 | 3 | | | 4.50 | | |
| | | | | | | | |
| APPLIANCES: | 0.00 | | 1 | | 24.00 | | |
| 1 RANGE | 8.00 | 3 | | | 15.00 | | |
| 2 DRYER | 5.00 | 3 | | | 3.60 | | |
| 3 DISHWASHER 4 WH# 1 | 1.20 4.50 | 3 | | | 13.50 | | |
| 4 WH# 1 | 4.50 | 3 | | | 13.30 | | |
| HEAT (HP W/ AUX. ELEC.) | | | | | | | |
| AHU# 1 | 5.63 | 3 | | | 16.89 | | |
| HP# 1 | 3.63 | 3 | | | 10.89 | | |
| TOTAL LOAD SUBTOTAL | | _ | | _ | 108.00 | | |
| | | | | | | | |
| NUMBER OF DWELLING UNITS: | | 3 | 45% | | | | |
| FOTAL BLDG kVA DEMAND LOAD: | | | | | 48.60 | | |
| VOLTAGE (240/1ø): | | | | | 240 | | |
| BLDG MINIMUM DEMAND AMPERI | ES @ 240V/1ø: | | | | 203 | | |

| LOAD FOR MULTIFAMILY DWELLING | | | | | | | | |
|---|------------------------|----------|--------|------|------------|--|--|--|
| METER CENTER BLDG '1' 3 REG UNITS & HOUSE | | | | | | | | |
| | kVA | QTY | FACTOR | SQFT | DEMAND kVA | | | |
| LTS & RCPTS (PANEL U-B): | | 3 | 3 | 1180 | 10.62 | | | |
| SMALL APPLIANCE: | 1.50 | 6 | | | 9.00 | | | |
| LAUNDRY: | 1.50 | 3 | | | 4.50 | | | |
| APPLIANCES: | | | | | | | | |
| 1 RANGE | 8.00 | 3 | | | 24.00 | | | |
| 2 DRYER | 5.00 | 3 | | | 15.00 | | | |
| 3 DISHWASHER | 1.20 | 3 | | | 3.60 | | | |
| 4 WH# 1 | 4.50 | 3 | | | 13.50 | | | |
| HEAT (HDW/ ALLY ELEC) | | | | | | | | |
| HEAT (HP W/ AUX. ELEC.) AHU# 1 | 5.63 | 3 | | | 16.89 | | | |
| HP# 1 | 3.63 | 3 | | | 10.89 | | | |
| TOTAL LOAD SUBTOTAL | 3.03 | 1 3 | | | 108.00 | | | |
| | | | | | | | | |
| NUMBER OF DWELLING UNITS: | | 3 | 45% | | | | | |
| TOTAL UNIT KVA DEMAND LOAD: | | | | | 48.60 | | | |
| VOLTAGE (240/1ø): | | | | | 240 | | | |
| UNIT MINIMUM DEMAND AMPERI | ES @ 240V/1 ø : | | | | 203 | | | |
| | | | | | | | | |
| | HOUSE PAN | | | | | | | |
| | | CTED kVA | NEC FA | | DEMAND kVA | | | |
| ELECTRIC HEAT | | .50 | 1.0 | | 0.50 | | | |
| LIGHTS | | .17 | 1.2 | | 0.21 | | | |
| RECEPTACLES (1ST 10.0 kVA) | | .18 | 1.00 | | 0.18 | | | |
| MISCELLANEOUS | | .40 | 1.0 | | 0.40 | | | |
| HVAC | | .00 | 1.0 | 00 | 0.00 | | | |
| SUBTOTAL HOUSE kVA LOAD | 1 | .25 | | | 1.29 | | | |
| TOTAL BLDG kVA DEMAND LOAD | <u> </u> | | | | 49.89 | | | |
| VOLTAGE (240/1ø): | | | | | 240 | | | |
| BLDG MINIMUM DEMAND AMPER | EC @ 040V/H . | | | | 208 | | | |

| <u>IULTI</u> F | <u>'AMI</u> I | Y DW | ELLI | NG | |
|-------------------|----------------|---|--|------------|--|
| ER BLD | G '2'] | FLATS | 8 & H | OUSE | |
| kVA | QTY | FACTOR | SQFT | DEMAND kVA | |
| | 1 | 3 | 1180 | 3.54 | |
| | 1 | 3 | 1180 | 3.54 | |
| | 1 | 3 | 1294 | 3.88 | |
| 1.50 | 6 | ' | | 9.00 | |
| 1.50 | 3 | | | 4.50 | |
| | | | | | |
| 8.00 | 3 | | | 24.00 | |
| 5.00 | 3 | | | 15.00 | |
| 1.20 | 3 | | | 3.60 | |
| 4.50 | 3 | | | 13.50 | |
| | | | | | |
| 5.63 | 1 | | | 5.63 | |
| 3.63 | 1 | | | 3.63 | |
| 5.85 | 2 | | | 11.70 | |
| 3.36 | 2 | | | 6.72 | |
| | | | | 108.24 | |
| | 3 | 45% | | | |
| | ı | | | 48.71 | |
| | | | | 240 | |
| S @ 240V/1ø: | | | | 203 | |
| HOUSE PAN | IEL LOAD | os | | | |
| CONNEC | CTED kVA | NEC FA | ACTOR | DEMAND kVA | |
| 0. | 50 | 1.00 | | 0.50 | |
| 0. | 24 | 1.2 | 25 | 0.30 | |
| 0. | 54 | 1.0 | 00 | 0.54 | |
| 0. | 40 | 1.0 | 00 | 0.40 | |
| 0. | 00 | 1.0 | 00 | 0.00 | |
| 1. | 68 | | | 1.74 | |
| | | | | 50.45 | |
| VOLTAGE (240/1ø): | | | | | |
| | 1.50 | RVA QTY 1 1 1 1 1 1 1 1 1 | RVA QTY FACTOR 1 3 3 1 3 3 | 1 | |

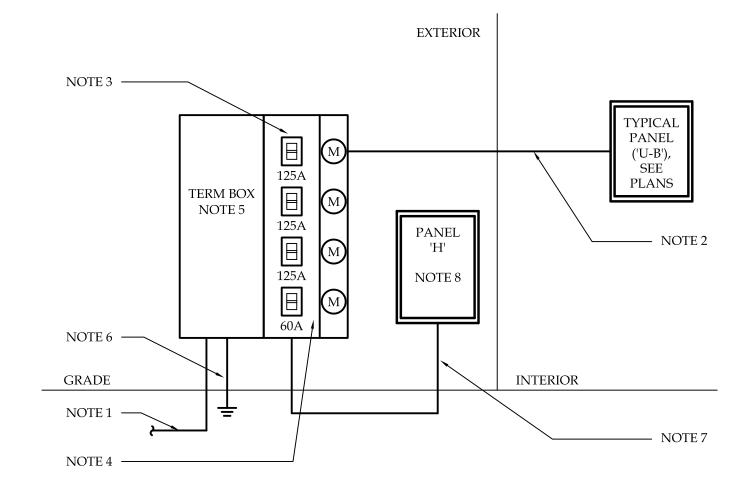
Electrical Power Calcs & Schedules

E6.02

REVISIONS

BUILDING '1' & '2' (3 REG UNITS, 'U-B') RISER DIAGRAM **DIAGRAMMATIC ONLY**

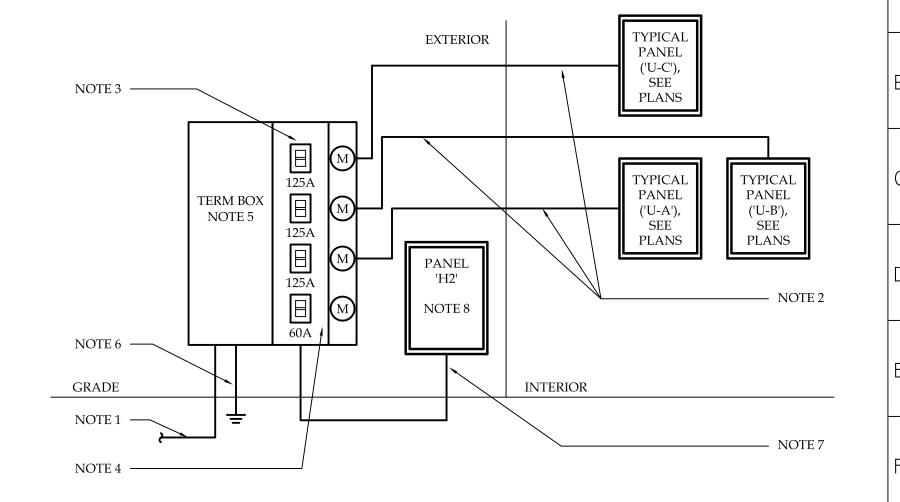
- 1. FROM UTILITY PAD MOUNTED TRANSFORMER, SEE CIVIL/SITE PLANS FOR LOCATION. SECONDARY SERVICE ENTRANCE CONDUCTORS PROVIDED AND INSTALLED BY EC. ONE SET OF 2#4/0, 1#2/0 CU USE, IN 2-1/2" CONDUIT, OR ONE SET OF 2#300KCM, 1#4/0 AL USE, IN 3" CONDUIT. EC SHALL CONTACT UTILITY FOR MOST UP TO DATE AVAILABLE FAULT CURRENT. ALL PANELBOARDS AND CIRCUIT BREAKERS MUST HAVE AN AIC RATING GREATER THAN THE FAULT CURRENT.
- 2. ONE SET OF 2#2, 1#4 CU SER WITH #8 GND OR 2#1/0, 1#2, AL SER WITH #6 GND.
- 3. 125A METER BASE FOR EACH APT UNIT EQUAL TO EZMR113125 (3 BANK) BY SQUARE D OR EQUAL PROVIDED AND INSTALLED BY EC TO POWER CO. REQUIREMENTS. EACH APT UNIT PROVIDED WITH 125A MCB.
- 4. MAIN BUILDING SERVICE ENTRANCE SECTION TO BE EQUAL TO EZM1225TB BY SQUARE D OR EQUAL WITH 225A RATED MAINS AND LOAD CENTER BUS BAR ASSEMBLY, NEMA 3R.
- 5. #2 GROUNDING CONDUCTOR AND GROUNDING ELECTRODE SYSTEM. BOND ALL GROUNDS TOGETHER WITH #2 TO FORM ONE BUILDING GROUND. SEE GROUNDING DETAIL FOR



BUILDING '1' (3 REG UNITS, 'U-B') & HOUSE RISER DIAGRAM DIAGRAMMATIC ONLY

NOTES:

- 1. FROM UTILITY PAD MOUNTED TRANSFORMER, SEE CIVIL/SITE PLANS FOR LOCATION. SECONDARY SERVICE ENTRANCE CONDUCTORS PROVIDED AND INSTALLED BY EC. ONE SET OF 2#4/0, 1#2/0 CU USE, IN 2-1/2" CONDUIT, OR ONE SET OF 2#300KCM, 1#4/0 AL USE, IN 3" CONDUIT. EC SHALL CONTACT UTILITY FOR MOST UP TO DATE AVAILABLE FAULT CURRENT. ALL PANELBOARDS AND CIRCUIT BREAKERS MUST HAVE AN AIC RATING GREATER THAN THE FAULT CURRENT.
- 2. ONE SET OF 2#2, 1#4 CU SER WITH #8 GND OR 2#1/0, 1#2, AL SER WITH #6 GND.
- 3. 125A METER BASE FOR EACH APT UNIT EQUAL TO EZMR114125 (4 BANK) BY SQUARE D OR EQUAL PROVIDED AND INSTALLED BY EC TO POWER CO. REQUIREMENTS. EACH APT UNIT PROVIDED WITH 125A MCB.
- 4. 125A METER BASE FOR HOUSE SERVICE PROVIDED AND INSTALLED BY EC TO POWER CO. REQUIREMENTS. HOUSE SERVICE PROVIDED WITH 60A MCB.
- 5. MAIN BUILDING SERVICE ENTRANCE SECTION TO BE EQUAL TO EZM1225TB BY SQUARE D OR EQUAL WITH 225A RATED MAINS AND LOAD CENTER BUS BAR ASSEMBLY, NEMA 3R.
- 6. #2 GROUNDING CONDUCTOR AND GROUNDING ELECTRODE SYSTEM. BOND ALL GROUNDS TOGETHER WITH #2 TO FORM ONE BUILDING GROUND. SEE GROUNDING DETAIL FOR MORE INFO.
- 7. ONE SET OF 2#6, 1#8 CU SER WITH #8 GND IN 1-1/4"C.
- 8. 240/120V, 1 PHASE, 3 WIRE, 125 AMP, 12 SPACE PANEL EQUAL TO SQUARE D HOMELINE LOADCENTER, WITH 125 AMP MLO, NEMA 3R EXTERIOR RATED.



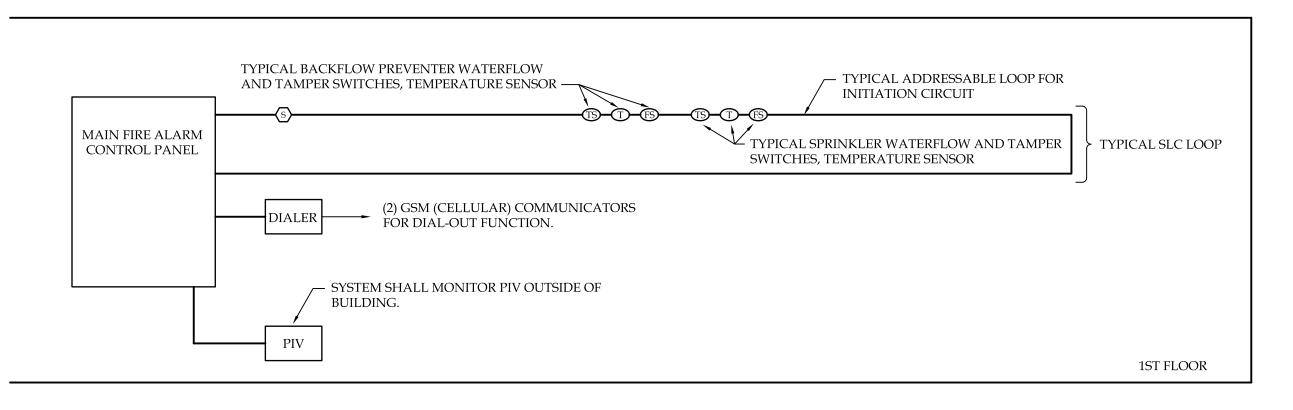
BUILDING '2' (2 FLATS, 1 REG UNIT) & HOUSE RISER DIAGRAM DIAGRAMMATIC ONLY

NOTES:

- 1. FROM UTILITY PAD MOUNTED TRANSFORMER. SEE CIVIL/SITE PLANS FOR LOCATION. SECONDARY SERVICE ENTRANCE CONDUCTORS PROVIDED AND INSTALLED BY EC. ONE SET OF 2#4/0, 1#2/0 CU USE, IN 2-1/2" CONDUIT, OR ONE SET OF 2#300KCM, 1#4/0 AL USE, IN 3" CONDUIT. EC SHALL CONTACT UTILITY FOR MOST UP TO DATE AVAILABLE FAULT CURRENT. ALL PANELBOARDS AND CIRCUIT BREAKERS MUST HAVE AN AIC RATING GREATER THAN THE FAULT CURRENT.
- 2. ONE SET OF 2#2, 1#4 CU SER WITH #8 GND OR 2#1/0, 1#2, AL SER WITH #6 GND.
- 3. 125A METER BASE FOR EACH APT UNIT EQUAL TO EZMR114125 (4 BANK) BY SQUARE D OR EQUAL PROVIDED AND INSTALLED BY EC TO POWER CO. REQUIREMENTS. EACH APT UNIT PROVIDED WITH 125A MCB.
- 4. 125A METER BASE FOR HOUSE SERVICE PROVIDED AND INSTALLED BY EC TO POWER CO. REQUIREMENTS. HOUSE SERVICE PROVIDED WITH 60A MCB.
- MAIN BUILDING SERVICE ENTRANCE SECTION TO BE EQUAL TO EZM1225TB BY SQUARE D OR EQUAL WITH 225A RATED MAINS AND LOAD CENTER BUS BAR ASSEMBLY, NEMA 3R.
- 6. #2 GROUNDING CONDUCTOR AND GROUNDING ELECTRODE SYSTEM. BOND ALL GROUNDS TOGETHER WITH #2 TO FORM ONE BUILDING GROUND. SEE GROUNDING DETAIL FOR MORE INFO.
- 7. ONE SET OF 2#6, 1#8 CU SER WITH #8 GND IN 1-1/4"C.
- 8. 240/120V, 1 PHASE, 3 WIRE, 125 AMP, 12 SPACE PANEL EQUAL TO SQUARE D HOMELINE LOADCENTER, WITH 125 AMP MLO, NEMA 3R EXTERIOR RATED.

GENERAL NOTES - FIRE ALARM

- FIRE ALARM SYSTEM SHALL BE ADDRESSABLE, 24V DC, POWER LIMITED, FULLY SUPERVISED, WITH REMOTE AUTODIAL. PANEL TO BE SURFACE MOUNTED LOCATED AS INDICATED ON THE DRAWINGS.
- 2. FIRE ALARM DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH 2013 NFPA 72, NFPA 70 (NEC), 'ADA', AND THE REQUIREMENTS OF THE LOCAL AHJ.
- ALL FIRE ALARM WIRING SHALL BE IN MIN. 3/4" CONDUIT OR AS ALLOWED BY NEC OR LOCAL AHJ. ENT, ALSO KNOWN AS "SMURF TUBE" IS NOT ALLOWED. PROVIDE CABLE SIZE AND TYPE PER MFG. RECOMMENDATIONS. RACEWAYS AND J-BOXES CONTAINING FIRE ALARM CONDUCTORS SHALL BE MARKED IN RED FOR READY IDENTIFICATION.
- 4. NOTIFICATION DEVICES AND CIRCUITS/LOOPS ARE NOT REQUIRED FOR THIS PROJECT.
- 5. ALL ADDRESSABLE LOOP CONTROLLER (INITIATING) CIRCUITS SHALL BE WIRED WITH NO 'T' TAPS MADE. PROVIDE 20% SPARE ADDRESSES PER LOOP.
- 6. DEVICE QUANTITIES INDICATED ON THE PLANS SHALL BE VERIFIED BY THE FIRE ALARM CONTRACTOR TO COMPLY WITH THE REQUIREMENTS OF 2013 NFPA 72, INCLUDING THE CORRECT SPACING AND CANDELA RATINGS OF ANY HORN/STROBES. FIRE ALARM CONTRACTOR SHALL ADD DEVICES AT ANY POINT WHERE SPACING OR CANDELA RATINGS ARE NOT MET AND INCLUDE THESE IN HIS SHOP DRAWINGS AND IN HIS BID. VERIFY QUANTITY AND EXACT LOCATION WITH AHJ TO ENSURE BID INCLUDES ALL REQUIRED WORK.
- 7. FIRE ALARM CONTROL PANEL LOCATION MUST BE APPROVED BY THE LOCAL FIRE DEPARTMENT REPRESENTATIVE.
- 8. TESTING OF THE FIRE ALARM SYSTEM SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM CONTRACTOR.
- 9. REFER TO APPROVED SPRINKLER SHOP DRAWINGS FOR LOCATION OF ALL SPRINKLER MONITORING POINTS.
- 10. PROVIDE EMERGENCY POWER SUPPLY TO FIRE ALARM SYSTEM. MAY USE BATTERY BACKUP. BATTERY MUST OPERATE FOR 5 MINUTES IN ALARM AFTER 24 HOURS IN STANDBY.



FIRE ALARM RISER DIAGRAM

REVISIONS

Electrical Riser Diagram

E9.01