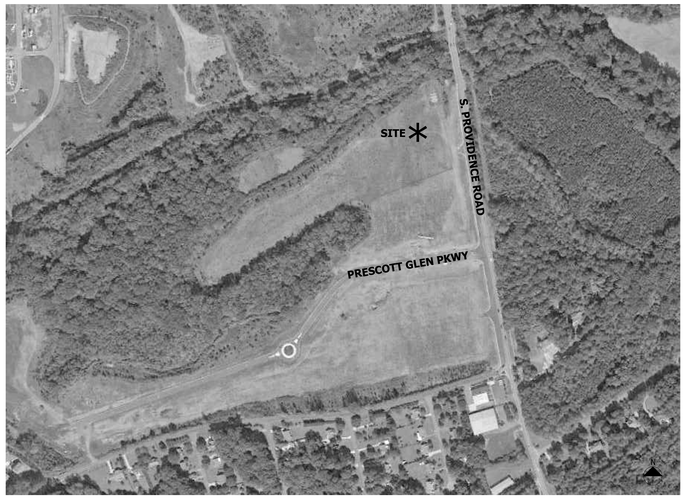
BED & BARK

WAXHAW, NORTH CAROLINA



VICINTY

GENERAL CONSTRUCTION NOTES

UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR IN THE DOCUMENTS OR SPECIFICATIONS, THE FOLLOWING NOTES APPLY.

DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION OBTAIN CLARIFICATION FROM ARCHITECT.

1. ALL DIMENSIONS ARE GIVEN TO FACE OF MASONRY WALLS, FACE OF EXISTING WALLS, FACE OF STUD WALLS AND CENTERLINE OF STRUCTURAL COLUMNS. ALL DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED.
2. ALL CONSTRUCTION TO MEET REQUIREMENTS OF THE APPLICABLE BUILDING CODES.
3. ALL WORK NOTED "BY OTHERS", "NIC", OR "SUPPLIED BY OWNER" SHALL BE PROVIDED BY OWNER OR OWNER'S CONSULTANT UNDER A SEPARATE AGREEMENT.
4. "ALIGN" SHALL MEAN TO ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE.
5. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLANS AND ELEVATIONS.

ODa
overcash demmitt
2010 south tryon st. suite 1a
charlotte north carolina 28203
office.704.332.1615
web.www.odarch.com

01/02/19

METROLINA BUILDERS
GENERAL CONTRACTORS

GENERAL

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FIRE PROTECTION

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BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
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2 ZONING CHANGES	:	07.25.17
3 ZONING CHANGES	:	09.06.17
4 REVIEW COMMENTS	:	10.24.17
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11 RETAINING WALL	:	01.02.19
---	:	---

SHEET INDEX

DEWBERRY ENGINEERS INC.
6135 LAKEVIEW RD.
SUITE 150
OFFICE: 704.509.9918

overcash demmitt
2010 south tryon st. suite 1a
charlotte north carolina 28203
704 332 1615

BAB STRUCTURAL ENGINEERING
3017 CLARK ST.
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OFFICE: 704.507.4014

BK CONSULTING, INC.
301 MCCULLOUGH DR. - 4TH FLOOR
OFFICE: 980.272.2009 EXT.801

BK CONSULTING, INC.
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A0.0

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ODA No. 163112 CADD File: dwgs/_A0.1.dwg

2012 APPENDIX B : BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

GENERAL INFORMATION

NAME OF PROJECT: Bed & Bark

ADDRESS: 3300 Providence Rd. South as part of new Prescott Development ZIP CODE: 28173

PROPOSED USE: Dog and cat boarding facility

OWNER or AUTHORIZED AGENT: Evan Carroll Phone #: 704.779.5118

OWNED BY: [ ] City / County [X] Private [ ] State

CODE JURISDICTION: [X] City Waxhaw [ ] County Union County [ ] State NC

DESIGNER of RECORD

LEAD DESIGN PROFESSIONAL: Stephen Overcash

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	EMAIL
Architectural	OVERCASH-DEMMITT	Stephen Overcash	3876	704-332-1615	sovercash@oda.us.com
Civil	Dewberry	Brian Dey	27528	704-264-1252	bdey@Dewberry.com
Electrical	BK Consulting, Inc.	William King	32531	980-272-2009	bking@bkconsultingInc.com
Fire Alarm	BK Consulting, Inc.	William King	32531	980-272-2009	bking@bkconsultingInc.com
Plumbing	BK Consulting, Inc.	William King	32531	980-272-2009	bking@bkconsultingInc.com
Mechanical	BK Consulting, Inc.	William King	32531	980-272-2009	bking@bkconsultingInc.com
Sprinkler/Standpipe	BK Consulting, Inc.	William King	32531	980-272-2009	bking@bkconsultingInc.com
Structural	BAB Structural Engineering	Blaine Barfield	35798	704.507.4014	bbarfield@babstruct.com
Retaining Walls >5' High	BAB Structural Engineering	Blaine Barfield	35798	704.507.4014	bbarfield@babstruct.com
Other	---	---	---	---	---

BUILDING CODE EDITION

2012 EDITION OF NORTH CAROLINA CODE FOR: [X] New Construction [ ] Addition [ ] Upfit

EXISTING: [ ] Reconstruction [ ] Alteration [ ] Repair [ ] Renovation

CONSTRUCTED (date) : --- ORIGINAL USE(S) Chapter 3 : ---

RENOVATED (date) : --- CURRENT USE(S) Chapter 3 : ---

PROPOSED USE(S) Chapter 3 : ---

BUILDING DATA

CONSTRUCTION TYPE: (Chapter 6)

Non-combustible	Non-combustible	Non-combustible exterior walls and any materials permitted by this Code	Heavy Timber	Any materials permitted by Code
[ ] Type I - A	[ ] Type II - A	[ ] Type III - A	[ ] Type IV - HT	[ ] Type V - A
[ ] Type I - B	[ ] Type II - B	[ ] Type III - B		[X] Type V - B

Mixed construction: [X] No [ ] Yes Types: ---

SPRINKLER: [ ] No [X] Yes [ ] Partial [ ] NFPA 13 [ ] NFPA 13R [ ] NFPA 13D

STANDPIPES: [X] No [ ] Yes Class: [ ] I [ ] II [ ] III [ ] WET [ ] DRY

FIRE DISTRICT: [X] No [ ] Yes

BUILDING HEIGHT: Ht: 23'-4" Stories: 1

MEZZANINE: [X] No [ ] Yes

FLOOD HAZARD AREA: [X] No [ ] Yes

GROSS BUILDING AREA : Square Footage

	EXISTING (sq. ft.)	RENOVATION / UPFIT (sq. ft.)	NEW (sq. ft.)	SUB-TOTAL
SIXTH FLOOR	---	---	---	---
FIFTH FLOOR	---	---	---	---
FOURTH FLOOR	---	---	---	---
THIRD FLOOR	---	---	---	---
SECOND FLOOR	---	---	---	---
MEZZANINE	---	---	---	---
FIRST FLOOR	N/A	N/A	8,260	8,260
BASEMENT LEVEL	---	---	---	---
			TOTAL	8,260

ALLOWABLE AREA : Chapter 5

PRIMARY OCCUPANCY: (Chapter 3)

[ ] Assembly	Type:	---	[ ] Institutional	Type:	---
[X] Business	Type:	ANIMAL KENNEL FACILITY	[ ] Mercantile	Type:	---
[ ] Educational	Type:	---	[ ] Residential	Type:	---
[ ] Factory / Industrial	Type:	---	[ ] Storage	Type:	---
[ ] High Hazard	Type:	---	[ ] Parking Garage	[ ] Open	
[ ] Utility / Misc	Type:	---	[ ] Enclosed	[ ] Repair Garage	

ACCESSORY OCCUPANCY:

[ ] Assembly	Type:	---	[ ] Institutional	Type:	---
[ ] Business	Type:	---	[ ] Mercantile		---
[ ] Educational	Type:	---	[ ] Residential	Type:	---
[ ] Factory / Industrial	Type:	---	[ ] Storage	Type:	---
[ ] High Hazard	Type:	---	[ ] Parking Garage	[ ] Open	
[ ] Utility / Misc	Type:	---	[ ] Enclosed	[ ] Repair Garage	

INCIDENTAL USES:: (Table 508.2.5)

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

SPECIAL USES:

[ ] 402 [ ] 403 [ ] 404 [ ] 405 [ ] 406 [ ] 407 [ ] 408 [ ] 409 [ ] 410 [ ] 411 [ ] 412 [ ] 413 [ ] 414

[ ] 415 [ ] 416 [ ] 417 [ ] 418 [ ] 419 [ ] 420 [ ] 421 [ ] 422 [ ] 423 [ ] 424 [ ] 425 [ ] 426 [ ] 427

SPECIAL PROVISIONS:

[ ] 509.2 [ ] 509.3 [ ] 509.4 [ ] 509.5 [ ] 509.6 [ ] 509.7 [ ] 509.8 [ ] 509.9

MIXED OCCUPANCY:: [X] No [ ] Yes Separation / Hour: - Exception: ___

- [ ] Icidental use Separation (508.2.5)
  This separation is not exempt as a Non-Separated Use (see exceptions)
- [ ] Non-Seperated Mixed Occupancy (508.3)
  The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
- [ ] Separated Mixed Occupancy (508.4) - See below for area calculations
  For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use, shall not exceed 1.

ACTUAL Building A / Building A + Building B / Building B + Building C / Building C = ___ ≤ 1.00

	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (actual)	(B) 5 TABLE 503 AREA	(C) 1 AREA FOR OPEN SPACE INCREASE	(D) 2 AREA FOR SPRINKLER INCREASE	(E) 3 ALLOWABLE AREA OR UNLIMITED	(F) 4 MAXIMUM BUILDING AREA
SIXTH FLOOR	---	---	---	---	---	---	---
FIFTH FLOOR	---	---	---	---	---	---	---
FOURTH FLOOR	---	---	---	---	---	---	---
THIRD FLOOR	---	---	---	---	---	---	---
SECOND FLOOR	---	---	---	---	---	---	---
FIRST FLOOR	BUSINESS	8,260	9 000	N/A	24,780	UNLIMITED	UNLIMITED
BASEMENT LEVEL	---	---	---	---	---	---	---

1. Open space area increase from Section 506.2 are computed thus:
   - a. Perimeter which fronts a public way or open space having 20 feet minimum width (F) = N/A
   - b. Total Building Perimeter (P) = N/A
   - c. Ratio (F/P) = N/A
   - d. Minimum width of public way (W) = N/A
   - e. Percent of frontage increase I_f = 100 (F/P - 0.25) x W/30 = N/A
2. The sprinkler increase per Section 506.3 Is as follows:
   - a. Multi-story building I s = 200 percent
   - b. Single-story building I s = 300 percent
3. Unlimited area application under conditions of Sections: 507
4. Maximum Building Area = total number of stories in the building x E, but not greater than 3 x E (506.5).
5. maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.3.1.

ALLOWABLE HEIGHT : Chapter 5

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
TYPE OF CONSTRUCTION	Type VB		Type VB	
BUILDING HEIGHT (feet)	Feet 40	Feet = H + 20' = 60'-0"	Feet 23'-4"	SECTION 503
BUILDING HEIGHT (stories)	Stories 2	Stories + 1 = 3	Stories 1	SECTION 503

FIRE PROTECTION REQUIREMENTS : Chapter 6

Life Safety Plan sheet no. (if provided): A0.2

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (feet)	RATING REQUIRED	RATING PROVIDED 1	DETAIL / SHEET No.	DESIGN No. FOR RATED ASSEMBLY	DESIGN No. FOR RATED PENETRATIONS	DESIGN No. FOR RATED JOINTS
Structural frame, including: columns, girders, trusses		0	0				
Bearing walls - Exterior							
North	30'+	0	0-2HR				
East	30'+	0	0-2HR				
West	30'+	0	0-2HR				
South	30'+	0	0-2HR				
Bearing walls - Interior		0	0				
Non-bearing walls/ partitions - Exterior							
North		N/A	N/A				
East		N/A	N/A				
West		N/A	N/A				
South		N/A	N/A				
Non-bearing walls - Interior		0	0				
Floor construction, including: supporting beams and joists		0	0				
Roof construction, including: supporting beams and joists		0	0				
Shafts - Exit		N/A	N/A				
Shafts - Other		N/A	N/A				
Corridor separation		N/A	N/A				
Occupancy separation		N/A	N/A				
Party / fire wall separation		N/A	N/A				
Smoke barrier separation		N/A	N/A				
Tenant separation		N/A	N/A				

1. Indicates section number permitting reduction.

LIFE SAFETY SYSTEM REQUIREMENTS : Chapters 9 and 10

EMERGENCY LIGHTING:	[ ] No	[X] Yes		1006.1
EXIT SIGNS:	[ ] No	[X] Yes		1011.1
FIRE ALARM:	[ ] No	[X] Yes		907
SMOKE DETECTION SYSTEMS:	[ ] No	[X] Yes	[ ] Partial	907
PANIC HARDWARE	[X] No	[ ] Yes		1008.1.9

LIFE SAFETY PLAN REQUIREMENTS :

Life Safety plan Sheet#: A0.2

- [ ] Fire and/or smoke rated wall locations (Chapter 7)
- [ ] Assumed and real property line locations
- [ ] Exterior wall opening area with respect to distance to assumed property lines (705.8)
- [ ] Existing structures within 30' of the proposed building
- [X] Occupancy types for each area as it relates to occupant load calculation (Table: 1004.1.1)
- [X] Occupant loads for each area
- [X] Exit access travel distances (1016)
- [X] Common path of travel distances (1014.3 & 1028.8)
- [ ] Dead end lengths (1018.4)
- [X] Clear exit widths for each exit door
- [X] Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
- [X] Actual occupant load for each exit door
- [ ] A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- [ ] Location of doors with panic hardware (1008.1.10)
- [ ] Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
- [ ] Location of doors with electromagnetic egress locks (1008.1.9.8)
- [ ] Location of doors equipped with hold-open devices
- [ ] Location of emergency escape windows (1029)
- [ ] The square footage of each fire area (902)
- [ ] The square footage of each smoke compartment (407.4)
- [ ] Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE "A" UNITS REQUIRED	TYPE "A" UNITS PROVIDED	TYPE "B" UNITS REQUIRED	TYPE "B" UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
N/A	---	---	---	---	---	---	---

PLUMBING FIXTURES : Chapter 29

OCCUPANCY		WATERCLOSETS MALE	WATERCLOSETS FEMALE	URINALS MALE	LAVATORIES MALE	LAVATORIES FEMALE	TUBS / SHOWERS	DRINKING FOUNTAIN REGULAR	DRINKING FOUNTAIN ACCESSIBLE
1 st. FLOOR									
	EXISTING	N/A		N/A	N/A		N/A	N/A	N/A
	NEW	1*		N/A	1*		N/A	1	1
	REQUIRED	1*		N/A	1*		N/A	1	1
2 nd. FLOOR									
	EXISTING	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	NEW	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	REQUIRED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*PER 2012 NCSBC PLUMBING CODE, SECTION 403.2 - EXCEPTION 2, SEPERATE FACILITIES SHALL NOT BE REQUIRED IF OCCUPANT LOAD, INCLUDING BOTH EMPLOYEES AND CUSTOMERS IS 25 OR LESS.

ACCESSIBLE PARKING REQUIREMENTS (SEE CIVIL)

LOT OR PARKING AREA	TOTAL No. OF PARKING SPACES REQUIRED	TOTAL No. OF PARKING SPACES PROVIDED	No. OF ACCESSIBLE SPACES PROVIDED: REGULAR w/ 5'-0" ACCESS AISLE	No. OF ACCESSIBLE SPACES PROVIDED: VAN SPACES w/ 8'-0" ACCESS AISLE	TOTAL No. ACCESSIBLE PROVIDED
---	---	---	---	---	---
---	---	---	---	---	---
---	---	---	---	---	---
TOTAL	---	---	---	---	---

STATEMENT of SPECIAL INSPECTION

[ ] NO SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT [X] SPECIAL INSPECTIONS REQUIRED

THE FOLLOWING COMPRISE THE REQUIRED SCHEDULE OF SPECIAL INSPECTIONS FOR THIS PROJECT. THE CONSTRUCTION DIVISIONS WHICH REQUIRE SPECIAL INSPECTIONS FOR THIS PROJECT ARE AS FOLLOWS:

- [ ] IT-1 VERIFICATION OF SOILS
- [ ] IT-2 EXCAVATION AND FILL
- [ ] IT-3 PILING AND DRILLING PIERS
- [X] IT-4 MODULAR RETAINING WALLS
- [X] IT-5 REINFORCED CONCRETE
- [ ] IT-6 POST TENSION SLAB
- [ ] IT-7 PRE-CAST CONCRETE ERECTION
- [ ] IT-8 PRE-STRESSED CONCRETE
- [ ] IT-9 INSPECTION OF PRE-CAST FABRICATORS
- [ ] IT-10 INSPECTION OF STRUCTURAL STEEL FABRICATORS
- [X] IT-11 STRUCTURAL MASONRY
- [ ] IT-12 WELDING
- [ ] IT-13 HIGH STRENGTH BOLTS & STEEL FRAMING INSP.
- [ ] IT-14 SPRAYED FIRE-RESISTANCE MATERIALS
- [X] IT-15 EXTERIOR INSULATION AND FINISH SYSTEM
- [ ] IT-16 SEISMIC RESISTANCE
- [ ] IT-17 SMOKE CONTROL
- [ ] IT-18 DETENTION BASIN
- [ ] IT-19 SPECIAL CASES

SEE SHEET A0-_ FOR THE REQUIRED SCHEDULE OF SPECIAL INSPECTIONS FOR THIS PROJECT.

STRUCTURAL DESIGN

ALSO SEE STRUCTURAL DRAWING SHEET:

DESIGN LOADS:

Importance Factors:
- Wind (Iw): 1.0
- Snow (Is): 1.0
- Seismic (Ie): 1.0

Live Loads:
- Roof (p.s.f.): 20 PSF
- Mezzanine (p.s.f.): N/A
- Floor (p.s.f.): 100 PSF

Snow load (p.s.f.) : Pg : 12

Wind load:
- Basic wind speed (m.p.h. ASCE-7-98): 90 MPH
- Exposure category: C

Wind base shears (for MWFRS):
- Vx : 16.4 K
- Vy : 27.1 K

SEISMIC DESIGN CATEGORY : [ ] A [ ] B [X] C [ ] D

Occupancy Category (T1604.5) [X] I [ ] II [ ] III [ ] IV

Spectral response acceleration:
- Sds (% g): 0.292 % g
- Sd1 (% g): 0.176 % g

Site classification: D [ ] Field Test [X] Presumptive [ ] Historical Data

Basic Structural System: [X] Bearing wall [X] Building frame [ ] Moment frame [ ] Dual w/ special moment frame [ ] Dual w/ intermediate R/C or special steel [ ] Inverted pendulum

Seismic base shears:
- Vx : 22.3 K
- Vy : 49.4 K

Analysis Procedure: [ ] Simplified [X] Equivalent lateral force [ ] Modal

Architectural, mechanical, components anchored: YES

LATERAL DESIGN CONTROL: [X] Earthquake [ ] Wind

SOIL BEARING CAPACITIES:
- Field test (provide test report) (p.s.f.): N/A
- Presumptive bearing capacity (p.s.f.): 2000 PSF
- Pile size, type and capacity: N/A

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT - SEE ELECTRICAL DRAWINGS

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT - SEE MECHANICAL DRAWINGS

ENERGY SUMMARY

COMcheck Software Version 4.0.5.4

Envelope Compliance Certificate

Section 1: Project Information

Energy Code: **2012 North Carolina Energy Conservation Code**
Project Title: Bed & Bark Pet Care
Project Type: New Construction

Construction Site:
3400 Providence Rd S.
Waxhaw, NC 28173

Owner/Agent:
Matt Williams
Metrolina Builders
425 East Hebron Street
Charlotte, NC 28273
704-533-0634
mwilliams@metrolinabuilders.com

Designer/Contractor:
Stephen Overcash
Overcash Demmitt Architects
2010 South Tryon Street
Suite 1a
Charlotte, NC 28203
704-332-1615
sovercash@oda.us.com

Building Location (for weather data): Waxhaw, North Carolina
Climate Zone: 3a
Vertical Glazing / Wall Area Pct.: 7%

Building Use: Area Type	Floor Area
1-Office : Nonresidential	8260

Section 2: Envelope Assemblies and Requirements Checklist

Envelope PASSES. Design 0.4% better than code.

Envelope Assemblies:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Office Rear Wall - North: Wood-Framed, 16' o.c., [Bldg. Use 1 - Office]	925	13.0	3.8	0.064	0.064
Window 1: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID AGC Comfort Ti-AC 40#2/Clear, SHGC 0.28, [Bldg. Use 1 - Office] (b)	132	---	---	0.290	0.450
Door 9: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, [Bldg. Use 1 - Office]	63	---	---	1.200	0.770
Office Side Wall - West: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	495	13.0	3.8	0.064	0.064
Window 2: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID AGC Comfort Ti-AC 40#2/Clear, SHGC 0.28, [Bldg. Use 1 - Office] (b)	59	---	---	0.290	0.450
Door 10: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, [Bldg. Use 1 - Office]	21	---	---	1.200	0.770
Office Side Wall - East: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	495	13.0	3.8	0.064	0.064
Window 3: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID AGC Comfort Ti-AC 40#2/Clear, SHGC 0.28, [Bldg. Use 1 - Office] (b)	81	---	---	0.290	0.450
Office Front Wall - South: Wood-Framed, 16" o.c., [Bldg. Use 1 - Office]	1210	13.0	3.8	0.064	0.064
Window 4: Metal Frame with Thermal Break:Fixed, Perf. Specs.: Product ID AGC Comfort Ti-AC 40#2/Clear, SHGC 0.28, [Bldg. Use 1 - Office] (b)	210	---	---	0.290	0.450
Door 11: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, [Bldg. Use 1 - Office]	42	---	---	1.200	0.770

Project Title: Bed & Bark Pet Care
Data filename: L:_Industrial\163112 - Bed & Bark - Waxhaw_Drawings\Misc\Energy\COMcheck.cck
Report date: 02/06/17
Page 1 of 2

Kennel Rear Wall - North: Concrete Block:8", Solid Grouted,Medium Density , Furring: None, [Bldg. Use 1 - Office]	2250	---	10.4	0.080	0.123
Door 1: insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	140	---	---	0.610	0.500
Door 2: insulated Metal, Swinging, [Bldg. Use 1 - Office]	21	---	---	0.370	0.700
Kennel Side Wall - West: Concrete Block:8", Solid Grouted,Medium Density , Furring: None, [Bldg. Use 1 - Office]	810	---	10.4	0.080	0.123
Door 3: insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	25	---	---	0.610	0.500
Door 4: insulated Metal, Swinging, [Bldg. Use 1 - Office]	42	---	---	0.370	0.700
Kennel Side Wall - East: Concrete Block:8", Solid Grouted,Medium Density , Furring: None, [Bldg. Use 1 - Office]	810	---	10.4	0.080	0.123
Door 5: insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	35	---	---	0.610	0.500
Door 6: insulated Metal, Swinging, [Bldg. Use 1 - Office]	42	---	---	0.370	0.700
Kennel Front Wall - South: Concrete Block:8", Solid Grouted,Medium Density , Furring: None, [Bldg. Use 1 - Office]	1950	---	10.4	0.080	0.123
Door 7: insulated Metal, Non-Swinging, [Bldg. Use 1 - Office]	97	---	---	0.610	0.500
Door 8: insulated Metal, Swinging, [Bldg. Use 1 - Office]	42	---	---	0.370	0.700
Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Office]	2540	---	25.0	0.039	0.039
Roof 2: Attic Roof with Wood Joists, [Bldg. Use 1 - Office]	5690	38.0	0.0	0.027	0.027
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Office]	688	---	---	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

Air Leakage, Component Certification, and Vapor Retarder Requirements:

- [ ] 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- [ ] 2. Windows, doors, and skylights certified as meeting leakage requirements.
- [ ] 3. Component R-values & U-factors labeled as certified.
- [ ] 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- [ ] 5. 'Other' components have supporting documentation for proposed U-Factors.
- [ ] 6. Insulation installed according to manufacturer's instructions. in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation.
- [ ] 7. Shaft vents serving stairs and elevators integral to the building envelope are equipped with motorized dampers.
  - *Exceptions:*
  - [ ] Buildings without fire alarm system.
  - [ ] Stairway vents open to the exterior.
- [ ] 8. Cargo doors and loading dock doors are weather sealed.
- [ ] 9. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, are sealed with gasket or caulk.
- [ ] 10.Building entrance doors have a vestibule equipped with self-closing devices.
  - *Exceptions:*
  - [ ] Building entrances with revolving doors.
  - [ ] Doors not intended to be used as a building entrance.
  - [ ] Doors that open directly from a space less than 3000 sq. ft. in area.
  - [ ] Doors used primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.
  - [ ] Doors opening directly from a sleeping/dwelling unit.
  - [ ] Buildings less than four stories above grade and less than 10,000 ft2 in area.

Additional Efficiency Package Requirements:

- [ ] 1. The high efficiency HVAC option has been selected as the additional efficiency package required by this energy code. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Section 3: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2012 North Carolina Energy Conservation Code requirements in COMcheck Version 4.0.5.4 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title ___ Signature ___ Date ___

Project Title: Bed & Bark Pet Care
Data filename: L:_Industrial\163112 - Bed & Bark - Waxhaw_Drawings\Misc\Energy\COMcheck.cck
Report date: 02/06/17
Page 2 of 2

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o f f i c e . 7 0 4 . 3 3 2 . 1 6 1 5
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STEPHEN F. OVERCASH REGISTERED ARCHITECT 3876 NORTH CAROLINA CHARLOTTE, N.C.

06/01/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
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---	:	---
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CODE SHEET
APPENDIX B

A0.1

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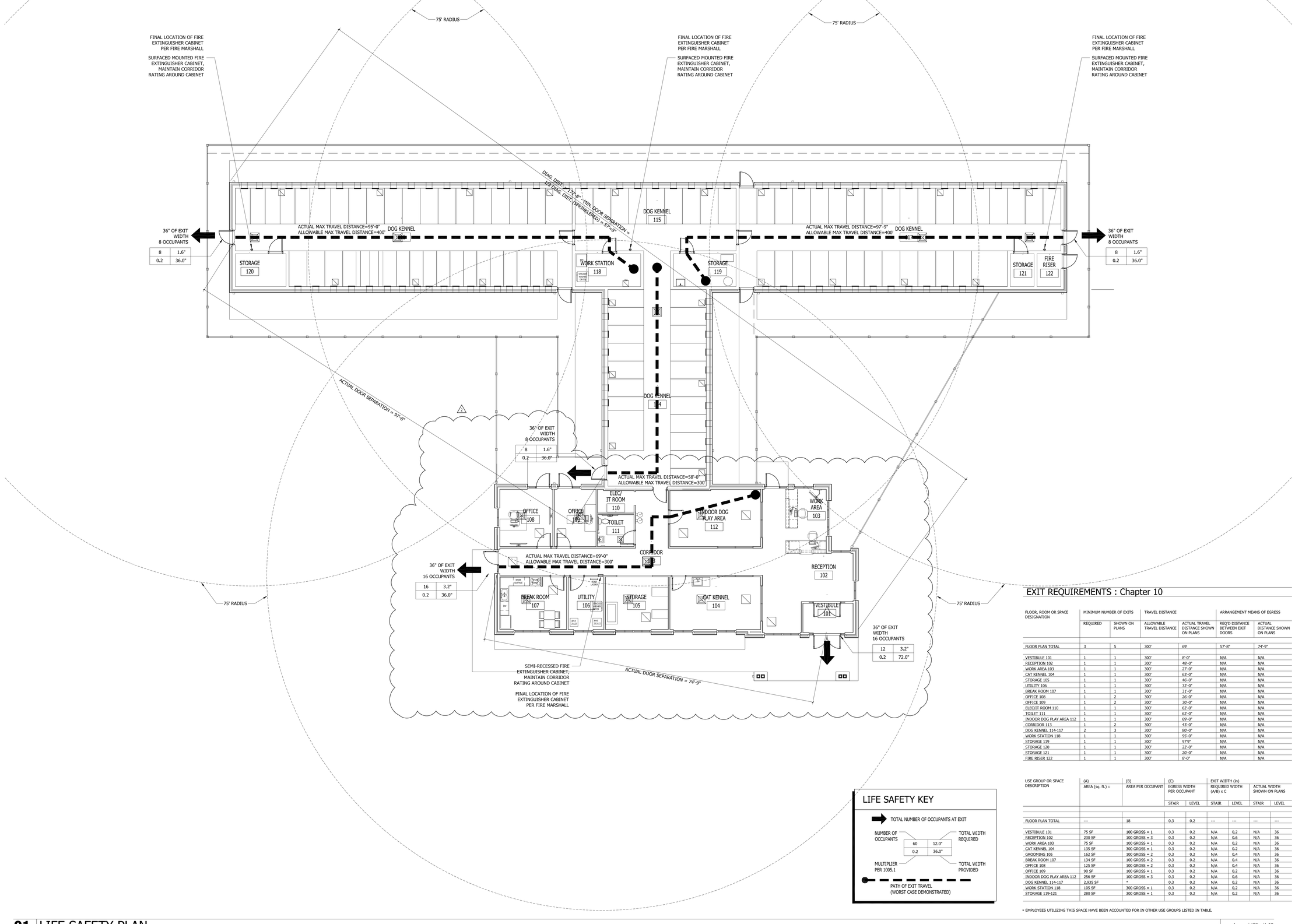
ODA No. 163112 CADD File: dwgs/_A0.1.dwg



LIFE SAFETY KEY

TOTAL NUMBER OF OCCUPANTS AT EXIT

NUMBER OF OCCUPANTS — TOTAL WIDTH REQUIRED

60	12.0"
0.2	36.0"

MULTIPLIER PER 1005.1 — TOTAL WIDTH PROVIDED

PATH OF EXIT TRAVEL (WORST CASE DEMONSTRATED)

EXIT REQUIREMENTS : Chapter 10

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS	
	REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQ'D DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
FLOOR PLAN TOTAL	3	5	300'	69'	57'-8"	74'-9"
VESTIBULE 101	1	1	300'	8'-0"	N/A	N/A
RECEPTION 102	1	1	300'	48'-0"	N/A	N/A
WORK AREA 103	1	1	300'	27'-0"	N/A	N/A
CAT KENNEL 104	1	1	300'	63'-0"	N/A	N/A
STORAGE 105	1	1	300'	46'-0"	N/A	N/A
UTILITY 106	1	1	300'	32'-0"	N/A	N/A
BREAK ROOM 107	1	1	300'	31'-0"	N/A	N/A
OFFICE 108	1	2	300'	26'-0"	N/A	N/A
OFFICE 109	1	2	300'	30'-0"	N/A	N/A
ELEC/IT ROOM 110	1	1	300'	62'-0"	N/A	N/A
TOILET 111	1	1	300'	62'-0"	N/A	N/A
INDOOR DOG PLAY AREA 112	1	1	300'	69'-0"	N/A	N/A
CORRIDOR 113	1	2	300'	43'-0"	N/A	N/A
DOG KENNEL 114-117	2	3	300'	80'-0"	N/A	N/A
WORK STATION 118	1	1	300'	95'-0"	N/A	N/A
STORAGE 119	1	1	300'	97'9"	N/A	N/A
STORAGE 120	1	1	300'	22'-0"	N/A	N/A
STORAGE 121	1	1	300'	20'-0"	N/A	N/A
FIRE RISER 122	1	1	300'	8'-0"	N/A	N/A

USE GROUP OR SPACE DESCRIPTION	(A) AREA (sq. ft.) 1	(B) AREA PER OCCUPANT	(C) EGRESS WIDTH PER OCCUPANT		EXIT WIDTH (in) REQUIRED WIDTH (A/B) x C		ACTUAL WIDTH SHOWN ON PLANS	
			STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
FLOOR PLAN TOTAL	---	18	0.3	0.2	---	---	---	---
VESTIBULE 101	75 SF	100 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36
RECEPTION 102	230 SF	100 GROSS = 3	0.3	0.2	N/A	0.6	N/A	36
WORK AREA 103	75 SF	100 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36
CAT KENNEL 104	135 SF	300 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36
GROOMING 105	162 SF	100 GROSS = 2	0.3	0.2	N/A	0.4	N/A	36
BREAK ROOM 107	134 SF	100 GROSS = 2	0.3	0.2	N/A	0.4	N/A	36
OFFICE 108	125 SF	100 GROSS = 2	0.3	0.2	N/A	0.4	N/A	36
OFFICE 109	90 SF	100 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36
INDOOR DOG PLAY AREA 112	256 SF	100 GROSS = 3	0.3	0.2	N/A	0.6	N/A	36
DOG KENNEL 114-117	2,935 SF	*	0.3	0.2	N/A	0.2	N/A	36
WORK STATION 118	105 SF	300 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36
STORAGE 119-121	280 SF	300 GROSS = 1	0.3	0.2	N/A	0.2	N/A	36

* EMPLOYEES UTILIZING THIS SPACE HAVE BEEN ACCOUNTED FOR IN OTHER USE GROUPS LISTED IN TABLE.

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STEPHEN F. OVERCASH REGISTERED ARCHITECT 3878 NORTH CAROLINA CHARLOTTE, N.C.
07/25/17

METROLINA BUILDERS GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---

LIFE SAFETY PLAN

A0.2

01 LIFE SAFETY PLAN

scale: 1/8"=1'-0"

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ODA No. 163112 CADD File: dwgs/_A0.1.dwg

BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

TOWN OF WAXHAW, NORTH CAROLINA

DRAWING INDEX

GENERAL

T1.0 COVER SHEET

ARCHITECTURAL

A1.0 ELEVATIONS
A1.1 MATERIAL SELECTION

CIVIL

C0.0 GENERAL NOTES
C1.0 EXISTING CONDITIONS AND DEMOLITION PLAN
C2.0 PHASE I EROSION CONTROL
C2.1 PHASE II EROSION CONTROL
C3.0 SITE PLAN
C3.1 SITE PLAN
C4.0 GRADING AND STORM DRAINAGE PLAN
C5.0 UTILITY PLAN
C6.0 PROFILES
C7.0 LANDSCAPE PLAN
C8.0 AUTOTURN PLAN
C9.0 DETAILS
C9.1 DETAILS
C9.2 DETAILS

ZONING DISTRICTS & LOT DEVELOPMENT REQUIREMENTS

SITE	3.03 ACRES
ZONING:	CU-C2
IMPERVIOUS COVERAGE:	18.8%
BUILDING HEIGHT:	45' MAX.
BUILDING SIZE:	
SETBACKS:	FRONT:20'
	SIDE:10'
	REAR:20'
ACCESSORY STRUCTURE:	N/A
SUPPLEMENTAL REQ:	N/A

NOTES:

ANY CHANGES MADE TO THE PLANS FOR OTHER DISCIPLINES (STORM WATER, EROSION, TREES, LANDSCAPING, ETC.) MUST BE SHOWN AND IDENTIFIED BY REVISION # AND CLOUDING. FAILURE TO DO SO WILL DELAY THE APPROVAL OF THIS PROJECT.

DEVELOPMENT MUST COMPLY WITH THE PRESCOT VILLAGE CONDITIONAL USE PERMIT

PARKING SUMMARY

PROPOSED BUILDINGS:
PET CARE FACILITY – 8,260 SF

REQUIRED PARKING – 3.6 SPACES PER 1,000 SF OFFICES
2 SPACES PER 1,000 SF KENNELS

REQUIRED PARKING CALCULATION – 3.6*(2,379/1000) + (2*(5,341/1,000) = 19 SPACES

PARKING SPACES PROVIDED – 19 SPACES

CONTACTS

CLIENT:
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Marvin, NC 28173
PH. (704) 779-5118
evanrc11@gmail.com

ENGINEER:
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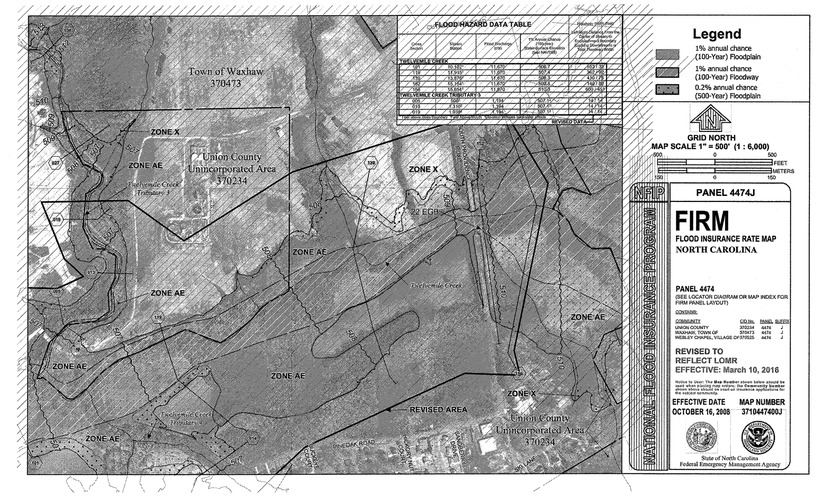
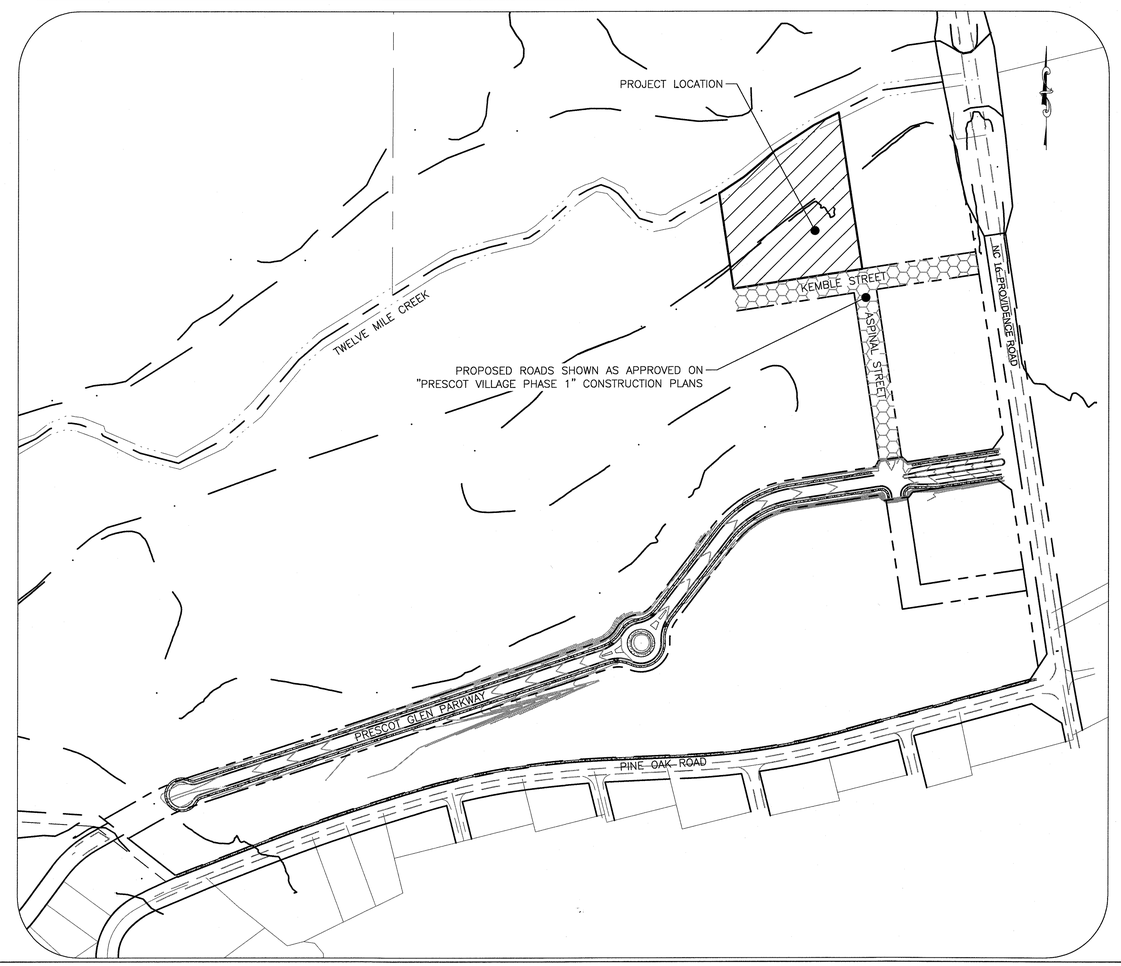
Brian LaFranchi, P.E.
9300 Harris Corners Pkwy, Suite 220
Charlotte, NC 28269
PH. (704) 631-5206
FAX (704) 509-9937
blafranchi@dewberry.com

SUBMITTAL		SET NUMBER
☐ PRELIMINARY	☐ CONSTRUCTION	
☐ APPROVAL	■ REVISION	
☐ BIDDING	☐ RECORD	



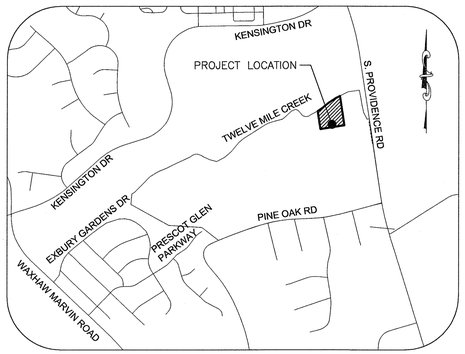
VICINITY MAP

SCALE: 1" = 200'



LOCATION MAP

SCALE: NTS



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WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 11-14-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
8	11/14/18	BML	WAXHAW COMMENT
7	08/16/18	PRS	WAXHAW COMMENT
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

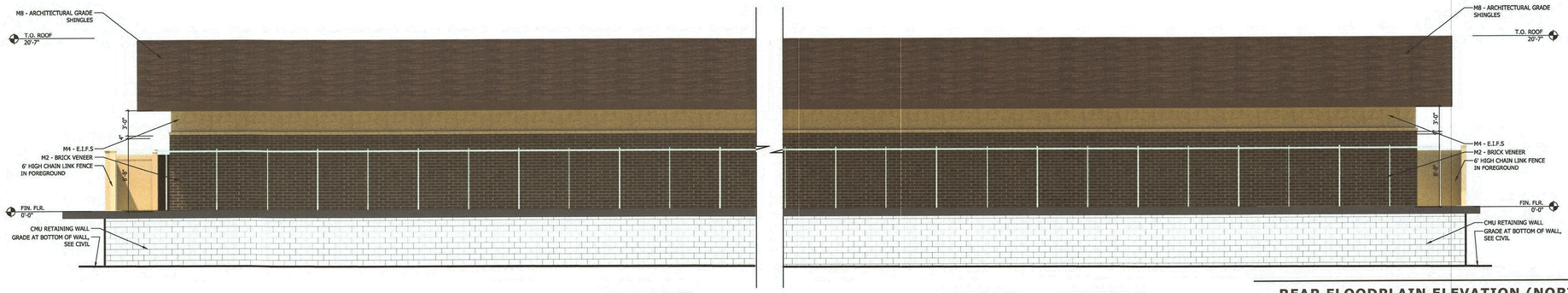
DRAWN BY	MTK
APPROVED BY	BML
CHECKED BY	BML
DATE	06/23/17

TITLE

COVER SHEET

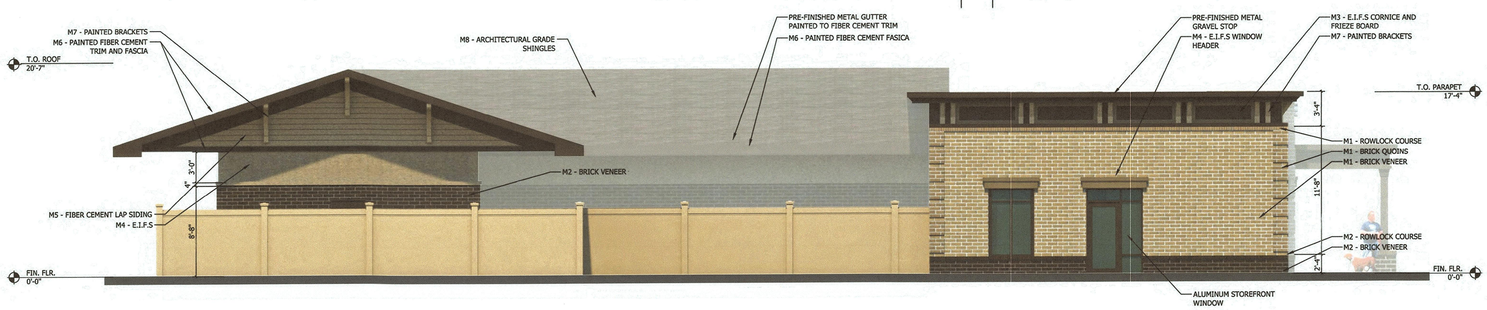
PROJECT NO. 50084227

T1.0

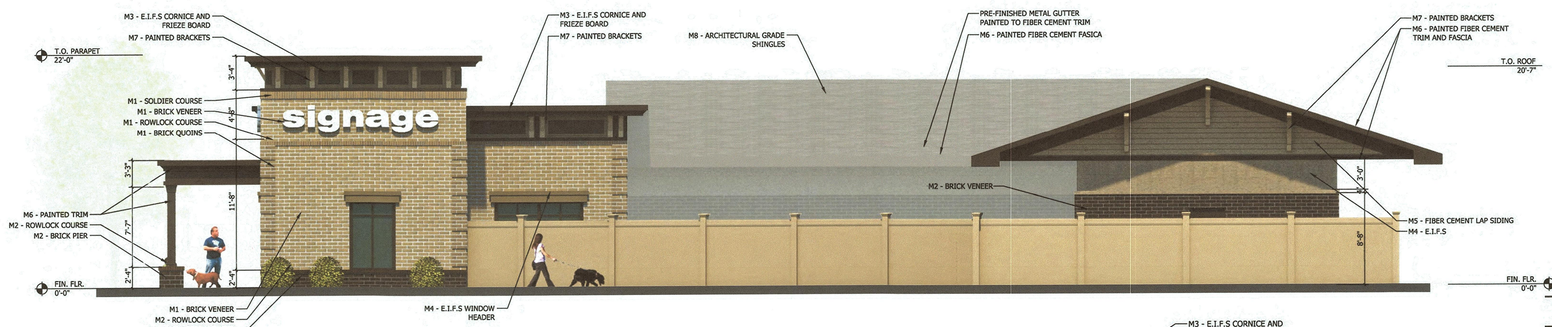


REAR FLOODPLAIN ELEVATION (NORTH)

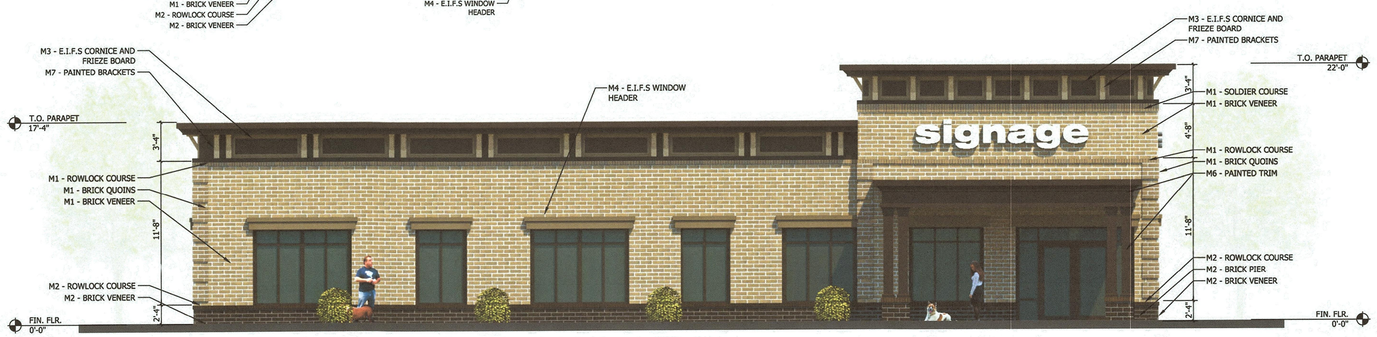
REAR ELEVATION FACES FLOODPLAIN IN BACK AND ISN'T VISIBLE FROM ANY STREETS OR NEIGHBORING PROPERTIES.



SIDE ELEVATION (WEST)



PARKING LOT ELEVATION (EAST)



STREET ELEVATION (SOUTH)

0 10' 25' 50'

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6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

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CHECKED BY BML

DATE 06/23/17

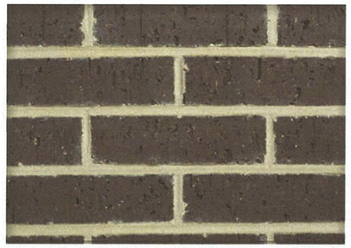
TITLE

ELEVATIONS

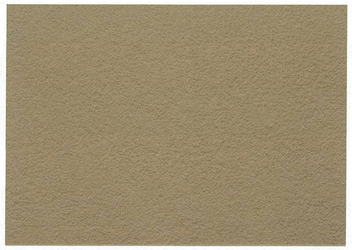
PROJECT NO. 50084227

A1.01

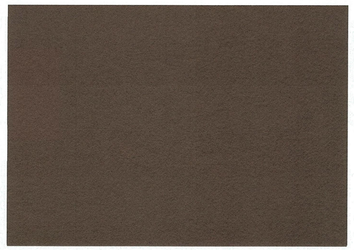
M1 - BRICK VENEER
MANUFACTURER: BORAL BRICK
COLOR: BATTLESHIP
LIBERTY COLLECTION - HENDERSON



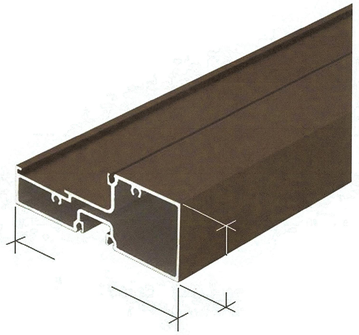
M2 - BRICK VENEER
MANUFACTURER: BORAL BRICK
COLOR: CANNON
LIBERTY COLLECTION - HENDERSON



M3 - STUCCO (SMOOTH FINISH)
MANUFACTURER: DRYVIT
COLOR: SW 6151

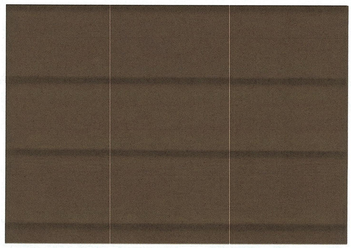


M4 - STUCCO (SMOOTH FINISH)
MANUFACTURER: DRYVIT
COLOR: SW 6006

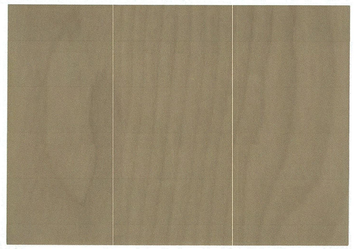


BRONZE ANODIZED ALUMINUM STOREFRONT

M5 - LAP SIDING
MANUFACTURER: JAMESHARDIE
COLOR: SW 6151



M6 - FIBER CEMENT TRIM
MANUFACTURER: JAMESHARDIE
COLOR: SW 6006



M7 - PAINTED WOOD BRACKET
COLOR: SW 6151

M8 - ARCHITECTURAL ROOF SHINGLES
MANUFACTURER: IKO
COLOR: CAMBRIDGE DRIFTWOOD

M9 - CHAIN-LINK FENCE
MANUFACTURER: TBD.
COLOR: BLACK VINYL COATED

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1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK
APPROVED BY BML
CHECKED BY BML
DATE 06/23/17

TITLE

MATERIAL SELECTION

PROJECT NO. 50084227

A1.02

GENERAL

1. BASE MAP OF EXISTING CONDITIONS WAS ESTABLISHED BY SURVEY CONDUCTED AND PREPARED BY DEWBERRY; 2016. BASIS OF SURVEY CONTROL: HORIZONTAL NAD83 (NSRS 2007), VERTICAL NAVD 88
2. WETLANDS, CRITICAL AREAS, OTHER INDICATED ENVIRONMENTALLY SENSITIVE AREAS AND UNDISTURBED BUFFERS SHALL NOT BE DISTURBED EXCEPT WHERE SPECIFICALLY INDICATED WITHIN THESE CONSTRUCTION DOCUMENTS.
3. CONTRACTOR IS TO VERIFY ALL INFORMATION CONTAINED HEREIN PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OR OWNER OF ANY DISCREPANCY PRIOR TO CONSTRUCTION.
4. ALL CONSTRUCTION METHODS, MATERIALS AND WORKMANSHIP, NOT OTHERWISE INDICATED IN THESE PLANS, SHALL CONFORM TO THE LATEST EDITION OF THE TOWN OF WAXHAW SPECIFICATIONS, AND WHERE CONFLICT OCCURS BETWEEN CONSTRUCTION PLANS, CONTACT ENGINEER OR OWNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
5. CONTRACTOR TO COORDINATE WITH OWNER AND ENSURE ALL APPLICABLE CONSTRUCTION AND LAND DISTURBANCE PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCING ANY WORK.
6. CONTRACTOR AND/OR OWNER IS RESPONSIBLE FOR COORDINATING CONSTRUCTION WITH UTILITY COMPANIES, ADJACENT LAND DEVELOPMENTS OR OTHER AFFECTED THIRD PARTIES.
7. CONTRACTOR SHALL CONTROL ACCESS TO THE SITE. A VEHICLE BARRIER OF ORANGE CONSTRUCTION FENCING SHALL BE EMPLOYED ALONG THE FRONTAGE OF KEMBLE STREET.

SURVEY NOTES

1. THIS PROPERTY IS LOCATED WITHIN A DESIGNATED AE FLOOD ZONE, REPRESENTED FROM FEMA FIRM 3710447400J PANEL NUMBER 4474; DATED OCTOBER 16, 2008.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES EXCEPT WHERE OTHERWISE NOTED.
3. CP DENOTES COMPUTED POINT, NO MONUMENT SET.
4. HORIZONTAL PROJECT DATUM IN NORTH CAROLINA STATE 3200 (NAD 83/2007).
5. VERTICAL PROJECT DATUM IN (NAVD 88)
6. WETLANDS AND CHANNELS DELINEATION COMPLETED BY DEWBERRY OCTOBER 1, 2011 ON AND SURVEYED BY DEWBERRY SEPTEMBER 21, 2011.
7. BOUNDARY RETRACEMENT BASED ON THE FOLLOWING DEED AND PLAT REFERENCES.
   - DB. 4316 PG. 78
   - DB. 4316 PG. 83
   - DB. 3679 PG. 298 R/W TO NCDOT
   - DB. 209 PG. 701 R/W AGREEMENT TO STATE OF NORTH CAROLINA
   - DB. 3806 PG. 535 SAN. SEW. ESMT. TO UNION COUNTY.
   - CAB. N FILE 643 PLAT PRESCOT VILLAGE – PHASE 1

ROADWAY, GRADING & DRAINAGE CONSTRUCTION NOTES

1. NOMENCLATURE FOR STATION AND OFFSET IS THE PRIMARY METHOD OF DIMENSIONING FOR THIS SET OF CONSTRUCTION DOCUMENTS. CURB RADII DIMENSIONS ARE REFERENCED TO FACE OF CURB.
2. ALL WORK, METHODS, EQUIPMENT AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WAXHAW ROAD CODE AND SPECIFICATIONS, LATEST EDITION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, LATEST EDITION.
3. CONTRACTOR SHALL VERIFY OWNER HAS OBTAINED ALL NECESSARY PERMITS FOR CONSTRUCTION PRIOR TO THE START OF THE PROJECT.
4. THE LOCATIONS OF EXISTING UTILITIES IS APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES AND ELEVATIONS PRIOR TO BEGINNING WORK. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER OR OWNER FOR COORDINATION.
5. EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE IN PLACE PRIOR TO THE BEGINNING OF ANY WORK AND MAINTAINED THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL MEASURES MUST BE INSPECTED BY THE TOWN OF WAXHAW'S EROSION CONTROL INSPECTOR PRIOR TO COMMENCING CONSTRUCTION.
6. ALL STREET RIGHT OF WAYS, SANITARY SEWER EASEMENTS, AND DRAINAGE EASEMENTS TO BE CLEARED 100% (WITH EXCEPTION OF TREE SAVE AREAS) AND ALL DEBRIS REMOVED FROM SITE AND PROPERLY DISPOSED.
7. ALL STRUCTURAL FILL FOR ROADWAYS, FOUNDATIONS OR OTHER PERMANENT STRUCTURES OR EMBANKMENTS SHALL BE PLACED UNDER THE SUPERVISION OF THE PROJECT GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE UNLESS OTHERWISE DIRECTED BY THE OWNER. STRUCTURAL FILL SHALL BE A COHESIONLESS SOIL CONTAINING NO MORE THAN 15% FINES BY WEIGHT AND HAVING A MAXIMUM DRY DENSITY OF AT LEAST 100 PCF. STRUCTURAL FILL SHALL BE FREE OF EXCESSIVE MOISTURE, ORGANICS, AND ELONGATED OR FLAT PARTICLES WHICH MAY BE SUCCEPTABLE TO DEGRADATION, OR OTHER DELETERIOUS MATERIALS AND BE COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.
8. ALL NON–STRUCTURAL FILL FOR COMMON AREAS AND YARDS SHALL BE A LOW PLASTICITY, INORGANIC SAND OR CLAYEY SAND SOIL FREE OF ROCK, GRAVEL OR LUMPS LARGER THAN 6–INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, ORGANIC MATTER OR ANY OTHER DELETERIOUS MATERIALS AND COMPACTED TO 90% OF THE PROCTOR MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED.
9. ALL UTILITIES TO BE INSTALLED BEFORE CURB & GUTTER OR S.A.B.C. INSTALLED.
10. PIPE UNDERDRAINS WILL BE CONSTRUCTED 100' UPSLOPE FROM ALL ROADWAY CURB INLETS AND JUNCTION BOXES, AND ALL AREAS DEEMED NECESSARY BY THE PROJECT ENGINEER OR COUNTY ENGINEER AND WILL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. IN AREAS WHERE UNDERDRAINS ARE PLANNED, ROAD BASE IS TO EXTEND BENEATH THE CURB & GUTTER AND BE IN FULL CONTACT WITH THE UNDERDRAIN.
11. ALL DRAINAGE CHANNELS SHALL BE GRADED, PRIOR TO COMPLETION OF STREETS, TO GRADES SET BY THE DESIGN ENGINEER.
12. ALL PIPE ENDS SHALL BE CONSTRUCTED WITH CONCRETE HEADWALL OR FLARED END SECTION AS INDICATED ON THE PLANS. ALL HEADWALLS AND FLARED END SECTIONS WILL BE TREATED WITH ADEQUATE RIP–RAP OUTLET PROTECTION FOLLOWING THE GUIDELINES OF THE EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL PUBLISHED BY NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, AS WELL AS NCDOT DETAILS AND SPECIFICATIONS.
13. UNIFORMLY GRADE TOP SOIL BEHIND CURB AND GUTTER AND ADJACENT PROPERTY LINES TO MEET EXISTING GRADES AT PROPERTY LINE.
14. SHOULDERS OF ROADWAYS SHALL BE LEFT IN GOOD CONDITION, ALL TOPSOIL, AND GRASS THAT IS DISTURBED SHALL BE REPLACED IN ACCORDANCE WITH THE N.C. DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, LATEST EDITION.
15. CONTRACTOR SHALL PROVIDE A CONCRETE WASHOUT PIT PER THE DETAIL PROVIDED ON SHEET C9.2. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THE WASHOUT PIT ON SITE, BUT WILL MAINTAIN A BUFFER OF 50 FEET BETWEEN THE WASHOUT AND ANY CATCH BASIN. DRAINAGE INLET, OR SIMILAR STRUCTURE. ADDITIONALLY, A BUFFER OF 75 FEET WILL BE MAINTAINED FROM THE FLOOODWAY.
16. GRADE TO ENSURE POSITIVE DRAINAGE TOWARDS NATURAL OR PLANNED LOW POINTS. FINISHED SURFACES SHALL BE FREE FROM SURFACE IRREGULARITIES AND DEBRIS TO ENSURE EFFECTIVE POSITIVE DRAINAGE.

EROSION CONTROL NOTES

1. EROSION AND SEDIMENTATION WILL BE CONTROLLED AND MAINTAINED ON SITE AND WILL FOLLOW THE RULES, REGULATIONS AND GUIDELINES SET FORTH BY THE TOWN OF WAXHAW AND THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES. THE APPROVED PLANS ARE A GUIDE FOR RECOMMENDED STRUCTURAL BMP'S (BEST MANAGEMENT PRACTICES) IF AT ANY TIME A BMP IS FAILING OR CONSIDERED INADEQUATE, WHERE SEDIMENTATION IS NOT BEING CONTROLLED, THE ENGINEER WILL BE NOTIFIED AS TO WHERE ADDITIONAL OR ALTERNATIVE MEASURES CAN BE PUT IN PLACE TO ENSURE THAT SEDIMENT DOES NOT LEAVE THE SITE AND MAKE ANY IMPACTS ONTO THE NATURAL ENVIRONMENT OUTSIDE THE LIMITS OF CONSTRUCTION OR A DOWNSTREAM PROPERTY OWNER.
2. HOLD A PRE–CONSTRUCTION MEETING A MINIMUM OF 48 HOURS PRIOR TO COMMENCING CONSTRUCTION,
3. A SEDIMENT AND EROSION CONTROL INSPECTION IS REQUIRED UPON COMPLETION OF THE INSTALLATION OF REQUIRED EROSION CONTROL. NO GRADING ON THE SIDE CAN COMMENCE UNTIL THE EROSION CONTROLS ARE INSTALLED AND PASS INSPECTION.
4. AN EROSION CONTROL CLOSEOUT INSPECTION IS REQUIRED AT THE END OF THE PROJECT PRIOR TO ZONING COMPLIANCE. ALL PERMANENT CONTROLS WILL BE IN PLACE AT THIS TIME AND A MINIMUM OF 80% STABILIZATION LEVEL BE ACHIEVED BEFORE REMOVING EROSION CONTROL AND REQUESTING THE CLOSEOUT INSPECTION.
5. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
6. FROM THE NPDES PERMIT THAT WENT INTO EFFECT AUGUST 3, 2011 GROUND STABILIZATION MUST OCCUR WITHIN 7 DAYS ON PERIMETER AREAS AND SLOPES GREATER THAN 3:1, AND GROUND STABILIZATION MUST OCCUR WITHIN 14 DAYS ON OTHER AREAS. ALSO, ANY BASIN OUTLET STRUCTURES WITH DRAINAGE AREAS EQUAL TO OR GREATER THAN ONE ACRE MUST WITHDRAW FROM THE SURFACE. FOR MORE INFORMATION, PLEASE VISIT HTTP://PORTAL.NCDENR.ORG/WEB/WQ/WS/SU/CONSTRUCTION. STANDARD MUST BE ADHERED IN ORDER TO RECEIVE NPDES GENERAL PERMIT.
7. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED.
8. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN (7) DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE–HALF (0.5) INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.
9. PROVIDE SEDIMENT BARRIERS AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
10. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE, THE SITE IS STABILIZED, THE SITE HAS PASSED INSPECTION BY THE TOWN OF WAXHAW'S EROSION CONTROL INSPECTOR, PERMIT IS OFFICIALLY CLOSED, AND SITE IS IN IT'S FINAL CONDITION MEETING THE INTENT OF THE OWNER, INTENT OF RULES AND REGULATIONS THAT ARE STATED OR IMPLIED WITHIN THE APPROVAL PERMIT, AS WELL AS THE DIRECTION GIVEN WITHIN THESE APPROVED PLANS.
11. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING MUD/OBJECTIONABLE MATERIAL ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL IMMEDIATELY REMOVE MUD/OBJECTIONABLE MATERIAL TRACKED ONTO ROADWAY. THE CONTRACTOR SHALL DAILY REMOVE ANY AGGREGATE FROM ROADWAY, AS MAY BE REQUIRED.
12. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
13. IN ACCORDANCE WITH G.S. 113A–57(1), WHEN WORKING ADJACENT TO NATURAL WATERCOURSES, 12–MILE CREEK, SHALL HAVE A BUFFER ZONE OF UNDISTURBED VEGETATION SUFFICIENT WIDTH TO RESTRAIN VISIBLE SILTATION WITHIN 25% OF THE BUFFER CLOSEST TO THE LAND DISTURBING ACTIVITY MUST BE MAINTAINED DURING ALL PHASES OF THE PROJECT. AREA SHALL BE INCLUDED IN SELF–INSPECTION REPORTS.
14. EFFECTIVE OCTOBER 1, 2010 PERSONS RESPONSIBLE FOR LAND DISTURBING ACTIVITIES MUST INSPECT THE SEDIMENT AND EROSION CONTROL MEASURES ON A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. SELF–INSPECTION REPORTS ARE REQUIRED. A SAMPLE OF SELF–INSPECTION REPORT (DEMLR MONITORING FORM REV. 080152013), AS WELL AS DETAILS OF THE SELF INSPECTION PROGRAM, CAN BE FOUND ON THE LAND QUALITY WEB SITE: HTTPS:/DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY–MINERAL–LAND–RESOURCES/EROSION–SEDIMENT–CONTROL/FORMS NOT EVERY PROJECT WILL HAVE ALL THE POSSIBLE PHASES, BUT A LIST OF PHASES MAY INCLUDE:

- INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES.
- INSTALLATION OF SEDIMENT TRAPS/BASINS.
- CLEARING AND GRUBBING OF EXISTING GROUND COVER.
- COMPLETION OF ANY PHASE OF GRADING THAT REQUIRES PROVISION OF STABILIZATION.
- INSTALLATION OF MEASURES DURING ANY PHASE OF THE PROJECT.
- COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- INSTALLATION OF STORMWATER RETENTION MEASURES.
- QUARTERLY UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER IS FULLY ESTABLISHED.

PLEASE NOTE THESE INSPECTIONS REQUIREMENTS ARE IN ADDITION TO NPDES INSPECTION REQUIREMENTS. IF YOU HAVE QUESTIONS ABOUT THE SELF–INSPECTION PROGRAM, PLEASE CONTACT AT (704) 663–1699.

CONTRACTOR WILL COMPLY WITH NPDES GENERAL PERMIT NCG–010000 FOR CONSTRUCTION ACTIVITIES PURSUANT TO CONSTRUCTION SITE INSPECTIONS. THE CONTRACTOR WILL MAINTAIN ON–SITE COPIES OF ALL INSPECTION REPORTS AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THESE DOCUMENTS ARE TO BE ACCESSIBLE TO THE TOWN OF WAXHAW'S EROSION CONTROL INSPECTOR AT ALL TIMES.

SANITARY SEWER AND WATER CONSTRUCTION NOTES

1. CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS, MATERIALS AND LOCATION OF EXISTING SANITARY SEWER LINES AND MANHOLES BEING TIED INTO, PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL USE A SECTION OF 8" DIAMETER POLYLINED D.I.P. AT ANY CROSSING OF SANITARY SEWER LINE AND STORM DRAINAGE PIPE OR BOTTOM OF DRAINAGE STRUCTURE OR POTABLE WATER LINE WITH LESS THAN 18" VERTICAL OR 10' HORIZONTAL SEPARATION. ALONG WITH 8" DIAMETER D.I.P., TWO D.I.P.–PVC ADAPTERS OR APPROVED EQUAL WILL BE CONSTRUCTED AT BOTH ENDS OF D.I.P.
3. CONTRACTOR WILL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS NEEDED FOR ALL PHASES OF CONSTRUCTION PRIOR TO THE START OF THE PROJECT.
4. ALL SEWER LINE TIES INTO MANHOLES WILL HAVE A MINIMUM ANGLE OF 90 DEGREES TO DOWNSTREAM SEWER LINE.
5. THE BACKFILLING OF PIPELINE TRENCHES SHALL BE STARTED IMMEDIATELY AFTER THE PIPE WORK HAS BEEN INSPECTED. THE INITIAL BACKFILL MATERIAL, PLACED TO A HEIGHT OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE, SHALL CONSIST OF APPROVED BACKFILL MATERIAL FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES, CONTAINING NO ROCKS OR LUMPS OVER TWO INCHES IN ANY DIMENSION. IT SHALL BE CAREFULLY PLACED AND COMPACTED THROUGH COMPACTION OF ENTIRE AREA BACKFILLED. BACKFILL SHALL BE DEPOSITED IN 6" LAYERS (BEFORE COMPACTION) AND THOROUGHLY COMPACTED WITH POWER TOOLS TO 95% OF THEORETICAL MAXIMUM DENSITY, MODIFIED PROCTOR ASTM–D–1557.
6. WHERE TRENCHES ARE NOT UNDER PAVEMENT, SIDEWALKS, OR IN ALLEYS, THE BACKFILL MATERIAL ABOVE PIPE ZONE SHALL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT SETTLEMENT. ANY DEFICIENCY IN THE BACKFILLING OF THE TRENCHES, OR DEPRESSIONS CAUSED BY SETTLEMENT, SHALL BE REPAIRED.
7. BACKFILLING AROUND STRUCTURES SHALL BE DONE IN THE MANNER SPECIFIED ABOVE FOR PIPE TRENCHES BY POWER TAMPING FOR THE FULL DEPTH OF CUT FROM THE BOTTOM OF THE FINISHED GRADE.
8. ALL BACKFILLING SHALL BE DONE IN SUCH A MANNER AS WILL NOT DISTURB OR INJURE THE PIPE OR STRUCTURE OVER OR AGAINST WHICH IT IS PLACED. ANY PIPE OR STRUCTURE INJURED, DAMAGED, OR MOVED FROM ITS PROPER LINE OR GRADE DURING BACKFILLING OPERATIONS SHALL BE UNCOVERED, REPAIRED AND THEN RE–BACKFILLED AS HEREIN SPECIFIED.
9. ADJUST MANHOLE RIM ELEVATIONS TO MATCH FINAL GRADE WHEN NECESSARY.
10. IN THE EVENT OF A CONFLICT WITH WATER, SEWER, DRAINAGE OR OTHER UTILITY LINES, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND FIELD ADJUST TO AVOID CONFLICTS.
11. ALL MANHOLES NOT PLACED IN THE ROAD RIGHT OF WAY SHALL HAVE A RIM ELEVATION ONE (1) FOOT HIGHER THAN THE FINISHED GRADE.
12. ALL GRAVITY LINE SEWERS SHALL BE CONSTRUCTED USING THE FOLLOWING MATERIALS FOR DEPTH: LESS THAN 3 FEET SHALL BE DUCTILE IRON PIPE. GREATER THAN 3 FEET BUT LESS THAN 10 FEET SHALL BE SDR 35 PVC. GREATER THAN 10 FEET BUT LESS THAN 18 FEET SHALL BE SDR 26 PVC. GREATER THAN 18 FEET DEEP SHALL BE DUCTILE IRON PIPE.
13. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE UNION COUNTY WATER AND SEWER EXTENSION POLICY – LATEST VERSION.
14. NO STREETSCAPE TREE PLANTINGS SHALL BE PLACED IN SUCH A MANNER THAT DISTURBS THE WATER AND SEWER LINES AND SERVICE CONNECTIONS.
15. ALL MANHOLES IN STREETS ARE TO BE LOCATED AS SUCH THAT MANHOLES COVER WILL BE A MINIMUM OF 30 INCHES FROM EDGE OF CURB.
16. ALL MANHOLES TO BE MINIMUM OF 4.5 FEET TO AVOID USING FLATTOP (20IN. BASE, 24IN. CONCENTRIC CONE & STANDARD RING & COVER).
17. REFER TO UNION COUNTY SPECIFICATIONS AND TO UNION COUNTY WATER & SEWER EXTENSION POLICY. UNION COUNTY PUBLIC WORKS 704–296–4210.
18. ALL RIMS ON SANITARY SEWER MANHOLES ARE TO BE FLUSH MOUNT TO FINISH GRADE.
19. REFER TO SHEETS FOR COORDINATION WITH UTILITIES AND PLACEMENT OF TREES, WHICH FOLLOW TOWN OF WAXHAW GUIDELINES FOR THE PLACEMENT OF "STREET TREES".
20. VERIFICATION HAS BEEN MADE BY DEWBERRY THAT EACH LOT IS CAPABLE OF HAVING GRAVITY SEWER SERVICE TO THE CENTER OF THE LOT AT THE FRONT SETBACK.
21. DE–WATERING: THE CONTRACTOR SHALL AT ALL TIMES PROVIDE AND MAINTAIN AMPLE MEANS AND EQUIPMENT WITH WHICH TO REMOVE AND PROPERLY DISPOSE OF ANY AND ALL WATER ENTERING THE EXCAVATION OR OTHER PARTS OF THE WORK AND KEEP ALL EXCAVATIONS DRY UNTIL SUCH TIME AS PIPE LAYING AND GRADING IS COMPLETED AND STRUCTURES TO BE BUILT THEREIN ARE COMPLETED. NO WATER SHALL BE ALLOWED TO RISE AROUND THE PIPE IN UNBACKFILLED TRENCHES NOR SHALL IT BE ALLOWED TO RISE OVER MASONRY UNTIL THE CONCRETE OR MORTAR HAS SET (MINIMUM 24 HOURS). ALL WATER PUMPED OR DRAINED FROM THE WORK SHALL BE DISPOSED OF IN SUCH A MANNER AS TO PREVENT SILTATION AND EROSION TO ADJACENT PROPERTY OR OTHER CONSTRUCTION.
22. BUILDING FOOTPRINTS, PARKING LAYOUT, AND CONNECTING DRIVES SHOWN ARE FOR WATER AND WASTEWATER ALLOCATION PURPOSES ONLY, INCLUDING CAPACITY CALCULATIONS MEETING NORTH CAROLINA DEPARTMENT OF NATURAL AND ENVIRONMENTAL RESOURCES REGULATIONS. FINAL BUILDING FOOTPRINTS AND PARKING LAYOUT MAY VARY AND WILL BE SUBJECT TO UCPW REVIEW AND APPROVAL.

Dewberry

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NCBELS #F-0929

BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 8-16-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
7	08/16/18	PRS	WAXHAW COMMENT
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

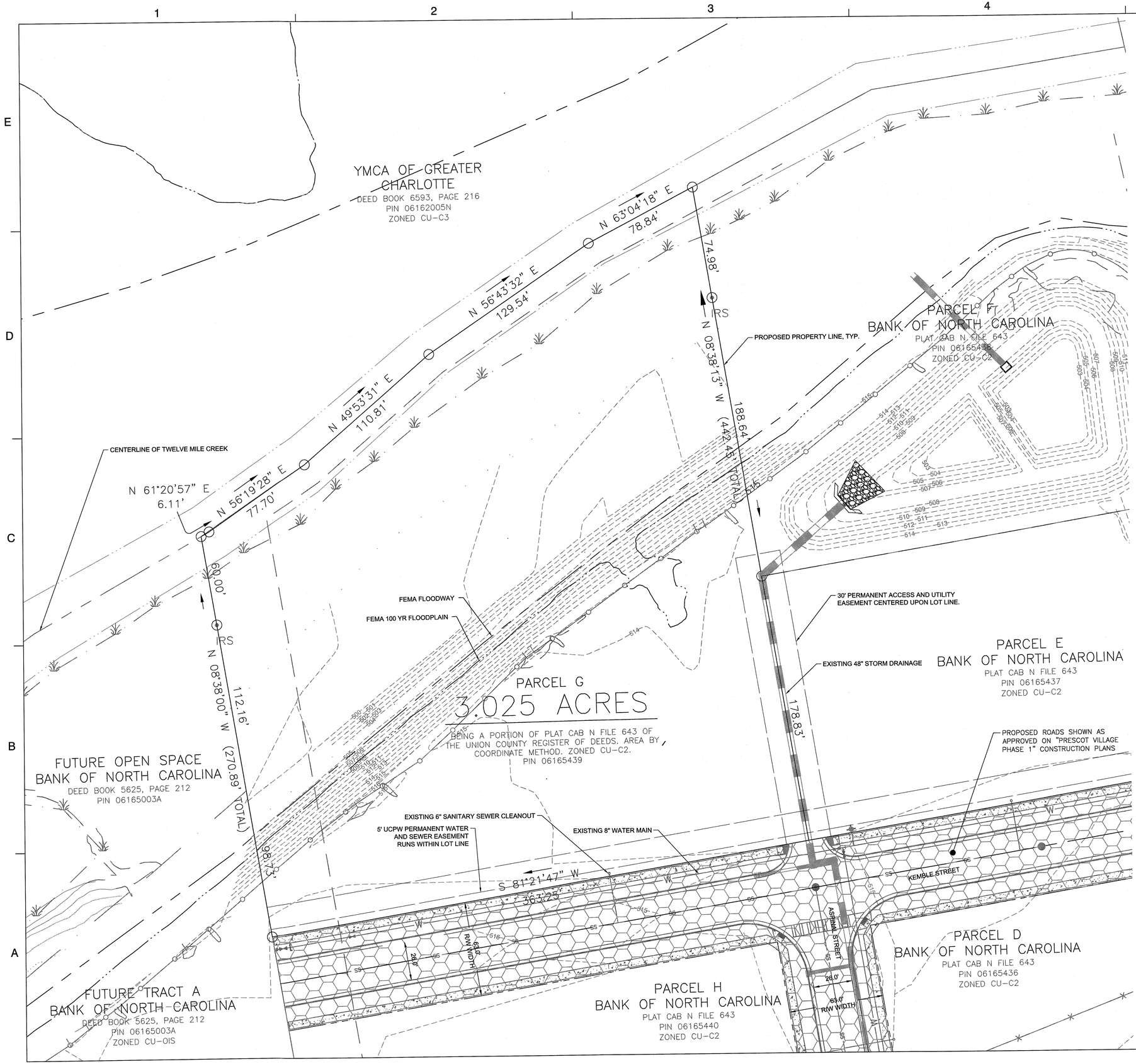
DATE 06/23/17

TITLE

GENERAL NOTES

PROJECT NO. 50084227

C0.0



LEGEND

- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- 501 — EXISTING CONTOUR
- SS — EXISTING SANITARY SEWER LINE
- W — EXISTING WATER LINE
- EXISTING SILT FENCE
- PROPOSED CONCRETE DEMOLITION

NC GRID (FEAD #3)

NOTES

1) PLAN DEPICTS IMPROVEMENT PLAN PLANNED AS PART OF PRESCOT VILLAGE PHASE I.

SCALE : HORZ. 1" = 30'

Dewberry

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WAXHAW, NORTH CAROLINA

SEAL

KEY PLAN

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REVISIONS

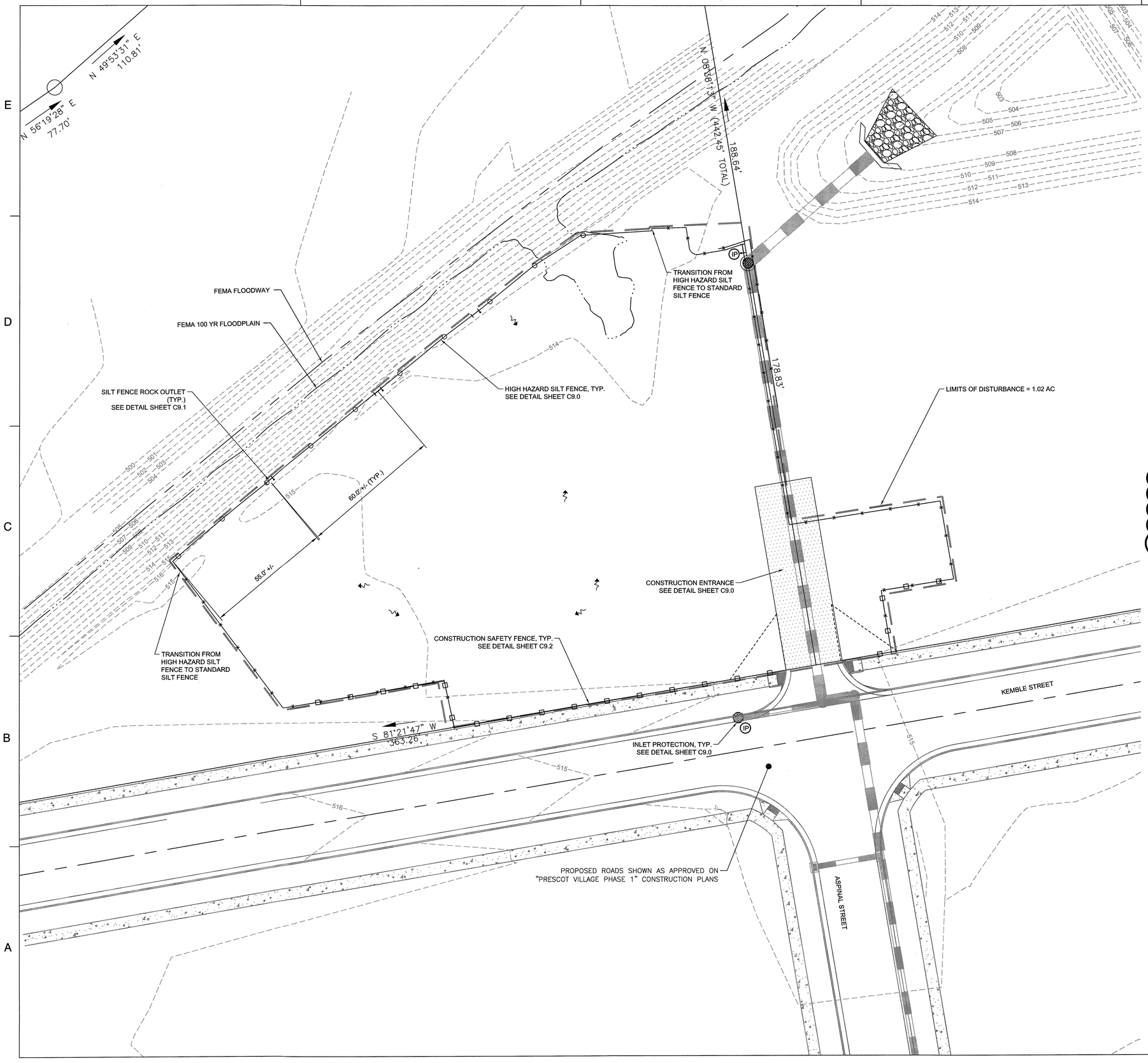
DRAWN BY	MTK
APPROVED BY	BML
CHECKED BY	BML
DATE	06/23/17

TITLE

EXISTING CONDITIONS AND DEMOLITION PLAN

PROJECT NO. 50084227

C1.0



LEGEND

- SILT FENCE
- CONSTRUCTION SAFETY FENCE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- 515 EXISTING CONTOUR
- SS EXISTING SANITARY SEWER LINE
- W EXISTING WATER LINE
- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- EXISTING DRAINAGE ARROW
- SILT FENCE ROCK OUTLET
- HIGH HAZARD SILT FENCE

NC GRID (NAD 83)

20 40 60

SCALE : HORZ. 1" = 20'

CONSTRUCTION SEQUENCE:

1. OBTAIN EROSION CONTROL PLAN APPROVAL AND APPLICABLE PERMIT.
2. FLAG WORK LIMITS.
3. INSTALL TEMPORARY SILT FENCE, INLET PROTECTION, CONSTRUCTION ENTRANCE, AND CONSTRUCTION SAFETY FENCING.
4. ENSURE ALL SEDIMENTATION AND EROSION CONTROLS HAVE BEEN INSPECTED AND PASSED PRIOR TO GRADING.
5. INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND FOLLOWING ANY RAIN EVENT OF 0.5 INCHES OR GREATER.

SITE STABILIZATION SCHEDULE:

1. PHASE THE CONSTRUCTION WHEN FEASIBLE TO LIMIT THE AMOUNT OF SOIL EXPOSED AT ONE TIME.
2. DELINEATE AREAS NOT THE BE DISTURBED WITH FLAGS, STAKES, SILT FENCE, OR WITH SIGNS.
3. AVOID DISTURBANCE OF STEEP SLOPES OR UTILIZE STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES, SUCH AS TERRACING OR SLOPE DRAINING TO MINIMIZE EROSION.
4. ROUTE STORMWATER AROUND EXPOSED SOIL AREAS THROUGH USE OF CONVEYANCE CHANNELS WHEN FEASIBLE.
5. DIRECT STORMWATER DISCHARGES FROM THE SITE TO VEGETATED AREAS IN ORDER TO INCREASE SEDIMENT REMOVAL AND INFILTRATE STORMWATER ON THE SITE WHEN FEASIBLE.
6. UTILIZE VEGETATIVE BUFFERS, HORIZONTAL SLOPE GRADING, AND MAINTENANCE TO PROTECT SURFACE WATERS.
7. USE CHECK DAMS, SEDIMENT TRAPS, RIP RAP, OR GROUTED RIP RAP AT OUTLETS AND ALONG CONVEYANCE CHANNELS TO CONTROL VELOCITY AND MINIMIZE EROSION ALONG THE CHANNEL AND OUTLETS.
8. INSTALL ENERGY DISSIPATION SUCH AS CONCRETE APRONS, SPLASH PADS, RIP RAP, AND GABIONS AT PIPE OUTLETS WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.
9. INITIATE SOIL STABILIZATION IMMEDIATELY ON PORTIONS OF THE SITE, INCLUDING SOL STOCKPILES, WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED AND WILL NOT RESUME FOR 14 DAYS.
10. STABILIZE EXPOSED SOILS WITHIN 24 HOURS ON PORTIONS OF SITE THAT DRAIN TO PUBLIC WATERS.
11. STABILIZE THE LAST 200 FEET OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM THE SITE WITHIN 24 HOURS OF CONNECTING TO A PROPERTY EDGE OR A DISCHARGE POINT TO A SURFACE WATER. USE EROSION BLANKETS, RIP RAP OR OTHER COVER DESIGNED FOR CONCENTRATED FLOW AREAS.
12. STABILIZE THE REMAINING PORTIONS OF THE DITCH OR SWALE WITHIN 14 DAYS WHERE CONSTRUCTION OF THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.

GROUND STABILIZATION TIME FRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXPECTATIONS
PERIMETER DIKES, SWALES, & SLOPES	SEVEN (7) DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	SEVEN (7) DAYS	NONE
SLOPES STEEPER THAN 3:1	SEVEN (7) DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, FOURTEEN (14) DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	FOURTEEN (14) DAYS	SEVEN (7) DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	FOURTEEN (14) DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

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BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 8-16-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
7	08/16/18	PRS	WAXHAW COMMENT
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

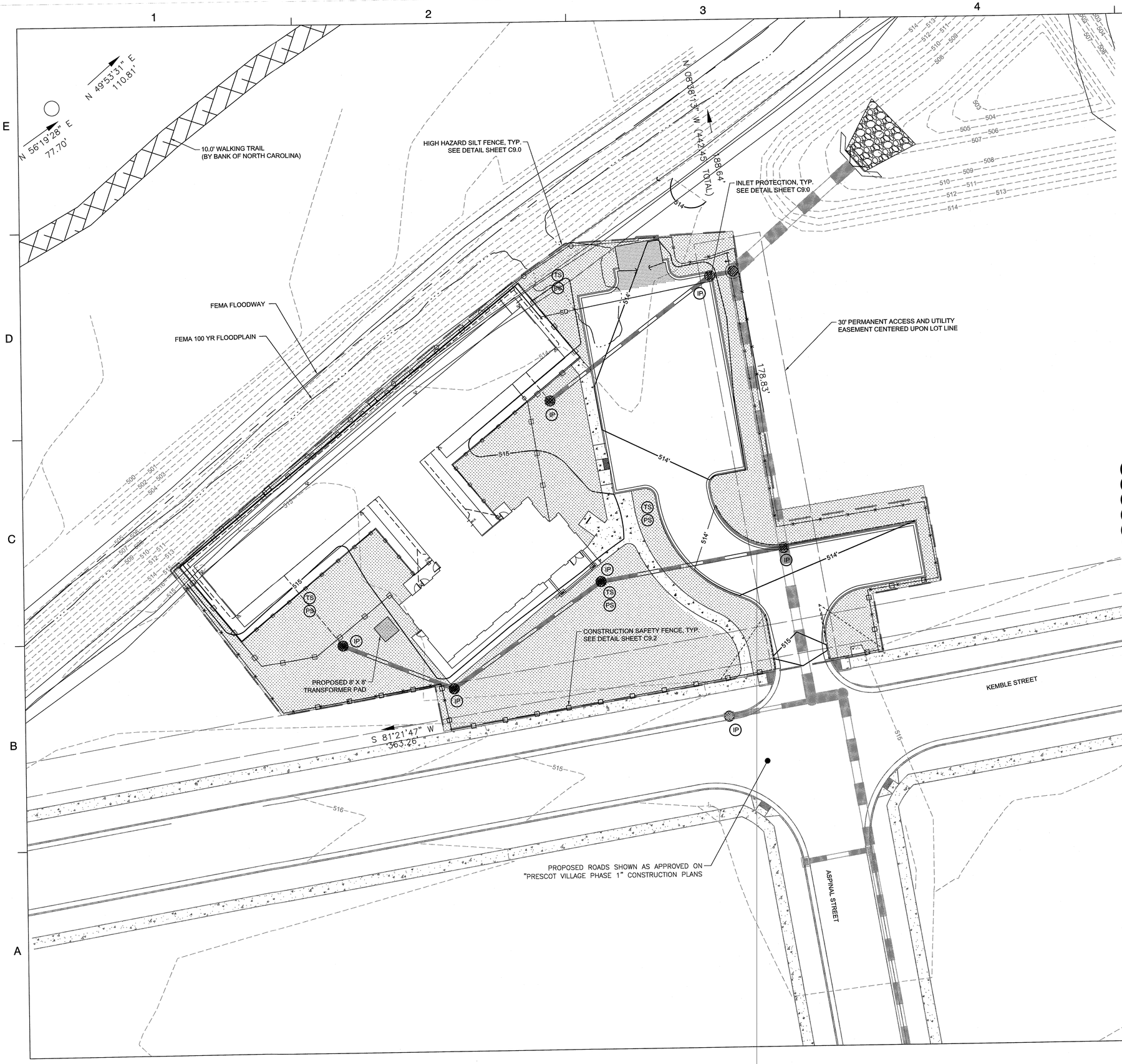
DRAWN BY	MTK
APPROVED BY	BML
CHECKED BY	BML
DATE	06/23/17

TITLE

PHASE I
EROSION CONTROL

PROJECT NO. 50084227

C2.0



LEGEND

- PROPOSED CURB AND GUTTER
- SEEDING AREA
- SILT FENCE
- HIGH HAZARD SILT FENCE
- IP INLET PROTECTION
- TS TEMPORARY SEEDING
- PS PERMANENT SEEDING
- LIMITS OF DISTURBANCE
- 515 EXISTING CONTOUR
- 515 PROPOSED CONTOUR
- SS EXISTING SANITARY SEWER LINE
- W EXISTING WATER LINE
- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)

20 40 60

SCALE : HORZ. 1" = 20'

CONSTRUCTION SEQUENCE:

1. OBTAIN EROSION CONTROL PLAN APPROVAL AND APPLICABLE PERMIT.
2. FLAG WORK LIMITS.
3. INSTALL TEMPORARY SILT FENCE, INLET PROTECTION, CONSTRUCTION ENTRANCE, AND CONSTRUCTION SAFETY FENCING.
4. ENSURE ALL SEDIMENT AND EROSION CONTROLS HAVE BEEN INSPECTED AND PASSED PRIOR TO GRADING.
5. INSPECT ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND FOLLOWING ANY RAIN EVENT OF 0.5 INCHES OR GREATER.

SITE STABILIZATION SCHEDULE:

1. PHASE THE CONSTRUCTION WHEN FEASIBLE TO LIMIT THE AMOUNT OF SOIL EXPOSED AT ONE TIME.
2. DELINEATE AREAS NOT THE BE DISTURBED WITH FLAGS, STAKES, SILT FENCE, OR WITH SIGNS.
3. AVOID DISTURBANCE OF STEEP SLOPES OR UTILIZE STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES, SUCH AS TERRACING OR SLOPE DRAINING TO MINIMIZE EROSION.
4. ROUTE STORMWATER AROUND EXPOSED SOIL AREAS THROUGH USE OF CONVEYANCE CHANNELS WHEN FEASIBLE.
5. DIRECT STORMWATER DISCHARGES FROM THE SITE TO VEGETATED AREAS IN ORDER TO INCREASE SEDIMENT REMOVAL AND INFILTRATE STORMWATER ON THE SITE WHEN FEASIBLE.
6. UTILIZE VEGETATIVE BUFFERS, HORIZONTAL SLOPE GRADING, AND MAINTENANCE TO PROTECT SURFACE WATERS.
7. USE CHECK DAMS, SEDIMENT TRAPS, RIP RAP, OR GROUTED RIP RAP AT OUTLETS AND ALONG CONVEYANCE CHANNELS TO CONTROL VELOCITY AND MINIMIZE EROSION ALONG THE CHANNEL AND OUTLETS.
8. INSTALL ENERGY DISSIPATION SUCH AS CONCRETE APRONS, SPLASH PADS, RIP RAP, AND GABIONS AT PIPE OUTLETS WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.
9. INITIATE SOIL STABILIZATION IMMEDIATELY ON PORTIONS OF THE SITE, INCLUDING SOL STOCKPILES, WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED AND WILL NOT RESUME FOR 14 DAYS.
10. STABILIZE EXPOSED SOILS WITHIN 24 HOURS ON PORTIONS OF SITE THAT DRAIN TO PUBLIC WATERS.
11. STABILIZE THE LAST 200 FEET OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM THE SITE WITHIN 24 HOURS OF CONNECTING TO A PROPERTY EDGE OR A DISCHARGE POINT TO A SURFACE WATER. USE EROSION BLANKETS, RIP RAP OR OTHER COVER DESIGNED FOR CONCENTRATED FLOW AREAS.
12. STABILIZE THE REMAINING PORTIONS OF THE DITCH OR SWALE WITHIN 14 DAYS WHERE CONSTRUCTION OF THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.

GROUND STABILIZATION TIME FRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXPECTATIONS
PERIMETER DIKES, SWALES, & SLOPES	SEVEN (7) DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	SEVEN (7) DAYS	NONE
SLOPES STEEPER THAN 3:1	SEVEN (7) DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, FOURTEEN (14) DAYS ARE ALLOWED
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BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 8-16-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
7	08/16/18	PRS	WAXHAW COMMENT
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

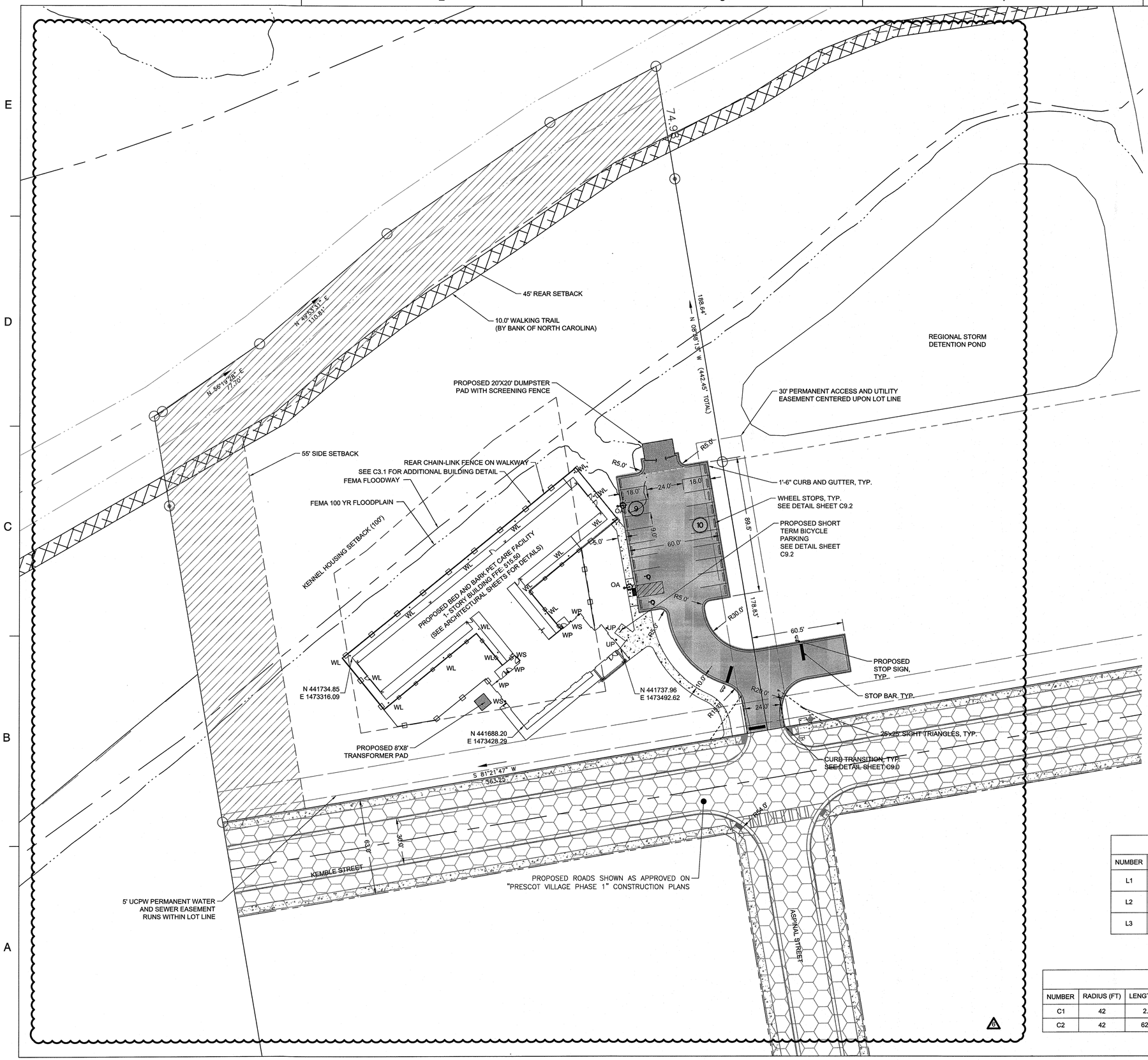
DATE 06/23/17

TITLE

PHASE II
EROSION CONTROL

PROJECT NO. 50084227

C2.1



LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT
- BUFFER ZONE
- PROPOSED CONCRETE PAD
- PROPOSED ADA ACCESSIBLE CURB RAMPS
- PROPOSED SETBACK LINE
- SIGHT TRAINGLES
- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)
- 500 — EXISTING CONTOUR
- WP, UP, & WS — EXTERIOR WALL LIGHTING
- WL — EXTERIOR AREA LIGHTING
- OA — EXTERIOR PARKING LOT LIGHTING

NC GRID (FAD 83)

30 60 90

SCALE : HORZ. 1" = 30'

NOTE:

SEE SHEET C7.0 LANDSCAPING PLAN FOR PROPOSED SCREENING

SITE DATA

PARKING SUMMARY

PROPOSED BUILDINGS:
PET CARE FACILITY - 8,260 SF

REQUIRED PARKING - 3.6 SPACES PER 1,000 SF OFFICES
2 SPACES PER 1,000 SF KENNELS

REQUIRED PARKING CALCULATION - 3.6*(2,379/1000) +
(2*(5,341/1,000) = 19 SPACES

PARKING SPACES PROVIDED - 19 SPACES

IMPERVIOUS CALCULATIONS:
BUILDING AREA: 13,540 SF
PARKING AREA AND DUMPSTER PAD: 10,070 SF
SIDEWALK AREA: 1,250 SF
TOTAL: 24,860 SF

IMPERVIOUS PERCENTAGE: 24,860 SF / (3.03 AC * 43,560 SF/AC) = 18.8%

MAX IMPERVIOUS AREA: 80% * (3.03 AC) = 2.424 AC

LINE TABLE

NUMBER	BEARING	LENGTH (FT)	START POINT	END POINT
L1	S81°21'47"W	58.00	N441732.00 E1473641.62	N441723.29 E1473584.27
L2	N08°38'35"W	106.25	N441758.50 E1473536.44	N441863.54 E1473520.48
L3	N08°38'04"W	72.11	N441651.66 E1473592.13	N441722.94 E1473581.30

CURVE TABLE

NUMBER	RADIUS (FT)	LENGTH (FT)	TANGENT (FT)	DELTA	CHORD LENGTH (FT)	CHORD BEARING
C1	42	2.99	1.49	004°04'38"	2.99	S83°24'06"W
C2	42	62.98	39.11	085°55'01"	57.24	N51°36'05"W

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WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 7-2-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
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2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

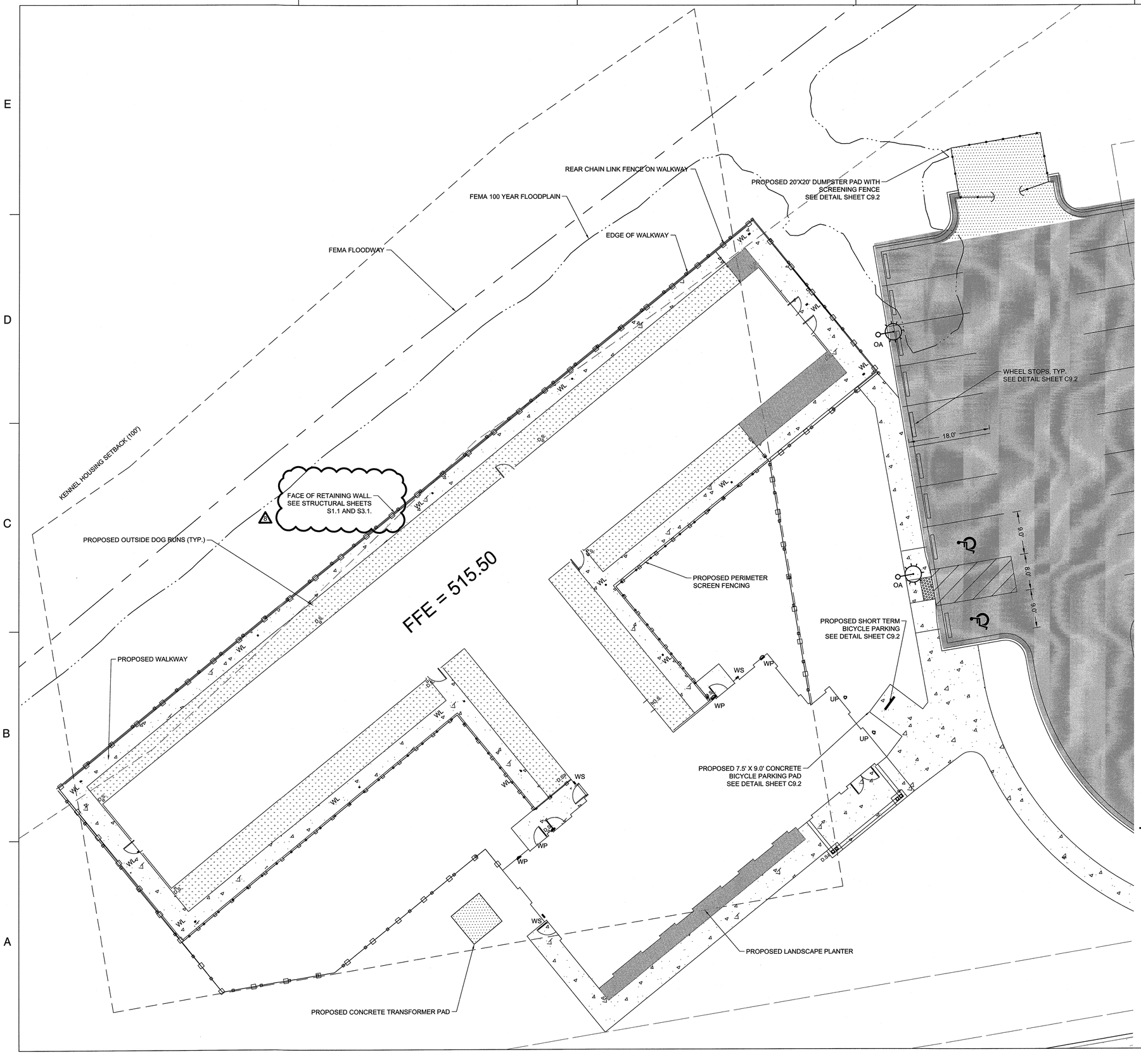
DRAWN BY MTK
APPROVED BY BML
CHECKED BY BML
DATE 06/23/17

TITLE

SITE PLAN

PROJECT NO. 50084227

C3.0



LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE SIDEWALK
- PROPOSED ASPHALT
- PROPOSED CONCRETE PAD
- PROPOSED GRASS AREA
- PROPOSED SETBACK LINE
- FEMA 100 YEAR FLOODPLAIN
- 500 — FEMA FLOODWAY
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)
- EXISTING CONTOUR
- PROPOSED ADA ACCESSIBLE CURB RAMPS
- WP, UP, & WS — EXTERIOR WALL LIGHTING
- WL — EXTERIOR AREA LIGHTING
- OA — EXTERIOR PARKING LOT LIGHTING

NC GRID (NAD 83)

10 20 30

SCALE : HORZ. 1" = 10'

SITE DATA

PARKING SUMMARY

PROPOSED BUILDINGS:
PET CARE FACILITY - 8,260 SF

REQUIRED PARKING - 3.6 SPACES PER 1,000 SF OFFICES
2 SPACES PER 1,000 SF KENNELS

REQUIRED PARKING CALCULATION - 3.6*(2,379/1000) +
(2*(5,341/1,000) = 19 SPACES

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WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 11-14-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
8	11/14/18	BML	WAXHAW COMMENT
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3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK
APPROVED BY BML
CHECKED BY BML
DATE 06/23/17

TITLE

SITE PLAN

PROJECT NO. 50084227

C3.1

LEGEND

638	EXISTING MINOR CONTOUR
640	EXISTING MAJOR CONTOUR
x SP 500.00	PROPOSED SPOT ELEVATION
x TC 500.00	PROPOSED TOP OF CURB ELEVATION
x BC 500.00	PROPOSED BOTTOM OF CURB ELEVATION
x BC 500.00 (EX)	PROPOSED BOTTOM OF CURB TO MATCH EXISTING ELEVATION
x TC 500.00 (EX)	PROPOSED TOP OF CURB TO MATCH EXISTING ELEVATION
638	PROPOSED MINOR CONTOUR
640	PROPOSED MAJOR CONTOUR
	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPOSED CURB AND GUTTER
	HIGH HAZARD SILT FENCE
	INLET PROTECTION
	PROPOSED SETBACK LINE
	FEMA 100 YEAR FLOODPLAIN
	FEMA FLOODWAY
	WALKING TRAIL (BY BANK OF NORTH CAROLINA)

N 49°53'31" E 110.81'

N 56°19'28" E 77.70'

N 08°38'13" W (442.45' TOTAL)

KENNEL HOUSING SETBACK (100')

4" SCH 80 PVC STORM DRAIN FOR FOUNDATION DRAIN CONTINUATION

FRENCH DRAIN INBOARD OF RETAINING WALL PER STRUCTURAL SHEETS S1.1 AND S3.1.

FEMA FLOODWAY

FEMA 100 YR FLOODPLAIN

FACE OF PROPOSED RETAINING WALL

PROPOSED ROOF LEADER CONNECTIONS, TYP. SEE PLUMBING DWG. P1.1 FOR PIPE SIZING

PROPOSED 8' X 8' TRANSFORMER PAD

FFE = 515.50

FFE = 516

BC 513.30 TC 513.80

BC 513.10 TC 513.60

SP 513.88

SP 514.23

SP 514.03

SD

BC 514.20 TC 514.70

SP 513.68

18" RCP

C2.0

SP 515.48

C2.1

SP 514.04 SP 514.44 SP 514.47

SP 514.08

SP 514.12

SP 514.20

BC 514.50 TC 515.00

SP 515.10

BC 514.15 TC 514.65

BC 513.71 TC 514.21

PROPOSED ASHPALT PAVING SEE DETAIL SHEET C9.1

CONTRACTOR TO INSTALL DOGHOUSE CATCH BASIN OVER EXISTING 48" RCP

BC 514.17 TC 514.67

BC 513.74 TC 514.24

BC 514.19 TC 514.69

BC 514.36 TC 514.86

BC 515.05 TC 515.45

SP 515.05

C1.1

SP 515.5

C1.3

SP 515

C1.2

SP 515.10

BC 514.65 TC 515.15

BC 514.73 TC 515.23

SP 515.19 (EX)

SP 515.67 (EX)

BC 515.05 TC 515.55

S 81°21'47" W 363.26'

KEMBLE STREET

ASPINAL STREET

PROPOSED ROADS SHOWN AS APPROVED ON "PRESCOT VILLAGE PHASE 1" CONSTRUCTION PLANS

ADA GRADING INSET

SCALE: 1" = 10'

SP 514.03

SP 514.92

TC 514.84 BC 514.34

SP 514.08

BC 514.44

6.0%

SP 514.52

SP 514.53

4.5%

BC 514.45

SP 514.54

BC 514.46

SP 514.12

7.8%

SP 515.06

TC 514.98 BC 514.48

SP 514.20

SP 515.08

TC 515.00 BC 514.50

SP 515.10

SP 515.48

SP 515.05

20 40 60

SCALE : HORZ. 1" = 20'

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BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LeFRANCH 11-14-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
8	11/14/18	BML	WAXHAW COMMENT
7	08/16/18	PRS	WAXHAW COMMENT
6	07/02/18	PRS	MAJOR REV 1
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4	11/22/17	MTK	COMMENTS
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2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

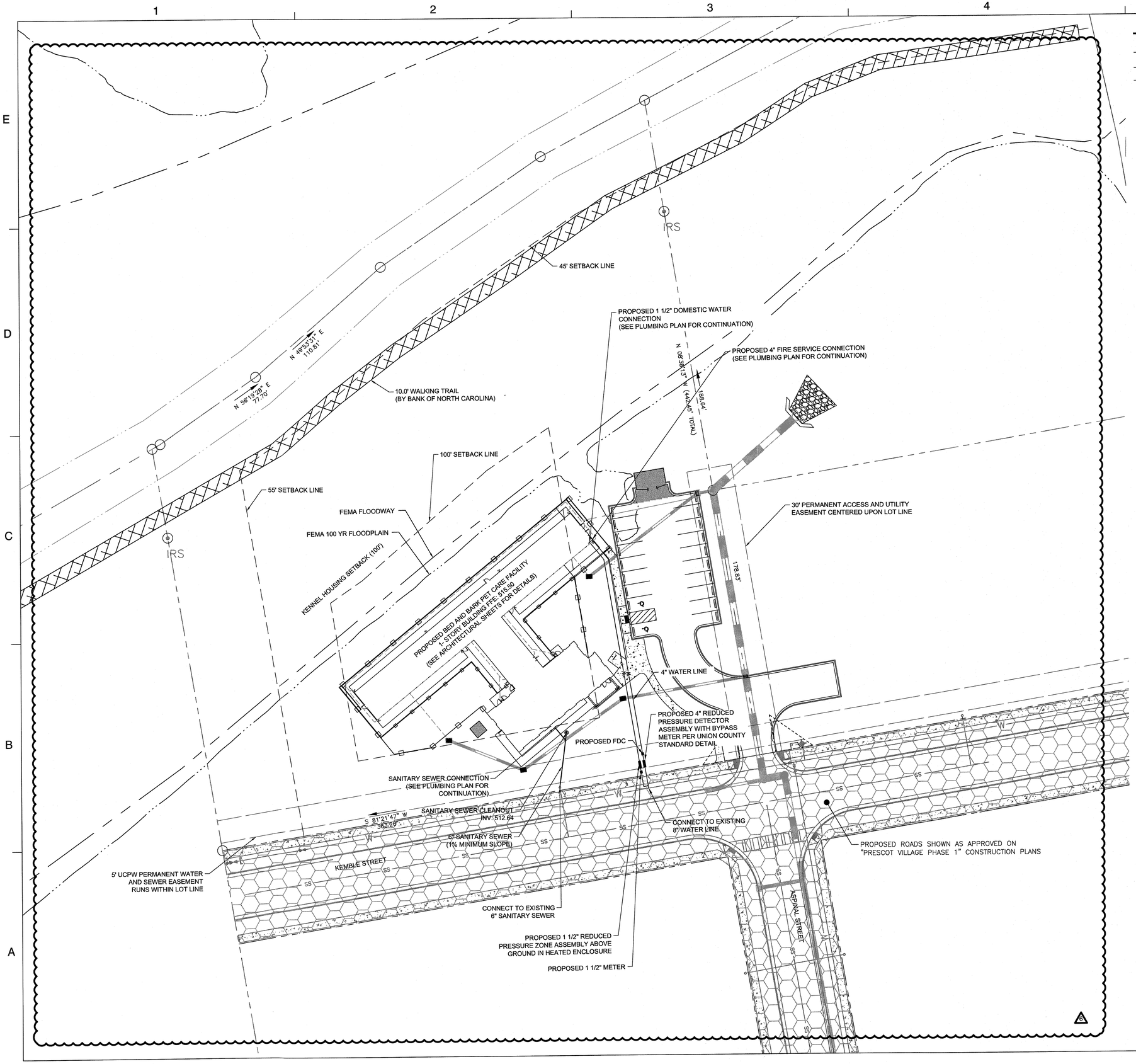
DRAWN BY	MTK
APPROVED BY	BML
CHECKED BY	BML
DATE	06/23/17

TITLE

GRADING PLAN

PROJECT NO. 50084227

C4.0



LEGEND

- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- PROPOSED SETBACK LINE
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)

NOTE:

ANY ABOVE GROUND MECHANICAL AND UTILITY EQUIPMENT MUST BE SCREENED FROM PUBLIC VIEW.

SEE SHEET C7.0 LANDSCAPING PLAN FOR PROPOSED SCREENING

30 60 90

SCALE : HORZ. 1" = 30'

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WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCHI 7-2-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
6	07/02/18	PRS	MAJOR REV 1
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3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY	MTK
APPROVED BY	BML
CHECKED BY	BML
DATE	06/23/17

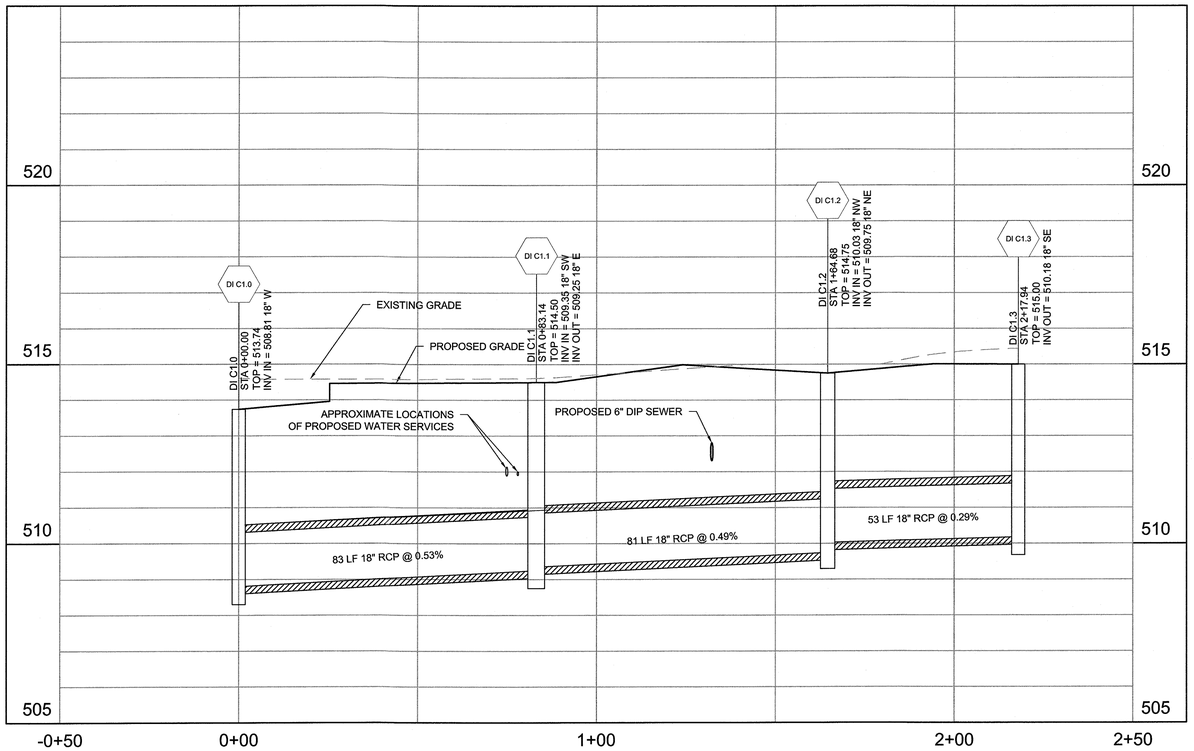
TITLE

UTILITY PLAN

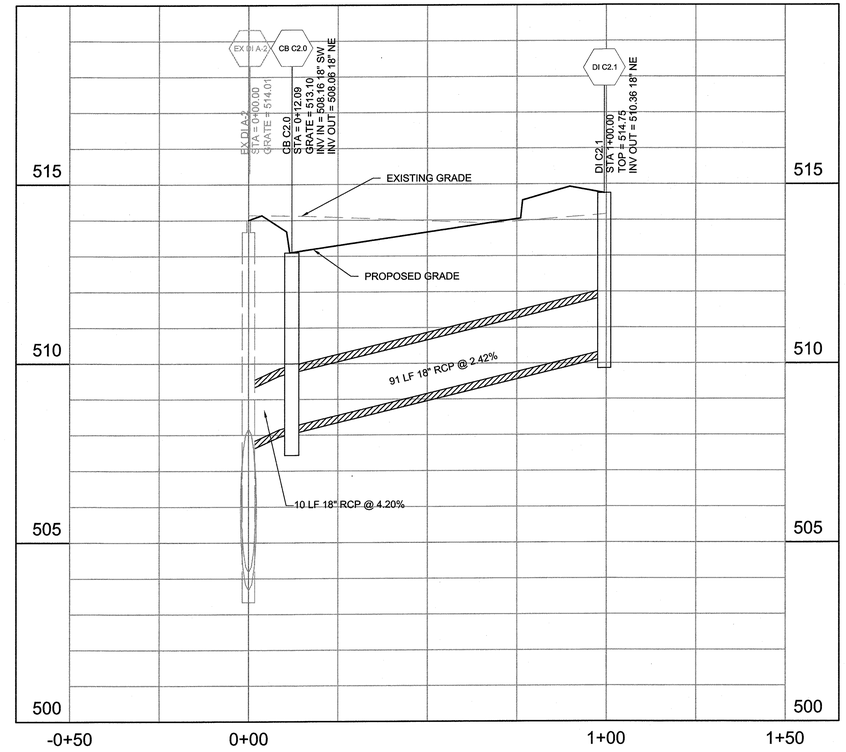
PROJECT NO. 50084227

C5.0

STORM C1.0 - C1.3 PROFILE

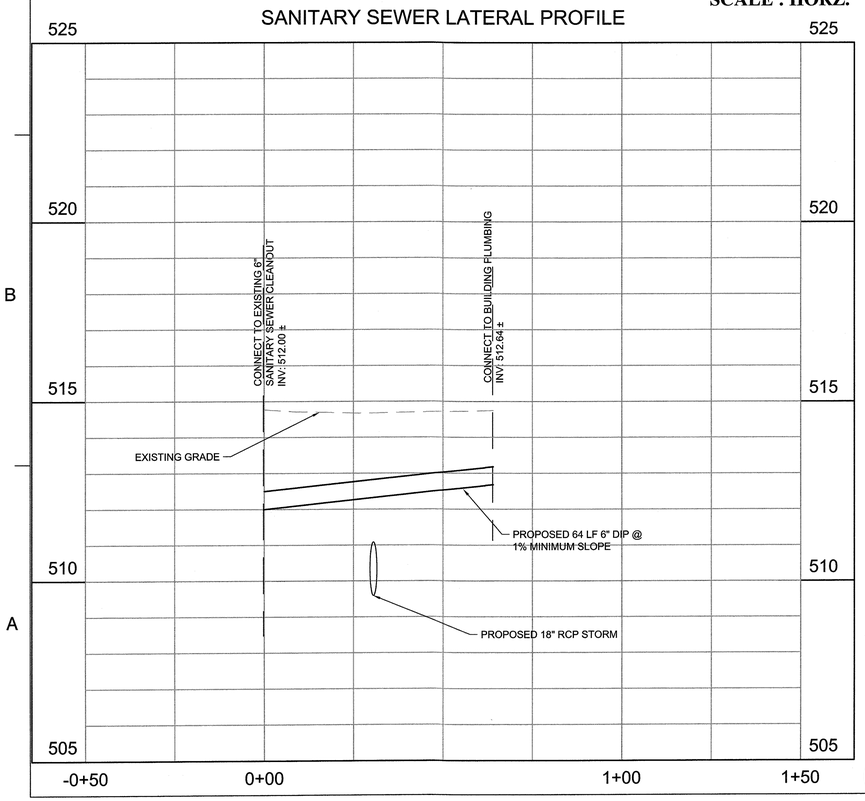


STORM EX A-2 - C2.1 PROFILE

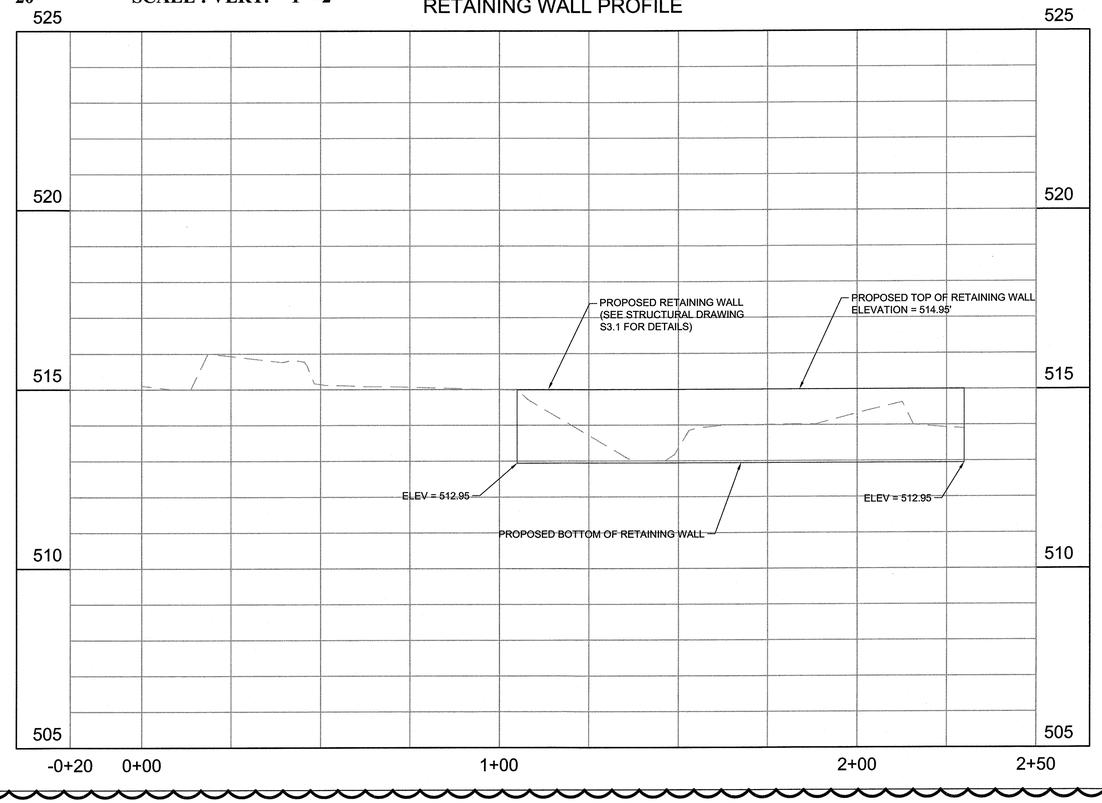


SCALE : HORZ. 1" = 20' SCALE : VERT. 1"=2'

SANITARY SEWER LATERAL PROFILE



RETAINING WALL PROFILE



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WAXHAW, NORTH CAROLINA

SEAL

KEY PLAN

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1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

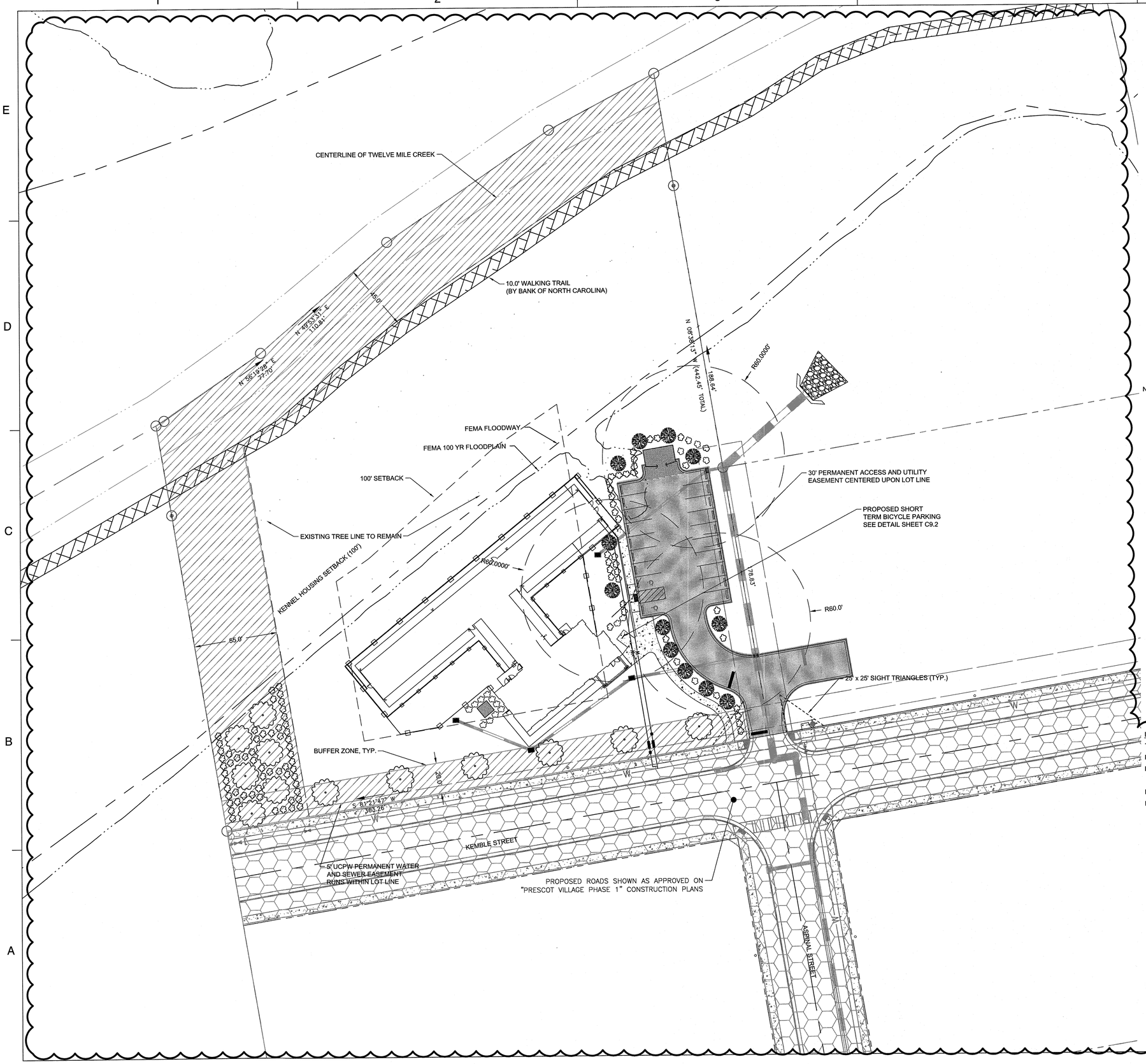
DATE 06/23/17

TITLE

PROFILES

PROJECT NO. 50084227

C6.0



LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- BUFFER ZONE
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)
- PROPOSED SETBACK LINE
- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY
- TREE COVER AREA

NC GRID (FIPS 32)

30 60 90

SCALE : HORZ. 1" = 30'

NOTES:

1. SHRUBS USED FOR SCREENING ALONG PUBLIC STREETS SHALL BE EVERGREEN SPECIES, AND SHALL BE PLANTED AT A MAXIMUM SPACING OF 4 FEET ON CENTER ALONG THE LENGTH OF THE REQUIRED SCREENING.
2. NEW STREET TREES SHALL BE SPACED BETWEEN 40 FEET AND 65 FEET ON CENTER.
3. ANY ABOVE GROUND MECHANICAL, UTILITY EQUIPMENT, AND DUMPSTER AREA MUST BE SCREENED FROM PUBLIC VIEW.
4. TREES USED TO MEET BUFFER PLANTING REQUIREMENTS SHALL HAVE A MINIMUM TRUNK CALIPER (MEASURED SIX (6) INCHES ABOVE GROUND) OF TWO (2) INCHES FOR LARGE MATURING TREES AND ONE AND ONE-HALF (1-1/2) INCHES FOR SMALL MATURING TREES, AND A MINIMUM HEIGHT OF TEN (10) FEET.
5. SHRUBS USED FOR BUFFERS AND/OR PERIMETER SCREENING SHALL BE AT LEAST THIRTY (30) INCHES TALL WHEN PLANTED, AND BE EXPECTED TO GROW TO A MINIMUM HEIGHT OF FIVE (5) TO SIX (6) FEET WHEN MATURE, WITH A MINIMUM MATURE WIDTH OF FOUR (4) FEET.
6. SHRUBS USED FOR SCREENING ALONG PUBLIC STREETS SHALL BE AT LEAST EIGHTEEN (18) INCHES TALL AND EIGHTEEN (18) INCHES WIDE WHEN PLANTED, AND BE EXPECTED TO GROW TO A MINIMUM HEIGHT OF THREE (3) TO FOUR (4) FEET WHEN MATURE.
7. ALONG PUBLIC STREETS, SHRUBS USED FOR SCREENING SHALL BE EVERGREEN SPECIES, AND SHALL BE PLANTED AT A MAXIMUM SPACING OF FOUR (4) FEET ON CENTER ALONG THE LENGTH OF THE REQUIRED SCREENING.
8. A CONTINUOUS LANDSCAPE AREA OF 20 FEET SHALL BE PROVIDED ADJACENT TO THE PUBLIC STREET RIGHT OF WAY.
9. PER UDO SECTION 9.8.1.E.7, DUE TO THE FLOODPLAIN AREA ALONG THE NORTH AND WEST SIDE OF THE PROPERTY AND THE EXISTING VEGETATION IN THE AREA WHICH IS GOVERNED BY FLOODPLAIN REGULATIONS, STRICT ADHERENCE TO THE REQUIREMENTS FOR THE BUFFER AND THESE AREAS WOULD SERVE NO MEANINGFUL PURPOSE AND HAVE BEEN WAIVED BY THE ZONING ADMINISTRATOR.
10. NO VEGETATION WILL BE REMOVED IN THE AREAS LABELED BUFFER ZONE

LANDSCAPE AREA REQUIRED (NEW CONSTRUCTION):

TOTAL IMPERVIOUS PARKING AREA: 10,070 SF

PARKING PLANTINGS REQUIRED: 1 DECIDUOUS TREE AND 4 SHRUBS/1,000 SF

IMPERVIOUS AREA/1,000 = 10 TREES AND 41 SHRUBS REQUIRED

VEGETATION PROVIDED: 12 TREES AND 45 SHRUBS

PERIMETER PLANTING: 295 LF FRONTAGE = 1 TREE PER 50 LF = 6 TREES PROVIDED

BUFFER SCREENING: 6 TREES AND 60 SHRUBS PER 100 LF

BUFFER LENGTH = APPROXIMATELY 85 LF DUE TO EXISTING VEGETATION AND WETLANDS

REQUIRED VEGETATION = 6 TREES AND 51 SHRUBS

PROVIDED VEGETATION = 6 TREES AND 59 SHRUBS

PROVIDED TRANSFORMER SCREENING = 10 SHRUBS

PLANTING LEGEND & SCHEDULE

TREES	COMMON NAME	SPECIES NAME	REQUIRED	PROVIDED
	SOUTHERN MAGNOLIA	MAGNOLIA GRANDIFLORA	12	12
	RIVER BIRCH	BETULA NIGRA	10	12
SHRUBS				
	EMILY BRUNNER HOLLY	ILEX 'EMILY BRUNNER'	105	114

LANDSCAPING NOTES:

1. ALL PEDESTRIAN SCALE LIGHT POLES TO BE NO CLOSER THAN 15' FROM PROPOSED TREES AND ALL COMMERCIAL LIGHTING TO BE NO CLOSER THAN 30' FROM PROPOSED TREES.
2. SEE SHEET C0.0 FOR ADDITIONAL GENERAL NOTES.
3. ADDITIONAL TREES TO BE PLANTED AS NECESSARY TO MEET CITY ORDINANCE.
4. NO TREE/SHRUB PLANTINGS WITHIN RIGHT-OF-WAY

Dewberry

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NCBELS #F-0929

BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 40016 ENGINEER BRIAN M. LaFRANCH 7-2-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

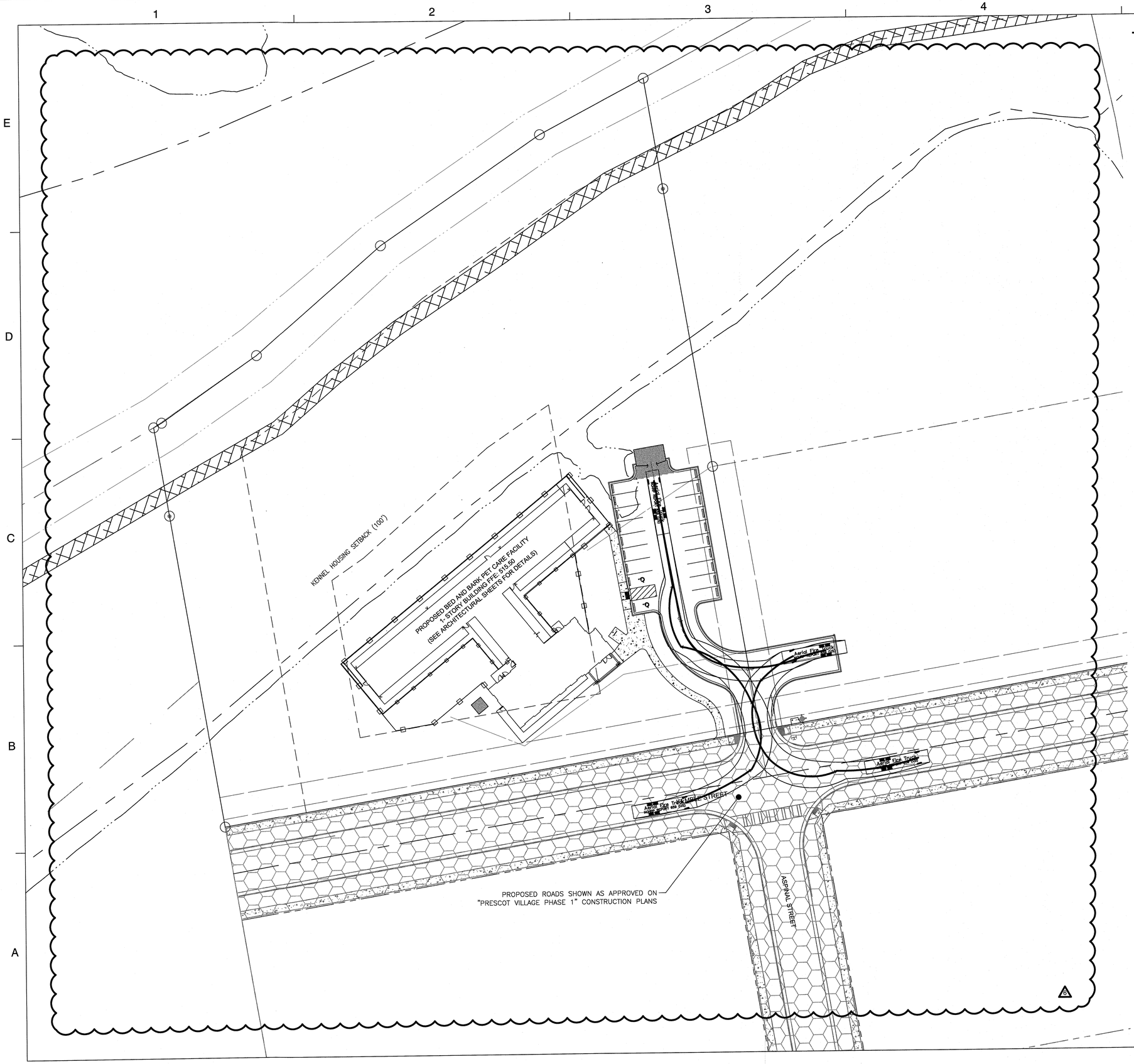
DATE 06/23/17

TITLE

LANDSCAPE PLAN

PROJECT NO. 50084227

C7.0



LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED CONCRETE
- WALKING TRAIL (BY BANK OF NORTH CAROLINA)
- PROPOSED SETBACK LINE
- FEMA 100 YEAR FLOODPLAIN
- FEMA FLOODWAY

NC 42/50 (HWY 55)

30 60 90

SCALE : HORZ. 1" = 30'

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WAXHAW, NORTH CAROLINA

SEAL

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REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

DATE 06/23/17

TITLE

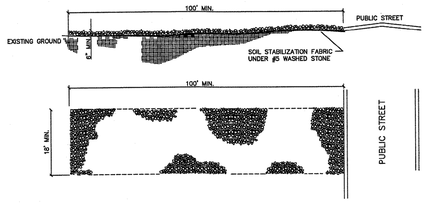
AUTOTURN PLAN

PROJECT NO. 50084227

C8.0

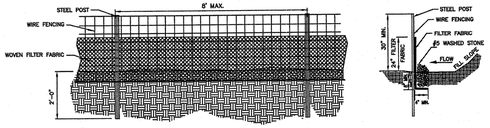
NOTES:

1. A STABILIZED ENTRANCE PAD OF #5 WASHED STONE AND RAILROAD BALLAST SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY. ANY AGGREGATE TRACKED INTO THE ROADWAY MUST BE SWEPT BACK ONSITE ON A NIGHTLY BASIS.
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN SEE STD. NO. 515.1
6. THE TOWN MAY REQUIRE A STANDARD COMMERCIAL DRIVEWAY (STD. 108.1 & 109.1) TO ACCESS THE CONSTRUCTION SITE IF THE DRIVEWAY IS ON A THOROUGHFARE.



NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | STABILIZED CONSTRUCTION ENTRANCE | STD. NO. 514.1 | REV.



GENERAL NOTES:

1. WIRE FENCING SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
3. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
5. TURN SILT FENCE UP SLOPE AT ENDS.
6. WIRE MESH SHALL BE MIN. 13 GAGE WITH MAXIMUM 12" OPENINGS.
7. WIRE AND WASHED STONE IS REQUIRED TO BE SHOWN ON PLANS AT THE TOE OF SLOPES GREATER THAN 10 FEET VERTICAL (2:1 SLOPE)
8. ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE WHEN GRADING IS ADJACENT TO SWIM BUFFERS, STREAMS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES). THE COLOR ORANGE IS RESERVED FOR VISUAL IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS.
9. DRAINAGE AREA CAN NOT BE GREATER THAN 1/4 ACRE PER 100 FT OF FENCE.
10. SLOPE LENGTHS CAN NOT EXCEED CRITERIA SHOWN IN TABLE 6.62A NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
11. DO NOT INSTALL SEDIMENT FENCE ACROSS STREAMS, DITCHES, WATERWAYS OR OTHER AREAS OF CONCENTRATED FLOW.

MAINTENANCE NOTES:

1. FILTER BARRIERS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | HIGH HAZARD TEMPORARY SILT FENCE | STD. NO. 508.1 | REV.

FOR LATE WINTER AND EARLY SPRING:

SEEDING MIXTURE:
RYE (GRAIN) – 120 LB/ACRE
ANNUAL LESPEDEZA (KOBE) – 50 LB/ACRE
(OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE)

SEEDING DATES:
JAN. 1 – MAY 1

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE

FOR SUMMER:

SEEDING MIXTURE:
GERMAN MILLET – 40 LB/ACRE
(A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE)

SEEDING DATES:
MAY 1 – AUG. 15

SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL

MAINTENANCE:
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE

FOR FALL:

SEEDING MIXTURE:
RYE (GRAIN) – 120 LB/ACRE

SEEDING DATES:
AUG. 15 – DEC 30

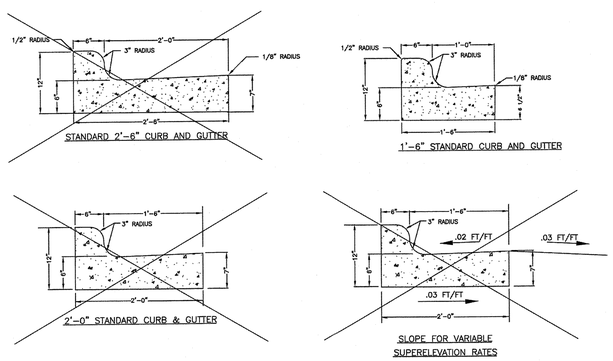
SOIL AMENDMENTS:
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER

MULCH:
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL

MAINTENANCE:
REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

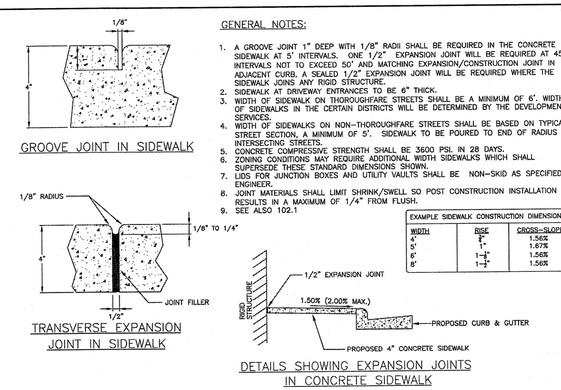
FOR ADDITIONAL INFORMATION, REFER TO NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL (ESCPDM): SECTION 6.10. FOR PERMANENT SEEDING SPECIFICATIONS, INCLUDING SEED BED PREP, SEASONAL LIMITATIONS FOR SEEDING OPERATIONS, THE KINDS OF GRADES OF FERTILIZERS, THE KINDS OF SEED, AND THE RATES OF APPLICATION OF LIMESTONE, FERTILIZER, AND SEED, REFER TO NCDENR ESCPDM SECTION 6.11.

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | TEMPORARY SEEDING SCHEDULE | STD. NO. 521.1 | REV.



NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | STANDARD CURB AND GUTTER | STD. NO. 100.1 | REV.



GENERAL NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
3. WIDTH OF SIDEWALK ON THOROUGHFARE STREETS SHALL BE A MINIMUM OF 6'. WIDTH OF SIDEWALKS IN THE CERTAIN DISTRICTS WILL BE DETERMINED BY THE DEVELOPMENT SERVICES.
4. WIDTH OF SIDEWALKS ON NON-THOROUGHFARE STREETS SHALL BE BASED ON TYPICAL STREET SECTION, A MINIMUM OF 5'. SIDEWALK TO BE POURED TO END OF RADIUS AT INTERSECTING STREETS.
5. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.
6. ZONING CONDITIONS MAY REQUIRE ADDITIONAL WIDTH SIDEWALKS WHICH SHALL SUPERSEDE THESE STANDARD DIMENSIONS SHOWN.
7. LIDS FOR JUNCTION BOXES AND UTILITY VAULTS SHALL BE NON-SKID AS SPECIFIED BY ENGINEER.
8. JOINT MATERIALS SHALL LIMIT SHRINK/SWELL SO POST CONSTRUCTION INSTALLATION RESULTS IN A MAXIMUM OF 1/4" FROM FLUSH.
9. SEE ALSO 102.1

EXAMPLE SIDEWALK CONSTRUCTION DIMENSIONS:

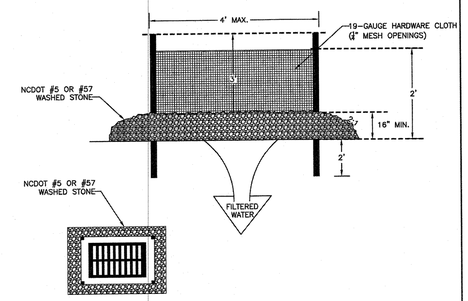
WIDTH	RISE	CROSS-SLOPE
4'	3"	1.56%
5'	1"	1.67%
6'	1-3/4"	1.56%
8'	1-3/4"	1.56%

NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | CONCRETE SIDEWALKS | STD. NO. 106.1 | REV.

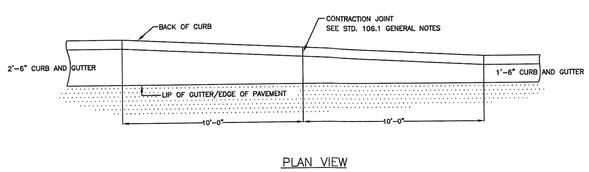
GENERAL NOTES:

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.



NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | HARDWARE CLOTH AND GRAVEL INLET PROTECTION | STD. NO. 512.1 | REV.



PLAN VIEW

NOTES:

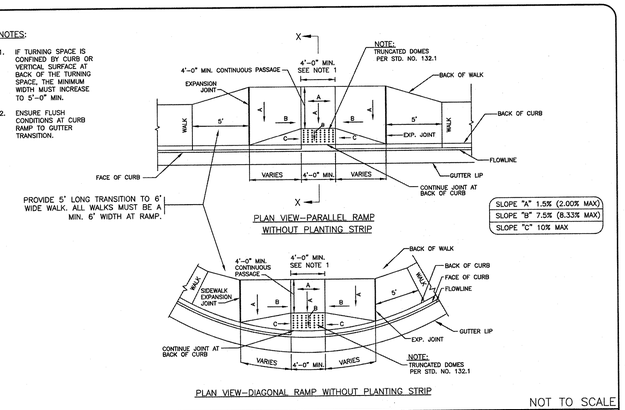
1. TRANSITION TO BE ALONG BACK OF CURB.

NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | CURB TRANSITION 2'-6" CURB AND GUTTER TO 1'-6" CURB AND GUTTER | STD. NO. 105.1 | REV.

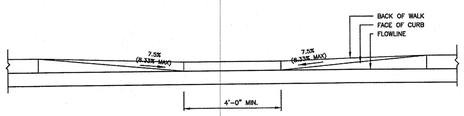
NOTES:

1. IF TURNING SPACE IS CONFINED BY CURB OR VERTICAL SURFACE AT BACK OF THE TURNING SPACE, THE MINIMUM WIDTH MUST INCREASE TO 5'-0" MIN.
2. ENSURE FLUSH CONDITIONS AT CURB RAMP TO GUTTER TRANSITION.



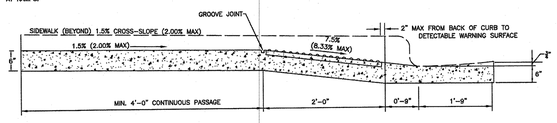
NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | ACCESSIBLE RAMP STANDARD WITHOUT PLANTING STRIP 2'-6" CURB AND GUTTER | STD. NO. 125.1 | REV.



SECTION THROUGH FLOWLINE

NOTE:
ALL WALKS MUST BE A MIN. 6' WIDTH AT RAMPS.



TYPICAL RAMP ℄ SECTION X-X

NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | ACCESSIBLE RAMP SECTIONS WITHOUT PLANTING STRIP (2'-6" CURB AND GUTTER) | STD. NO. 126.1 | REV.

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WAXHAW, NORTH CAROLINA

SEAL

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REVISIONS

DRAWN BY MTK
APPROVED BY BML
CHECKED BY BML
DATE 06/23/17
TITLE

DETAILS

PROJECT NO. 50084227

C9.0

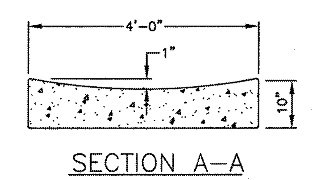
C9.1 DETAILS

TYPE III DRIVEWAY ENTRANCE

NOTES:

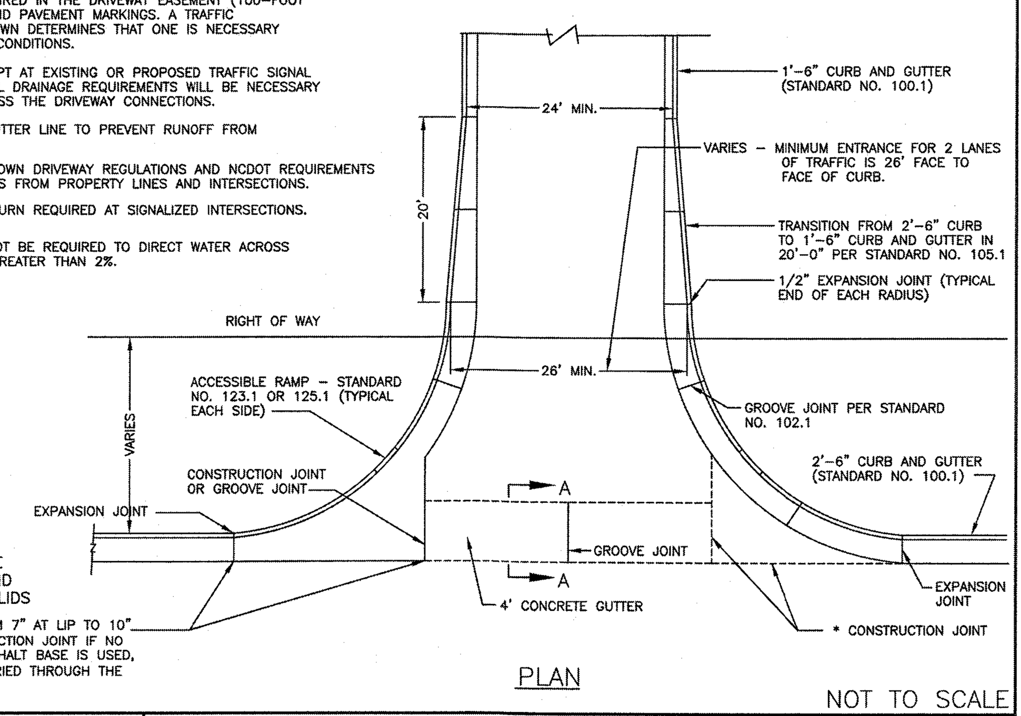
1. WHERE A TYPE III DRIVEWAY IS APPROVED BY THE TOWN DEVELOPMENT SERVICES DEPARTMENT THAT CONNECTS TO AN EXISTING SIGNALIZED INTERSECTION, OR AT A LOCATION WHERE A TRAFFIC SIGNAL INSTALLATION IS PROPOSED BY THE TOWN BASED ON A TRAFFIC IMPACT/SIGNAL WARRANT STUDY, A FULL DEPTH ASPHALT PAVEMENT (2-1/2" S-9.5 B/C AND 6" B-25.0 B/C) IS REQUIRED. THIS PAVEMENT DESIGN IS REQUIRED IN THE DRIVEWAY EASEMENT (100-FOOT MINIMUM) TO MAINTAIN DETECTOR LOOPS AND PAVEMENT MARKINGS. A TRAFFIC SIGNAL WILL BE INSTALLED ONLY IF THE TOWN DETERMINES THAT ONE IS NECESSARY BASED ON A TRAFFIC STUDY OF CURRENT CONDITIONS.
2. A CONCRETE GUTTER IS TO BE USED EXCEPT AT EXISTING OR PROPOSED TRAFFIC SIGNAL LOCATIONS. AT THESE LOCATIONS ADDITIONAL DRAINAGE REQUIREMENTS WILL BE NECESSARY TO ELIMINATE THE NEED FOR GUTTER ACROSS THE DRIVEWAY CONNECTIONS.
3. THE DRIVEWAY MUST RISE 6" FROM THE GUTTER LINE TO PREVENT RUNOFF FROM ENTERING DRIVEWAY.
4. ALL DRIVEWAYS MUST MEET THE CURRENT TOWN DRIVEWAY REGULATIONS AND NCDOT REQUIREMENTS FOR SPACING, SIGHT DISTANCE, AND OFFSETS FROM PROPERTY LINES AND INTERSECTIONS.
5. TWO (2) ACCESSIBLE RAMPS PER CURB RETURN REQUIRED AT SIGNALIZED INTERSECTIONS.

* FOUR (4) FOOT GUTTER AND WINGS WILL NOT BE REQUIRED TO DIRECT WATER ACROSS DRIVE IF THE DRIVEWAY GUTTER SLOPE IS GREATER THAN 2%.



*CONCRETE GUTTER SECTION MAY BE ALTERED TO MATCH GRADES AROUND EXISTING JUNCTION BOX MANHOLE LIDS

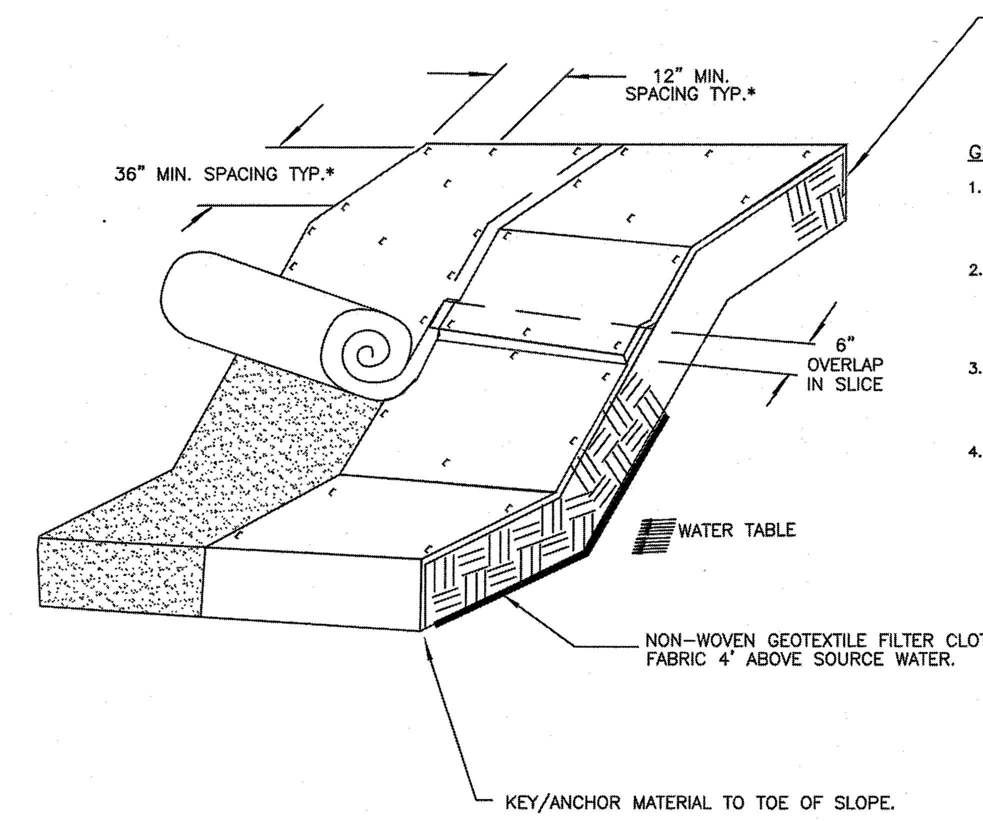
TRANSITION CONCRETE DEPTH FROM 7" AT LIP TO 10" AT 4' CONCRETE GUTTER CONSTRUCTION JOINT IF NO ASPHALT BASE INSTALLED. IF ASPHALT BASE IS USED, 7" CONCRETE DEPTH CAN BE CARRIED THROUGH THE 4' CONCRETE GUTTER.



NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | TYPE III DRIVEWAY ENTRANCE | *MODIFIED | STD. NO. 120.1 | REV.

EMBANKMENT MATTING DETAIL



GENERAL NOTES:

1. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
2. * DIMENSIONS SHOWN ARE MINIMUM, MANUFACTURED PRODUCTS MAY HAVE ADDITIONAL REQUIREMENTS THAT MUST BE MET.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, SOIL CLODS, STICKS, GRASS. MAT/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
4. THE DETAIL SHOWN IS FOR SLOPE MATTING. FOR CHANNEL OR PIPE OUTFALL MATTING SPECIFICATIONS, PLEASE REFER TO NCESCPDM STANDARD #6.17 AND MANUFACTURER'S GUIDELINES.

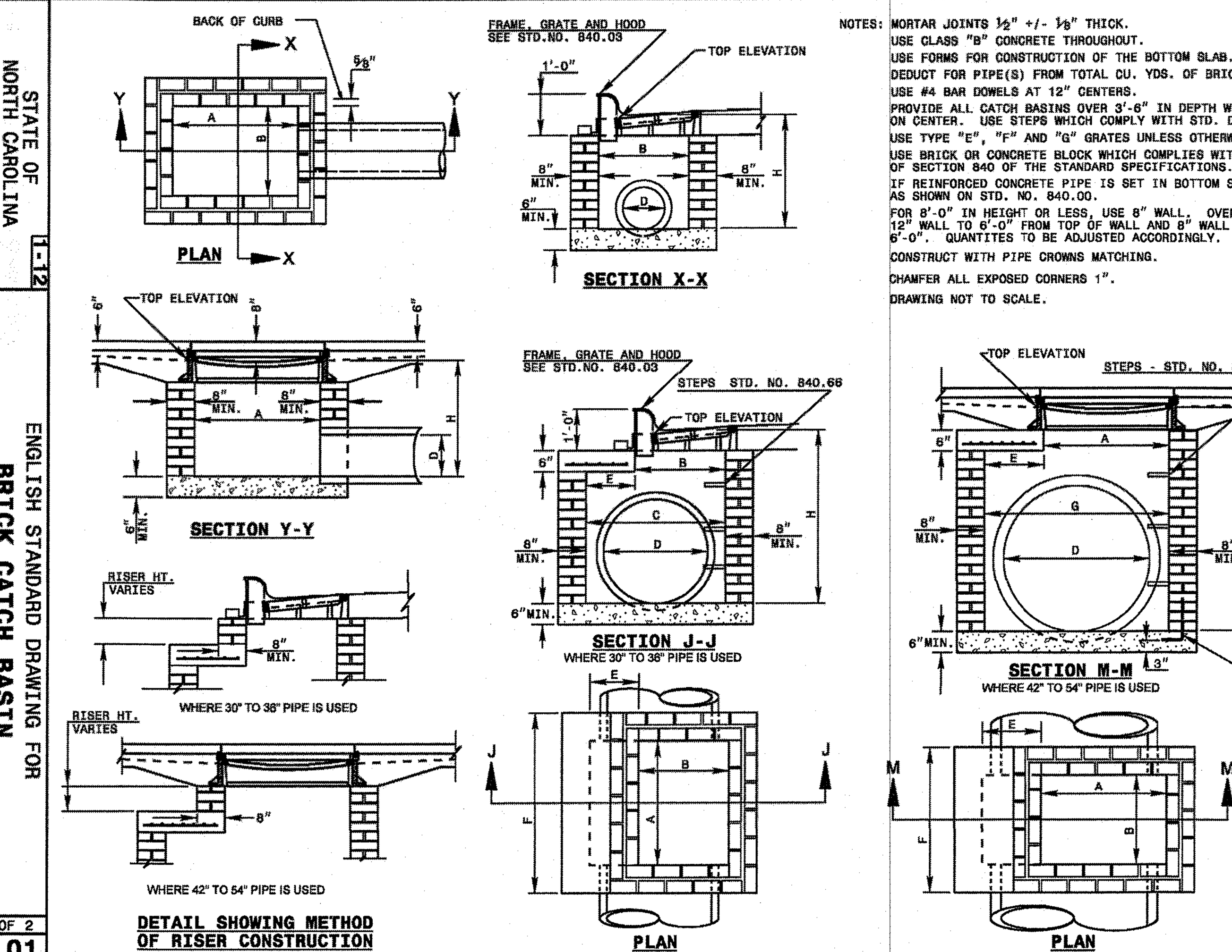
NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS | EMBANKMENT MATTING DETAIL | STD. NO. 525.1 | REV.

BRICK CATCH BASIN (840.01, SHEET 1 OF 2)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

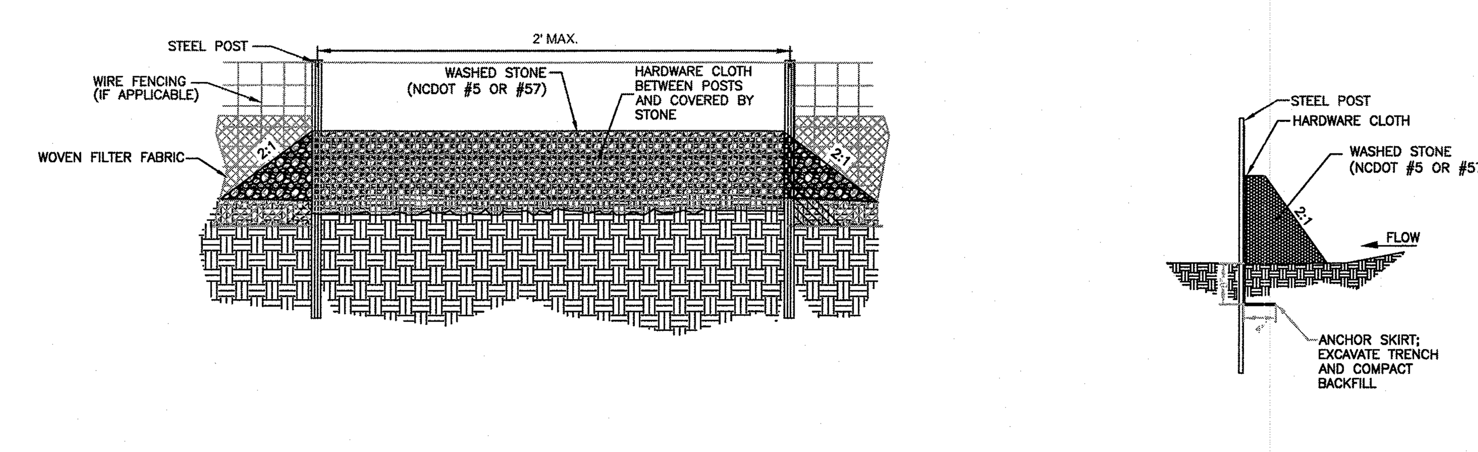
ENGLISH STANDARD DRAWING FOR **BRICK CATCH BASIN** 12" THRU 54" PIPE



NOTES: MORTAR JOINTS ½" +/- ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
USE #4 BAR DOWELS AT 12" CENTERS.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

SHEET 1 OF 2 840.01

SILT FENCE ROCK OUTLET



GENERAL NOTES:

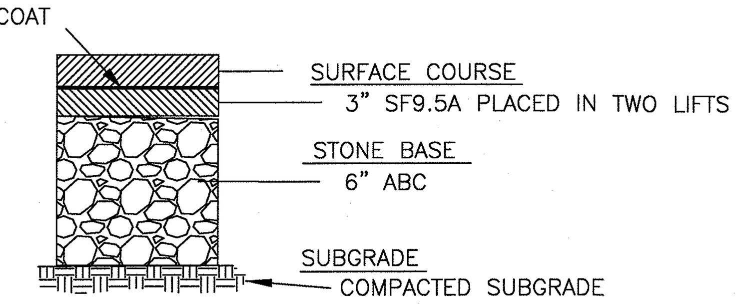
1. SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
2. HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEYED IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLED PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #30.09 (19 GAUGE, 1/4" SPACING).
3. POSTS SHALL BE NO MORE THAN 4 FEET APART.
4. SITE OUTLETS AT ANY POINT SMALL CONCENTRATED FLOWS ARE ANTICIPATED AND AT THE DIRECTION OF THE INSPECTOR.
5. ONE ACRE MAXIMUM DRAINAGE AREA PER OUTLET.

MAINTENANCE NOTES:

1. FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. THE STONE SHALL BE REPLACED PROMPTLY AFTER ANY EVENT THAT HAS CLOGGED OR REMOVED IT.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

NOT TO SCALE

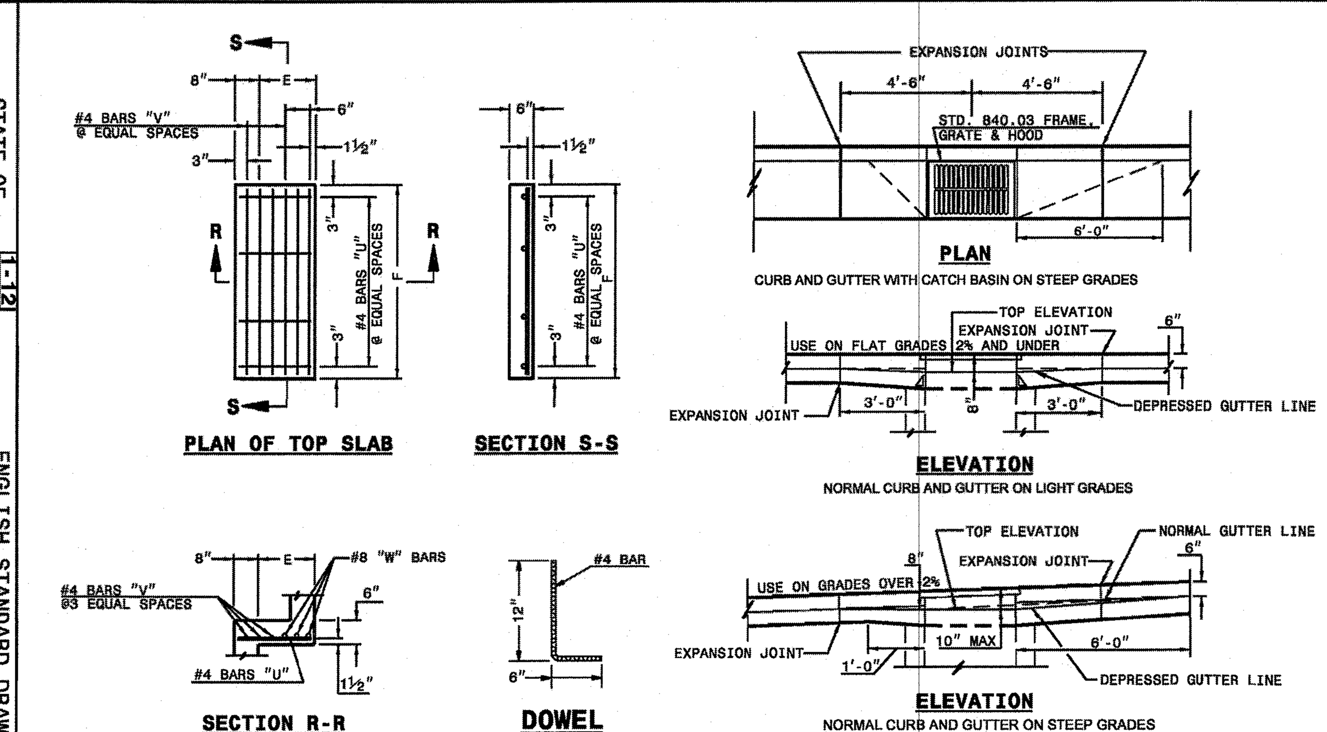
PAVEMENT SECTION



BRICK CATCH BASIN (840.01, SHEET 2 OF 2)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR **BRICK CATCH BASIN** 12" THRU 54" PIPE



MINIMUM DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER)*

PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT H	TOP SLAB E	TOP SLAB F	BARS-U NO.	BARS-U LENGTH	BARS-V NO.	BARS-V LENGTH	BARS-W NO.	BARS-W LENGTH	TOTAL LBS.	CU.YDS. CONC. IN BOX TOP SLAB	BOTTOM SLAB	TOTAL CONC.	BRICK MSNR. IN WALLS	TOTAL BRICK AND CONCRETE	DEDUCTIONS ONE PIPE C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.281	0.281	0.883	1.164	0.020	0.042
15"	3'-0"	2'-2"			3'-0"											0.281	0.281	0.963	1.244	0.031	0.047
18"	3'-0"	2'-2"			3'-3"											0.281	0.281	1.043	1.324	0.044	0.065
24"	3'-0"	2'-2"			3'-9"											0.281	0.281	1.204	1.485	0.078	0.121
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.521	1.606	2.217	0.122	0.184
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.914	2.516	0.176	0.261
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.373	0.508	2.152	2.660	0.240	0.371
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-6"	4	2'-6"	4	3'-3"	3	3'-3"	41	0.173	0.410	0.583	2.415	2.998	0.313	0.477
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	47	0.211	0.448	0.659	2.806	3.465	0.396	0.595

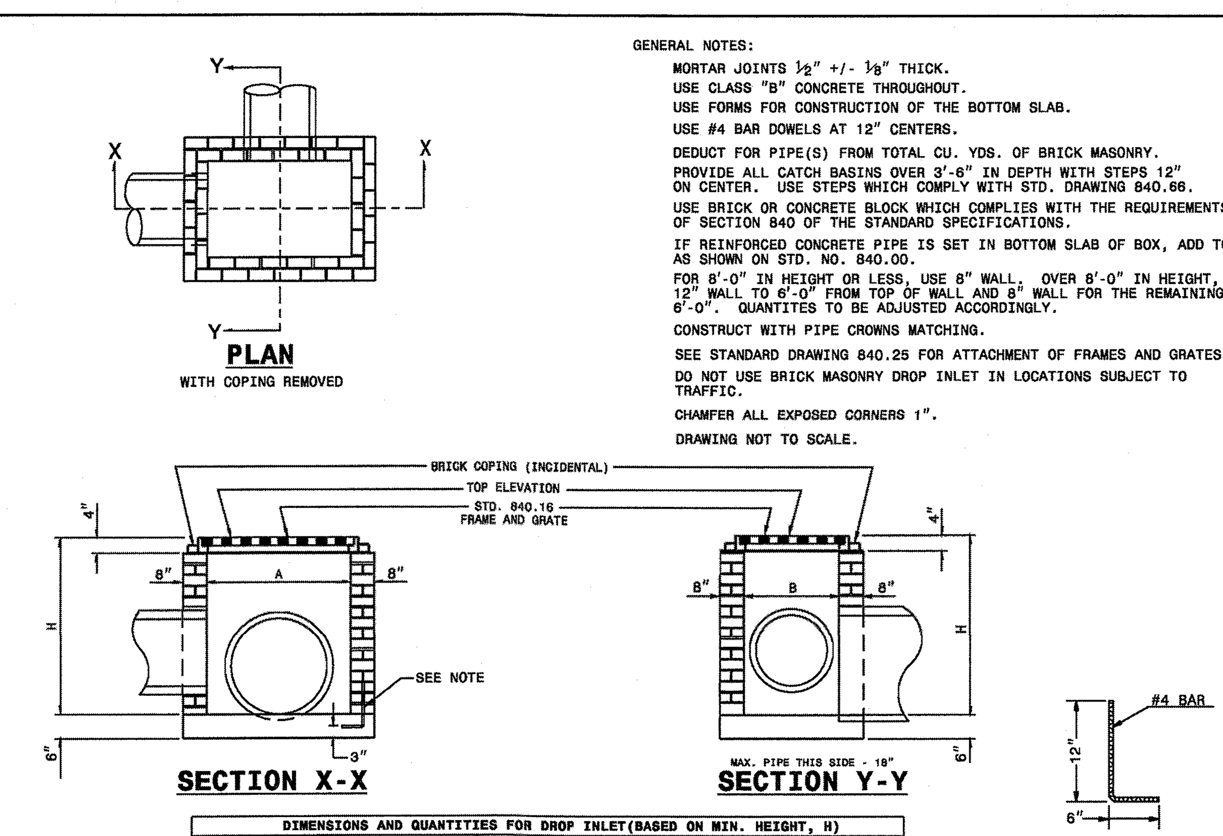
* RISER HAS .321 CUBIC YARDS OF BRICK MASONRY PER FOOT HEIGHT

SHEET 2 OF 2 840.01

BRICK DROP INLET (840.15, SHEET 1 OF 1)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR **BRICK DROP INLET** 12" THRU 30" PIPE



GENERAL NOTES:
MORTAR JOINTS ½" +/- ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
USE #4 BAR DOWELS AT 12" CENTERS.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

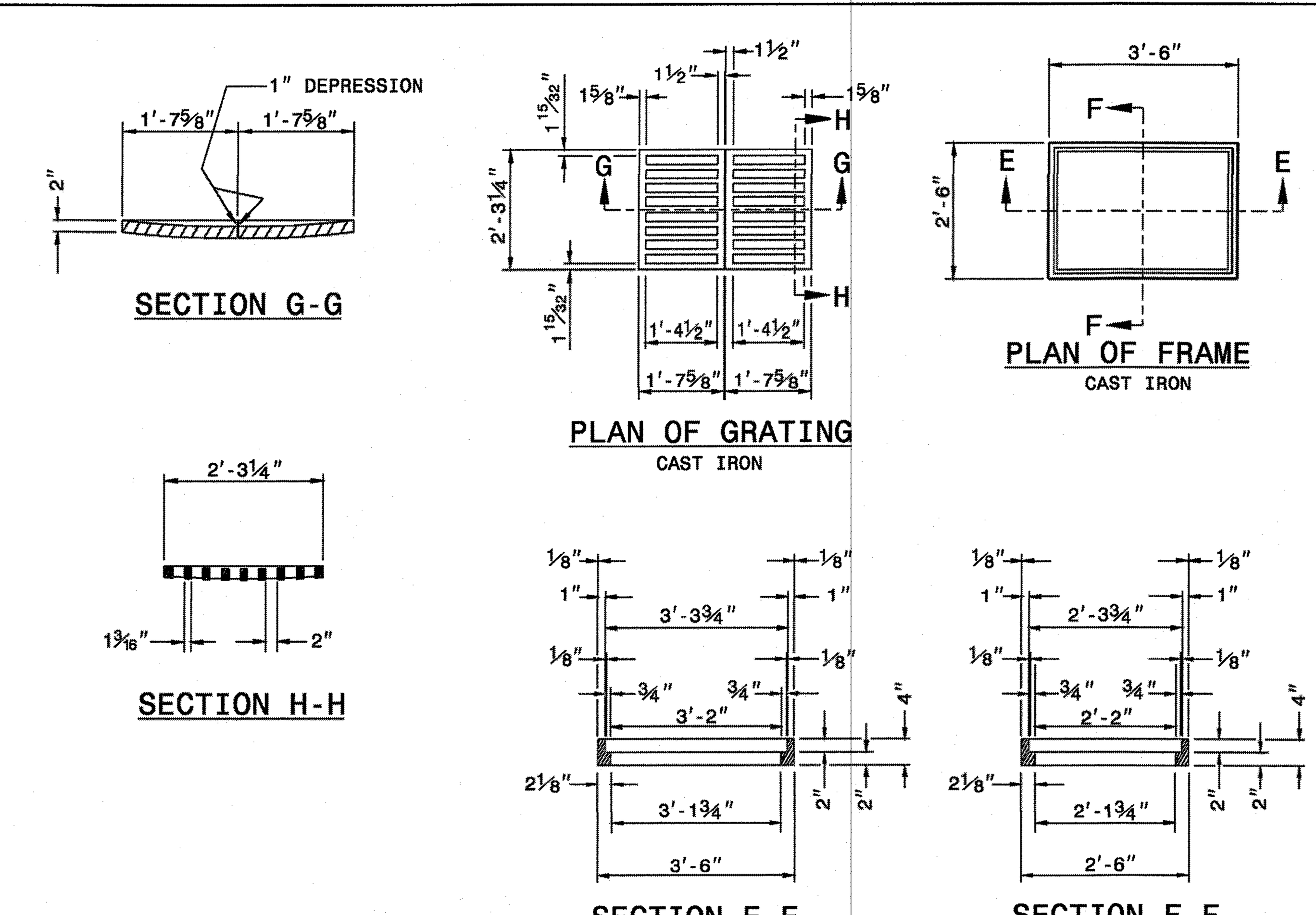
PIPE D	SPAN A	WIDTH B	MIN. HEIGHT H	CUBIC YARDS CONCRETE BOTTOM SLAB	CUBIC YARDS BRICK MASONRY WALL PER FOOT HT.	TOTAL BRICK MASONRY FOR MIN. HEIGHT, H	DEDUCTIONS FOR ONE PIPE C.S.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032
15"	/	/	2'-3"	0.268	0.313	0.600	0.031	0.047
18"	/	/	2'-6"	0.268	0.313	0.678	0.044	0.065
24"	/	/	3'-0"	0.268	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	3'-6"	0.268	0.313	0.991	0.122	0.170

SHEET 1 OF 1 840.15

DROP INLET FRAME AND GRATES (840.16, SHEET 1 OF 1)

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C. 1-12

ENGLISH STANDARD DRAWING FOR **DROP INLET FRAME AND GRATES** FOR USE WITH STD. DWG.S 840.14 AND 840.15



SHEET 1 OF 1 840.16

Dewberry

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NCBELS #F-0929

BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 40016 BRIAN M. LaFRANCHI 7-2-18

KEY PLAN

NO.	DATE	BY	DESCRIPTION
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
3	10/25/17	MTK	COMMENTS
2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

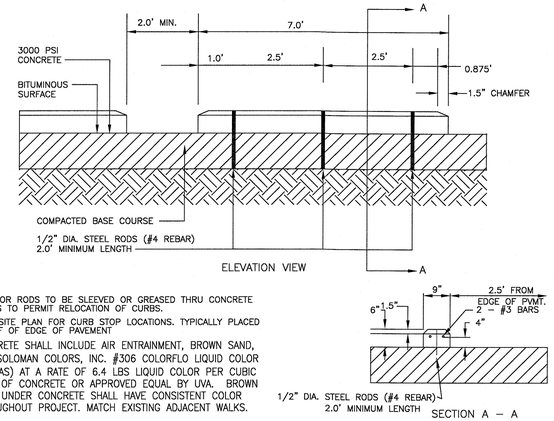
DRAWN BY MTK
APPROVED BY BML
CHECKED BY BML
DATE 06/23/17

TITLE

DETAILS

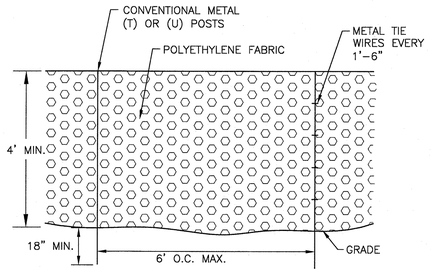
PROJECT NO. 50084227

C9.1

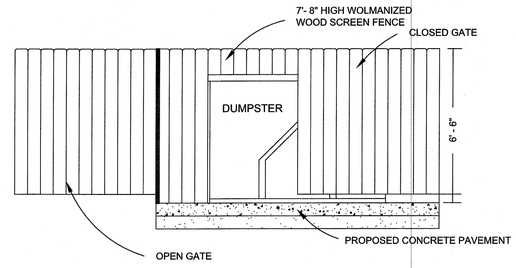


NOTE:
1. ANCHOR RODS TO BE SLEEVED OR GREASED THRU CONCRETE CURBS TO PERMIT RELOCATION OF CURBS.
2. SEE SITE PLAN FOR CURB STOP LOCATIONS. TYPICALLY PLACED 2' OFF OF EDGE OF PAVEMENT
3. CONCRETE SHALL INCLUDE AIR ENTRAINMENT, BROWN SAND, AND SOLOMAN COLORS, INC. #306 COLORFLO LIQUID COLOR (CANVAS) AT A RATE OF 6.4 LBS LIQUID COLOR PER CUBIC YARD OF CONCRETE OR APPROVED EQUAL BY UVA. BROWN SAND UNDER CONCRETE SHALL HAVE CONSISTENT COLOR THROUGHOUT PROJECT. MATCH EXISTING ADJACENT WALKS.

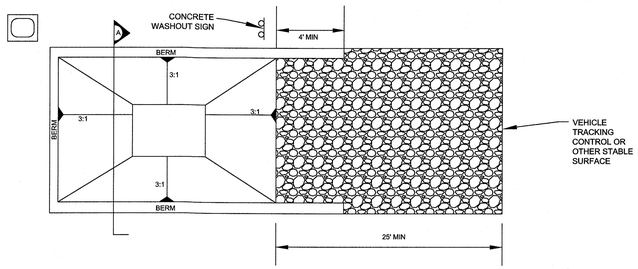
WHEELBLOCK DETAIL
N.T.S.



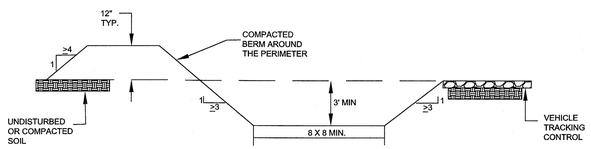
CONSTRUCTION SAFETY FENCE
N.T.S.



DUMPSTER SCREENING DETAIL
NO SCALE



CONCRETE WASHOUT AREA PLAN



SECTION A

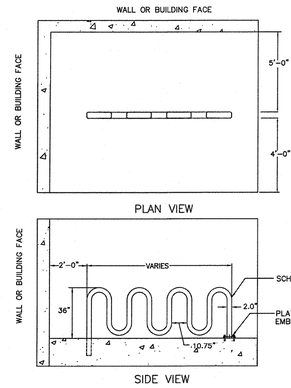
CWA INSTALLATION NOTES

1. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON THE SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (8 IN. MIN THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINES ABOVE GROUND STORAGE SHOULD BE USED.
2. CWA SHALL BE INSTALLED PRIOR TO ANY CONCRETE INSTALLATION.
3. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' WITH SLOPES COMING OUT AT 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
4. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE A MINIMUM HEIGHT OF 1'.
5. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
6. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
7. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

1. INSPECT BMP'S EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMP'S SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMP'S AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMP'S IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMP'S HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE USED FOR THE PROJECT HAS BEEN PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED, AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

CONCRETE WASHOUT AREA
N.T.S.



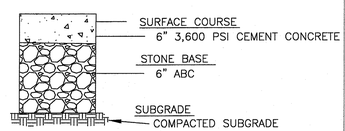
NOTES:
1. BIKE RACKS SHOULD BE INSTALLED AS PER MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
2. ALTERNATIVE BIKE RACKS OR LOCKERS MAY BE USED BUT ARE SUBJECT TO APPROVAL BY THE CHARLOTTE DEPARTMENT OF TRANSPORTATION.
3. ALL DIMENSIONS SHOWN ARE MINIMUM.
4. PLACEMENT SHOULD BE CANE DETECTABLE AND PLACED OUTSIDE PEDESTRIAN ACCESS ROUTE.

NOTE:

A THREE (3) LOOP WAVE STYLE BIKE RACK WITH FIVE (5) BIKE CAPACITY IS TO BE USED. BIKE RACK AS MANUFACTURED ULINE OR APPROVED EQUAL

NOT TO SCALE

TOWN OF WAXHAW LAND DEVELOPMENT STANDARDS	WAVE RACK FOR BICYCLE PARKING	STD. NO. 717.1	REV.



CONCRETE SECTION

Dewberry

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NCBELS #F-0929

BED & BARK PET CARE

100% CONSTRUCTION DOCUMENTS

WAXHAW, NORTH CAROLINA

SEAL

KEY PLAN

NO.	DATE	BY	DESCRIPTION
6	07/02/18	PRS	MAJOR REV 1
5	01/09/18	BML	RFI CHANGES
4	11/22/17	MTK	COMMENTS
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2	09/05/17	JGL	COMMENTS
1	07/24/17	JGL	COMMENTS

REVISIONS

DRAWN BY MTK

APPROVED BY BML

CHECKED BY BML

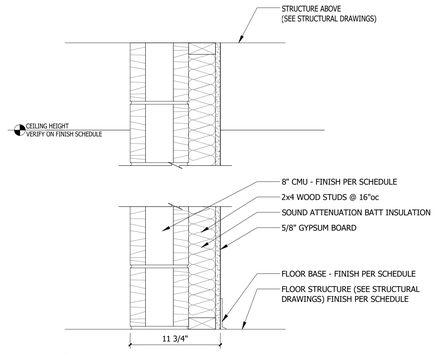
DATE 06/23/17

TITLE

DETAILS

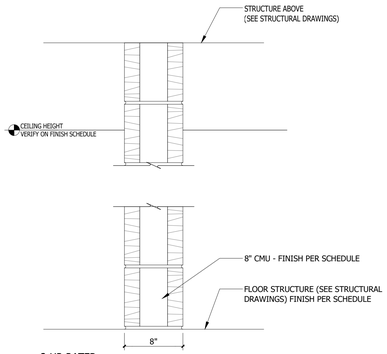
PROJECT NO. 50084227

C9.2



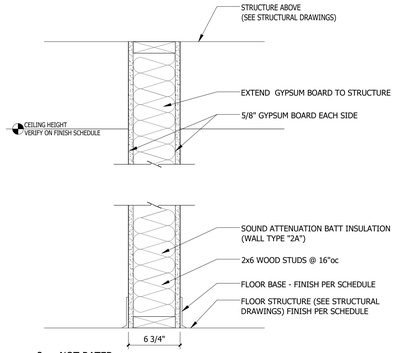
2-HR RATED

WALL TYPE 04 — scale: 1 1/2"=1'-0"



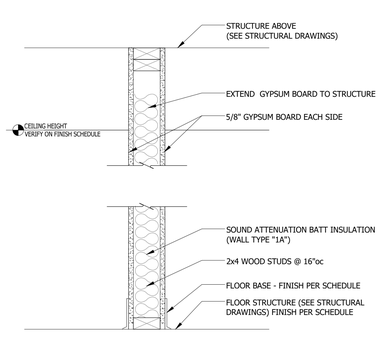
2-HR RATED

WALL TYPE 03 — scale: 1 1/2"=1'-0"



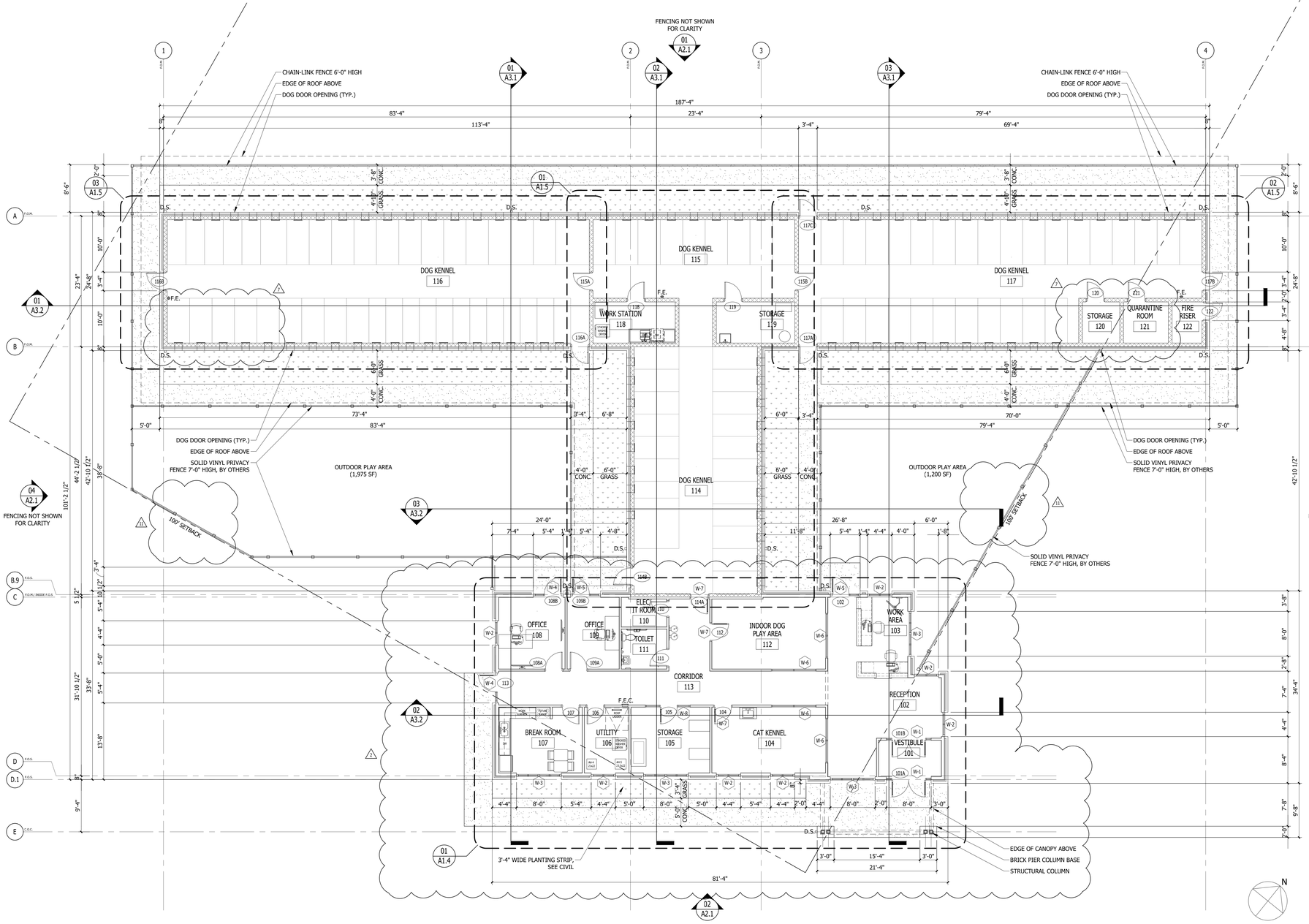
2 = NOT RATED
2A = LIKE 2 w/ SOUND ATTENUATION BATT (STC 49)

WALL TYPE 02 — scale: 1 1/2"=1'-0"



1 = NOT RATED
1A = LIKE 1 w/ SOUND ATTENUATION BATT (STC 49)

WALL TYPE 01 — scale: 1 1/2"=1'-0"



01 FLOOR PLAN — scale: 1/8"=1'-0"

ODa
overcash demmitt
2010 south tryon st. suite 1a
charlotte north carolina 28203
office.704.332.1615
web.www.odarch.com

01/02/19

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
3 OWNER CHANGES	:	07.12.18
4 RETAINING WALL	:	01.02.19
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---

FLOOR PLAN AND WALL TYPES

A1.1

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ODA No. 163112 CADD File:

CEILING NOTES

1. ALL GYPSUM BOARD CEILINGS, SOFFITS AND BULKHEADS TO BE SMOOTH PAINTED FINISH - SEE FINISH SCHEDULE.

2. SEE FINISH SCHEDULE OR SPECIFICATIONS FOR ACOUSTICAL CEILING TILE TYPES.

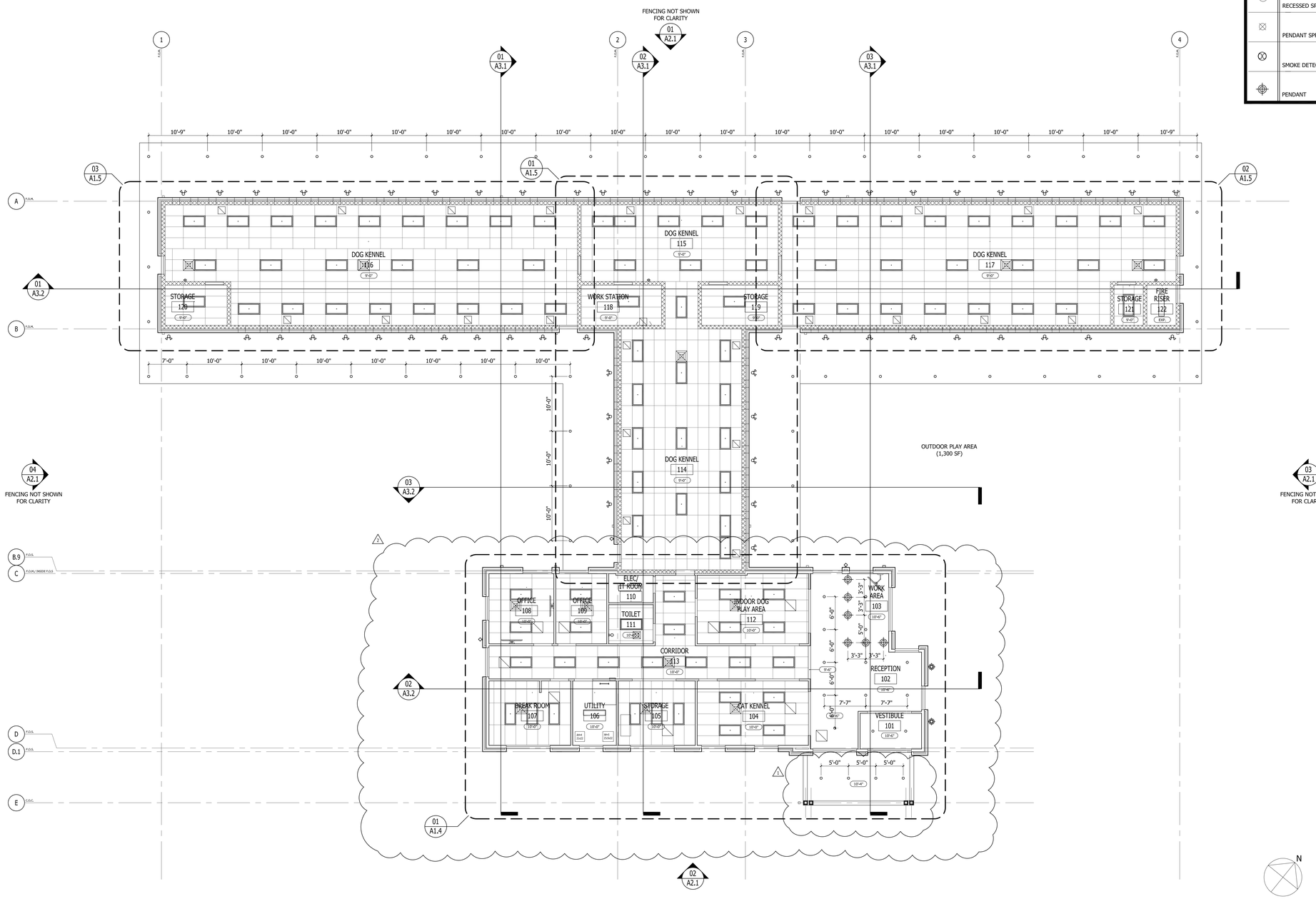
3. SUSPENDED ACCOUSTICAL TILE CEILING TO BE INSTALLED ACCORDING TO REQUIREMENTS OF ASTM C 636 - 96 AND NCBC 1621.

4. USE MOISTURE RESISTANT GYPSUM BOARD AT ALL WET LOCATIONS.

5. SEE ELECTRICAL PLAN FOR SPECIALTY FIXTURE, SYMBOLS, & SPECIFICATIONS.

RCP PLAN LEGEND

	2X4 LAY-IN CEILING TILE AND GRID
	2X4 LED LIGHT FIXTURE
	1X4 FLUORESCENT CEILING MOUNTED FLOURESCENT
	RETURN
	SUPPLY
	EXIT SIGN
	EMERGENCY LIGHT
	CAN LIGHT
	WALL SCONCE
	WALL WASH CAN LIGHT
	RECESSED SPRINKLER HEAD
	PENDANT SPRINKLER HEAD
	SMOKE DETECTOR
	PENDANT



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07/25/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
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---	:	---
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REFLECTED CEILING PLAN

A1.2

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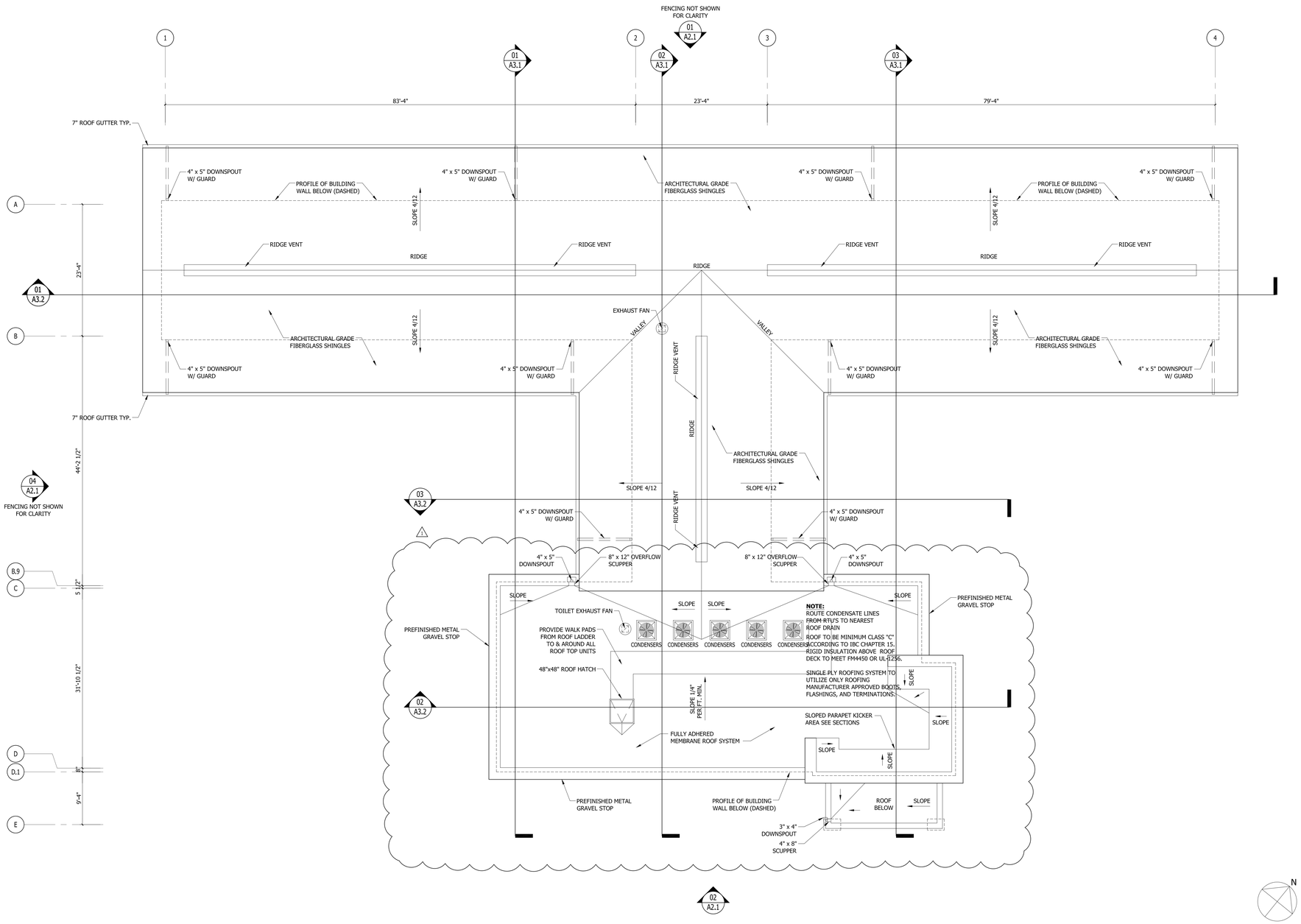
ODA No. 163112 CADD File:

01 REFLECTED CEILING PLAN

scale: 1/8"=1'-0"



01 ROOF PLAN

scale: 1/8"=1'-0"

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o f f i c e . 7 0 4 . 3 3 2 . 1 6 1 5
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06/01/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

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FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
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ROOF PLAN

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ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE	GRFC	GLASS FIBER REINFORCED CONCRETE	RB	RUBBER BASE
CPT	BROADLOOM CARPET	GRNT	GRANITE	SLT	SLATE TILE
CPTTL	CARPET TILE	GYPBD	GYPSUM WALL BOARD	SSM	SOLID SURFACE MATERIAL
CB	CEMENT BOARD	LIN	LINOLEUM	WOOD	STAINED WOOD
CT	CERAMIC TILE	LVT	LUXURY VINYL TILE	ST	STAIR TREAD
CTB.	CERAMIC TILE BASE	MRBL	MARBLE	SC	STAMPED CONCRETE
CONC.	CONCRETE	MW	MILLWORK	TP	TOILET PARTITION
EPXYPNT	EPOXY PAINT	MRGYP	MOISTURE RESISTANT GYPSUM BOARD	VCB	
EIFS	EXTERIOR INSULATION FINISH SYSTEM	PT	PORCELAIN TILE	VCT	VINYL COMPOSITE TILE
EXTGYP	EXTERIOR GYPSUM SOFFIT BOARD	PNT	PAINT	VPNT	VERIGATED PAINT
FRP	FIBER RESIN POLYMER	PLAM	PLASTIC LAMINATE	VWC	VINYL WALL COVERING
GT	GLASS MOSAIC TILE	QT	QUARRY TILE	UOS	UNDERSDIE OF STRUCTURE

FINISH SCHEDULE

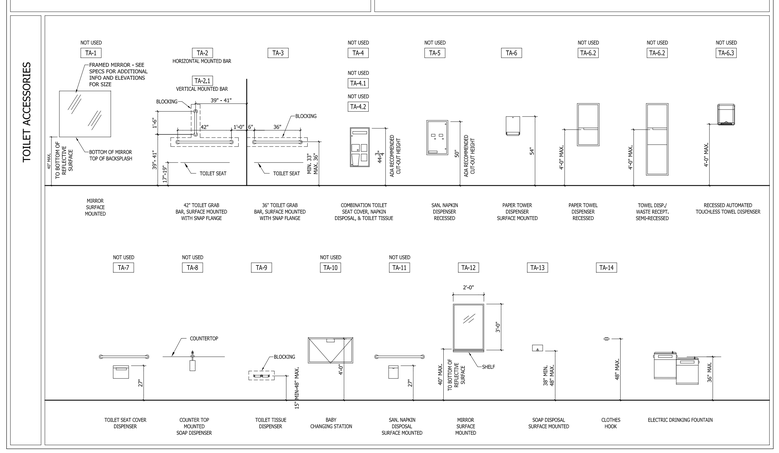
NOTE : ALL FINISHES SHALL COMPLY WITH SECTION 803 AND 804 OF NORTH CAROLINA STATE BUILDING CODE.

ROOM NO.	ROOM NAME	FLOOR	BASE		WALLS								SPECIAL TRIM		CEILING		NOTES
			MAT'L	FINISH	NORTH MAT'L	FINISH	SOUTH MAT'L	FINISH	EAST MAT'L	FINISH	WEST MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	
101	VESTIBULE	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	---	---	GYP	PNT	---
102	RECEPTION	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	EPOXY PNT	WOOD	PNT	GYP	PNT	---
103	WORK AREA	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	EPOXY PNT	WOOD	PNT	GYP	PNT	---
104	CAT KENNEL	EPOXY	EPOXY	---	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	---	---	ACT	---	---
105	GROOMING	EPOXY	EPOXY	---	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	---	---	ACT	---	---
106	STORAGE / UTILITY	EPOXY	EPOXY	---	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	---	---	GYP	PNT	---
107	BREAKROOM	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	---	---	ACT	---	---
108	OFFICE	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	---	---	ACT	---	---
109	OFFICE	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	---	---	ACT	---	---
110	ELECTRICAL / IT	EPOXY	EPOXY	---	GYP	PNT	GYP	PNT	GYP	PNT	GYP	PNT	---	---	GYP	PNT	---
111	TOILET	EPOXY	EPOXY	---	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	---	---	ACT	---	---
112	INDOOR DOG PLAY AREA	EPOXY	EPOXY	---	GYP / FRP	EPOXY PNT	GYP / FRP	EPOXY PNT	GYP / FRP	EPOXY PNT	GYP / FRP	EPOXY PNT	FRP / EPOXY	---	ACT	---	---
113	CORRIDOR	EPOXY	EPOXY	---	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	GYP	EPOXY PNT	---	---	ACT	---	---
114	DOG KENNEL	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
115	DOG KENNEL	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
116	DOG KENNEL	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
117	DOG KENNEL	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
118	WORK STATION	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
119	STORAGE	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
120	STORAGE	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
121	STORAGE	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---
122	FIRE RISER	EPOXY	EPOXY	---	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	CMU	EPOXY PNT	---	---	ACT	---	---

05 FINISH SCHEDULE scale: 1/4"=1'-0"

TOILET ACCESSORIES

NOTES:
1) ACCESSORIES TO BE BOBRICK CONTURA SERIES OR EQUAL SEE SPECIFICATIONS - SECTION # 10 28 00
2) PROVIDE SHEET METAL BLOCKING FOR ALL TOILET ACCESSORIES MOUNTED ON GYP. BD. PARTITIONS.
3) ALL TOILET PAPER DISPENSERS LOCATED IN ACCESSIBLE TOILET ROOMS OR STALLS SHALL COMPLY WITH 604.11 OF ANSI 117.1-2003.



04 TYPICAL DEVICE MOUNTING HEIGHTS scale: 1/4"=1'-0"

EQUIPMENT SCHEDULE

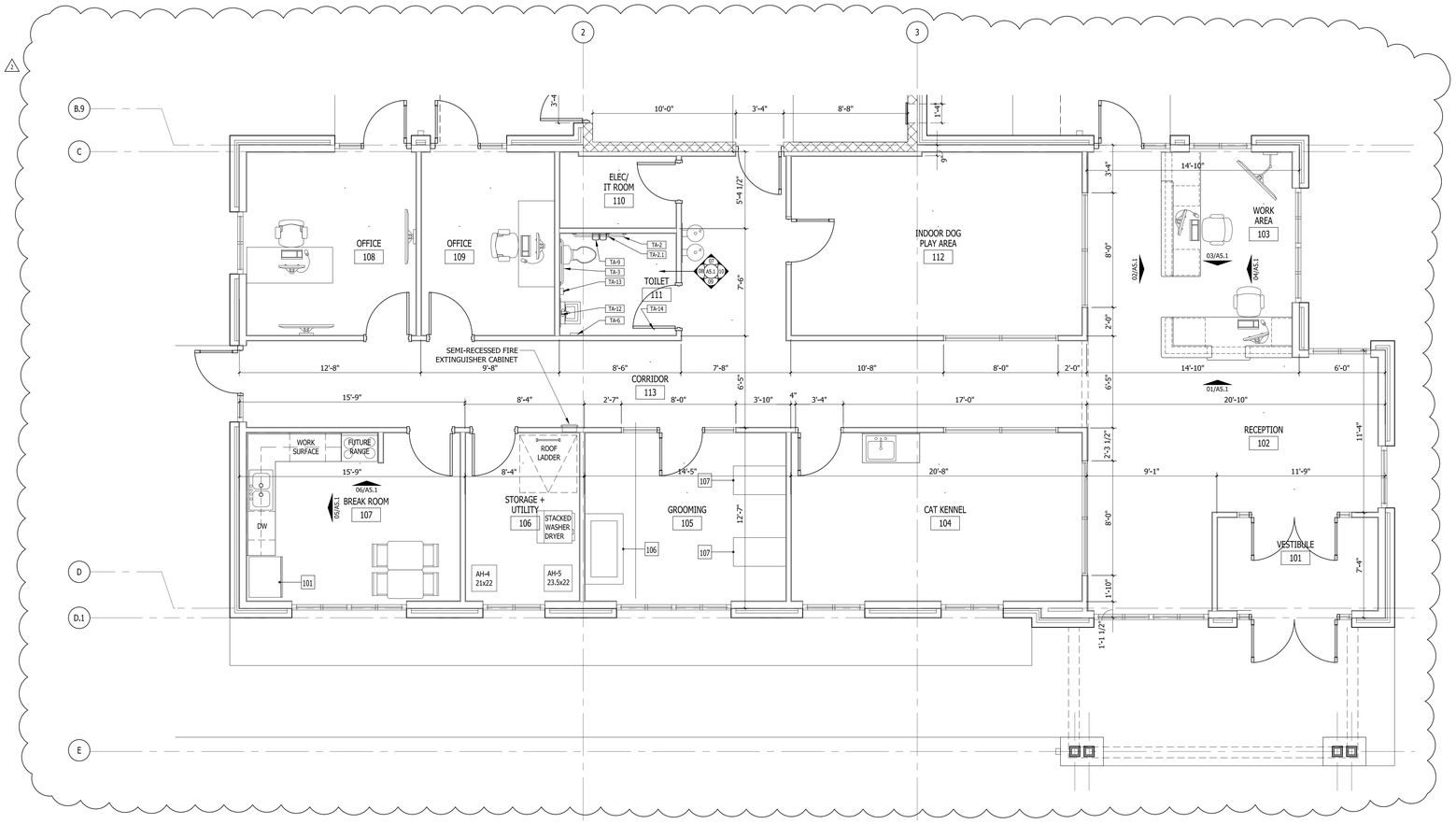
MARK	QTY.	DESCRIPTION	COMMENTS	LOCATION
101	1	REFRIGERATOR	BY VENDOR	118 WORKSTATION
102	1	STACKED WASHER/DRYER	BY VENDOR	118 WORKSTATION
103	1	CMA DISHMACHINE MODEL #: CMA-180CB WITH DISHTABLE ATTACHEMENTS	BY VENDOR	118 WORKSTATION
104	1	CLEANWISE SYSTEM - WALL MOUNTED (MOP SINK COMES SEPARATELY)	BY VENDOR	119 STORAGE
105	1	HAIGH - WHOOPSIE-AWAY DOG DISPOSAL UNIT	BY VENDOR	119 STORAGE
106	1	3-SIDE SPLASH "PROFESSIONAL" WASH UNIT TUB	BY VENDOR	105 GROOMING
107	2	GROOMING TABLE	BY VENDOR	105 GROOMING
108	1	NOT USED	NOT USED	
109	1	NOT USED	NOT USED	
110	1	NOT USED	NOT USED	

03 EQUIPMENT SCHEDULE scale: 1/4"=1'-0"

TOILET ACCESSORY SCHEDULE

TA-#	DESCRIPTION	MANUFACTURER	MODEL #	REMARKS
TA-1	NOT USED			N/A
TA-2	42" GRAB BAR	BOBRICK	B-6806 X 36"	N/A
TA-2.1	18" GRAB BAR	BOBRICK	B-6806 X 18"	N/A
TA-3	36" GRAB BAR	BOBRICK	B-6806 X 42"	N/A
TA-4	NOT USED			N/A
TA-5	NOT USED			N/A
TA-6	SURFACE MOUNTED PAPER TOWEL DISPENSER	BOBRICK	B-4262	N/A
TA-6.1	NOT USED			N/A
TA-6.2	NOT USED			N/A
TA-6.3	NOT USED			N/A
TA-7	NOT USED			N/A
TA-8	NOT USED			N/A
TA-9	TOILET TISSUE HOLDER	BOBRICK	B-7686	N/A
TA-10	NOT USED			N/A
TA-11	NOT USED			N/A
TA-12	MIRROR (24"x36")	BOBRICK	B-165 2436	N/A
TA-13	SOAP DISPENSER	BOBRICK	B-4112 OR B-818615	N/A
TA-14	COAT HOOK	BOBRICK	B-76727	N/A
-	SIGNAGE PER ANSI STANDARDS			N/A

02 TOILET ACCESSORY LEGEND scale: 1/4"=1'-0"



01 ENLARGED PLAN scale: 1/4"=1'-0"

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ENLARGED PLAN AND EQUIPMENT SCHEDULES

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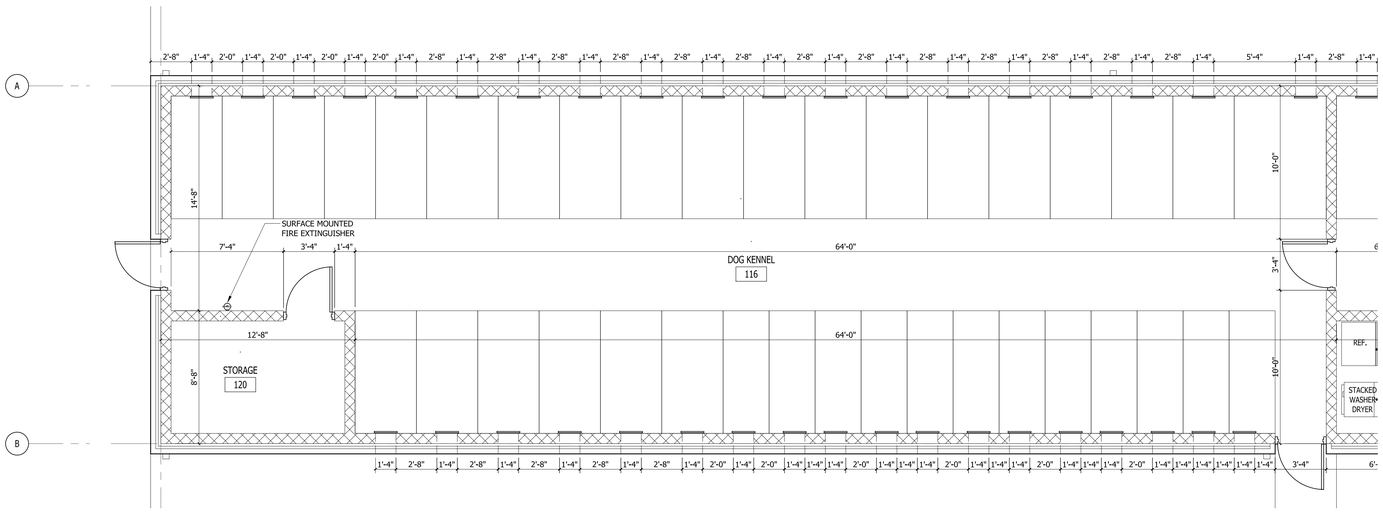
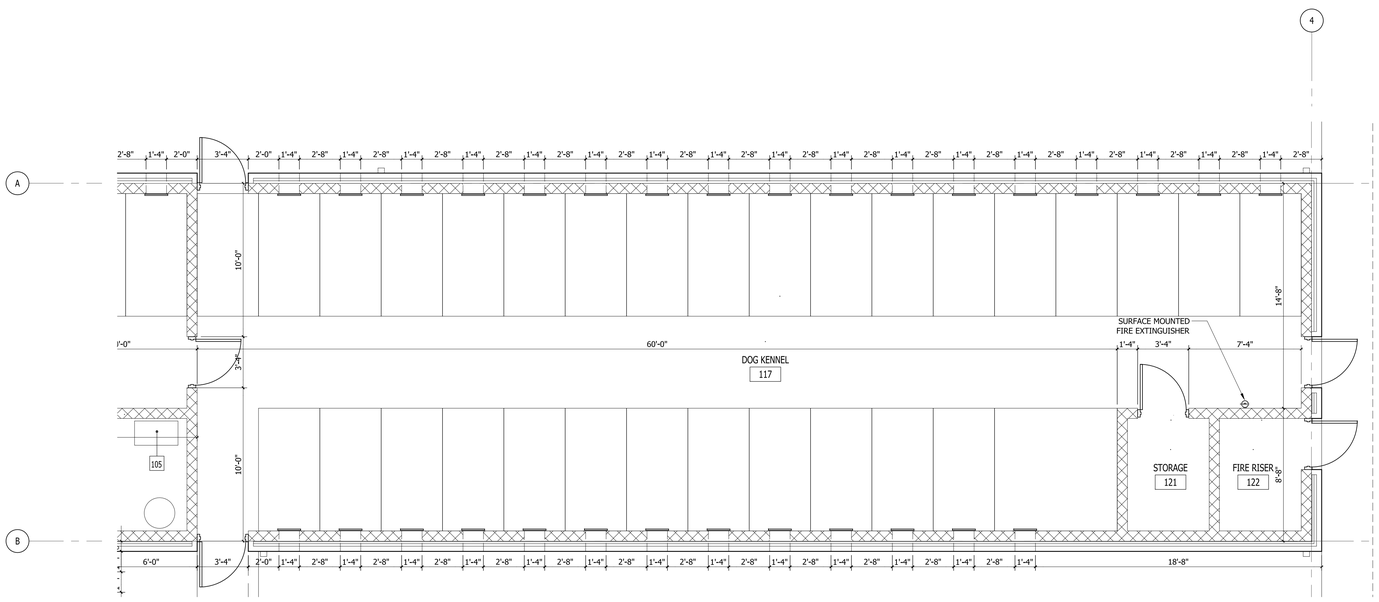
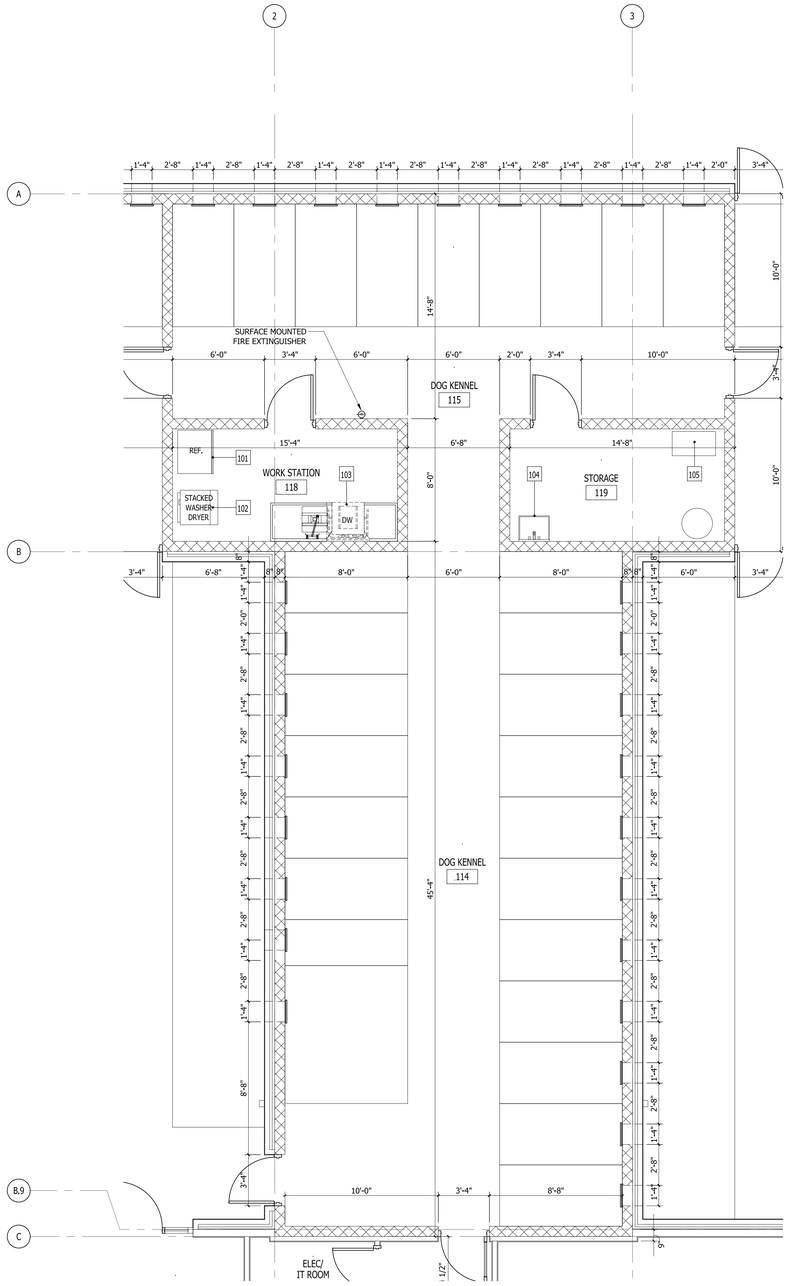


03 ENLARGED KENNEL PLAN — scale: 1/4"=1'-0"



02 ENLARGED KENNEL PLAN — scale: 1/4"=1'-0"



01 ENLARGED KENNEL PLAN — scale: 1/4"=1'-0"

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ENLARGED KENNEL PLANS

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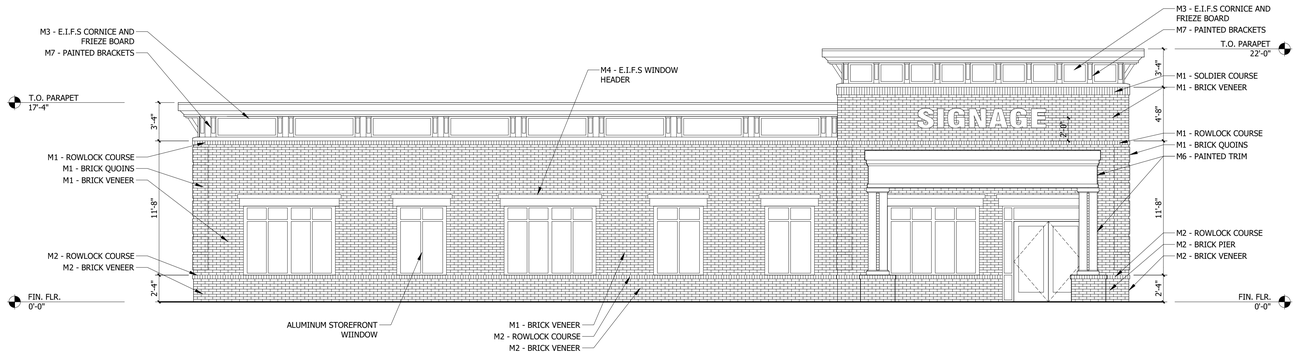
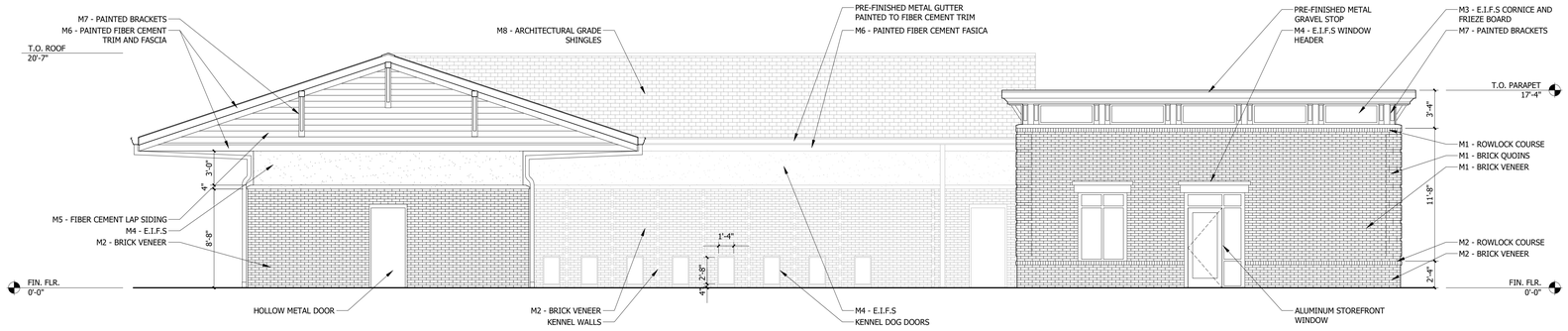
EXTERIOR MATERIAL LEGEND

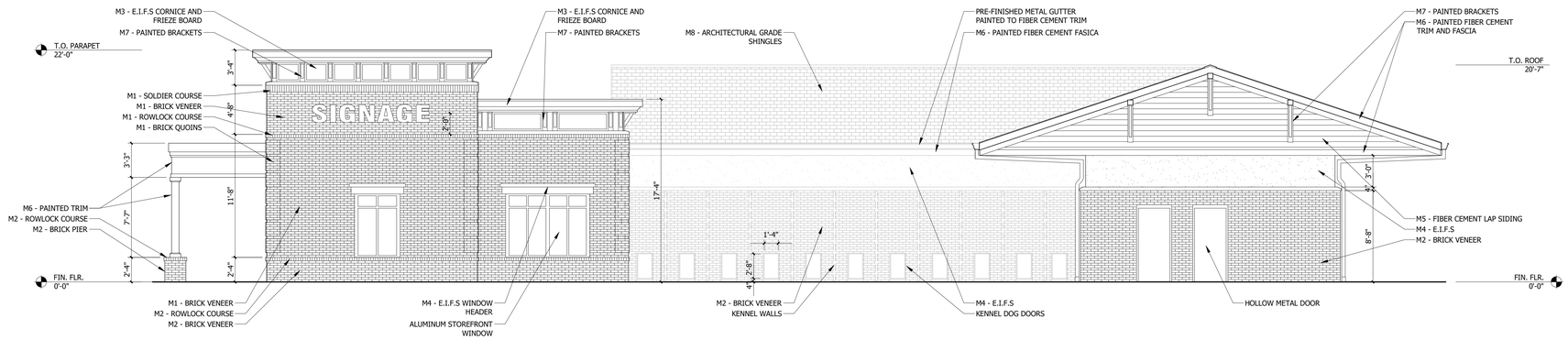
KEY	DESCRIPTION	MANUFACTURER	COLOR
M1	BRICK VENEER	BORAL BRICKS	BATTLESHIP
M2	BRICK VENEER	BORAL BRICKS	CANNON
M3	E.I.F.S	DRYVIT	SHERWIN WILLIAMS - 6006 BLACK BEAN
M4	E.I.F.S	DRYVIT	SHERWIN WILLIAMS - 6151 QUIVER TAN
M5	PAINTED FIBER CEMENT LAP SIDING	JAMESHARDIE	SHERWIN WILLIAMS - 6151 QUIVER TAN
M6	PAINTED FIBER CEMENT TRIM	JAMESHARDIE	SHERWIN WILLIAMS - 6006 BLACK BEAN
M7	PAINTED WOOD BRACKET	SHERWIN WILLIAMS	SHERWIN WILLIAMS - 6151 QUIVER TAN
M8	ARCHITECTURAL GRADE SHINGLES	IKO	CAMBRIDGE - DRIFTWOOD
M9	CHAIN-LINK FENCE	TBD.	VINYL COATED BLACK



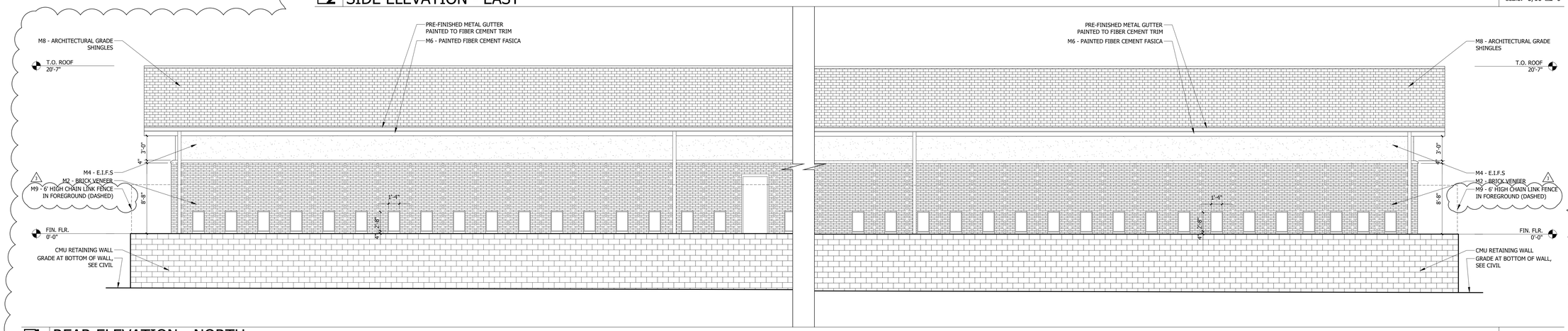
4 PUBLIC STREET ELEVATION - SOUTH — scale: 3/16"□1'-0"



3 SIDE ELEVATION - WEST — scale: 3/16"□1'-0"



2 SIDE ELEVATION - EAST — scale: 3/16"□1'-0"



1 REAR ELEVATION - NORTH — scale: 3/16"□1'-0"

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METROLINA BUILDERS
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EXTERIOR ELEVATIONS

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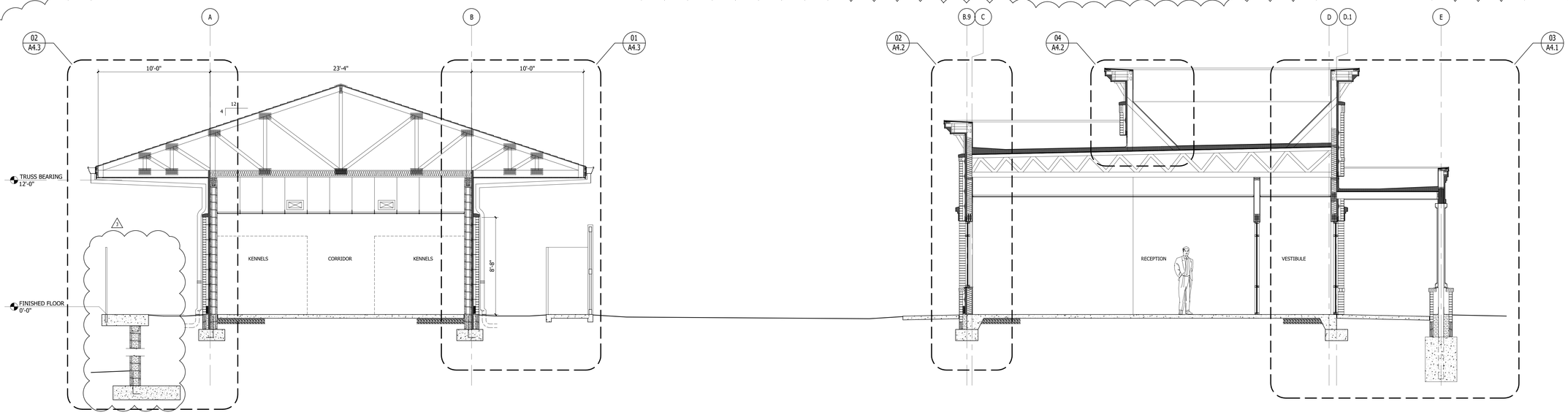

3 BUILDING SECTION

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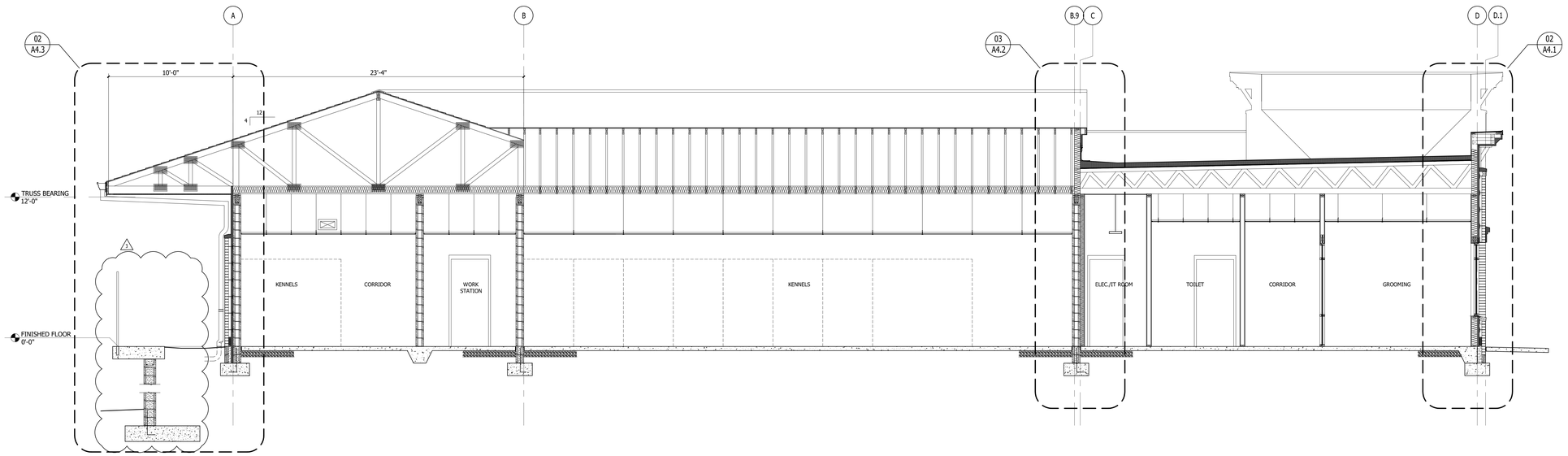

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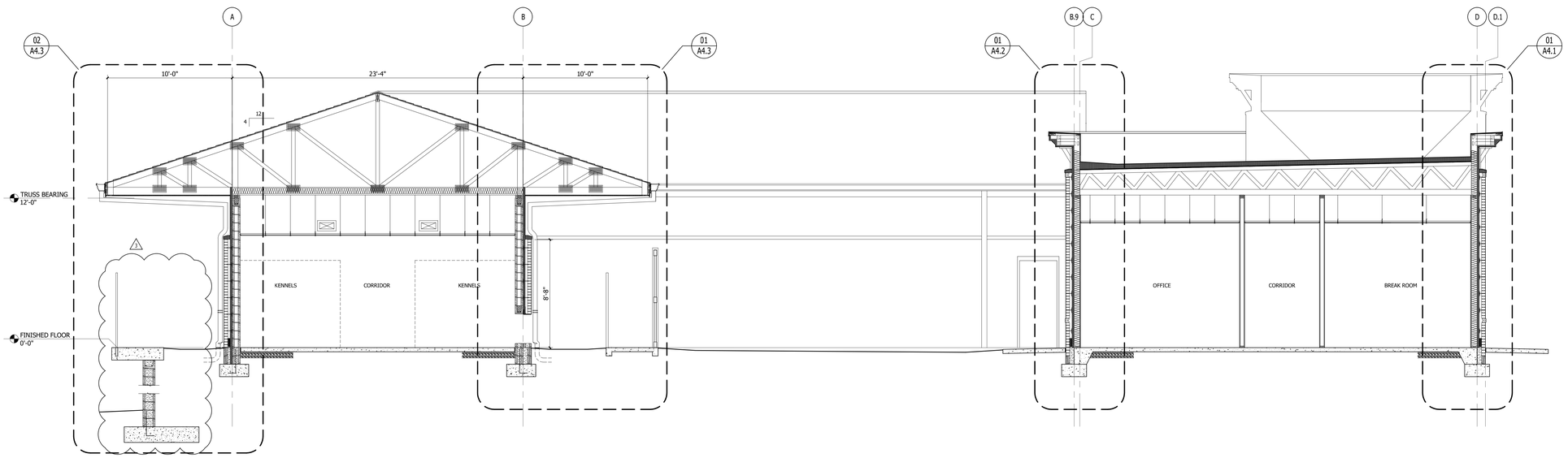

1 BUILDING SECTION

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BUILDING SECTIONS

A3.1

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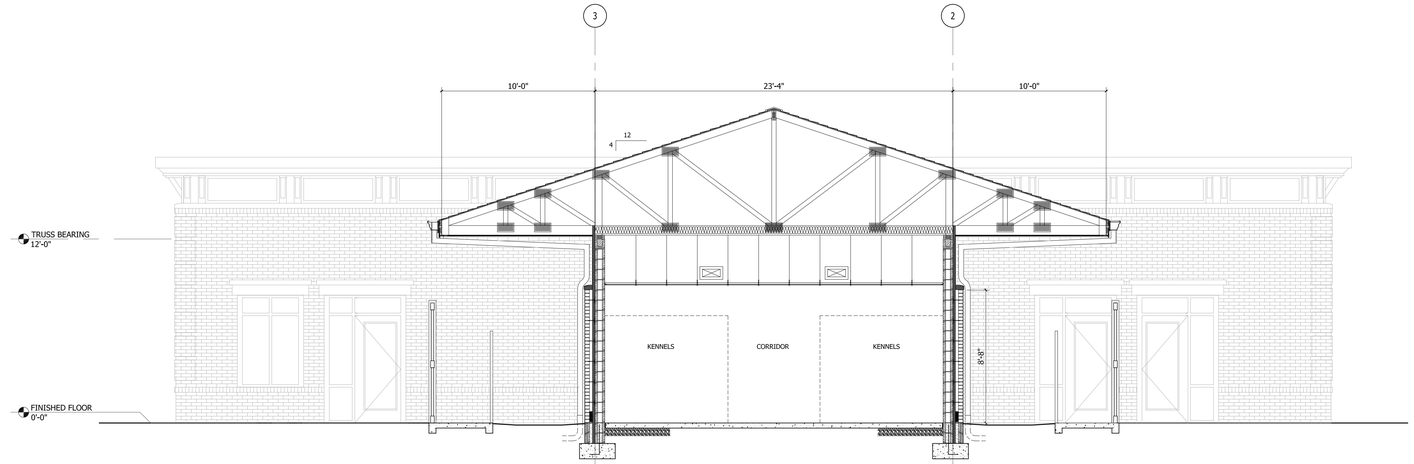
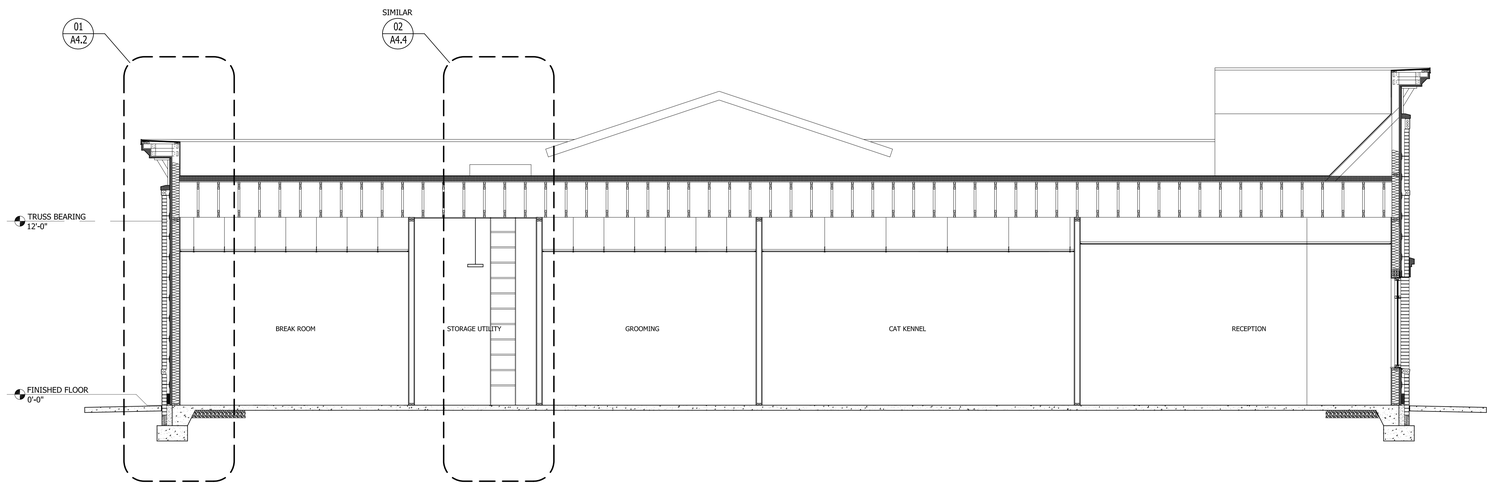


03 BUILDING SECTION

scale: 1/4"=1'-0"



02 BUILDING SECTION

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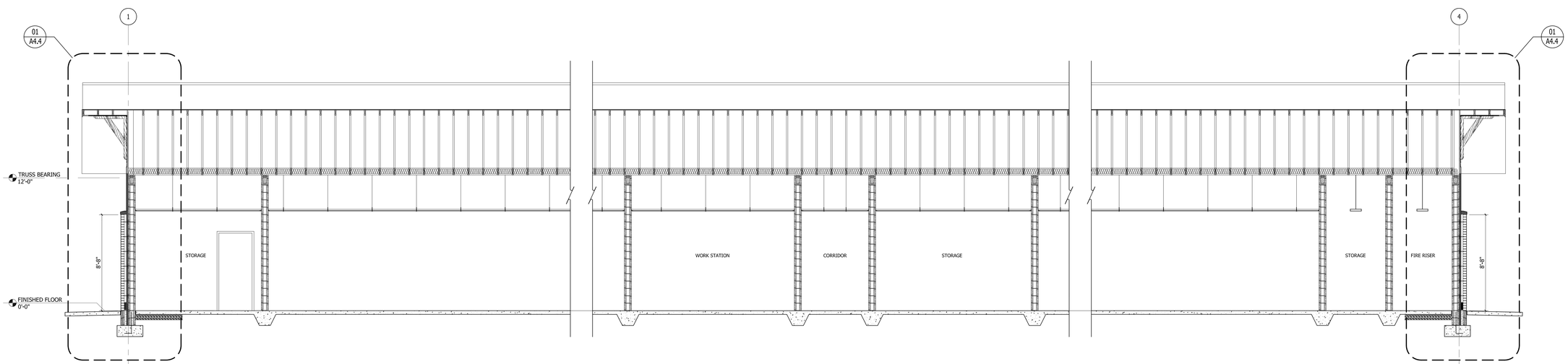

01 BUILDING SECTION

scale: 1/4"=1'-0"

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BUILDING SECTIONS

A3.2

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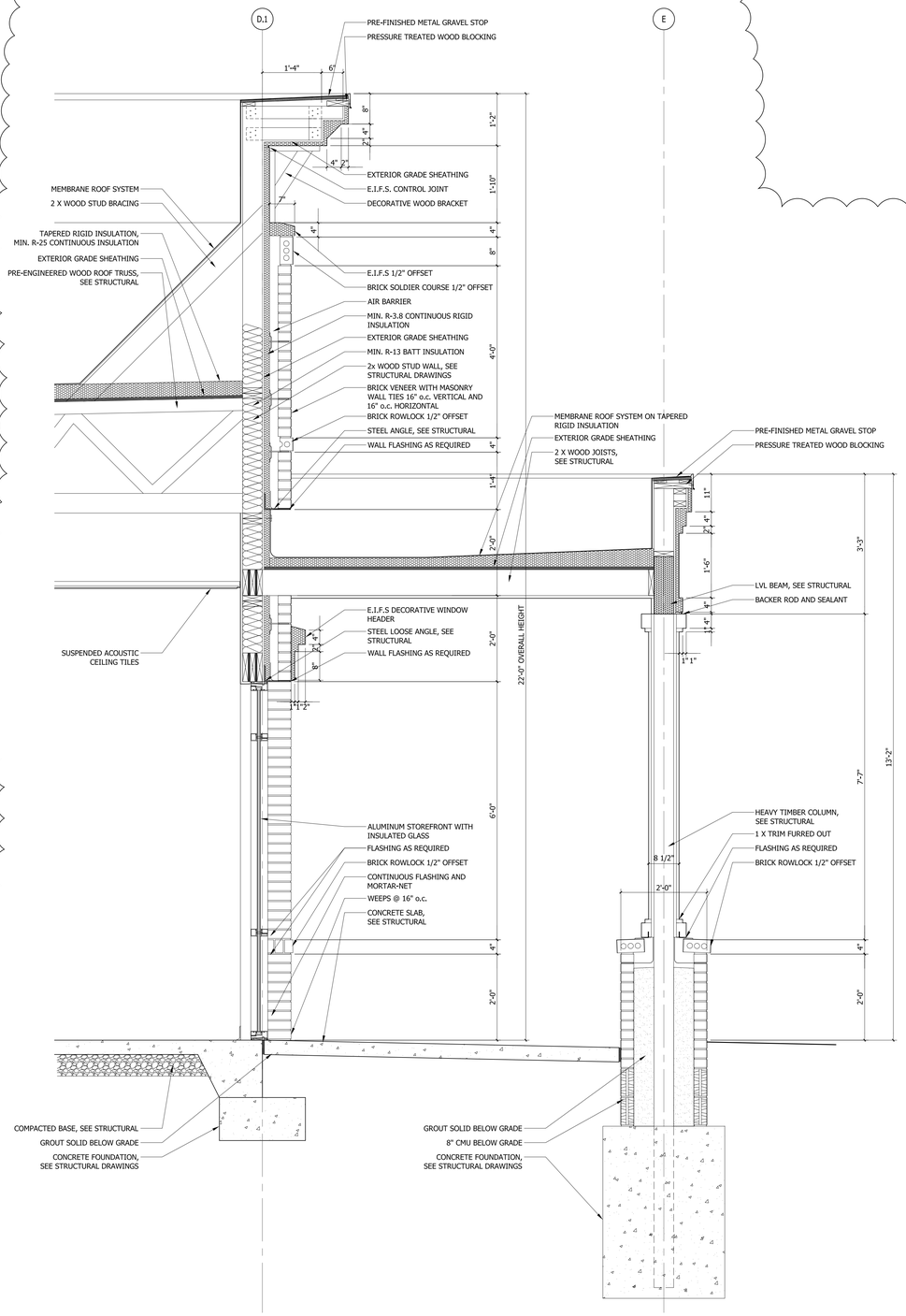
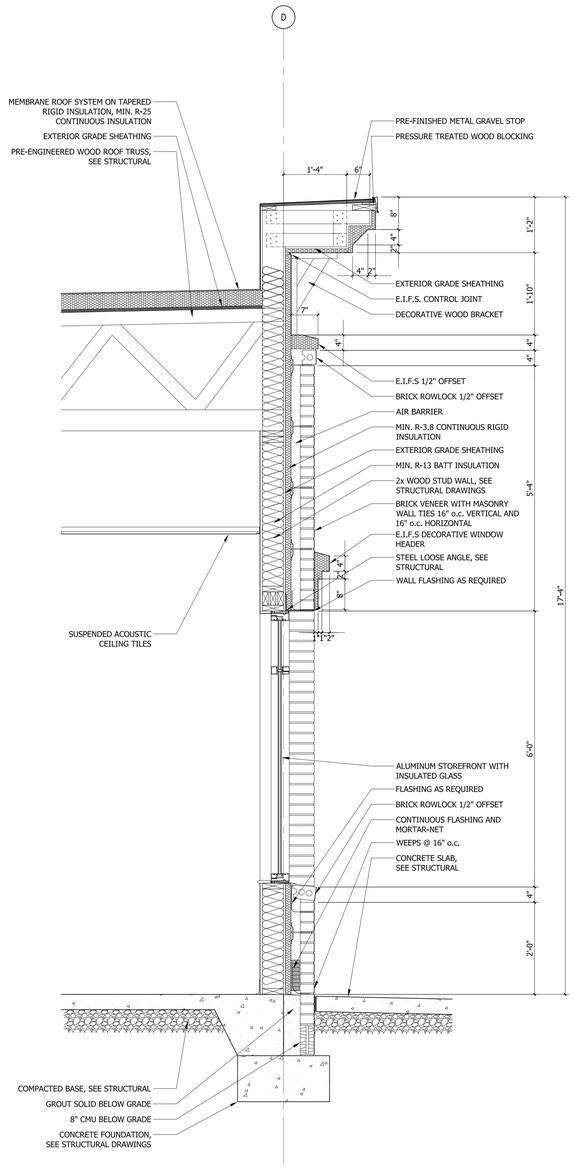
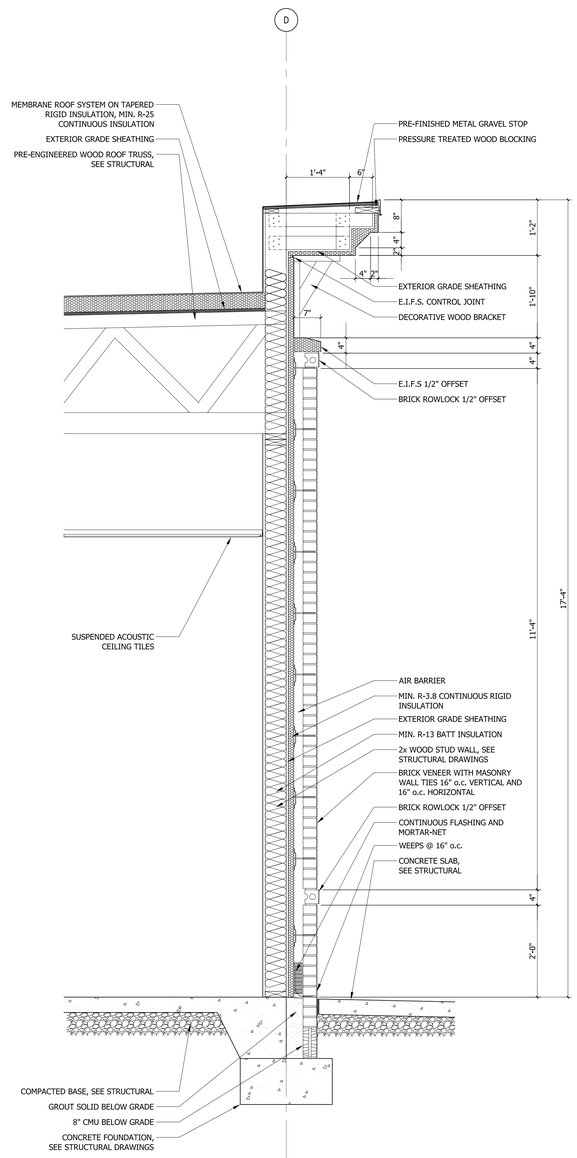


03 WALL SECTION 03 scale: 3/4"=1'-0"



02 WALL SECTION 02 scale: 3/4"=1'-0"



01 WALL SECTION 01 scale: 3/4"=1'-0"

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WALL SECTIONS

A4.1

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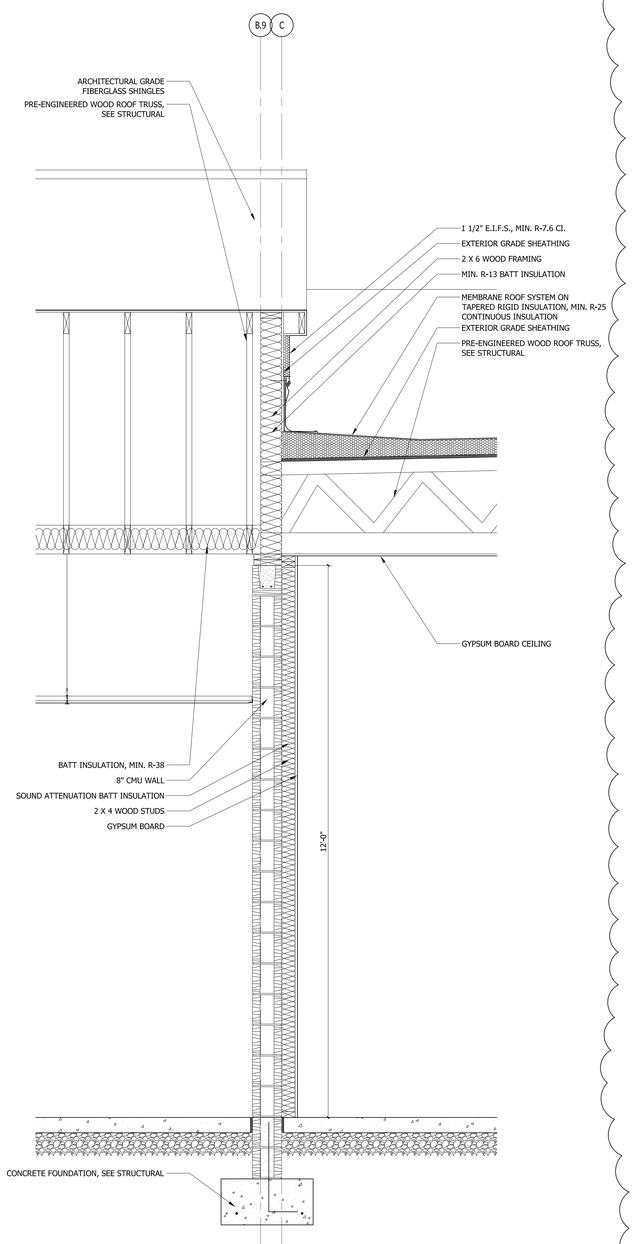
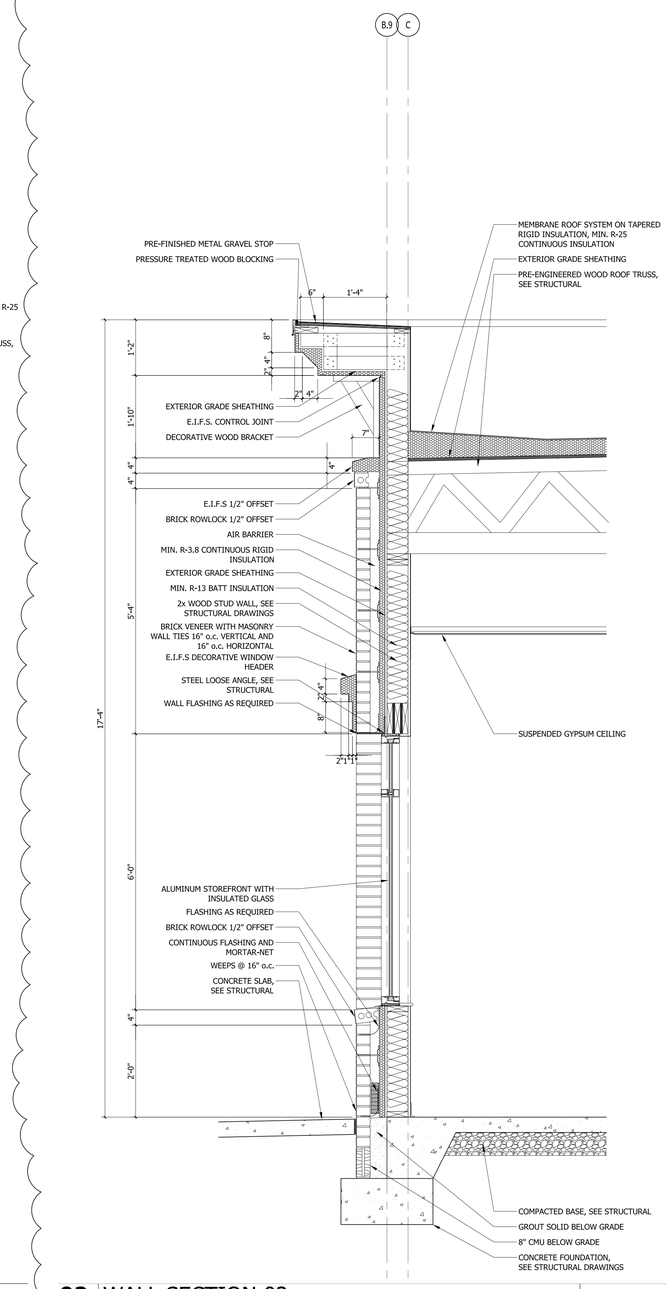
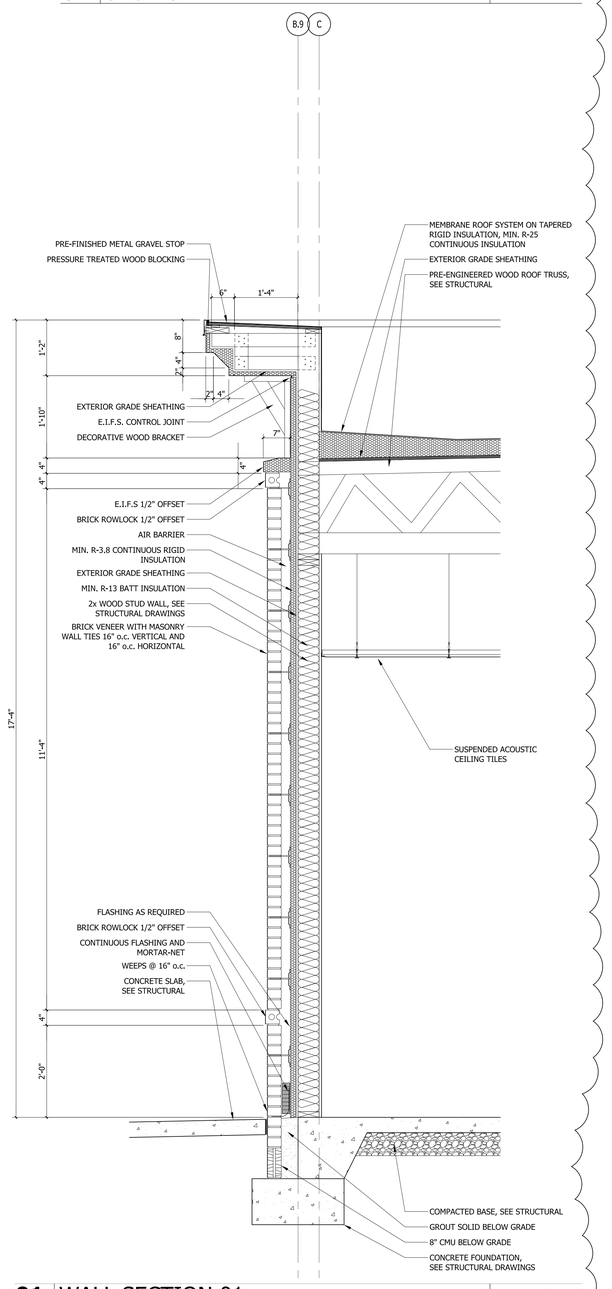
ODA No. 163112 CADD File:



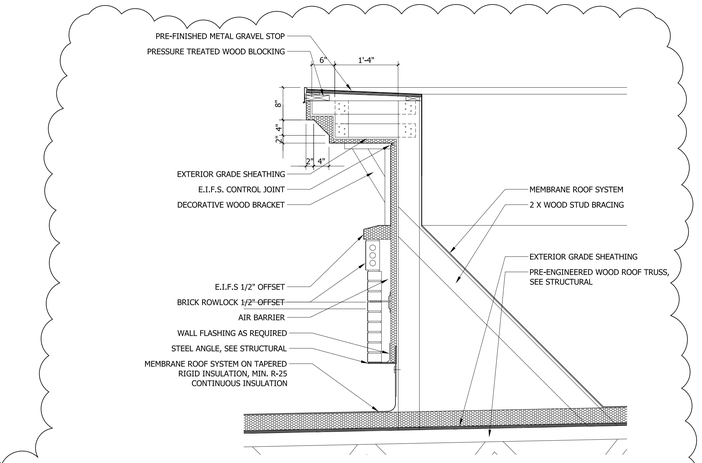
03 WALL SECTION 03 — scale: 3/4"=1'-0"



02 WALL SECTION 02 — scale: 3/4"=1'-0"



01 WALL SECTION 01 — scale: 3/4"=1'-0"



04 SECTION DETAIL — scale: 3/4"=1'-0"

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STEPHEN F. OVERCASH — REGISTERED ARCHITECT — 5878 — NORTH CAROLINA — CHARLOTTE, N.C.

06/01/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
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WALL SECTIONS

A4.2

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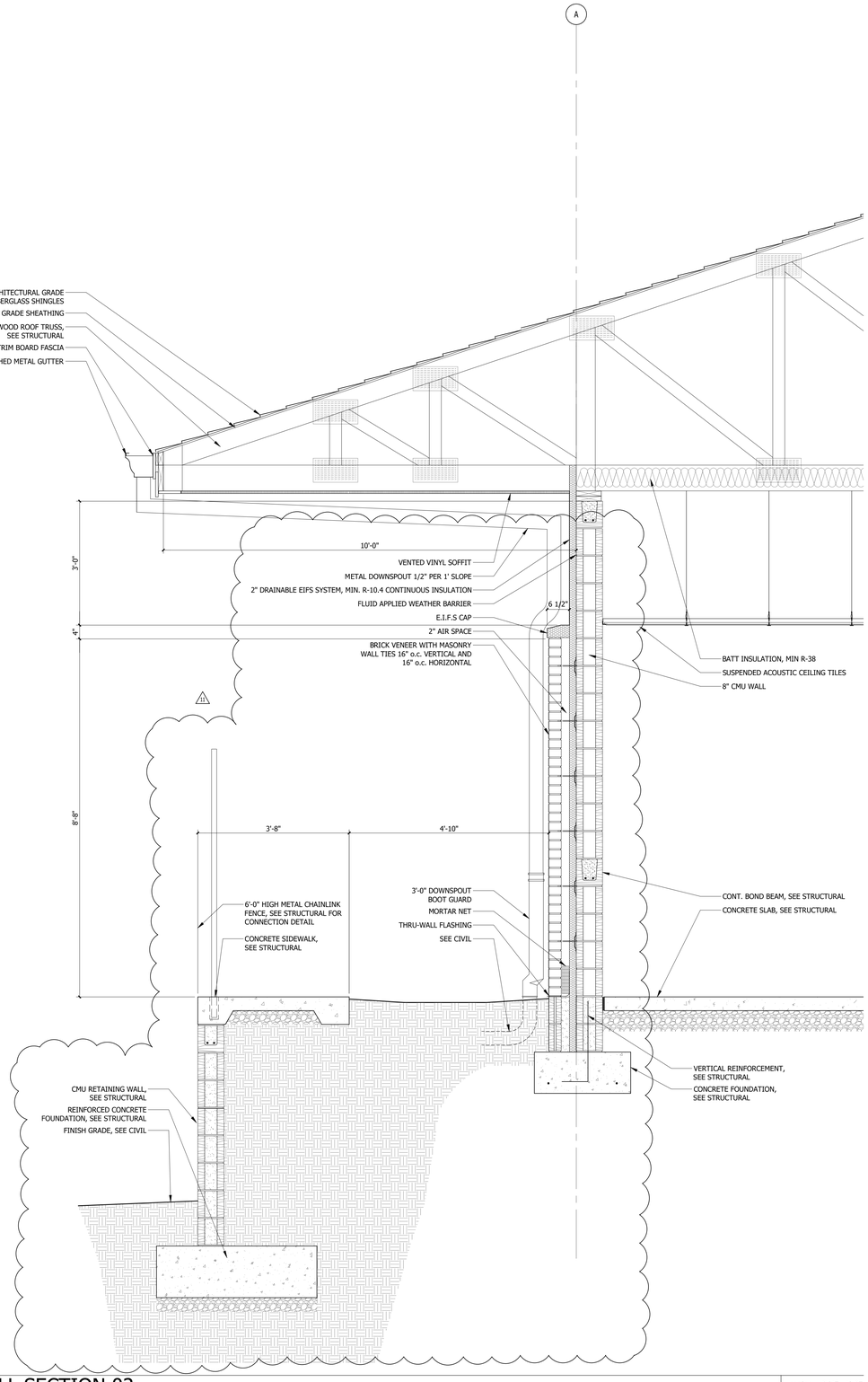
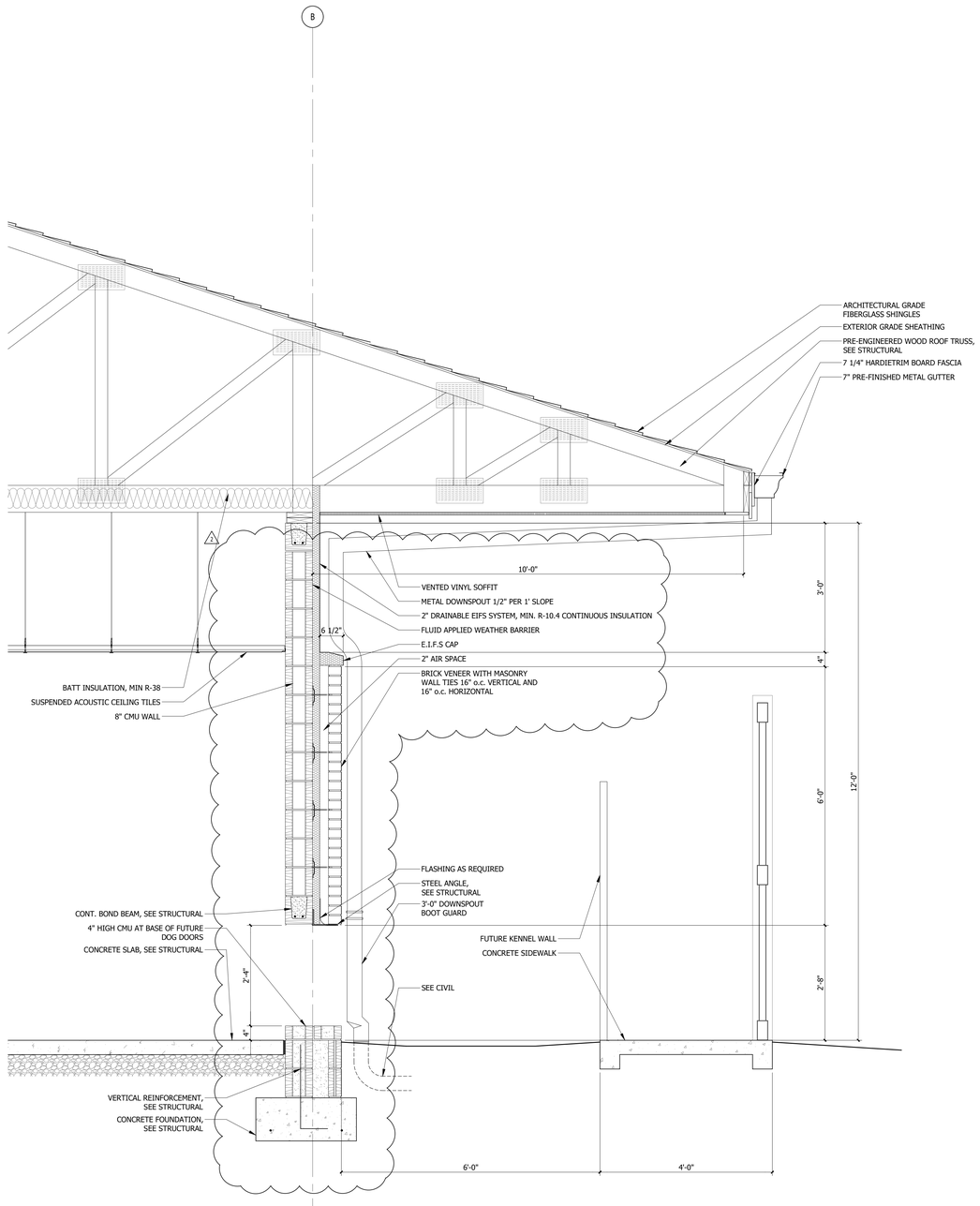


02 WALL SECTION 02 — scale: 3/4"=1'-0"



01 WALL SECTION 01 — scale: 3/4"=1'-0"

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01/02/19

METROLINA BUILDERS — GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
3 ZONING CHANGES	:	09.06.17
4 RETAINING WALL	:	01.02.19
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WALL SECTIONS

A4.3

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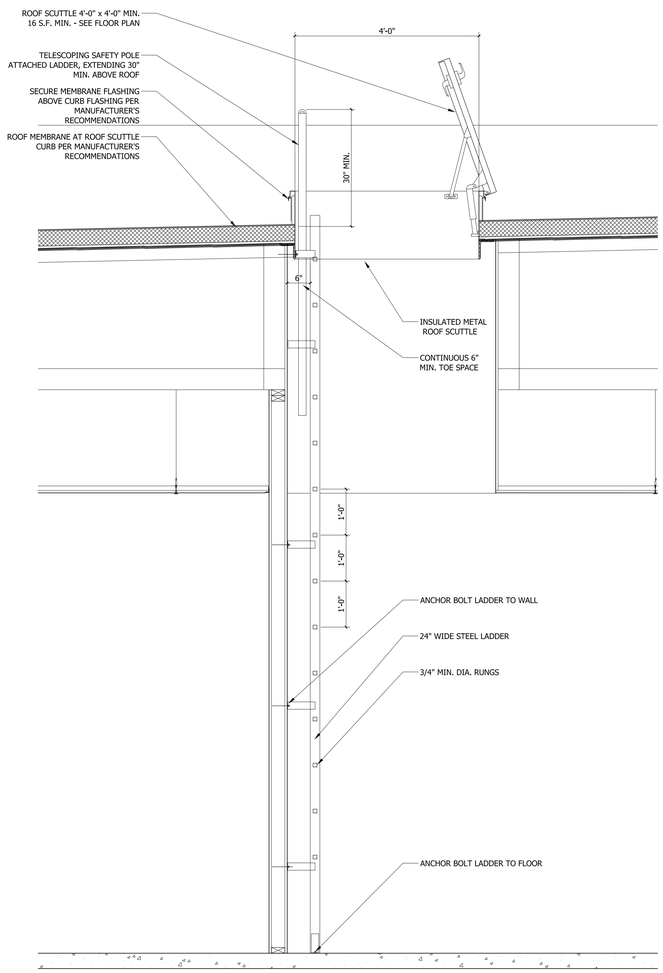
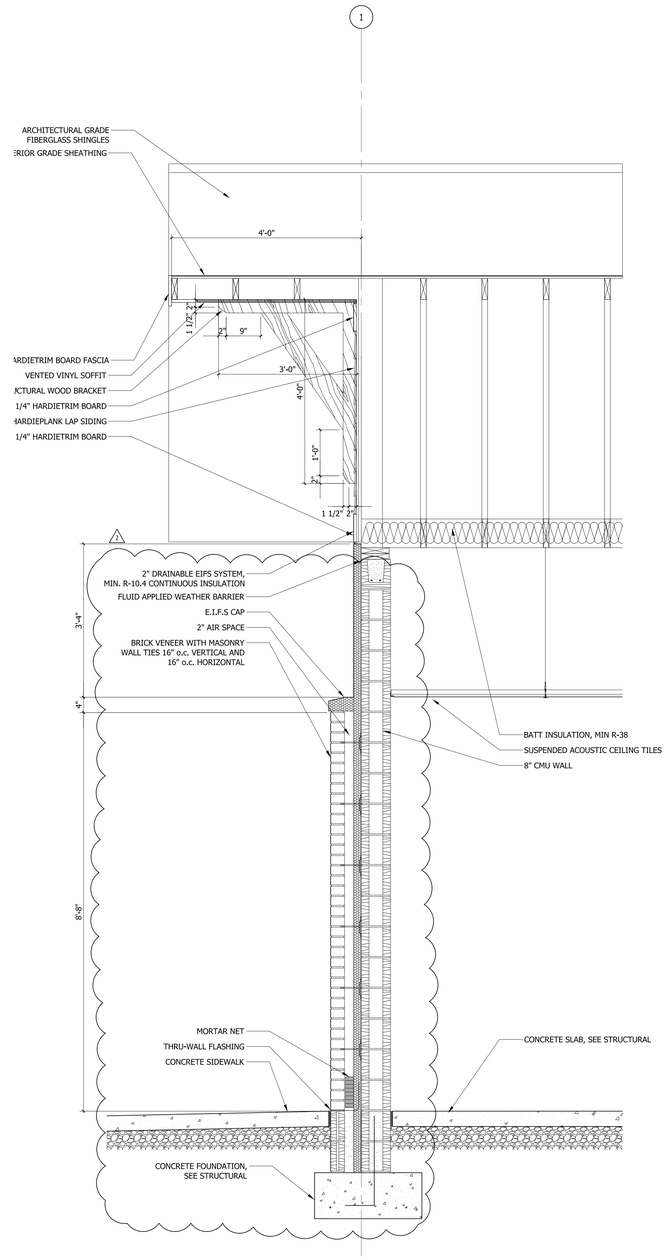
ODA No. 163112 CADD File:



02 WALL SECTION 02 scale: 3/4"=1'-0"



01 WALL SECTION 01 scale: 3/4"=1'-0"

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STEPHEN F. OVERCASH
REGISTERED ARCHITECT
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07/25/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
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WALL SECTIONS

A4.4

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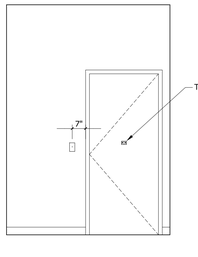
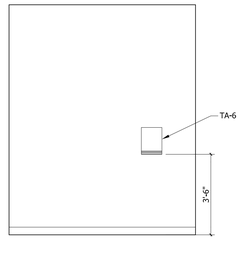
06/01/17

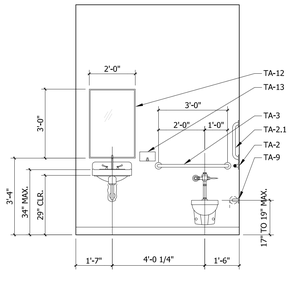
METROLINA BUILDERS
GENERAL CONTRACTORS



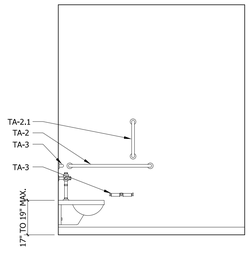
10 TOILET 111 ELEVATION scale: 3/8"=1'-0"



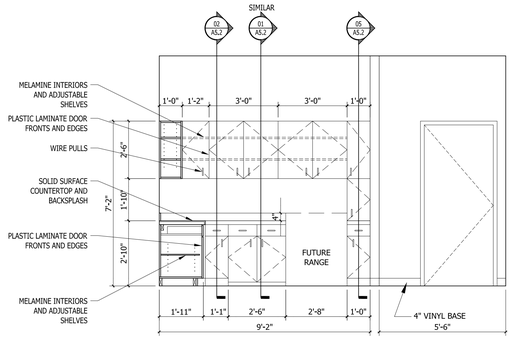
09 TOILET 111 ELEVATION scale: 3/8"=1'-0"



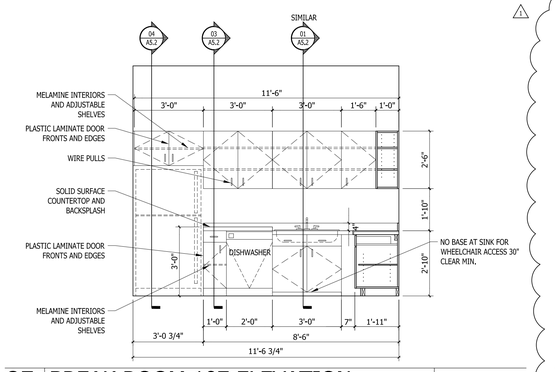
08 TOILET 111 ELEVATION scale: 3/8"=1'-0"



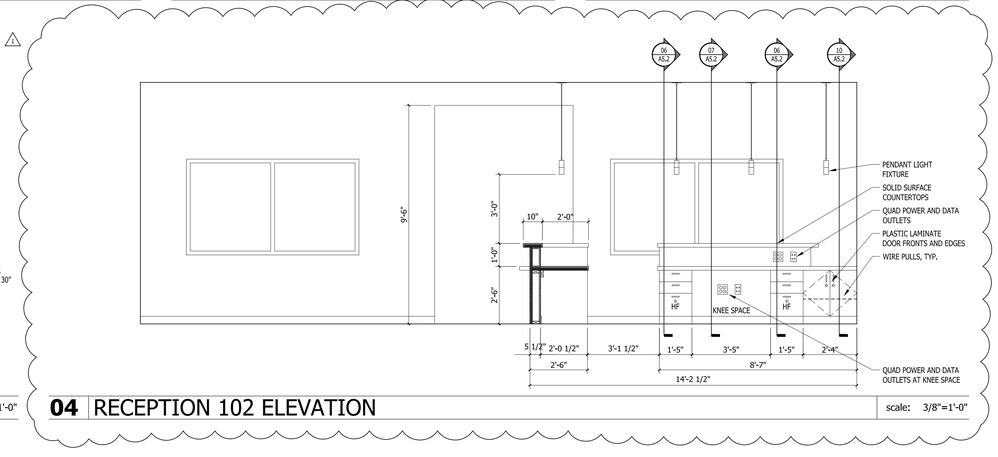
07 TOILET 111 ELEVATION scale: 3/8"=1'-0"



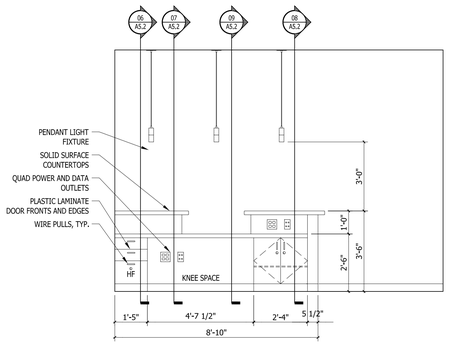
06 BREAK ROOM 107 ELEVATION scale: 3/8"=1'-0"



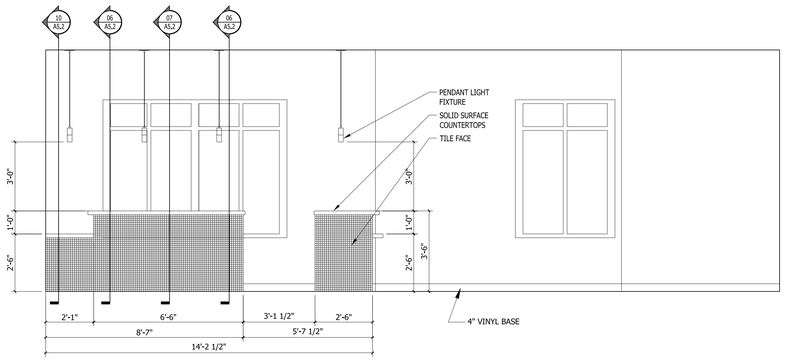
05 BREAK ROOM 107 ELEVATION scale: 3/8"=1'-0"



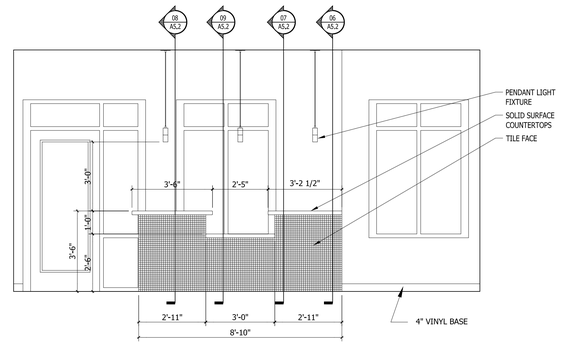
04 RECEPTION 102 ELEVATION scale: 3/8"=1'-0"



03 RECEPTION 102 ELEVATION scale: 3/8"=1'-0"



02 RECEPTION 102 ELEVATION scale: 3/8"=1'-0"



01 RECEPTION 102 ELEVATION scale: 3/8"=1'-0"

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INTERIOR ELEVATIONS

A5.1

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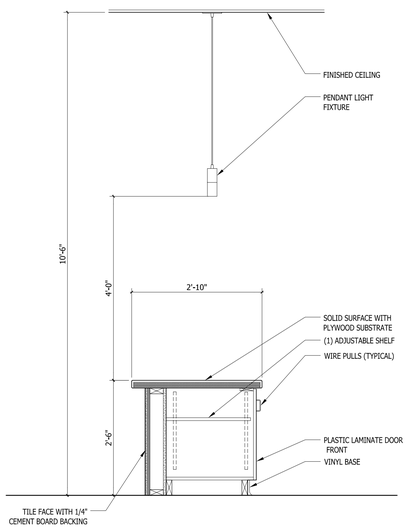
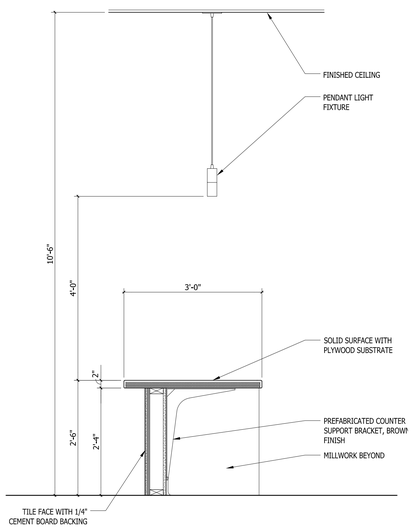
15 NOT USED
scale: 3/4"=1'-0"



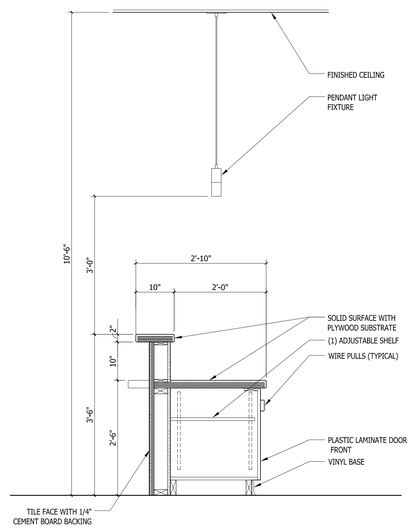
10 MILLWORK SECTION
scale: 3/4"=1'-0"

14 NOT USED
scale: 3/4"=1'-0"



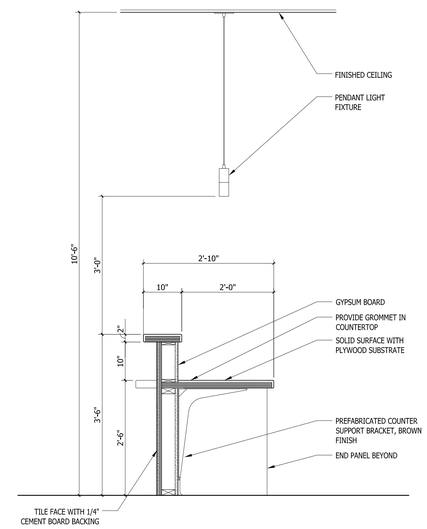
09 MILLWORK SECTION
scale: 3/4"=1'-0"

13 NOT USED
scale: 3/4"=1'-0"



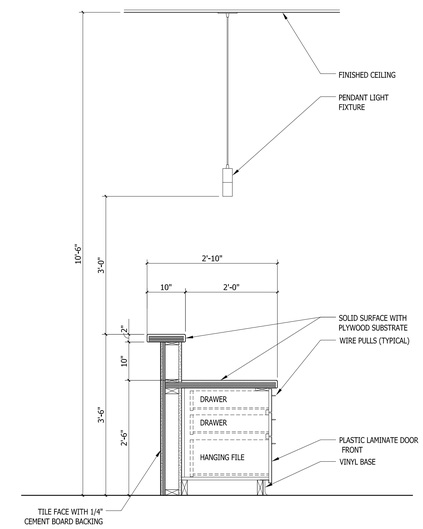
08 MILLWORK SECTION
scale: 3/4"=1'-0"

12 NOT USED
scale: 3/4"=1'-0"

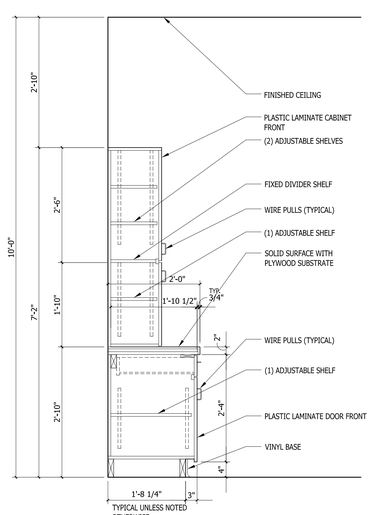


07 MILLWORK SECTION
scale: 3/4"=1'-0"

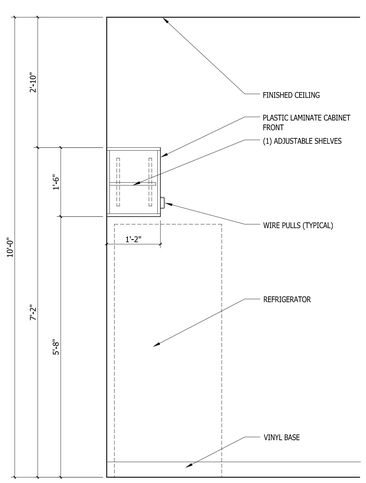
11 NOT USED
scale: 3/4"=1'-0"



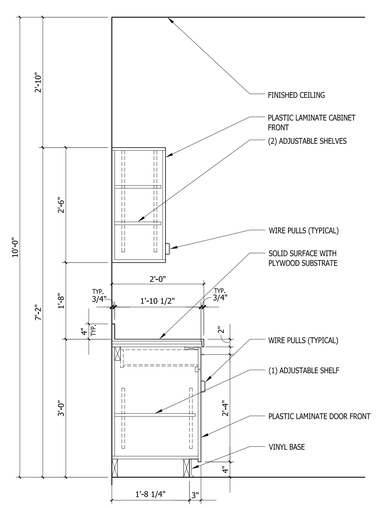
06 MILLWORK SECTION
scale: 3/4"=1'-0"



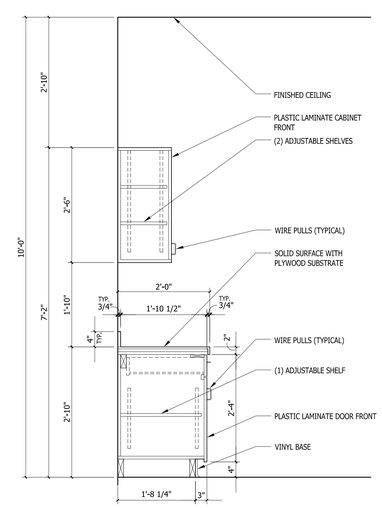
05 MILLWORK SECTION
scale: 3/4"=1'-0"



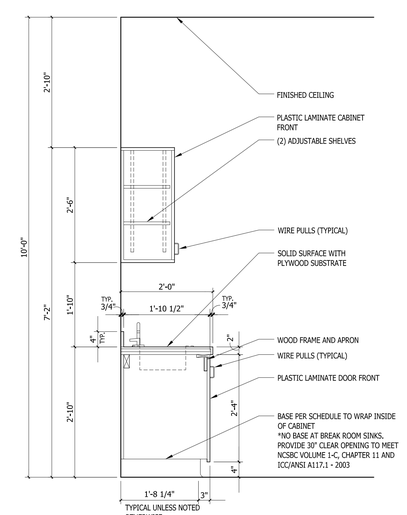
04 MILLWORK SECTION
scale: 3/4"=1'-0"



03 MILLWORK SECTION
scale: 3/4"=1'-0"



02 MILLWORK SECTION
scale: 3/4"=1'-0"



01 MILLWORK SECTION
scale: 3/4"=1'-0"

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CHARLOTTE, N.C.

02/14/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
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MILLWORK SECTIONS

A5.2

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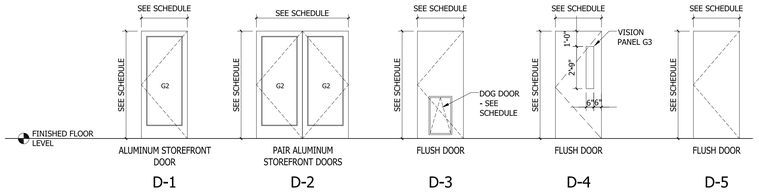
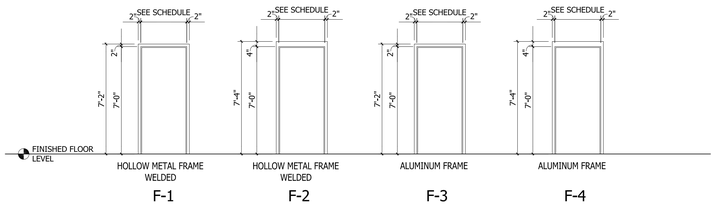


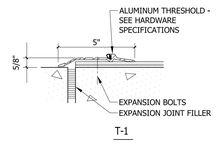
05 DOOR ELEVATIONS

scale: 1/4"=1'-0"



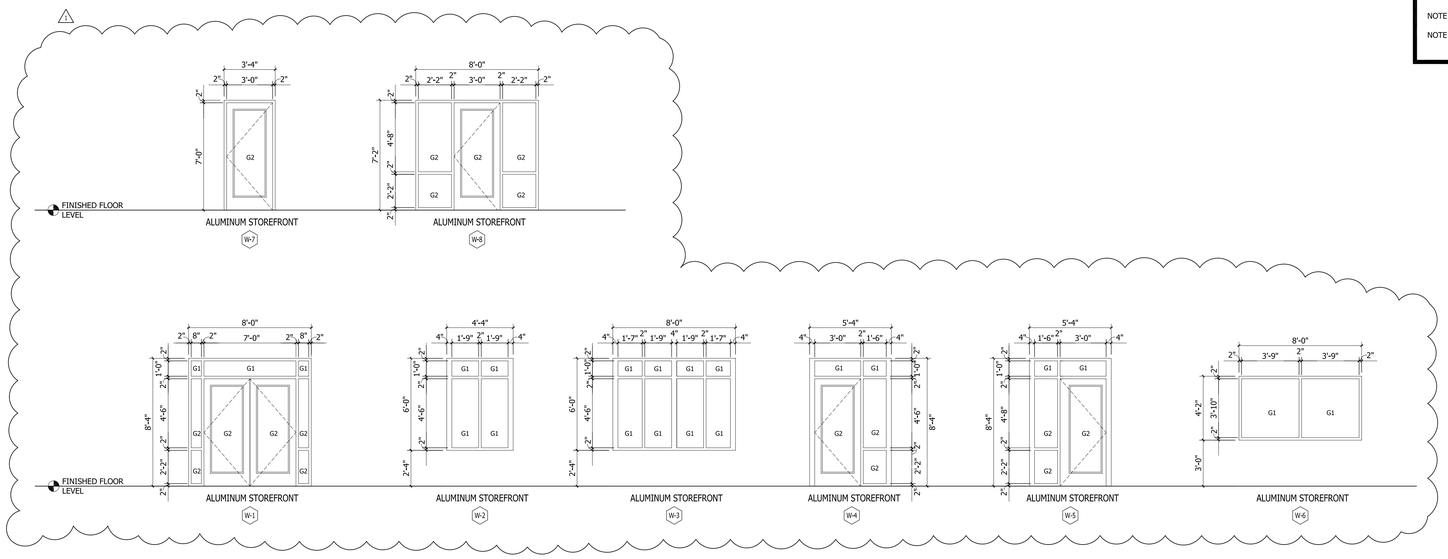
04 FRAME ELEVATIONS

scale: 1/4"=1'-0"



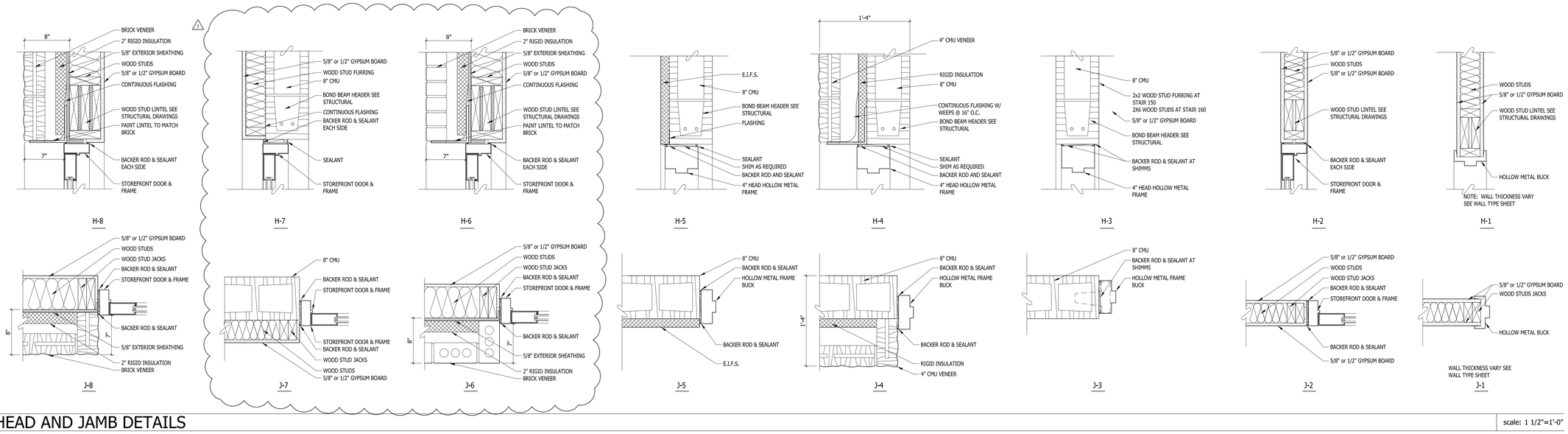
03 THRESHOLD DETAILS

scale: 3"=1'-0"



02 STOREFRONT ELEVATIONS

scale: 1/4"=1'-0"



01 HEAD AND JAMB DETAILS

scale: 1 1/2"=1'-0"

DOOR SCHEDULE

DOOR# & ROOM		DOOR								FRAME					HDW	REMARKS
		WIDTH	HEIGHT	THICK.	MATERIAL	FINISH	TYPE	GLAZING	LABEL	TYPE	MATERIAL	JAMB	HEAD	SILL	SET NO.	ADDITIONAL DOOR EQUIPMENT = [NOTE 7] 1 = PROVIDE CARD READER 2 =PROVIDE PANIC HARDWARE
MAIN LEVEL																
101A	VESTIBULE	3'-0" PAIR	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-2	TEMP/INSUL	-	W-1	ALUM	J-6	H-6	T-1	01	-
101B	VESTIBULE	3'-0" PAIR	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-2	TEMP/INSUL	-	W-1	ALUM	J-2	H-2	-	01	-
102	RECEPTION	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	W-5	ALUM	J-6	H-6	T-1	02	-
104	CAT KENNEL	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	F-3	ALUM	J-2	H-2	-	03	-
105	STORAGE	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	W-8	ALUM	J-2	H-2	-	03	-
106	STORAGE - UTILITY	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	06	-
107	BREAK ROOM	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	05	-
108A	OFFICE	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	07	-
108B	OFFICE	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	W-4	ALUM.	J-6	H-6	T-1	02	-
109A	OFFICE	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	07	-
109B	OFFICE	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	W-5	ALUM.	J-6	H-6	T-1	02	-
110	ELECT. IT ROOM	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	08	-
111	TOILET	3'-0"	7'-0"	1 3/4"	WOOD	PREFINISHED - STAIN	D-5	-	-	F-1	H.M.	J-1	H-1	-	09	-
112	INDOOR DOG PLAY AREA	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	F-3	ALUM	J-1	H-2	-	03	-
113	CORRIDOR	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	W-4	ALUM	J-6	H-6	T-1	02	-
114A	DOG KENNEL	3'-0"	7'-0"	1 3/4"	ALUM/GLASS	PREFINISHED - DARK BRONZE	D-1	TEMP/INSUL	-	F-4	ALUM	J-7	H-7	T-1	04	-
114B	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	-
115A	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-3	H-3	-	11	-
115B	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-3	H-3	-	11	-
116A	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	-
116B	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	-
117A	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	-
117B	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	-
117C	DOG KENNEL	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-3	-	-	F-2	H.M.	J-4/5	H-5	T-1	10	DOOR TO HAVE INSULATED DOG DOOR - COORDINATE SIZE WITH OWNER'S VENDER
118	WORK STATION	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-3	H-3	-	12	-
119	STORAGE	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-3	H-3	-	12	-
120	STORAGE	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-4	-	-	F-2	H.M.	J-3	H-3	-	12	-
121	STORAGE	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-3	H-3	-	12	-
122	FIRE RISER	3'-0"	7'-0"	1 3/4"	H.M.	PAINTED	D-5	-	-	F-2	H.M.	J-4/5	H-5	T-1	13	-

DOOR SCHEDULE NOTES

NOTE 1 : ALL DOORS TO BE INSTALLED IN ACCORDANCE WITH SECTION 1008.1 OF THE 2012 NCSBC.
LOCKING DEVICES SHALL COMPLY WITH SECTION 1008.1.9.3.
PANIC DEVICES SHALL COMPLY WITH SECTION 1008.1.10.

NOTE 2 : ALL DOORS TO BE INSTALLED IN ACCORDANCE WITH 2012 NCSBC AND 2009 ICC/ANSI.
DOOR CLOSERS SHALL COMPLY WITH ICC/ANSI SECTION 404.2.7 AND 404.2.8.
DOOR THRESHOLDS SHALL COMPLY WITH NCSBC - SECTION 1003.5, 1008.1.5, 1008.1.7 AND ICC/ANSI A117.1 - SECTION 404.2.4.
DOOR HARDWARE SHALL COMPLY WITH NCSBC - SECTION 1008.1.9 AND ICC/ANSI - SECTION 404.2.6.

NOTE 3 : ALL HOLLOW METAL DOOR FRAMES TO BE FULLY WELDED.

NOTE 4 : COORDINATE DEADBOLT LOCK WITH GLASS DOOR AND ALUMINUM FRAME MANUFACTURER.

NOTE 5 : PAINT ALL TOPS AND BOTTOM OF HOLLOW METAL DOORS THAT ARE EXPOSED TO WEATHER.

GLASS SCHEDULE

G1 - 1" INSULATED GLASS
CLEAR

G2 - 1" INSULATED TEMPERED GLASS
CLEAR

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STEPHEN F. OVERCASH REGISTERED ARCHITECT 3878 NORTH CAROLINA CHARLOTTE, N.C.
07/25/17

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	06.01.17
2 ZONING CHANGES	:	07.25.17
---	:	---
---	:	---
---	:	---
---	:	---
---	:	---
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---	:	---
---	:	---

WINDOW AND DOOR SCHEDULES

A6.1

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ODA No. 1631112 CADD File:

GENERAL NOTES:

COORDINATION:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.

2. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR REVIEWING/COORDINATING ALL DIMENSIONS, ELEVATIONS AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS.

3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL OF THE CONTRACT DOCUMENTS AND LATEST ADDENDA AND FOR SUBMITTING SUCH DOCUMENTS TO SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

4. THE GENERAL CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS AND OTHER CONTRACT DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN AND WITHIN EACH SET OF DRAWINGS WITH THE PROJECT ARCHITECT AND THE STRUCTURAL ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

5. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS OF THE EXISTING BUILDING AT THE JOB SITE AND REPORT ANY DISCREPANCIES FROM THE ASSUMED CONDITIONS SHOWN ON THE STRUCTURAL DRAWINGS TO THE PROJECT ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO THE FABRICATION AND ERECTION OF ANY STRUCTURAL MEMBERS.

6. DRAWINGS SHOW GENERAL AND TYPICAL SECTIONS/DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR SECTIONS/DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO THE APPROVAL OF THE ENGINEER.

7. THE STRUCTURAL MEMBERS OF THIS PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE GRAVITY AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE STRUCTURE IS TIED TOGETHER AND COMPLETED.

8. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION BRACING AND SHORING OF EXISTING STRUCTURE AS REQUIRED TO INSTALL NEW BEAMS, WALLS, COLUMNS AND FOUNDATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

9. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. LOADS APPLIED TO THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADS USED FOR THE DESIGN OF THE STRUCTURE ARE INDICATED IN THE GENERAL NOTES. DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY INSTALLED AND ALL TEMPORARY BRACING IS IN PLACE.

11. ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS UNLESS NOTED OTHERWISE.

12. EQUIPMENT PADS SHALL BE PROVIDED BY THE MECHANICAL, ELECTRICAL, OR PLUMBING CONTRACTORS REQUIRING THE PAD.

13. COORDINATE THE EXACT SIZE AND LOCATION OF ALL SLEEVES AND OPENINGS THROUGH CONCRETE WALLS, CONCRETE SLABS OR MASONRY WALLS WITH ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS.

14. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONTRACTOR SHALL REVIEW, APPROVE AND SIGN EACH SHEET PRIOR TO SUBMISSION. THE STRUCTURAL ENGINEER'S REVIEW SHALL BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLEY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC. CONTRACT DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS.

15. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

16. WHERE CONFLICTS OCCUR BETWEEN GENERAL NOTES AND SPECIFICATIONS THE MOST STRINGENT REQUIREMENT SHALL APPLY.

18. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.

FOUNDATIONS:

1. FOUNDATION DESIGN BASED ON SOIL BEARING PRESSURE OF 2,500 PSF. SOILS REPORT PROVIDED BY SUMMIT ENGINEERING PROJECT NO. 4308.500 DATED NOVEMBER 19, 2016. ALL FOOTINGS AND SLAB ON GRADE SHALL BEAR ON UNDISTURBED RESIDUAL SOIL OR STRUCTURAL COMPACTED FILL. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO PLACING CONCRETE FOR FOUNDATIONS.

2. NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST BASEMENT WALLS UNLESS WALLS ARE BRACED BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.

3. COORDINATE FOUNDATION WORK WITH EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES. NOTIFY PROJECT ARCHITECT AND STRUCTURAL ENGINEER TO PROVIDE REINFORCED CONCRETE PIER FOR COLUMN FOOTINGS

4. UNLESS NOTED OTHERWISE COLUMN CENTERLINES SHALL BE CENTERLINES OF COLUMN FOOTINGS.

CONCRETE:

1. CONCRETE SHALL BE PROPORTIONED TO MEET THE REQUIREMENTS OF THE FOLLOWING:

ELEMENT	28-DAY STRENGTH (PSI)	SLUMP RANGE (IN.)	UNIT WEIGHT (PCF)
COLUMN FOOTINGS	3000	3-5	150
WALL FOOTINGS	3000	3-5	150
SLAB ON GRADE	3000	3-4	150
EXTERIOR CONCRETE	4000	3-5	150

2. PORTLAND CEMENT SHALL BE ASTM C 150, TYPE I. FLY ASH SHALL BE ASTM C 618, CLASS F AND SHALL NOT EXCEED 25% OF CEMENT CONTENT BY WEIGHT. NORMAL WEIGHT AGGREGATE SHALL BE ASTM C 33.

3. CONCRETE AGGREGATE GRADATION SHALL BE IN ACCORDANCE WITH ASTM C33 SPECIFICATION. "SPECIFICATION FOR CONCRETE AGGREGATE". FINE AGGREGATE SHALL CONSIST OF NATURAL SAND OR A COMBINATION THEREOF, WITH A FINENESS MODULUS BETWEEN 2.3 AND 3.1. COURSE AGGREGATE CONTENT IS TO BE BETWEEN 35% AND 45% BY WEIGHT OR VOLUME OF THE TOTAL AGGREGATE CONTENT. LARGER COURSE AGGREGATE MIXES UP TO #67 ARE ACCEPTABLE FOR FLOOR SLAB CONCRETE TO MINIMIZE SHRINKAGE CRACKING.

4. FLY ASH SHALL NOT BE PERMITTED IN CONCRETE PLACED SUBJECT TO COLD WEATHER PLACEMENT PROCEDURES.

5. CONCRETE EXCEEDING THE SPECIFIED SLUMP RANGES SHALL BE RETURNED. DO NOT ADD WATER TO THE CONCRETE MIX AT THE JOB SITE WITHOUT THE WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

6. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC (W.W.F.) SHALL BE ASTM A82 AND A185 COLD DRAWN STEEL WIRE. W.W.F. SHALL BE DELIVERED TO THE JOB SITE IN FLAT SHEETS (NO ROLLS). PLACE SHEETS ON BOLSTERS AT 48" MAXIMUM TO LOCATE IN UPPER THIRD OF SLAB.

7. LAP CONTINUOUS REINFORCING BARS 36 BAR DIAMETERS UNLESS NOTED OTHERWISE. PROVIDE CORNER BARS IN ALL WALLS AND FOOTINGS.

8. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION, AND PLACING OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE ACI CODE AND DETAILING MANUAL AND CRSI'S "MANUAL OF STANDARD PRACTICE".

9. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
No. 6 THROUGH No. 18 BARS 2"
No. 5 AND SMALLER 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS AND JOISTS:
No. 14 AND No. 18 BARS 1 1/2"
No. 11 AND SMALLER 3/4"
BEAMS AND COLUMNS:
PRIMARY REINFORCEMENT, TIES, STIRRUPS AND SPIRALS 1 1/2"

10. ANCHOR RODS FOR COLUMNS SHALL BE POSITIONED WITH A TEMPLATE PRIOR TO PLACING CONCRETE IN PIER OR FOOTING. NUTS SHALL BE TIGHTENED ON EACH SIDE OF THE TEMPLATE TO HOLD THE ANCHOR BOLTS IN PLACE.

11. CONCRETE DESIGN AND REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-02) AND WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" (ACI 315-02). CONCRETE PLACED DURING HOT WEATHER AND COLD WEATHER SHALL MEET THE RECOMMENDATIONS OF ACI/PCA/TCA.

12. CONCRETE MIXES SHALL BE DESIGNED IN ACCORDANCE WITH ACI 301. WATER SHALL NOT BE ADDED TO THE CONCRETE MIX AT THE JOB SITE WITHOUT THE PRIOR WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER.

13. UNLESS OTHERWISE SHOWN ON ARCHITECTURAL DRAWINGS, PROVIDE 3/4" CHAMFER AT ALL COLUMN, WALL SLAB AND BEAM EDGES THAT ARE EXPOSED TO VIEW IN THE FINAL STRUCTURE..

14. FIBER REINFORCEMENT - POLYPROPYLENE FIBRILLATED FIBERS USE AT 1.5 POUNDS PER CUBIC YARD WITH A MINIMUM AVERAGE RESIDUAL STRENGTH OF 45 PSI IN ACCORDANCE WITH ASTM 1399 TESTING - FIBRMESH 300 OR EQUIVALENT. FIBER REINFORCEMENT - AN ENGINEERED BLEND OF COLD DRAWN STEEL WIRE FIBER (23 lbs.) AND A GRADED MULTIFILAMENT POLYPROPYLENE FIBER (1 lb.) AT 1 BAG (24 lbs.) PER CUBIC YARD - NOVAMESH 850 OR EQUIVALENT.

SLAB ON GRADE:

1. CONTROL JOINTS FOR SLAB ON GRADE SHALL BE LOCATED AS SHOWN ON PLAN, WITH A MAXIMUM JOINT SPACING OF 2 1/2 TIMES THE SLAB THICKNESS IN FEET. JOINTS SHALL BE FORMED USING SAW CUTS 1/8" WIDE (MAXIMUM) BY 1/4 (1 1/4" MIN.) DEEP. SAW CUT AS SOON AS PRACTICAL AND WITHIN 12 HOURS AFTER PLACING CONCRETE. JOINTS SHALL BE FILLED WITH SEMI-RIGID EPOXY JOINT FILLER (CONSPEC POLUREA JOINTFILL (OR EQUIVALENT). JOINTS IN AREAS SUBJECT TO FORKLIFT TRAFFIC SHALL BE FILLED WITH CONSPEC POLYUREA JOINT SAVER II (OR EQUIVALENT).

2. SIDEWALKS AND OTHER EXTERIOR SLABS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. SEE ARCHITECTURAL, SITE AND CIVIL DRAWINGS FOR LOCATIONS, DIMENSIONS AND ELEVATIONS.

3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF DEPRESSED SLAB AREAS AND DRAINS. SLOPE SLAB TO DRAINS WHERE INDICATED.

4. ALL INTERIOR AND EXTERIOR FLOOR SLABS ARE TO RECEIVE ONE (1) COAT OF EVAPORATION REDUCER (CONSPEC AQUAFILM (OR EQUIVALENT) APPLIED TO FRESHLY PLACED CONCRETE IMMEDIATELY AFTER SCREEDING AND/OR AFTER THE FIRST FLOATING OPERATION. EVAPORATION REDUCER IS NOT RECOMMENDED FOR USE DURING COLD WEATHER PLACEMENT.

5. FLOOR SLAB AREAS ARE TO RECEIVE 2 - COATS OF 25% MIN. SOLIDS ACRYLIC HARDENER AND SEAL (CONSPEC INTRASEAL, OR EQUIVALENT). APPLICATION IS TO CONFORM TO MANUFACTURER'S SPECIFICATIONS. FIRST COAT IS FOR CURING, SECOND COAT IS FOR SEALING AND DUST PROOFING AFTER BUILDING CONSTRUCTION COMPLETION.

6. FLOOR SLAB MAY RECEIVE DENSIFIER APPLICATION (NOX-CRETE DURONOX, CONSPEC INTRASEAL, OR ASHFORD FORMULA, OR EQUIVALENT) IN PLACE OF ACRYLIC FLOOR SEALER. DENSIFIERS DO NOT CONFORM WITH ASTM C309 AND MAY REQUIRE A CURING COMPOUND PRIOR TO APPLICATION OF DENSIFIER. CURING COMPOUND REQUIREMENT IS TO BE BASED ON CLIMATE CONDITIONS DURING TIME OF CONCRETE PLACEMENT. CONTRACTOR TO CONTACT ENGINEER FOR RECOMMENDATIONS.

7. DUE TO THE LACK OF SPECIFIC GEOTECHNICAL INFORMATION AND/OR SPECIFIC FLOOR LOADING REQUIREMENTS, THIS SLAB ON GRADE HAS BEEN DESIGNED USING A SUBGRADE MODULES - K = 120 PCI AND DESIGN LOADING OF 100 PSF.

8. SEE GEOTECHNICAL REPORT/GEOTECHNICAL ENGINEER FOR 10 MIL VAPOR RETARDER AND UNDERSLAB DRAINAGE FILL REQUIREMENTS.

MASONRY:

1. MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1-02)".

2. ALL HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-90, LIGHTWEIGHT. MINIMUM NET COMPRESSIVE STRENGTH (f'm) SHALL BE 1,500 PSI. FILL BLOCK CELLS WHERE REBAR OCCURS SOLID WITH GROUT. SUBMIT VERIFICATION OF ALL MATERIALS TO ARCHITECT FOR APPROVAL.

3. ALL BRICK UNIT MASONRY SHALL CONFORM TO ASTM C-216, GRADE SW, TYPE FBS. MINIMUM NET COMPRESSIVE STRENGTH (f'm) SHALL BE 3,000 PSI. VERIFICATION OF ALL MATERIALS TO ARCHITECT FOR APPROVAL.

4. MORTAR SHALL BE PORTLAND CEMENT-LIME MIX (PORTLAND CEMENT SHALL COMPLY WITH ASTM C 150, TYPE I OR III, AND HYDRATED LIME COMPLYING WITH ASTM C 207) OR MORTAR CEMENT ASTM C 1329 - TYPE S. THE USE OF MASONRY-CEMENT IS STRICTLY FORBIDDEN.

5. GROUT FOR UNIT MASONRY SHALL COMPLY WITH ASTM C 476 (SLUMP 8 TO 11 INCHES). AGGREGATE FOR MORTAR SHALL COMPLY WITH ASTM C 144 AND AGGREGATE FOR GROUT SHALL COMPLY WITH ASTM C404. COMPRESSIVE STRENGTH SHALL BE GREATER THAN OR EQUAL TO 2,000 PSI OR f'm, WHICHEVER IS GREATER. TESTING SHALL BE DONE IN AN ABSORBENT MOLD IN ACCORDANCE WITH ASTM C 1019.

6. MASONRY JOINT REINFORCEMENT SHALL COMPLY WITH ASTM A-951 AND SHALL BE HOT DIPPED GALVANIZED, CARBON STEEL.. BRICK TIES SHALL CONFORM TO SEISMIC DESIGN CATEGORY REQUIREMENTS (SUBMIT FOR APPROVAL). BRICK TIES USED IN SEISMIC DESIGN CATEGORY D AND E SHALL HAVE A CONTINUOUS 3/16" DIAMETER GALVANIZED WIRE ROD EMBEDDED INTO THE BRICK MORTAR JOINT (HECKMAN SEISMIC POS-I-TIE OR EQUIVALENT). BRICK TIES USED IN SEISMIC DESIGN CATEGORY F SHALL HAVE A CONTINUOUS 1/4" DIAMETER GALVANIZED WIRE ROD EMBEDED IN THE MORTAR JOINT. PROVIDE IN LENGTHS NOT LESS THAN 10 FEET IN LENGTH WITH PREFABRICATED CORNER AND TEE UNITS. FOR MULTIWYTHE MASONRY PROVIDE ADJUSTABLE 2-PIECE UNITS. PROVIDE CONTINUITY AT CORNERS AND WALL INTERSECTIONS BY USING PREFABRICATED "L" AND "T" SECTIONS. LAP REINFORCEMENT A MINIMUM OF 6". SPACE REINFORCEMENT NOT MORE THAN 16" O.C. PROVIDE REINFORCEMENT NOT MORE THAN 8" ABOVE OR BELOW WALL OPENINGS AND EXTENDING 24" BEYOND OPENINGS. CUT REINFORCEMENT AT CONTROL AND EXPANSION JOINTS UNLESS NOTED OTHERWISE.

7. THE MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING CONSTRUCTION.

8. THE MINIMUM QUALITY ASSURANCE PROGRAM FOR NON-ESSENTIAL FACILITIES SHALL COMPLY WITH TABLE 1.14.2 OF ACI 530-02. THE MINIMUM QUALITY ASSURANCE PROGRAM FOR ESSENTIAL FACILITIES SHALL COMPLY WITH TABLE 1.14.3 OF ACI 530-02.

STRUCTURAL STEEL:

1. ALL W-SHAPE STRUCTURAL STEEL SHALL BE ASTM A992, ALL OTHER STRUCTURAL SHAPES SHALL BE ASTM A-36, SQUARE OR RECTANGULAR HSS SHAPES SHALL CONFORM TO ASTM A-500, GRADE B, ROUND HSS SHAPES SHALL CONFORM TO ASTM A-500, GRADE B, STRUCTURAL STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A-501 OR ASTM A-53, TYPE E OR S, GRADE B. DESIGN, DETAILING, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC CODE AND DETAILING MANUAL. NO STRUCTURAL MEMBERS SHALL BE SPLICED EXCEPT AS SHOWN ON APPROVED SHOP DRAWINGS.

TIMBER:

1. MICROLAM TIMBER SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN STRESSES: BENDING STRESS, Fb = 2,600 PSI, HORIZONTAL SHEAR STRESS, Fv = 285 PSI, AND MODULUS OF ELASTICITY, E = 1,900,000 PSI - CONNECT MULTIPLE MEMBERS TOGETHER AS PER MANUFACTURERS RECOMMENDATIONS.

2. ALL TIMBER CONNECTORS, ANCHORS, FASTENERS, TIES, STRAPS, BASES, CAPS, ETC. SHALL BE SIMPSON "STRONG-TIE" (OR EQUIVALENT). CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL MEET THE REQUIREMENTS OF ASTM A653 (CLASS G185) OR ASTM A153.

3. ALL LOAD BEARING TIMBER WALL STUDS SHALL BE SOUTHERN PINE NO. 2 (SURFACE AT 19% MOISTURE CONTENT). TYPICAL UNLESS NOTED OTHERWISE.

10. ALL FRAMED LUMBER SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE STRESS STRESSES - UNLESS NOTED OTHERWISE (SURFACED AT 19% MOISTURE CONTENT):

ELEMENT	BENDING Fb-PSI	SHEAR Fv-PSI	COMPRESSION Fc-PSI	MODULUS OF ELASTICITY E-PSI
2"-4" THICK 2"-4" WIDE	1,500	90	1,650	1,600,000
2"-4" THICK 5"-6" WIDE	1,250	90	1,600	1,600,000
2"-4" THICK 8" WIDE	1,200	90	1,550	1,600,000
2"-4" THICK 10" WIDE	1,050	90	1,500	1,600,000
2"-4" THICK 12" WIDE	975	90	1,450	1,600,000

4. ALL TIMBER IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

5. ALL TIMBER CONNECTIONS SHALL NOT BE LESS THAN THOSE SPECIFIED IN CHAPTER 23 OF THE CURRENT BUILDING UNLESS NOTED OTHERWISE.

6. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF TRUSSES WITH OTHER TRADES - SHIFT TRUSSES A MAXIMUM OF 3 1/2" AS REQUIRED.

7. ALL NON TONGUE AND GROOVE PLYWOOD/OSB PANELS SHALL HAVE 1/8" GAP AT ALL PANEL EDGES. PROVIDE SIMPSON PSCL (OR EQUIVALENT) PLYWOOD CLIPS @ 24" AT PANEL EDGES OF ALL ROOF PLYWOOD/OSB SHEATHING.

STRUCTURAL DESIGN CRITERIA:

DESIGN:

1. STRUCTURAL DESIGN CONFORMS TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE, 2012 EDITION AND ASCE 7-05.

2. FLOOR LIVE LOADS USED IN DESIGN (POUNDS PER SQUARE FOOT):

RETAIL 100 PSF

3. BUILDING CODE REQUIRED ROOF LIVE AND SNOW LOAD USED IN DESIGN (POUNDS PER SQUARE FOOT):

LIVE 20 PSF
SNOW - Pg 10 PSF
SNOW - Pf 12 PSF
SNOW EXPOSURE FACTOR, Ce 1.0
SNOW LOAD IMPORTANCE FACTOR, Is 1.0
SNOW THERMAL FACTOR, Ct 1.0
SNOW ROOF SLOPE FACTOR, Cs 1.0 (SLIDING SNOW)

ROOF DEAD LOADS:
ROOFING (SINGLE PLY MECHANICALLY FASTENED) 3 PSF
INSULATION 2 PSF
DECK 2 PSF
HANGING 2 PSF
MECHANICAL 3 PSF
SPRINKLERS 5 PSF
JOISTS 3 PSF

5. WIND LOAD DATA:
BASIC WIND SPEED, V 90 MPH
WIND IMPORTANCE FACTOR, Iw 1.0
WIND EXPOSURE C

CALCULATED WIND BASE SHEARS (FOR MWFRS) Vx = 16.4K Vy = 27.1K

6. SEISMIC LOAD DATA:

SEISMIC DESIGN CATEGORY A - COMPLIANCE WITH SECTION 1616.4? YES

SEISMIC DESIGN CATEGORY B, C & D
SEISMIC IMPORTANCE FACTOR, Ie 1.0
SEISMIC USE GROUP I
DUE TO LACK OF GEOTECHNICAL INFORMATION THE FOLLOWING SOIL SITE CLASS WAS ASSUMED: 3
SOIL SITE CLASS: C
SPECTRAL RESPONSE ACCELERATION - SHORT PERIOD, SDS 0.219g
SPECTRAL RESPONSE ACCELERATION - 1.0 SECOND, SD1 0.126g
SEISMIC DESIGN CATEGORY C

BASIC SEISMIC-FORCE RESISTING SYSTEM
ORDINARY MASONRY SHEAR WALLS
RESPONSE MODIFICATION COEFFICIENT, R 3.5 4
DEFLECTION AMPLIFICATION FACTOR, Cd 3
BUILDING HEIGHT LIMIT, FEET H=NL
EQUIVALENT LATERAL-FORCE PROCEDURE

BASIC SEISMIC-FORCE RESISTING SYSTEM
LIGHT FRAME WALLS WITH SHEAR PANELS - WOOD OR STEEL
RESPONSE MODIFICATION COEFFICIENT, R 7
DEFLECTION AMPLIFICATION FACTOR, Cd 4.5
BUILDING HEIGHT LIMIT, FEET H=NL
EQUIVALENT LATERAL-FORCE PROCEDURE

SEISMIC BASE SHEAR Vx = 22.3K Vy = 49.4K

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? YES

LATERAL DESIGN CONTROLLED BY: WIND X SEISMIC

SOIL BEARING CAPACITIES: 3
FIELD TEST (PROVIDED COPY OF TEST REPORT) 2500 PSF
PRESUMPTIVE BEARING CAPACITY NA
PILE SIZE, TYPE AND CAPACITY NA

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o f f i c e . 7 0 4 . 3 3 2 . 1 6 1 5
w e b . w w w . o d a r c h . c o m

NORTH CAROLINA PROFESSIONAL SEAL 035798 ENGINEER
bab SES PLLC. No. P-0760 NORTH CAROLINA CERTIFICATE OF AUTHORIZATION

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

FOR CONSTRUCTION	: 02.14.2017
1 ZONING CHANGES	: 06.01.2017
2 ZONING CHANGES	: 09.06.2017
3 REVIEW COMMENTS	: 10.24.2017

GENERAL NOTES

S0.1

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NOTE: AT ANY REENTRANT CORNERS (PLUMBING BLOCK-OUTS, ETC.), PROVIDE 2-#4 BARS x 2'-0" LONG AT CENTER OF SLAB AT EACH CORNER.

PROVIDE #5 @ 32" VERT. REINFORCING AND GROUT ALL CMU CELLS SOLID WHERE REBAR OCCURS - PROVIDE W1.7 (9 GA.) LADDER TYPE HORIZONTAL JOINT REINFORCING @ 16" O.C. - TYPICAL ALL CMU WALLS U.N.O. - SEE SHEET S3.1

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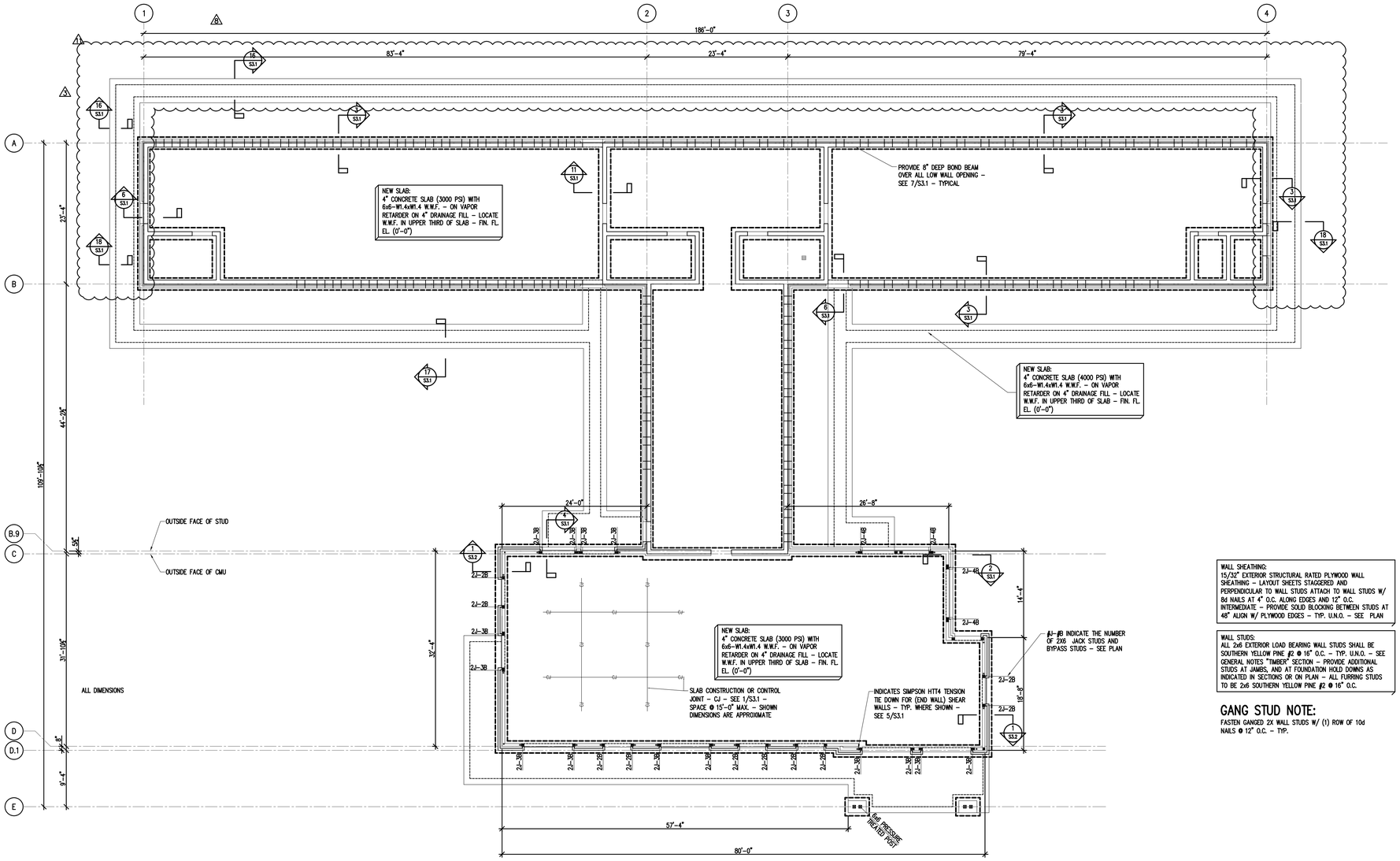
JOB #1339-16



1 S1.1 FOUNDATION PLAN

SCALE:1/8"=1'-0"

NOTES:
1. TOP OF EXTERIOR FOOTING (-1'-4")
2. TOP OF INTERIOR FOOTING (1'-0")
3. SEE SHEET S0.1 FOR GENERAL NOTES.

WALL SHEATHING:
15/32" EXTERIOR STRUCTURAL RATED PLYWOOD WALL SHEATHING - LAYOUT SHEETS STAGGERED AND PERPENDICULAR TO WALL STUDS ATTACH TO WALL STUDS W/ 8d NAILS AT 4" O.C. ALONG EDGES AND 12" O.C. INTERMEDIATE - PROVIDE SOLID BLOCKING BETWEEN STUDS AT 48" ALIGN W/ PLYWOOD EDGES - TYP. U.N.O. - SEE PLAN

WALL STUDS:
ALL 2x6 EXTERIOR LOAD BEARING WALL STUDS SHALL BE SOUTHERN YELLOW PINE #2 @ 16" O.C. - TYP. U.N.O. - SEE GENERAL NOTES "TIMBER" SECTION - PROVIDE ADDITIONAL STUDS AT JAMBS, AND AT FOUNDATION HOLD DOWNS AS INDICATED IN SECTIONS OR ON PLAN - ALL FURRING STUDS TO BE 2x6 SOUTHERN YELLOW PINE #2 @ 16" O.C.

GANG STUD NOTE:

FASTEN GANGED 2X WALL STUDS W/ (1) ROW OF 10d NAILS @ 12" O.C. - TYP.

ENTIRE SHEET

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METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

FOR CONSTRUCTION	: 02.14.2017
1 ZONING CHANGES	: 06.01.2017
2 ZONING CHANGES	: 09.06.2017
3 REVIEW COMMENTS	: 10.24.2017
4 CONTRACTOR CHANGES	: 01.03.2018
5 STRUCTURAL CHANGES	: 08.13.2018
6 REVIEW COMMENTS	: 09.04.2018
7 CIVIL CHANGES	: 11.12.2018
1 Retaining Wall	: 01.02.2019

FOUNDATION PLAN

S1.1

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LOOSE BRICK LINTEL

PROVIDE LOOSE L6x4x3/8 (LLV) BRICK SHELF OVER MASONRY OPENINGS – PROVIDE 8" MINIMUM BEARING OVER SOLID MASONRY EACH END – TYPICAL UNLESS NOTED OTHERWISE

MICROLAM HEADER NOTE:

PROVIDE PLYWOOD FILLER BETWEEN MICROLAM HEADER MEMBERS TO ACHIEVE 5⅛" OR 7¼" WALL THICKNESS – GLUE AND FASTEN MEMBERS W/ (2) ROWS OF 10d NAILS @ 12" O.C. – SEE 7/S4.1 FOR HEADER BEARING CONNECTION

2X SAWN LUMBER HEADER:

PROVIDE PLYWOOD FILLER BETWEEN 2X HEADER MEMBERS TO ACHIEVE 5⅛" OR 7¼" WALL THICKNESS – FASTEN 2X MEMBERS W/ (2) ROWS OF 10d NAILS @ 12" O.C. – SEE 6/S4.1 FOR HEADER BEARING CONNECTION

GANG STUD NOTE:

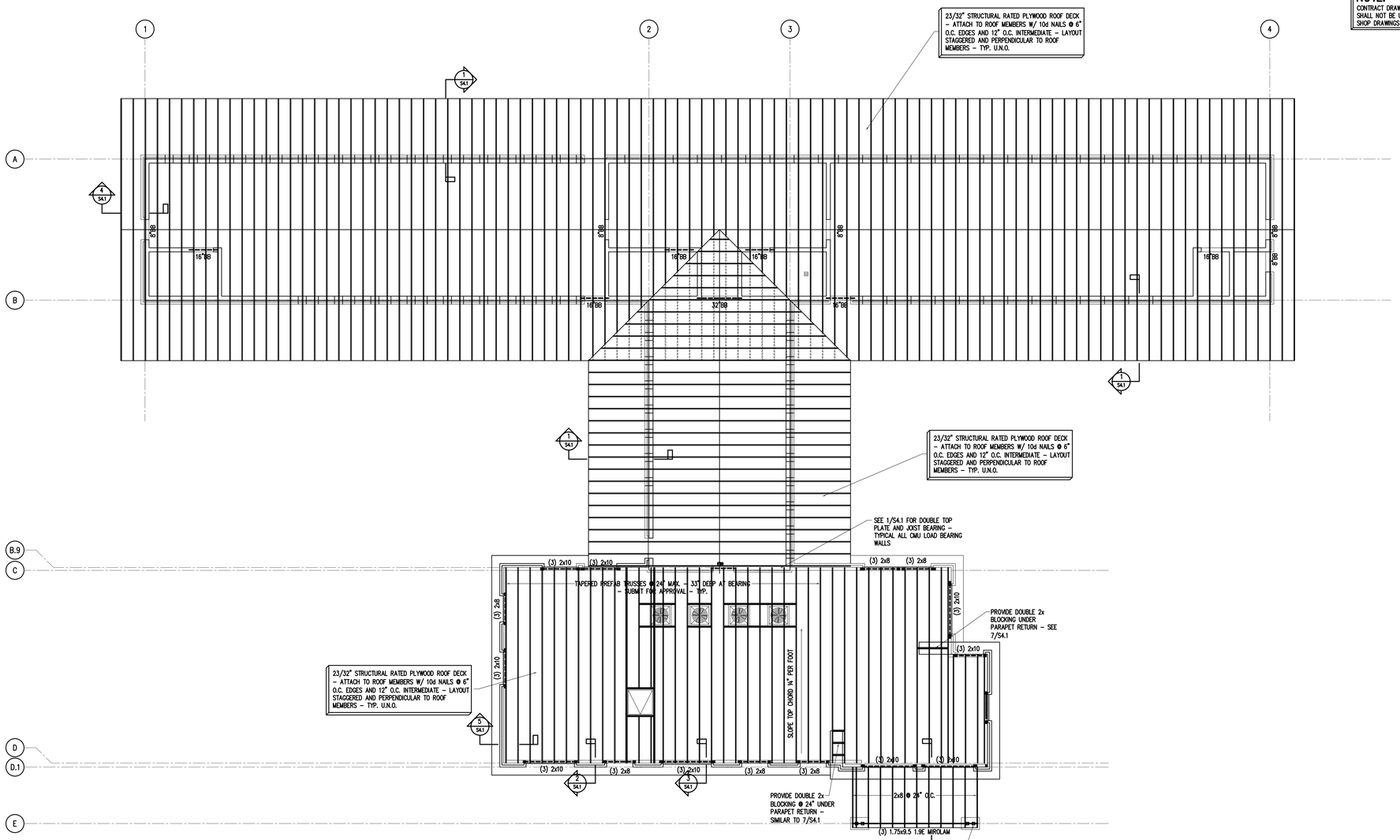
FASTEN GANGED 2X WALL STUDS W/ (1) ROW OF 10d NAILS @ 12" O.C. – TYP.

NOTE:
ALL TEMPORARY TRUSS BRACING REQUIRED FOR ERECTION, AS PER THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE PUBLICATION "HB-91" SHALL BE PERMANENTLY ATTACHED AND REMAIN IN PLACE TO SERVE AS PERMANENT TRUSS BRACING UNLESS NOTED OTHERWISE.

NOTE:
MECHANICAL CONTR. SHALL VERIFY & COORDINATE SIZE, WEIGHT AND LOCATION OF ALL MECHANICAL UNITS WITH TRUSS FABRICATOR PRIOR TO TRUSS FABRICATION. MECH. CONTRACTOR SHALL VERIFY AND COORDINATE MAGNITUDE AND LOCATION OF POINT LOADS PRIOR TO JOIST FABRICATION.

NOTE:
TRUSSES SHALL BE DESIGNED FOR ALL ADDITIONAL LOADS SHOWN ON FRAMING PLANS AND PROVIDE ADDITIONAL TRUSSES IF REQ'D

NOTE:
CONTRACT DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS



1 / S2.1 ROOF FRAMING PLAN

SCALE: 1/8"=1'-0"

NOTES:

1. ALL ELEVATIONS REFERENCED FROM FIN. FL. (0-0).
2. TRUSS BEARING - (+12'-3") ABOVE FINISHED FLOOR
3. CONTRACT DRAWINGS SHALL NOT BE USED FOR SHOP DRAWINGS.
4. SEE SHEET S0.1 FOR GENERAL NOTES.

ENTIRE SHEET

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ROOF FRAMING PLAN

S2.1

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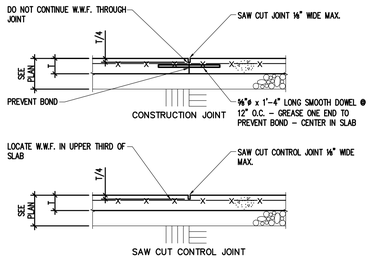
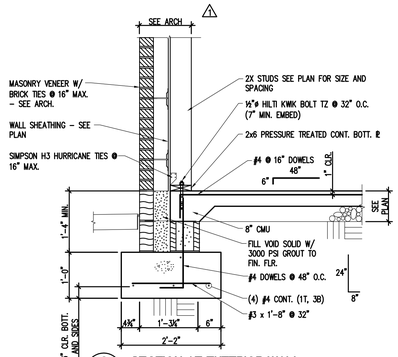
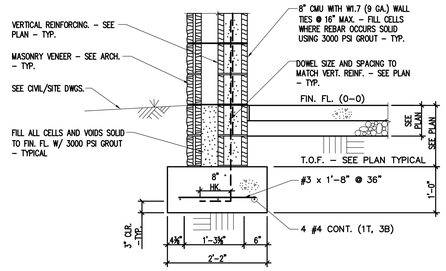


NOTE!
PROVIDE @ 10'-0" O.C. MAXIMUM AND AT ALL RE-ENTRANT CORNERS – TYPICAL

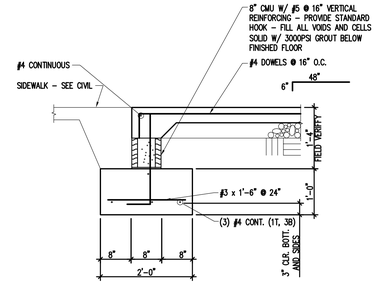
1 CONTROL/CONSTRUCTION JOINT
S3.1 SCALE: 3/4"=1'-0"



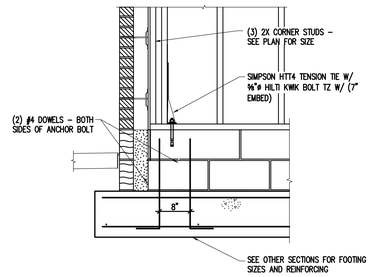
2 SECTION AT EXTERIOR WALL
S3.1 SCALE: 3/4"=1'-0"



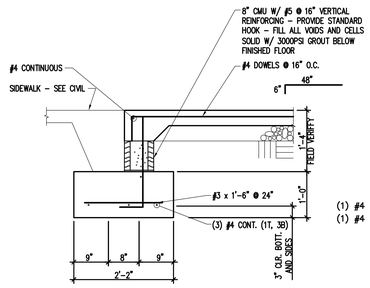
3 SECTION AT EXTERIOR WALL
S3.1 SCALE: 3/4"=1'-0"



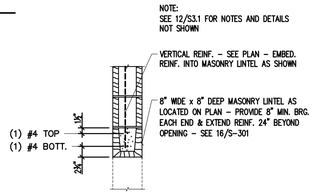
4 SECTION AT WALL OPENING
S3.1 SCALE: 3/4"=1'-0"



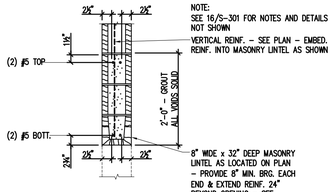
5 SECTION AT HOLD DOWN
S3.1 SCALE: 3/4"=1'-0"



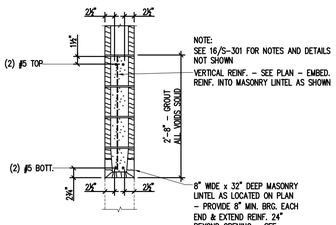
6 SECTION AT WALL OPENING
S3.1 SCALE: 3/4"=1'-0"



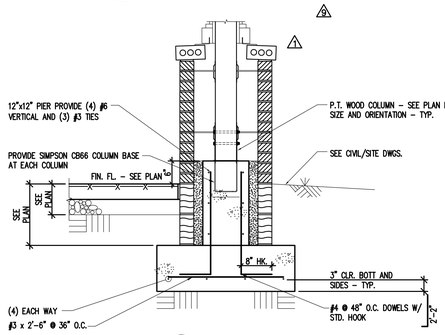
7 8" DEEP MASONRY LINTEL
S3.1 SCALE: 3/4"=1'-0"



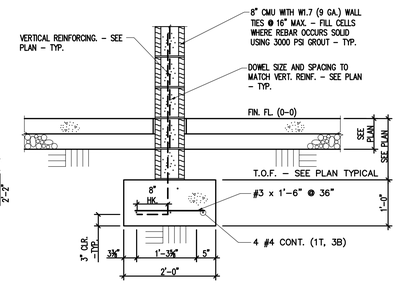
8 24" DEEP MASONRY LINTEL
S3.1 SCALE: 3/4"=1'-0"



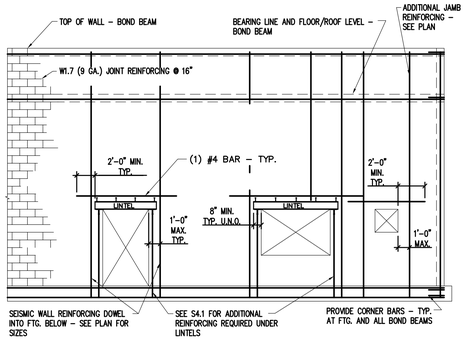
9 32" DEEP MASONRY LINTEL
S3.1 SCALE: 3/4"=1'-0"



10 SECTION AT COLUMN
S3.1 SCALE: 3/4"=1'-0"



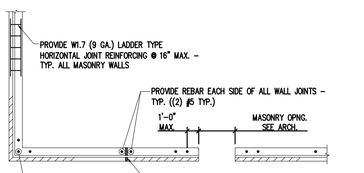
11 SECTION AT EXTERIOR WALL
S3.1 SCALE: 3/4"=1'-0"



12 CMU WALL ELEVATION
S3.1 NO SCALE – SPECIAL REINF. CMU WALL

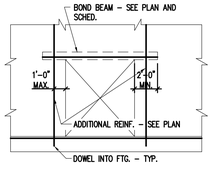
INTERIOR & EXTERIOR SEISMIC MASONRY WALL REQUIREMENTS – (U.N.O.)

1. VERTICAL REBAR (SEE PLAN) DOWELED INTO FOOTING.
2. HORIZONTAL REBAR AT TOP OF WALL, AT BEARING LINES, AT TOP OF FOOTING AND @ 48" O.C. MAX.
3. PROVIDE W1.7 (9 GA.) LADDER TYPE HORIZONTAL JOINT REINFORCEMENT @ 16" O.C.
4. PROVIDE REBAR (OR LINTEL) AROUND OPENINGS.
5. VERTICAL REBAR REQ'D EA. SIDE OF ALL VERT. WALL JOINTS (CONTROL & EXPANSION JOINTS).
6. LAP VERTICAL REBAR 48 BAR# (MIN. LAP 24").
7. GROUT ALL CELLS SOLID WHERE REBAR OCCURS.
8. ALL VERTICAL REBAR TO BE POSITIONED IN BLOCK CELL BY PREFABRICATED WIRE POSITIONER – SUBMIT FOR APPROVAL.
9. SEE BEAM OR LINTEL BEARING DETAILS FOR ADDITIONAL WALL REINFORCING REQUIRED UNDER LINTELS.
10. ALL BRICK TIES SHALL CONFORM WITH SEISMIC DESIGN CATEGORY REQUIREMENTS – SUBMIT FOR APPROVAL.
11. CONSTRUCT ALL WALLS IN 4'-0" LIFTS.
12. SEE OTHER SECTIONS FOR NOTES AND DETAILS NOT SHOWN.

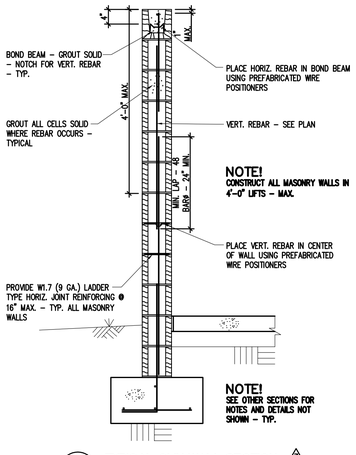


NOTE!
THIS BAR SPACING APPLIES TO ALL (LOAD BRG. & NON–LOAD BRG.) MASONRY WALLS ON ENTIRE JOB. SEE LINTEL SCHEDULE FOR ADDITIONAL WALL REINFORCING REQ'D. UNDER LINTEL BRG.

13 CMU WALL REINFORCING
S3.1 NOT TO SCALE



14 SCHEMATIC CMU WALL SECTION
S3.1 NOT TO SCALE

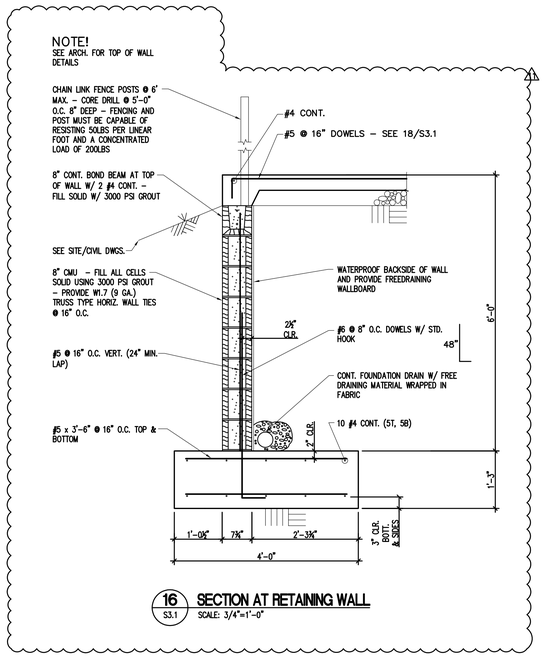


NOTE!
CONSTRUCT ALL MASONRY WALLS IN 4'-0" LIFTS – MAX.

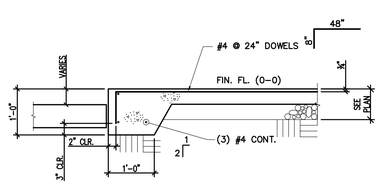
NOTE!
SEE OTHER SECTIONS FOR NOTES AND DETAILS NOT SHOWN – TYP.

15 TYPICAL CMU WALL SECTION
S3.1 SCALE: 3/4"=1'-0"

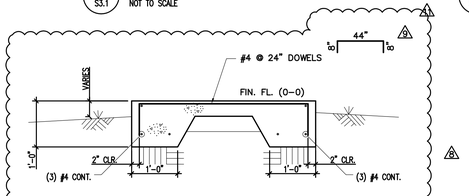
NOTE!
SEE ARCH. FOR TOP OF WALL DETAILS



16 SECTION AT RETAINING WALL
S3.1 SCALE: 3/4"=1'-0"



17 TURN DOWN SLAB
S3.1 SCALE: 3/4"=1'-0"



18 TURN DOWN SLAB
S3.1 SCALE: 3/4"=1'-0"

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METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK
WAXHAW, NORTH CAROLINA

FOR CONSTRUCTION	: 02.14.2017
1 ZONING CHANGES	: 06.01.2017
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1 Retaining Wall	: 01.02.2019

FOUNDATION SECTIONS AND DETAILS

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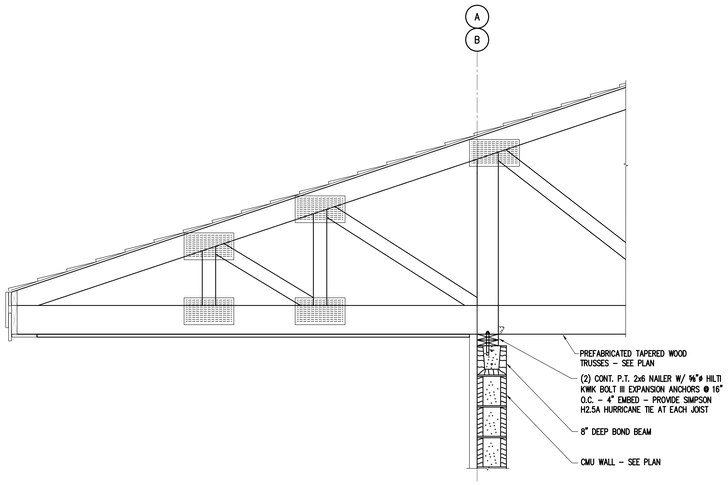
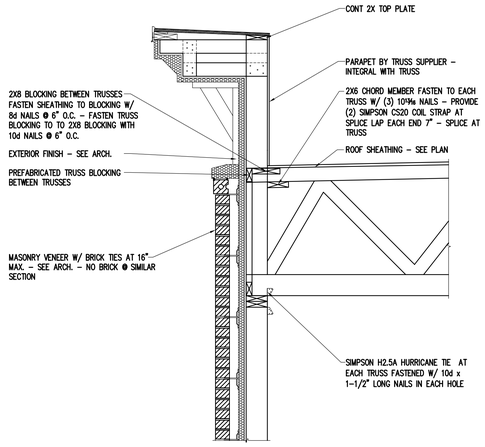
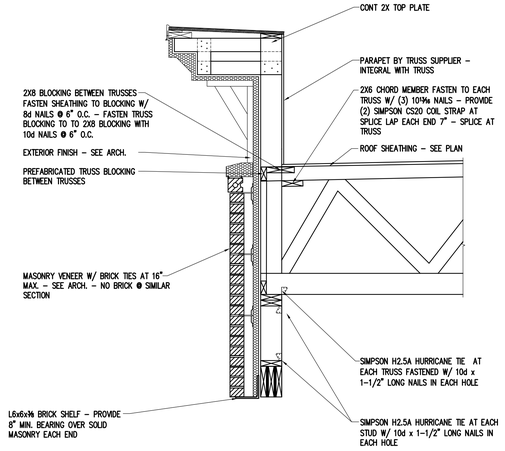


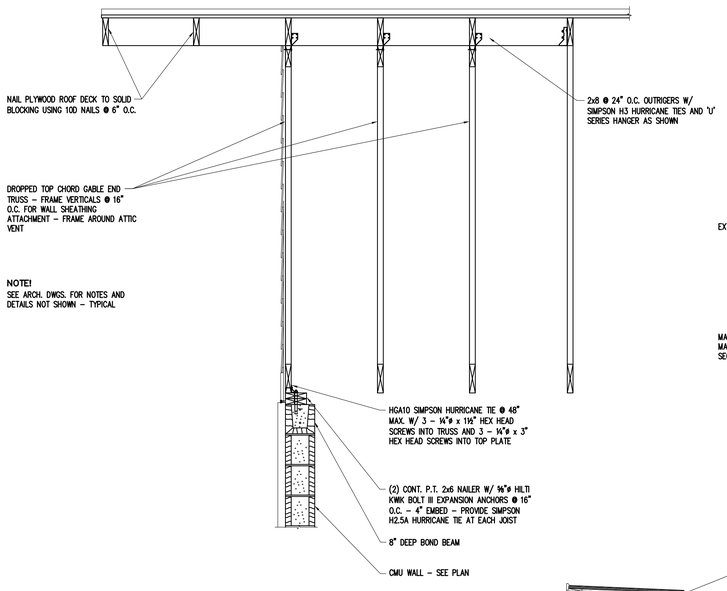
1 S4.1 **SECTION AT TRUSS BEARING**
SCALE: 3/4"=1'-0"



2 S4.1 **SECTION AT TRUSS BEARING**
SCALE: 3/4"=1'-0"



3 S4.1 **SECTION AT TRUSS BEARING**
SCALE: 3/4"=1'-0"



4 S4.1 **SECTION AT EXTERIOR WALL**
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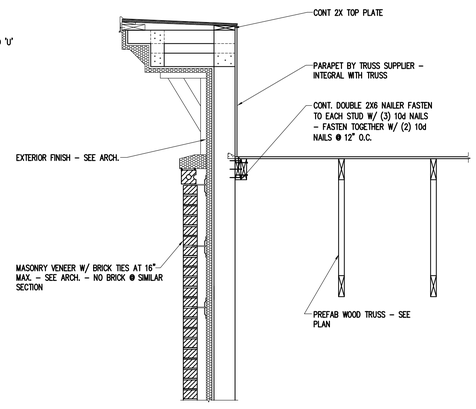

5 S4.1 **SECTION AT TRUSS BEARING**
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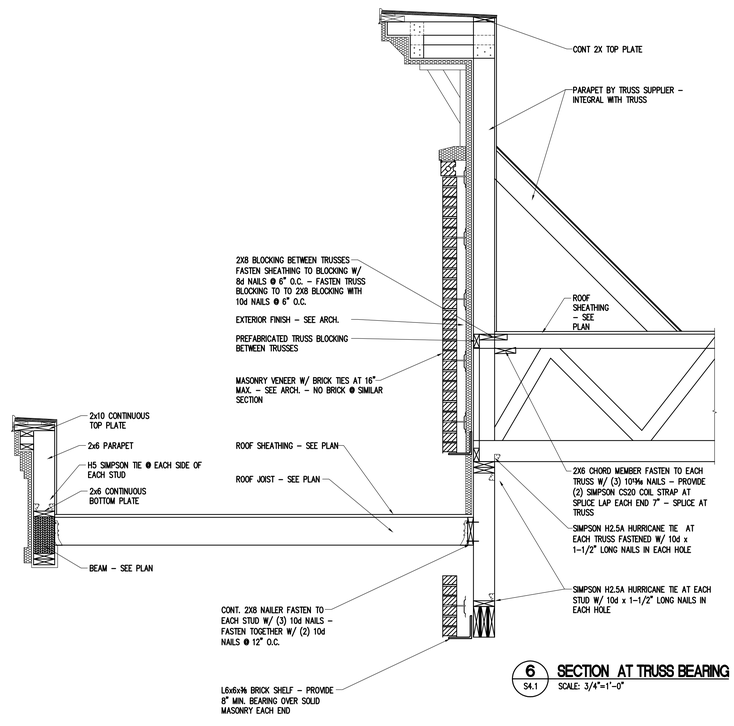

6 S4.1 **SECTION AT TRUSS BEARING**
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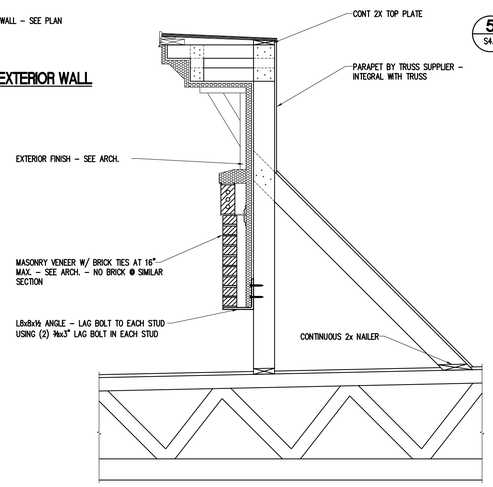

7 S4.1 **SECTION AT PARAPET RETURN**
SCALE: 3/4"=1'-0"

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ENTIRE SHEET ⚠1

FRAMING SECTIONS AND DETAILS

S4.1

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PLUMBING SPECIFICATIONS

GENERAL REQUIREMENTS:

1. SCOPE:
PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.

2. PERMITS:
APPLY FOR AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION.

3. WARRANTY:
PROVIDE ALL MATERIALS AND EQUIPMENT UNDER THIS SECTION OF THE SPECIFICATIONS WITH A ONE YEAR WARRANTY FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER.

4. COORDINATION:
VERIFY ALL ROUGH-IN LOCATIONS AND COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICTS. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC. TO PROPERLY BE INSTALLED. ANY CONFLICTS SHALL BE RESOLVED AT NO CHARGE TO THE OWNER. COORDINATE INSTALLATION OF ALL PLUMBING LINES AT CMU WALLS SO THAT PLUMBING LINES ARE PLACED IN WALL DURING CMU WALL CONSTRUCTION. CUTTING AND PATCHING OF CMU WALLS IN PLACE WILL NOT BE PERMITTED.

5. FIELD VERIFICATION:
FIELD VERIFY EXISTING CONDITIONS BEFORE STARTING CONSTRUCTION AND NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND EXISTING CONDITIONS AND/OR ANY POTENTIAL PROBLEMS OBSERVED BEFORE CONTINUING WORK IN THE EFFECTED AREAS.

6. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO:
- PLUMBING FIXTURES AND EQUIPMENT
- FIRE STOPPING
- DOMESTIC WATER SYSTEM
- SANITARY WASTE AND VENT SYSTEM
- FIRE/SPRINKLER PROTECTION

FIXTURES:

1. PROVIDE COMPLETE FIXTURES AND INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ESCUTCHEONS, ETC..

FIRE STOPPING:

1. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS AND PARTITIONS. PROVIDE A DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE A DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

DOMESTIC WATER PIPING:

1. FURNISH AND INSTALL A COMPLETE SYSTEM OF HOT AND COLD WATER, AND WASTE PIPING FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING THIS SERVICE. VERIFY LOCATION OF BEGINNING POINTS.

2. DOMESTIC WATER PIPING BELOW GRADE:
SOFT ANNEALED SEAMLESS COPPER TUBING, TYPE 'K' WITH NO JOINTS BELOW GRADE (ASTM B 88).

3. DOMESTIC WATER PIPING AND JOINTS ABOVE GRADE:
HARD DRAWN SEAMLESS COPPER TUBING, TYPE 'L' WITH 95-5 SILVER SOLDERED JOINTS (ASTM B 88).

IF PERMITTED BY LOCAL CODES, CROSS-LINKED POLYETHYLENE (PEX) PLASTIC TUBING; ASTM F 877; CSA-B137.5.

4. STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.

5. INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH ENGINEERED POLYMER FOAM INSULATION OR FIBERGLASS WITH FITTING INSERTS AND PVC COVERS. FOLLOW THIS SCHEDULE:

6.

SERVICE	PIPE SIZE	INS. THICKNESS
DOMESTIC HOT WATER (105°-140°F)	1/2" - 1-1/2"	1/2"
DOMESTIC HOT WATER CIRCULATION	ALL	1/2"
DOMESTIC COLD WATER	ALL	1/2"

7. DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME-SPREAD RATING OF 25 OR LESS AND A SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD.

8. INSULATE ALL PIPING BELOW HANDICAP ACCESSIBLE SINKS PER ADA REQUIREMENTS. INSULATE P-TRAPS, TRAP ARM, ANGLE STOP VALVES, AND RISERS WITH A PACKAGED MOLDED VINYL INSULATION KIT, HANDI LAV-GUARD MODEL 102W AND 105W BY TRUEBRO, OR APPROVED EQUIVALENT. PROVIDE FACTORY PREFORMED PIPING INSULATION KITS AS DESCRIBED OR APPROVED EQUIVALENT ONLY. OTHER TYPES OF INSULATION SYSTEMS: NON-MOLDED VINYL COVERED CLOTH WITH VELCRO OR ZIP-UP COVERS, FIELD FABRICATED PIPE INSULATION SYSTEMS, AND FLEXIBLE STRIP WRAPPING TYPE INSULATION ARE NOT ACCEPTABLE.

9. DO NOT INSTALL DOMESTIC WATER PIPING IN AREAS SUBJECT TO FREEZING TEMPERATURES. INSTALL WATER PIPING IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.

10. SHUT OFF VALVES: PROVIDE FULL PORT, BALL TYPE, AND INSTALL IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.

11. PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS.

12. PROTECT COPPER PIPING AGAINST CONTACT WITH ALL MASONRY. WHERE COPPER IS SLEEVED THROUGH MASONRY, PROVIDE COPPER OR RED BRASS SLEEVES. WHERE COPPER MUST BE CONCEALED IN OR AGAINST MASONRY PARTITIONS, PROVIDE A HEAVY COATING OF ASPHALTIC ENAMEL ON THE COPPER PIPING AND 15# ASPHALT SATURATED FELT BETWEEN THE PIPING AND THE MASONRY PARTITION.

SANITARY WASTE AND VENT PIPING:

1. FURNISH AND INSTALL COMPLETE SYSTEMS OF SOIL, WASTE, AND VENT PIPING FROM ALL PLUMBING FIXTURES, AND/OR OTHER EQUIPMENT. ALL SOIL, WASTE AND VENT LINES SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE.

2. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE WASTE PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.

3. SANITARY WASTE AND VENT PIPING AND FITTINGS: SERVICE WEIGHT CAST IRON, HUB AND SPIGOT TYPE WITH COMPRESSION JOINTS (ASTM A 74) OR NO-HUB PIPING WITH COUPLINGS (CISPI 301).

4. IF PERMITTED BY LOCAL CODES, SCHEDULE 40 PVC (ASTM D 2665) WITH SCHEDULE 40 SOCKET-TYPE PIPE FITTINGS (ASTM D 3311) MAY BE USED.

5. SLOPE SANITARY WASTE PIPING 2-1/2" AND SMALLER AT 1/4" PER FOOT MIN. SLOPE SANITARY WASTE PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM.

6. WHERE WASTE PIPING IS EXPOSED IN REST ROOM AREAS, PROVIDE CHROME PLATED BRASS PIPING, WITH MATCHING STOPS AND ESCUTCHEONS. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEAN-OUT PLUG FOR ALL LAVATORIES.

7. INSTALL CLEAN-OUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS AT EACH CHANGE IN DIRECTION.

FIRE PROTECTION (NEW SYSTEM):

1. INSTALL NEW FIRE SPRINKLER SYSTEM TO COVER ALL AREAS OF THE BUILDING PER NFPA 13. PROVIDE SPRINKLERS AS REQUIRED TO COVER ALL AREAS PER ARCHITECTURAL FLOOR PLANS AND REFLECTED CEILING PLANS.

2. UNLESS NOTED OTHERWISE, PROVIDE SEMI-RECESSED PENDANT TYPE SPRINKLERS IN LAY-IN TILE CEILING AREAS. UNLESS NOTED OTHERWISE, PROVIDE NEW CONCEALED FLUSH MOUNTED TYPE SPRINKLERS IN ALL HARD CEILING AREAS. LOCATE ALL SPRINKLERS WITHIN LAY-IN CEILING AREAS IN THE CENTER OF CEILING TILES, +/- 2". PROVIDE LAYOUT OF PROPOSED SPRINKLER LOCATIONS IN HARD CEILING AREAS AND SUBMIT TO ARCHITECT FOR APPROVAL. SUBMIT MANUFACTURER'S DATA ON SPRINKLERS AND PROPOSED SPRINKLER LAYOUT TO ARCHITECT AND ENGINEER FOR APPROVAL PRIOR TO START OF WORK.

3. THE PIPING SYSTEM SHALL BE COORDINATED WITH ALL OTHER NEW AND EXISTING TRADES (MECHANICAL, ELECTRICAL, TELE./DATA, ETC.) AND BUILDING COMPONENTS (ARCHITECTURAL AND STRUCTURAL) TO AVOID CONFLICTS WITH OTHER ELEMENTS (CEILING LIGHTING PLAN, DUCTWORK, OTHER MECHANICAL PIPING, MECHANICAL UNITS, CABLE TRAYS AND WIREWAYS, ETC.). WHERE TYPICAL PIPING ROUTING ELEVATIONS ARE INTERRUPTED BY NON-TYPICAL CONDITIONS, PROVIDE OFFSETS WITH DRAIN VALVES AS REQUIRED AT LOW POINTS, AND ROUTE ABOVE, BELOW, OR AROUND CONFLICTS. AS FP PIPING IS NOT SHOWN ON DESIGN DRAWINGS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE OFFSETS IN FP PIPING AS REQUIRED FOR ROUTING OF ALL OTHER TRADES, PARTICULARLY DUCTWORK, AND COORDINATE WITH THOSE TRADES FOR THEIR REQUIREMENTS.

4. ALL NEW WET SPRINKLER PIPING SHALL BE AS PER NFPA 13 EXCEPT THAT THE USE OF PLASTIC PIPING IS STRICTLY PROHIBITED.

5. PROVIDE FIRE SPRINKLER ENTRANCE RISER IN FIRE SPRINKLER ROOM INCLUDING FIRE DEPARTMENT CONNECTION. PROVIDE ALL REQUIRED VALVING AND TRIM PER NFPA 13 INCLUDING INDICATING BUTTERFLY VALVE WITH TAMPER SWITCH, FLOW SWITCH, AND ELECTRIC ALARM BELL.

6. PROVIDE SPRINKLER SYSTEM FABRICATION DRAWINGS AND HYDRAULIC CALCULATIONS SHOWING SPRINKLER LAYOUT, PIPING, AND OTHER COMPONENTS REQUIRING COORDINATION (STRUCTURE, CEILING LIGHTING PLAN, DUCTWORK, OTHER MECHANICAL PIPING, MECHANICAL UNITS, CABLE TRAYS AND WIREWAYS, ETC.). SUBMIT DRAWINGS AND CALCULATIONS TO THE LOCAL AUTHORITY HAVING JURISDICTION AS REQUIRED FOR PERMITTING.

EXECUTION:

1. ALL PIPING IS TO BE LABELED WITH PLASTIC LABELS, PERMANENTLY STRAPPED TO PIPING, OUTSIDE OF APPLICABLE INSULATION AND COVERS/ENCLOSURES. WHERE EXISTING PIPING SYSTEMS ARE LABELED, LABELING SHALL MATCH EXISTING BASE BUILDING STANDARDS. WHERE NO CURRENT STANDARDS EXIST, LABELS SHALL BE COLOR CODED, UNIQUE FOR EACH PIPING SYSTEM, WITH FLOW DIRECTION ARROWS, AND IDENTIFICATION LETTERING. PIPING SHALL BE IDENTIFIED WITH BLACK LETTERS, SIZED TO BE EASILY READABLE FROM FLOOR LEVEL. LOCATE AND MOUNT LABELS SO AS TO BE READABLE FROM FLOOR LEVEL OR AREA OF EASIEST ACCESS. PROVIDE LABELS AT EACH PIPING BRANCH CONNECTION, AT EACH EQUIPMENT CONNECTION, ON EACH SIDE OF WALL AND FLOOR PENETRATIONS, AND AT 20 LINEAR FEET ON CENTER MAXIMUM. PIPING SYSTEMS SHALL BE IDENTIFIED AS FOLLOWS: DOMESTIC COLD WATER = CW (DCW), DOMESTIC HOT WATER = HW (DHW), AND DOMESTIC HOT WATER RECIRCULATION/RETURN = HWR (DHWR), SANITARY/WASTE DRAINAGE = S, PUMPED WASTE DISCHARGE = PWD, VENT = V, GAS = G.

2. SUPPORT ALL PIPING FROM STRUCTURE. DO NOT SUPPORT FROM OTHER DUCTWORK, PIPING, CONDUIT, ETC. SUPPORT ALL PIPING WITH HANGERS, SUPPORTS, ANCHORS AND GUIDES PER ANSI CODE FOR PRESSURE PIPING, ANS B31.1 WITH ADDENDA 31.1 OA-69. SIZING AND SPACING OF HANGERS SHALL BE PER THESE STANDARDS, UNLESS OTHERWISE NOTED. "C" CLAMPS SHALL NOT BE USED UNLESS TACK WELDED OR STRAPPED TO STRUCTURAL STEEL MEMBERS.

3. INSULATION SHALL BE CONTINUOUS AT ALL WALL AND FLOOR PENETRATIONS AND AT HANGER SUPPORTS. HANGER SUPPORTS FOR INSULATED PIPING SHALL BE OUTSIDE INSULATION; PROVIDE INSULATED INSERTS AND SLEEVES AT HANGERS. INSULATION VAPOR BARRIER SHALL BE SEALED AT ALL JOINTS AND SEAMS, AND AT PENETRATIONS BY APPURTENANCES (VALVE STEMS, ETC.). REPAIR INSULATION AT EXISTING PIPING WHICH HAS BEEN REWORKED. TEARS AND PUNCTURES OF VAPOR BARRIER SHALL BE REPAIRED AND SEALED. ALL PRESSURE TESTING SHALL BE PERFORMED BEFORE INSULATION IS APPLIED.

4. INSULATE AND HEAT TRACE ALL PORTIONS OF SANITARY DRAINAGE SYSTEM TRAPS EXPOSED TO UNCONDITIONED SPACES (OUTDOORS AND WITHIN PARKING GARAGES).

5. PROVIDE SLEEVES, CLAMPS FOR PIPING AT ALL WALL AND FLOOR PENETRATIONS, AND FIRE PROOFING AT ALL RATED WALL AND FLOOR PENETRATIONS. PROVIDE ESCUTCHEON PLATES AT ALL VISIBLE WALL AND CEILING PENETRATIONS.

6. ALL PIPING BELOW HANDICAP ACCESSIBLE SINKS SHALL BE INSULATED AND INSTALLED AS HIGH AS POSSIBLE AND AS FAR BACK AS POSSIBLE TO PROVIDE MAXIMUM WHEELCHAIR ACCESS, PER ADA REQUIREMENTS.

7. CLEAN AND SANITIZE ALL DOMESTIC (POTABLE) WATER PIPING SYSTEMS PER CODE REQUIREMENTS AFTER COMPLETED INSTALLATION AND BEFORE ANY POTABLE USE. THE FOLLOWING SHALL BE PERFORMED AT A MINIMUM: CLEAN ALL DEBRIS FROM PIPING BEFORE FINAL CONNECTIONS ARE MADE. PRESSURE TEST THE COMPLETED PIPING SYSTEM. FLUSH THE PIPING SYSTEM WITH A CLEANING AND DEGREASING AGENT. COMPLETELY FLUSH THE PIPING SYSTEM WITH CLEAN WATER TO REMOVE ALL TRACES OF DEBRIS AND CLEANING AGENTS. FLUSH THE PIPING SYSTEM WITH A SANITIZING AGENT. COMPLETELY FLUSH THE PIPING SYSTEM WITH CLEAN WATER TO REMOVE ALL TRACES OF SANITIZING AGENT. FILL THE PIPING SYSTEM WITH CLEAN WATER.

8. ALL WASTE AND VENT (DWV) PIPING 3" AND ABOVE SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM, PIPING 2-1/2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT MINIMUM. PROVIDE CLEANOUTS AT ALL CHANGES IN DIRECTIONS. PROVIDE ADDITIONAL CLEANOUTS IN ALL DWV PIPING AT MAXIMUM 75 FT. INTERVALS FOR 4" PIPING AND ABOVE, AND AT MAXIMUM 50 FT. INTERVALS FOR 3" PIPING AND SMALLER.

9. SUPPORT GAS PIPING ON BUILDING ROOF ON PRE-MANUFACTURED PIPING SUPPORTS SET ON ROOF WITH FLEXIBLE RUBBER OR NEOPRENE PADS MOUNTED UNDER THE SUPPORTS TO PROTECT THE ROOFING MEMBRANE. SUPPORTS SHALL BE WIDE BASE, HIGH DENSITY RIGID CLOSED-CELL UV RESISTANT POLYETHYLENE FOAM WITH UNISTRUT CLAMPING CHANNEL MOLDED INTO AND BONDED TO THE TOP OF THE BASE, "PIPE PIER" BY ERICO OR APPROVED EQUIVALENT. AS AN ALTERNATE, PIPE SUPPORTS SHALL BE HEAVY DUTY RIGID MOLDED POLYCARBONATE RESIN PIPE/CONDUIT SUPPORTS WITH WIDE, FLAT BASE AND U-SHAPED PIPE CRADLE OR RAISED UNISTRUT SUPPORT; MIRO INDUSTRIES OR APPROVED EQUIVALENT. CLAMP PIPING TO SUPPORTS. SUPPORTS SHALL BE SPACED AT 8 FT. ON CENTER MAXIMUM AND AT ALL CHANGES IN DIRECTION.

10. SUPPORT PIPING OUTSIDE BUILDING FOOTPRINT WITH ROLLER TYPE PIPE SUPPORTS WITH BASE STANDS BOLTED TO 12" LONG (MIN.) 4X4 PRESSURE TREATED WOOD BLOCKS, WHICH REST DIRECTLY ON GRADE, MAXIMUM 5 FT. ON CENTER. SUPPORT PIPING INSIDE BUILDING FOOTPRINT WITH CLEVIS TYPE HANGERS, OR CLAMPED TO CHANNELS FOR RACKS, SUSPENDED FROM STRUCTURE ABOVE WITH ALL-THREAD RODS ANCHORED OR CLAMPED AND WELDED TO STRUCTURE; OR SUPPORTED FROM FLOOR BELOW WITH ROLLERS ON CHANNELS (BELOW RAISED FLOOR). PROVIDE RISER CLAMPS AT FLOOR PENETRATIONS AND WALL SUPPORT BRACKETS AT VERTICAL PIPING. PROVIDE FOAMGLASS INSERTS INSIDE INSULATION AND SHIELDS AT PIPE SUPPORT POINTS (INSULATION SHALL NOT COVER SUPPORT).

PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE

MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	FAUCET/VALVE				DRAIN		SUPPLIES AND STOPS	PIPE SIZES				MOUNTING	REMARKS
							MANUFACTURER MODEL NO.	SPOUT	HANDLES	CENTERS	TYPE	SIZE		WASTE	VENT	CW	HW		
P-1	WATER CLOSET	FLUSH TANK	KOHLER	K-3427	VITREOUS CHINA	HANDICAP ELONGATED	---	---	---	---	---	---	McQUIRE 166LK	4"	2"	1/2"	--	FLOOR	PROVIDE WITH K-4670-SC SEAT.
P-2	LAVATORY	WALL HUNG	KOHLER	K-2035-4	VITREOUS CHINA	HANDICAP	CHICAGO FAUCET 2200-CP	STANDARD	SINGLE LEVER	4"	GRID	1-1/2"	McQUIRE 165LK	2"	1-1/2"	1/2"	1/2"	WALL HUNG	PROVIDE WITH K-8998 P-TRAP, GRID DRAIN, LOOSE KEY STOPS, AND RIGID RISERS.
P-3	COUNTERTOP SINK	DROP IN	KOHLER	K-4015-4	STAINLESS STEEL	DOUBLE BOWL	KOHLER K-15253-4	STANDARD	LEVER HANDLES	4"	BASKET STRAINER	1-1/2"	McQUIRE 165LK	1-1/2"	1-1/2"	1/2"	1/2"	DROP IN	PROVIDE WITH K-8998 P-TRAP, BASKET STRAINER, LOOSE KEY STOPS, AND RIGID RISERS.
P-4	WATER COOLER	WALL HUNG	ELKAY	EZSTL8LC	STAINLESS STEEL	DOUBLE UNIT	---	---	---	---	---	1-1/2"	---	1-1/2"	1-1/2"	1/2"	--	WALL HUNG	BARRIER-FREE, SPLIT LEVEL DUAL WATER COOLER 120v/1ø, 4.4 FLA. PROVIDE CARRIER.
P-5	UTILITY SINK	FLOOOR MOUNT	FIAT	TSB-100	MOLDED STONE	24"x24"x12"	CHICAGO 897	SWING	---	8"	GRID	4"	---	4"	2"	1/2"	1/2"	FLOOR	PROVIDE FAUCET WITH INTEGRAL VACUUM BREAKER, SPOUT W/ PAIL HOOK AND WALL BRACE.
P-6	COUNTERTOP SINK	DROP IN	KOHLER	K-4011-4	STAINLESS STEEL	SINGLE BOWL	KOHLER K-15253-4	STANDARD	LEVER HANDLES	8"	BASKET STRAINER	1-1/2"	McQUIRE 165LK	1-1/2"	1-1/2"	1/2"	1/2"	DROP IN	PROVIDE WITH K-8998 P-TRAP, BASKET STRAINER, LOOSE KEY STOPS, AND RIGID RISERS.
NFWH	WALL HYDRANT	WALL MOUNTED	WOODFORD	65	CAST BRASS	---	---	---	---	---	---	---	---	---	--	3/4"	--	WALL	EXPOSED, NON-FREEZE, ANTI-SIPHON, AUTOMATIC DRAINING.
HB	HOSE BIBB	WALL MOUNTED	WOODFORD	24	CAST BRASS	---	---	---	---	---	---	---	---	---	--	3/4"	--	WALL	PROVIDE WITH TEE KEY HANDLE.
WH-1	WATER HEATER	ELECTRIC	A.O. SMITH	DEN-52	GLASS LINED	LIGHT COMMERCIAL	---	---	---	---	---	---	---	--	--	3/4"	3/4"	SEE DETAIL	50 GAL. STORAGE; 10.0 KW AT 208V/3ø; 41 GPH RECOVERY @ 100°F RISE.
WH-2	WATER HEATER	ELECTRIC	A.O. SMITH	DEL-10	GLASS LINED	LIGHT COMMERCIAL	---	---	---	---	---	---	---	--	--	3/4"	3/4"	SEE DETAIL	10 GAL. STORAGE; 2.0 KW AT 120V/1ø; 10 GPH RECOVERY @ 80°F RISE.
FS1	**FLOOR SINK**	SQUARE TOP	ZURN	Z1900	PORCELAIN ENAMEL	LOOSE SET FULL GRATE	---	---	---	---	CAST IRON	4"	---	4"	--	--	--	FLOOR	CAST IRON FLOOR RECEPTOR WITH 1/2 SQUARE OPENINGS AND PORCELAIN ENAMEL COATED INTERIOR
FCO	FLOOR CLEAN-OUT	SQUARE TOP	ZURN	CO2500-ST	CAST IRON	BRASS PLUG	---	---	---	---	---	---	---	--	--	--	--	FLOOR	FINISHED AREA ADJUSTABLE CLEANOUT WITH SQUARE TOP.

NOTES:
1. INSTALL SERVICE, SHUTOFF & CHECK VALVES, COCKS, STOPS, AIR CUSHIONS, VACUUM BREAKERS, AND SAFETY DEVICES WHERE REQUIRED BY CODE, SPECIFICATIONS, OR DRAWINGS. NO VALVES SHALL BE INSTALLED ABOVE SOLID CEILINGS.
2. ALL MODEL NOS. REFER TO AMERICAN STANDARD UNLESS NOTED AND ALL FIXTURES IN WHITE UNLESS NOTED.
3. EXPOSED P-TRAPS TO BE 17 GA. CHROME PLATE WITH CLEANOUT AND ESCUTCHEON PLATE.
4. STOPS TO BE CHROME PLATED 1/2" ANGLE VALVE WITH CHROME PLATED 12" LONG, 1/2" O.D. FLEXIBLE RISER AND ESCUTCHEON PLATE.
5. ALL DRAINS AND WATER SUPPLY PIPING TO LAVATORIES TO BE CONCEALED IN SHROUD/KNEE CONTACT GUARD.
6. ALL VITREOUS CHINA FIXTURES SHALL BE WHITE.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
W	WASTE (SOIL PIPE)
GW	GREASE WASTE
	STORM DRAIN
	VENT
AW	ACID WASTE
AV	ACID VENT
	DOMESTIC COLD WATER SUPPLY
	DOMESTIC HOT WATER SUPPLY (110°F)
	DOMESTIC HOT WATER RETURN (110°F)
	DOMESTIC HOT WATER SUPPLY (140°F)
	DOMESTIC HOT WATER RETURN (140°F)
	DOMESTIC HOT WATER SUPPLY (180°F)
	DOMESTIC HOT WATER RETURN (180°F)
G	LOW PRESSURE GAS
MPG	MEDIUM PRESSURE GAS
HPG	HIGH PRESSURE GAS
	RISER DOWN (ELBOW)
	RISER UP (ELBOW)
	RISE OR DROP
	BRANCH - BOTTOM CONNECTION
	BRANCH - TOP CONNECTION
	BRANCH - SIDE CONNECTION
	VALVE IN RISER
	ANGLE VALVE
	BALANCING VALVE
	STOP AND WASTE VALUE
	CHECK VALVE
	SHUT-OFF VALVE
	GLOBE VALVE
	MOTOR OPERATED VALVE
	PRESSURE REDUCING VALVE
	SOLENOID OPERATED VALVE
	TEMPERATURE & PRESSURE RELIEF VALVE
	PRESSURE RELIEF VALVE
	MANHOLE
	TRAP
	FLOOR CLEANOUT
	VALVE IN CAST IRON BOX W/ CONC. PAD
	FLOOR CLEANOUT
	FLOOR SINK W/ HALF GRATE
	FLOOR DRAIN W/ FULL GRATE
	FLOOR DRAIN
	HUB DRAIN OR OPEN SITE DRAIN
	HOSE BIBB
	WALL HYDRANT
	FLOW SWITCH
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	STRAINER
	UNION
	CAP ON END OF LINE
	PLUGGED TEE
	THERMOMETER
	PRESSURE GAUGE WITH GAUGE COCK
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	CONNECT TO EXISTING
	FLOW INDICATOR FOR PORTABLE METER
	FLOW - IN DIRECTION OF ARROW
	THERMOSTATIC MIXING VALVE
	BACKFLOW PREVENTER W/ STRAINER
	GAS SHUT-OFF VALVE
	GAS REGULATOR
	FLUSH GRADE CLEANOUT W/CONC. PAD
	ROOF DRAIN
	SIAMESE FIRE CONNECTION
	STANDPIPE W/FIRE DEPT. VALVE
M	METER
RISER # SHEET #	PLUMBING RISER INDICATOR

NOTE: THIS IS A STANDARD LEGEND. ALL ITEMS SHOWN MAY NOT APPEAR ON DRAWINGS.

PLUMBING ABBREVIATIONS

ABBREVIATION/DEFINITION		ABBREVIATION/DEFINITION	
A/C	ABOVE CEILING	FLR	FLOOR
AD	AREA DRAIN	G	LOW PRESSURE GAS
AFF	ABOVE FINISHED FLOOR	GEN	GENERAL
AFG	ABOVE FINISHED GRADE	HB	HOSE BIBB
AV	ACID VENT	HD	HUB DRAIN
AW	ACID WASTE	HPG	HIGH PRESSURE GAS
B/F	BELOW FLOOR	HWR	HOT WATER RETURN
B/G	BELOW GRADE	HW	HOT WATER
BLDG	BUILDING	ID	INDIRECT WASTE
CB	CATCH BASIN	INV	INVERT
CI	CAST IRON	LOC	LOCATION
CL	CENTER LINE	MPG	MEDIUM PRESSURE GAS
CO	CLEANOUT	NIC	NOT IN CONTRACT
CONT	CONTINUATION	OSD	OPEN SITE DRAIN
CONTR	CONTRACTOR	PLBG	PLUMBING
CW	COLD WATER	PRV	PRESSURE REDUCING VALVE
D	DRAIN	PVC	POLYVINYL CHLORIDE
DN	DOWN	RD	ROOF DRAIN
DTL	DETAIL	SAN	SANITARY
DWGS	DRAWINGS	SD	STORM DRAIN
DWR	CHILLED DRINKING WATER RETURN	SP	SPRINKLER
DWS	CHILLED DRINKING WATER SUPPLY	STR	STRAINER
EL	ELEVATION	SW	SOFT COLD WATER
EWC	ELEC. WATER COOLER	TSW	TAMPER SWITCH
F	FIRE LINE	V	VENT
FCO	FLOOR CLEANOUT	VTR	VENT THROUGH ROOF
FC	FLEXIBLE CONNECTION	W	WASTE
FD	FLOOR DRAIN	W/	WITH
FFE	FINISHED FLOOR ELEVATION	WCO	WALL CLEANOUT
FLR	FINISHED GRADE CLEANOUT	WH	WALL HYDRANT

NOTE: THESE ARE STANDARD ABBREVIATIONS, ALL ABBREVIATIONS SHOWN ABOVE MAY NOT APPEAR ON DRAWINGS.

GENERAL PLUMBING NOTES

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE PLUMBING SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL ITEMS AND LABOR REQUIRED FOR A COMPLETE PLUMBING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ADDITIONS TO THE CONTRACT.
2. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES. EXACT LOCATION OF ALL FIXTURES MUST BE VERIFIED IN THE FIELD PRIOR TO INSTALLATION. FINAL LOCATION SHALL BE AS DIRECTED BY ARCHITECT.
3. ALL PIPING SHALL BE INSTALLED ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED.
4. DO NOT RUN PIPING THROUGH ELECTRICAL ROOMS OR DIRECTLY ABOVE ELECTRICAL PANELS.
5. ALL PIPING SHALL BE SLOPED AS PER SPECIFICATIONS UNLESS OTHERWISE NOTED.
6. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL DRAWINGS. SET SLEEVES IN FLOORS AND WALLS. AND SECURE ATTACHMENTS FOR HANGERS AS CONSTRUCTION PROGRESSES. ALL PENETRATIONS MUST BE SEALED AND HELD AS TIGHT TO COLUMNS OR WALLS AS POSSIBLE.
7. INSTALL WATER HAMMER ARRESTOR (PDI'S) ON DOMESTIC COLD & HOT WATER LINES AT EACH FIXTURE OR BATTERY OF FIXTURES AS INDICATED ON THE DRAWINGS & IN ACCORDANCE WITH THE NORTH CAROLINA STATE PLUMBING CODE. ARRESTORS SHALL BE INSTALLED IN ACCESSIBLE LOCATION. PROVIDE 14"X14" ACCESS DOOR AT ALL ARRESTORS. ACCESS DOORS SHALL BE LOCATED SO THAT ARRESTORS ARE EASILY ACCESSIBLE FOR MAINTENANCE. ACCESS DOORS SHALL BE 16 GA. STEEL PRIMED AND PAINTED, CONCEALED ON ONE SIDE WITH KEYED CAM LOCK, COLOR AS SELECTED BY ARCHITECT.
8. WALL HYDRANTS SHALL BE MOUNTED 1'-6" ABOVE FINISHED FLOOR.
9. PLUMBING VENTS EXTENDING THROUGH THE ROOF SHALL TERMINATE AT 1'-0" ABOVE ROOF AND AT A MINIMUM OF 12'-0" HORIZONTALLY FROM ANY AIR INTAKE OR OPERABLE WINDOW.
10. VACUUM BREAKERS SHALL BE INSTALLED ON HOSE BIBBS AND SUPPLY NOZZLES USED FOR CONNECTION OF HOSES OR TUBING.
11. REFER TO PLUMBING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

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NORTH CAROLINA BOARD NO. C-3207

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	: 02.14.17

Plumbing Legend

P0.1

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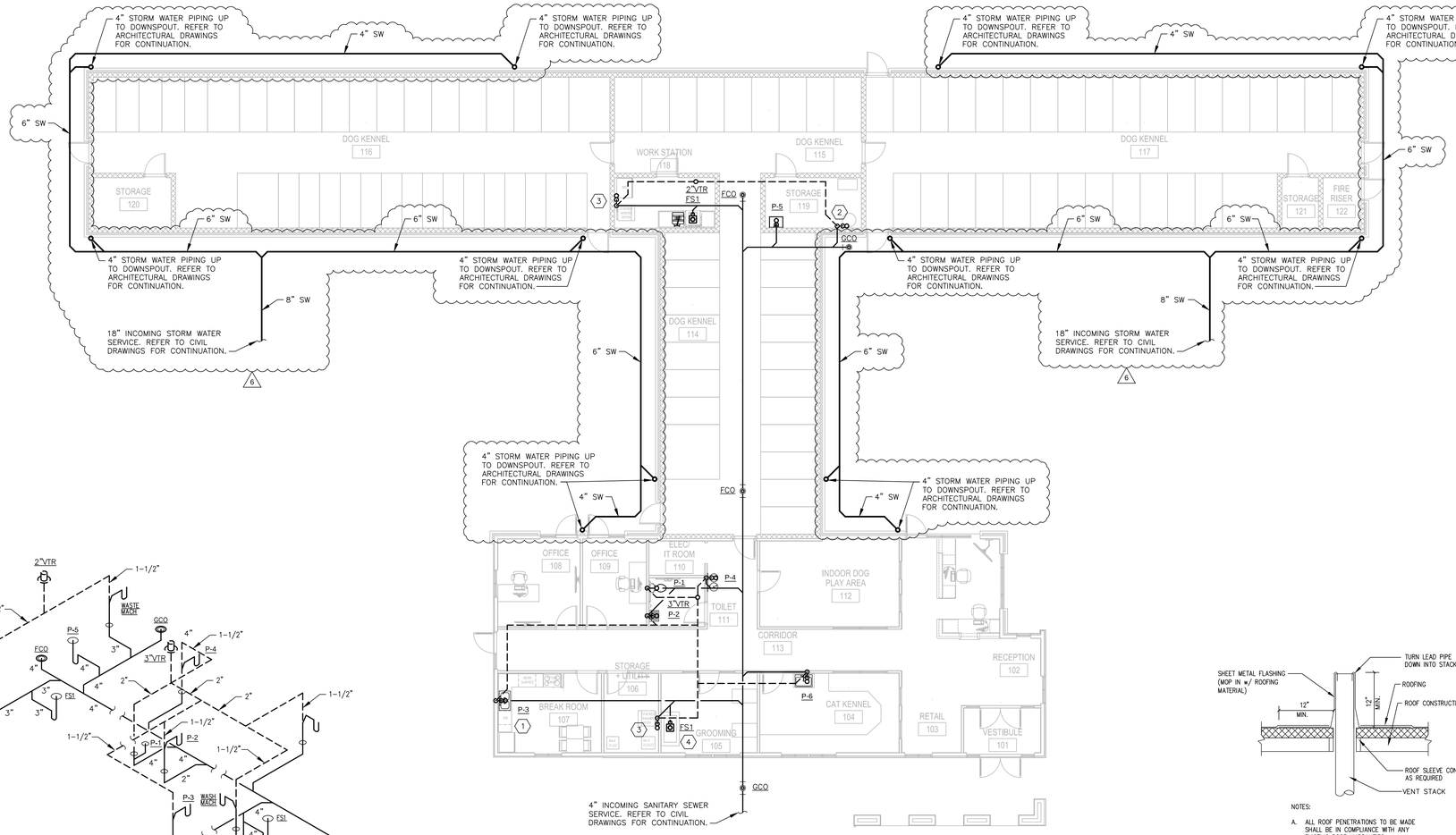
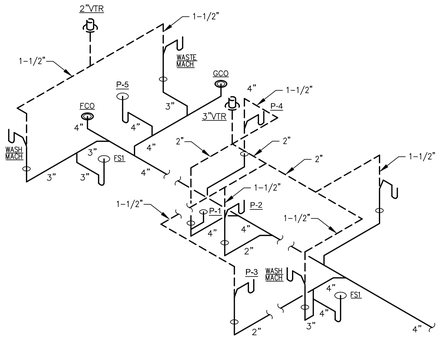
ODA No. 163112 CADD File:



1 P1.1 PLUMBING FLOOR PLAN - SANITARY & VENT

1/8" = 1' - 0"



2 P1.1 SANITARY RISER DIAGRAM

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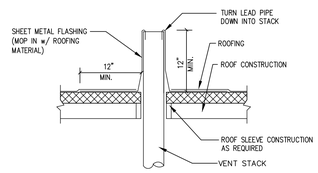

NOTES:

A. ALL ROOF PENETRATIONS TO BE MADE SHALL BE IN COMPLIANCE WITH ANY EXISTING ROOF WARRANTIES.

B. ANY VENT THAT IS WITHIN 10' OF ANY DOOR, WINDOW OR EXHAUST OPENING SHALL EXTEND NOT LESS THAN 3" ABOVE SUCH.

3 P1.1 VENT THROUGH ROOF

NTS

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.
2. REFER TO SANITARY RISER DIAGRAM FOR SANITARY AND VENT PIPING SIZES.
3. MAINTAIN MINIMUM 10 FT CLEARANCE FROM TOILET EXHAUST AND SANITARY VENT OUTLETS TO VENTILATION AIR INTAKE OPENINGS.
4. THE WASTE FROM AN AUTOMATIC CLOTHES WASHER SHALL CONNECT TO A VERTICAL DRAIN OF NOT LESS THAN 2 INCHES IN DIAMETER, OR A HORIZONTAL DRAIN OF NOT LESS THAN 3 INCHES IN DIAMETER. THE 2-INCH TRAP IN THE WASTE CONNECTION MAY BE USED AS A CLEAN-OUT FOR BOTH THE 2-INCH AND THE 3-INCH. PROVIDE INTERCEPTOR, WIRE BASKET OR SIMILAR DEVICE ON WASHING MACHINE OUTLET PER NC PLUMBING CODE, SECTION 1003.6.
5. REFER TO PLUMBING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

DRAWING NOTES:

1. SIZE, EXTEND AND MAKE ALL FINAL DRAIN PIPING CONNECTIONS TO OWNER FURNISHED DISHWASHER PER MANUFACTURERS INSTALLATION GUIDELINES.
2. SIZE, EXTEND AND MAKE ALL FINAL DRAIN PIPING CONNECTIONS TO OWNER FURNISHED WASTE MACHINE PER MANUFACTURERS INSTALLATION GUIDELINES.
3. PROVIDE WASHING MACHINE OUTLET WALL BOX, OATEY MODEL 38681 OR APPROVED EQUAL. COORDINATE EXACT LOCATION WITH OWNER PROVIDED EQUIPMENT PRIOR TO ROUGH IN. MAKE ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT PER MANUFACTURERS INSTALLATION GUIDELINES.
4. PROVIDE HAIR INTERCEPTOR, ZURN MODEL Z-1176 OR APPROVED EQUAL. MAKE ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT PER MANUFACTURERS INSTALLATION GUIDELINES. ROUTE DISCHARGE FROM INTERCEPTOR INDIRECT TO FLOOR SINK.

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METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	02.14.17
ZONING CHANGES	06.01.17
ZONING CHANGES	09.06.17
REVIEW COMMENTS	10.24.17
6 CONTRACTOR CHANGES	01.03.18

Plumbing Floor Plan - Sanitary & Vent

P1.1

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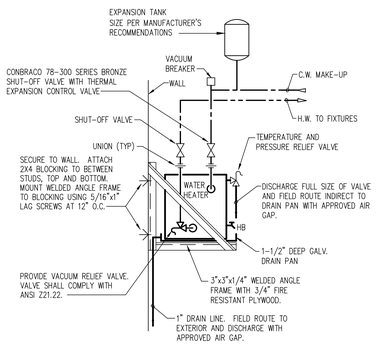
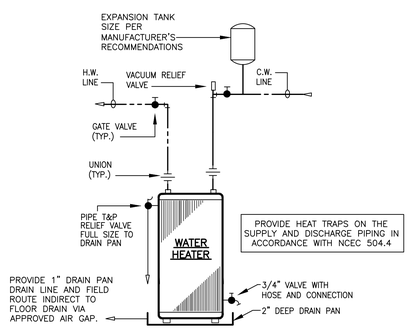
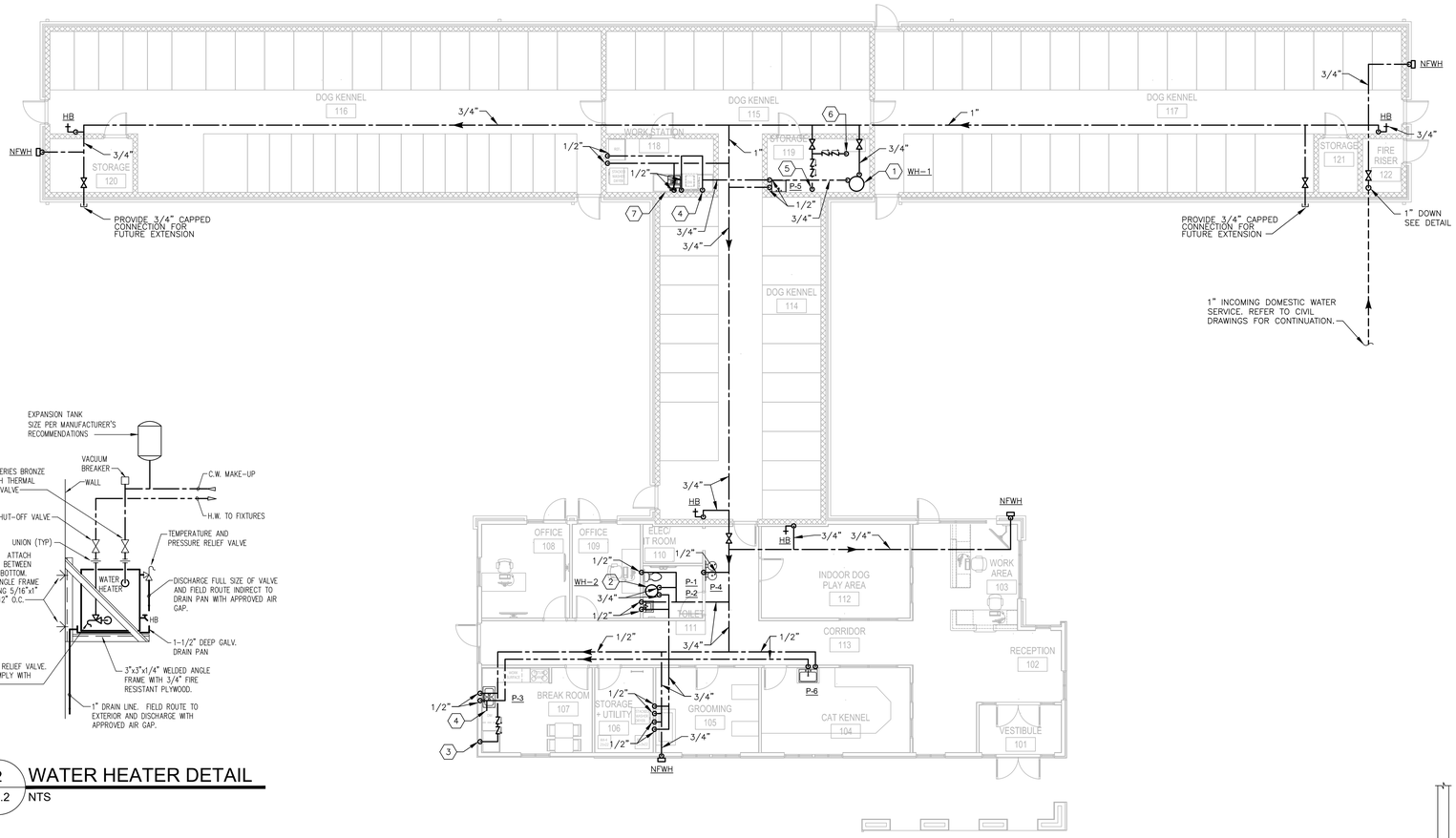


2 P1.2 WATER HEATER DETAIL
NTS



3 P1.2 WATER HEATER DETAIL
NTS



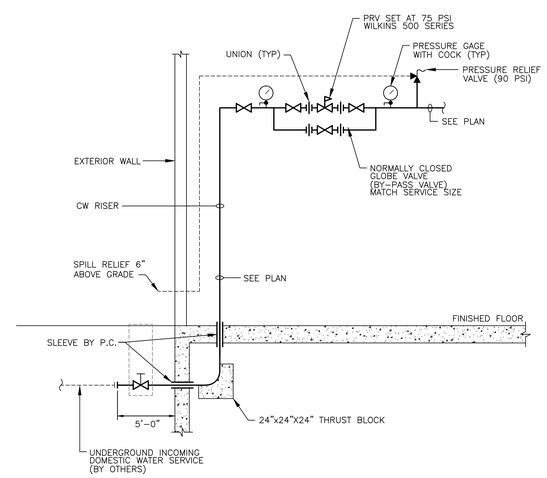
1 P1.2 PLUMBING FLOOR PLAN - DOMESTIC WATER
1/8" = 1' - 0"

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.

DRAWING NOTES:

1. FLOOR MOUNTED ELECTRIC WATER HEATER. INSTALL AND MAKE ALL FINAL CONNECTIONS TO WATER HEATER PER MANUFACTURERS INSTALLATION GUIDELINES. REFER TO SCHEDULE AND DETAIL FOR ADDITIONAL REQUIREMENTS.
2. ABOVE CEILING MOUNTED ELECTRIC WATER HEATER. INSTALL AND MAKE ALL FINAL CONNECTIONS TO WATER HEATER PER MANUFACTURERS INSTALLATION GUIDELINES. REFER TO SCHEDULE AND DETAIL FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE WATTS MODEL 007M3QT OR APPROVED BACKFLOW PREVENTER AS REQUIRED AND EXTEND 1/2" CW DOWN IN WALL TO ICE MAKER WALL BOX, GUY GRAY MODEL MIB1 OR APPROVED EQUAL. MAKE ALL FINAL CONNECTIONS TO OWNER FURNISHED REFRIGERATOR PER MANUFACTURERS INSTALLATION GUIDELINES.
4. PROVIDE WATTS MODEL 007M3QT OR APPROVED BACKFLOW PREVENTER AS REQUIRED AND SIZE, EXTEND AND MAKE ALL FINAL HW CONNECTIONS TO OWNER FURNISHED DISHWASHER PER MANUFACTURERS INSTALLATION GUIDELINES.
5. PROVIDE WATTS MODEL 007M3QT OR APPROVED BACKFLOW PREVENTER AS REQUIRED AND SIZE, EXTEND AND MAKE ALL FINAL CW CONNECTIONS TO OWNER FURNISHED CLEAN-WISE SYSTEM PER MANUFACTURERS INSTALLATION GUIDELINES.
6. PROVIDE WATTS MODEL 007M3QT OR APPROVED BACKFLOW PREVENTER AS REQUIRED AND SIZE, EXTEND AND MAKE ALL FINAL CW CONNECTIONS TO OWNER FURNISHED WHOOPSIE-AWAY SYSTEM PER MANUFACTURERS INSTALLATION GUIDELINES.
7. DISH TABLE PRE-WASH UNIT FURNISHED BY OWNER FOR INSTALLATION BY CONTRACTOR; INSTALL AND MAKE ALL FINAL PLUMBING CONNECTIONS TO UNIT PER MANUFACTURERS INSTALLATION GUIDELINES.



4 P1.2 WATER SERVICE ENTRANCE DETAIL
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METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	02.14.17

Plumbing Floor Plan - Domestic Water

P1.2

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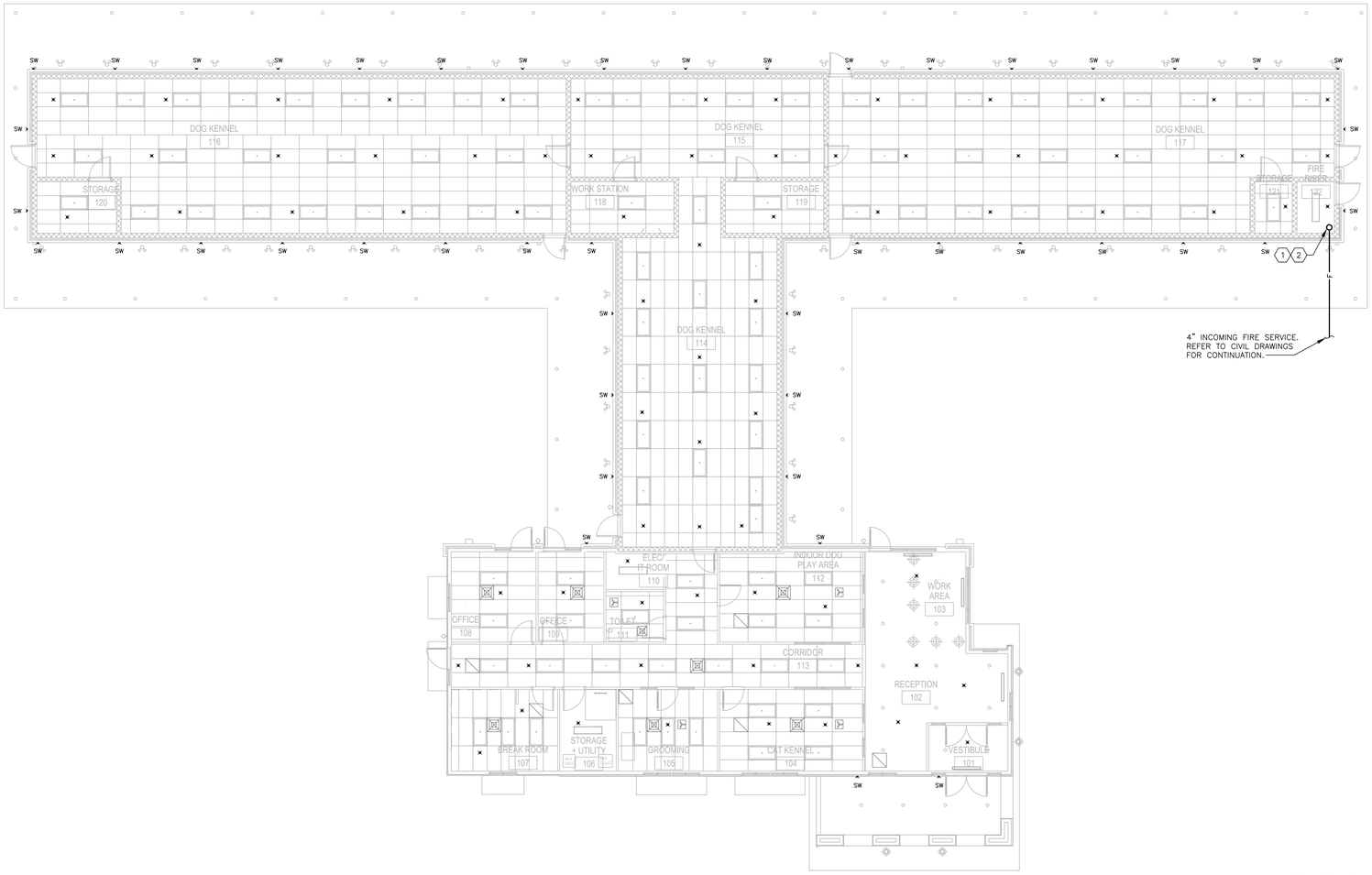


1 / P1.3 PLUMBING FLOOR PLAN - FIRE PROTECTION

1/8" = 1' - 0"

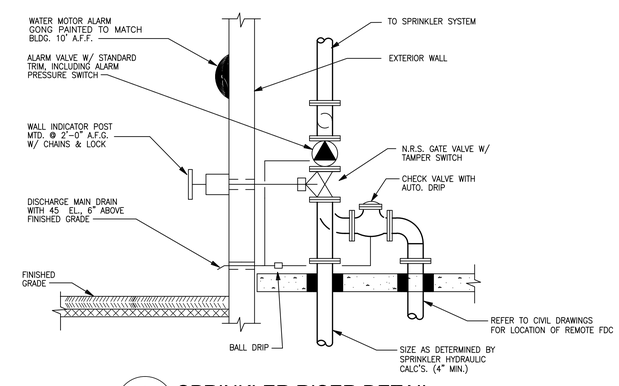
GENERAL NOTES:

1. SPRINKLER CONTRACTOR SHALL PROVIDE WET PIPE SPRINKLER SYSTEM AND QUICK RESPONSE SPRINKLER HEADS AS INDICATED. EXACT SPRINKLER HEAD LOCATIONS SHALL BE DESIGNATED BY SPRINKLER CONTRACTOR IN ACCORDANCE WITH NFPA 13 AND OWNER'S INSURANCE CARRIER'S OCCUPANCY HAZARD CLASSIFICATION. COORDINATE SPRINKLER HEAD LOCATIONS WITH EQUIPMENT, LIGHTING, HVAC, AND OTHER TRADES. SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF CEILING TILES WHERE APPLICABLE. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

DRAWING NOTES:

1. PROVIDE 4" FIRE SERVICE RISER AND SPRINKLER PIPING VALVE ASSEMBLY. FINAL PIPING SIZE TO BE HYDRAULICALLY CALCULATED AND DETERMINED BY LICENSED FIRE PROTECTION ENGINEER. REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.

2. EXTEND NEW WET PIPE SPRINKLER SYSTEM TO ALL AREAS OF THE BUILDING AND PROVIDE QUICK RESPONSE SPRINKLER HEADS AS INDICATED. EXACT SPRINKLER HEAD LOCATIONS SHALL BE DESIGNATED BY SPRINKLER CONTRACTOR IN ACCORDANCE WITH NFPA 13 AND OWNER'S INSURANCE CARRIER'S OCCUPANCY HAZARD CLASSIFICATION. COORDINATE SPRINKLER HEAD LOCATIONS WITH EQUIPMENT, LIGHTING, HVAC, AND OTHER TRADES. SPRINKLER HEADS SHALL BE LOCATED IN CENTER OF CEILING TILES WHERE APPLICABLE. REFER TO SPECIFICATION FOR ADDITIONAL REQUIREMENTS.



2 / P1.4 SPRINKLER RISER DETAIL

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METROLINA BUILDERS
GENERAL CONTRACTORS

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WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	: 02.14.17

Plumbing Floor Plan - Fire Protection

P1.3

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MECHANICAL SPECIFICATIONS

PART 1.0 GENERAL

1.1 DESCRIPTION:

A. THESE PLANS ARE SCHEMATIC IN NATURE AND ARE INTENDED TO ESTABLISH SIZE, GENERAL ROUTING AND LOCATION, AND PERFORMANCE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. ALL WORK SHALL BE FULLY COORDINATED WITH OTHER TRADES TO INSURE THE INSTALLATION OF A COMPLETE, OPERATING SYSTEM THAT FITS IN THE SPACE ALLOTTED. PROVIDE ALL LABOR, EQUIPMENT, APPURTENANCES AND MATERIALS NECESSARY, AND PERFORM ALL OPERATIONS REQUIRED FOR THE INSTALLATION OF COMPLETE, FUNCTIONAL MECHANICAL SYSTEMS AS OUTLINED ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.

B. THIS PROJECT IS A "BUILD TO SUIT" MECHANICAL SYSTEM INSTALLATION FOR A NEW BUILDING. THE APPROXIMATE CONDITIONS OF THE BUILDING ARCHITECTURAL ELEMENTS ARE REFLECTED IN THESE DRAWINGS, HOWEVER SOME UNDOCUMENTED WORK MAY BE PERFORMED (ADDED OR REMOVED) THE CONDITIONS OF WHICH ARE NOT INDICATED ON THESE DRAWINGS. NOTIFY ARCHITECT OF ANY FIELD CONDITIONS WHICH DO NOT MATCH DESIGN. INSTALL NEW EQUIPMENT WHERE INDICATED, AND RELOCATE AS REQUIRED TO MATCH FIELD CONDITIONS, SO THAT FINAL WORK SHOULD REFLECT, AS CLOSELY AS POSSIBLE, THE LAYOUT SHOWN OF THESE DRAWINGS.

C. BECAUSE THIS PROJECT IS A NEW INSTALLATION OF SEVERAL TRADES, UNKNOWN CIRCUMSTANCES AND INTERFERENCES MAY OCCUR. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO ANY BID SUBMISSION TO FAMILIARIZE HIMSELF WITH THE EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES AND MAKE ADJUSTMENTS IN ROUTING AND LOCATION AND, IF NECESSARY, IN SIZE, IN ORDER TO ACHIEVE THE SPECIFIED PERFORMANCE WITHOUT INCURRING ADDITIONS TO THE CONTRACT. WHERE ACTUAL FIELD CONDITIONS DIFFER SIGNIFICANTLY ENOUGH FROM DESIGN TO AFFECT PRICING, THE CONTRACTOR SHALL NOTIFY THE BUILDING OWNER/MANAGER PRIOR TO BID SUBMISSION FOR A RESOLUTION. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF FIELD CONDITIONS.

D. REFER TO ARCHITECTURAL FLOOR PLANS AND REFLECTED CEILING PLANS TO COORDINATE MECHANICAL EQUIPMENT WITH LAYOUT OF WALLS AND PARTITIONS AND LOCATIONS OF ALL CEILING MOUNTED DEVICES. FOR ANY ITEMS NOT SHOWN ON THE REFLECTED CEILING PLANS, PREPARE DRAWINGS OF THE PROPOSED LOCATIONS AND PRESENT TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.

E. CONTRACTOR SHALL COORDINATE ALL WORK REQUIRED FOR UTILITY SERVICE CONNECTIONS (ELECTRICITY, DOMESTIC WATER, SEWER, FIRE PROTECTION WATER, GAS) TO THE BUILDING WITH THE LOCAL UTILITY COMPANIES AND WITH THE LOCAL AUTHORITIES HAVING CODE JURISDICTION.

F. ALL WORK SHALL BE DONE IN CONFORMANCE WITH THESE SPECIFICATIONS AND LOCAL CODES. WHERE CONFLICTING REQUIREMENTS MAY OCCUR, THE MORE STRINGENT SHALL GOVERN.

1.2 CODES AND REGULATIONS:

A. ALL MECHANICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LOCALLY ADOPTED BUILDING CODES, MECHANICAL CODES, ENERGY CODES, PLUMBING AND GAS CODES, AND NFPA (LATEST EDITIONS).

B. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES, ARRANGE FOR ALL INSPECTIONS, PERFORM ALL TESTS AND PAY ALL FEES INCIDENTAL THERETO, AS REQUIRED FOR THE EXECUTION OF THE CONTRACT AND AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION.

PART 2.0 PRODUCTS

2.1 DESCRIPTION:

A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT THOSE EXISTING ITEMS INDICATED TO BE RE-USED. ANY EQUIPMENT OR DEVICES TO BE RE-USED SHALL BE THOROUGHLY CLEANED AND SERVICED TO GOOD WORKING CONDITION. ALL NEW EQUIPMENT SHALL BEAR THE LABEL OF THE APPROPRIATE TESTING AGENCY (UL, ETL, FM, CSA, AGA, ASTM, AMCA, PDI, CISPI, ETC.). PROVIDE ONE (1) YEAR PARTS AND LABOR WARRANTY ON ALL NEW EQUIPMENT, SYSTEMS AND COMPONENTS, INCLUDING WORKMANSHIP.

B. THE PRODUCTS OF PARTICULAR MANUFACTURERS HAVE BEEN USED AS THE BASIS OF DESIGN. ANY MODIFICATIONS REQUIRED TO THE MECHANICAL SYSTEM, ELECTRICAL SYSTEM, BUILDING STRUCTURE OR FINISHES DUE TO THE USE OF EQUIPMENT OTHER THAN THE BASIS OF DESIGN SHALL BE COORDINATED WITH ALL TRADES AND PERFORMED WITHOUT ADDITIONAL COST TO THE CONTRACT.

2.2 EQUIPMENT:

A. MECHANICAL EQUIPMENT SHALL BE AS INDICATED IN THE EQUIPMENT SCHEDULE. COORDINATE WITH ELECTRICAL BEFORE ORDERING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. EQUIPMENT WITH MOTORS SHALL BE PROVIDED WITH BUILT-IN STARTERS AND DISCONNECT SWITCHES, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

B. AIR DISTRIBUTION DEVICES SHALL BE AS INDICATED IN THE EQUIPMENT SCHEDULE. AIR DISTRIBUTION DEVICES SHALL MATCH EXISTING DEVICE TYPES WHERE APPLICABLE. COORDINATE MOUNTING FRAMES TO MATCH THE SURFACE IN WHICH THE DEVICES ARE INSTALLED. COORDINATE FINISH AND COLOR WITH THE ARCHITECT FINISH TO BE OFF-WHITE BAKED ENAMEL UNLESS OTHERWISE NOTED. ALL 2X2 LAY-IN DIFFUSERS SHALL HAVE 4-WAY ADJUSTABLE THROW, UNLESS NOTED OTHERWISE. DEVICES SHALL BE AS MANUFACTURED BY PRICE OR APPROVED EQUIVALENT BY CARNES, J&J REGISTER, KRUEGER, METAL*AIRE, OR TITUS.

2.3 DUCTWORK AND ACCESSORIES:

A. ALL NEW SUPPLY AND RETURN AIR DUCTWORK SHALL BE G90 GALVANIZED SHEET STEEL, FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA PRESSURE RATING CLASSIFICATION AND CODE. FIBERGLASS DUCT BOARD IS PROHIBITED. DUCTWORK SHALL BE RECTANGULAR OR ROUND AS INDICATED; ROUND EQUIVALENT MAY BE SUBSTITUTED FOR RECTANGULAR ONLY WHERE SPECIFICALLY INDICATED OR WITH PRIOR APPROVAL. SIZES INDICATED ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS AVAILABLE FOR AIR FLOW (ADD LINER THICKNESS FOR SHEETMETAL SIZES). DUCTWORK SHALL BE SEALED TO MINIMIZED LEAKAGE; MAXIMUM ALLOWABLE LEAKAGE SHALL BE 2 PER CENT. ALL JOINTS SHALL BE MECHANICALLY FASTENED AND SEALED, ALL SEAMS SHALL BE SEALED, ALL AUDIBLE LEAKS SHALL BE RESEALED. SEALANTS SHALL BE WATER BASED ONLY. LOW PRESSURE DUCTWORK IS THAT PORTION OF THE DUCT SYSTEM DOWNSTREAM OF THE TERMINAL UNIT DISCHERGES, AND SHALL BE SMACNA PRESSURE CLASS 1" W.G. MEDIUM PRESSURE DUCTWORK IS THAT PORTION OF THE DUCT SYSTEM DOWNSTREAM OF AIR HANDLING UNITS AND UP TO THE TERMINAL UNIT INLETS, AND SHALL BE SMACNA PRESSURE CLASS 3" W.G. MEDIUM PRESSURE DUCTWORK CONSTRUCTION SHALL BE SPIRAL LOCK SEAM (ROUND OR OVAL) OR GASKETED MECHANICAL FASTENED (RECTANGULAR).

B. MAKE ADJUSTMENTS IN ROUTING, LOCATION AND, IF NECESSARY, IN SIZE OF DUCTWORK IN ORDER TO AVOID CONFLICTS AND ACHIEVE THE DESIGN INTENT. DIFFERENTLY SIZED RECTANGULAR DUCTWORK MAY BE SUBSTITUTED FOR DESIGN DUCTWORK SIZES PROVIDED THAT IT IS SIZED FOR EQUIVALENT PRESSURE LOSS (NOT JUST CROSS SECTIONAL AREA) TO SIZES INDICATED.

C. FLEXIBLE DUCT MAY BE USED FOR FINAL CONNECTIONS TO AIR DISTRIBUTION DEVICES. FLEXIBLE DUCT SHALL BE U.L. 181 CLASS 1 AIR DUCT, RATED FOR APPLICABLE DUCT SYSTEM PRESSURE CLASSIFICATION SERVICE, WITH TEAR RESISTANT, REINFORCED INNER LAYER, SPRING STEEL WIRE HELIX, MINIMUM 1-1/2" INSULATION AND OUTER VAPOR BARRIER.

D. FLEX DUCT CONNECTIONS TO LOW PRESSURE TRUNK DUCT SHALL BE MADE WITH SPIN-IN CONNECTIONS WITHOUT EXTRACTOR SCOOP AND ADJUSTABLE, LOCKING MANUAL DAMPER (PROVIDE CONICAL SPIN-IN CONNECTIONS WHERE DUCT SIZES ALLOW). PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHERE REQUIRED. FLEX DUCT CONNECTIONS TO TERMINAL UNITS, AIR DISTRIBUTION DEVICES, DUCT TAPS, AND SPIN-IN FITTINGS SHALL BE SECURED WITH NYLON/PLASTIC TIE STRAPS OR METAL CLAMPS, PER SMACNA. STRAP OR CLAMP BOTH THE INNER LAYER AND THE OUTER VAPOR BARRIER; SEAL VAPOR BARRIER WITH FOIL FACED DUCT TAPE. DUCT CONNECTIONS TO MEDIUM PRESSURE TRUNK DUCT SHALL BE MADE WITH CONICAL BELLMOUTH OR LATERAL FITTINGS.

E. ALL SUPPLY AIR BRANCH TAKE-OFFS FROM LOW PRESSURE TRUNK DUCTS SHALL BE MADE WITH 45 DEGREE COLLAR AND SHALL HAVE BALANCING DAMPERS WITH LOCKING QUADRANT HANDLE IN BRANCH DUCT. AIR EXTRACTORS OR ELBOWS WITH SPLITTER DAMPERS MAY BE USED AS ALTERNATE BRANCH TAKE-OFF METHOD.

F. ALL ELBOWS SHALL BE SMOOTH RADIUS WITH CENTER LINE RADIUS EQUAL TO 1.5 DUCT WIDTH OR MITRED WITH DOUBLE THICKNESS TURNING VANES.

2.4 THERMAL INSULATION:

A. ALL MECHANICAL EQUIPMENT AND MATERIALS (DUCTWORK, PIPING, VALVES, ETC.) WITH COLD (BELOW 65 DEGREES) OR WARM (ABOVE 90 DEGREES) SURFACES SHALL BE INSULATED. ALL EXTERNAL INSULATION SHALL HAVE A CONTINUOUS VAPOR BARRIER. THE USE OF STAPLES FOR FASTENING INSULATION IS PROHIBITED. ALL INSULATION PRODUCTS SHALL BE PLENUM RATED WITH A MAXIMUM FLAME SPREAD/SMOKE DEVELOPED RATING OF 25/50. ALL MAXIMUM THERMAL CONDUCTIVITY (K) LISTED BELOW IS MEASURED AT 75 DEGREES F MEAN TEMPERATURE AND EXPRESSED IN TERMS OF (BTU / HOUR, SQ.FT., DEGREE F PER INCH THICKNESS OF MATERIAL.

B. LINE ALL NEW SUPPLY AND RETURN AIR DUCTS AS INDICATED ON DRAWINGS AND/OR AS DESCRIBED BELOW. DUCT LINER SHALL BE 1" THICK, 3 LB./CU.FT. DENSITY FIBERGLASS WITH A MAXIMUM THERMAL CONDUCTIVITY (K) OF 0.24. PROVIDE BLACK, FIRE RETARDANT, NEOPRENE COATING ON SURFACE EXPOSED TO THE AIR STREAM AND TREAT WITH AN ANTI-MICROBIAL COATING. IN GENERAL: ALL RETURN AIR DUCTWORK SHALL BE LINED; AND SUPPLY AIR DUCTWORK SHALL BE LINED FROM AIR HANDLING EQUIPMENT (FCU, FAN, ETC.) DISCHARGES THROUGH THE FIRST HORIZONTAL ELBOW OR THROUGH THE FIRST TWELVE (12) FEET, WHICHEVER IS GREATER. ALL NEW LOW PRESSURE SUPPLY AIR DUCTWORK SERVING CONFERENCE TYPE AREAS (TRAINING, SEMINAR, ETC. ROOMS) SHALL BE LINED. SIZES INDICATED ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS AVAILABLE FOR AIR FLOW (ADD LINER THICKNESSES FOR SHEETMETAL SIZES).

C. ALL NEW UNLINED SUPPLY DUCTWORK SHALL BE INSULATED. ALL NEW UNLINED RETURN AIR DUCTWORK WHICH IS IN A CONCEALED SPACE (NON-PLENUM CEILING OR ATTIC) SHALL BE INSULATED. SUPPLY AND RETURN AIR DUCTWORK EXPOSED WITHIN FULLY CONDITIONED SPACES NEED NOT BE EXTERNALLY INSULATED. ALL OUTSIDE AIR INTAKE DUCTWORK SHALL BE INSULATED. INSULATION SHALL BE 2" THICK, 1 PCF FIBERGLASS DUCT WRAP INSULATION WITH A MAXIMUM THERMAL CONDUCTIVITY (K) OF 0.27. PROVIDE REINFORCED FOIL VAPOR BARRIER AND FOIL FACED TAPE SEALS. REPAIR ALL HOLES IN VAPOR BARRIER WITH TAPE.

D. EXHAUST DUCTWORK SHALL BE LINED AS FOLLOWS: EXHAUST DUCTWORK UPSTREAM OF EXHAUST FANS SHALL BE LINED. EXHAUST DUCTWORK DOWNSTREAM OF FANS WHICH TERMINATES WITHIN A CEILING PLENUM SHALL BE LINED. EXHAUST DUCTWORK DOWNSTREAM FROM EXHAUST FANS WHICH TERMINATES AT THE BUILDING EXTERIOR OR AT EXHAUST RISER SHAFTS NEED NOT BE LINED OR INSULATED.

PART 3.0 EXECUTION

3.1 DESCRIPTION:

A. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH APPLICABLE CODES, NFPA, NEC, APPLICABLE INDUSTRY STANDARDS (SMACNA, ASME, ARI, AMCA, AGA, CISPI, ETC.), MANUFACTURER'S RECOMMENDATIONS, EQUIPMENT UL LISTING REQUIREMENTS, AND THESE DOCUMENTS. SHOULD CONFLICTS ARISE, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

B. ANY DAMAGE TO EXISTING STRUCTURE OR FINISHES RESULTING FROM THE INSTALLATION OF ANY EQUIPMENT SPECIFIED UNDER THIS DIVISION SHALL BE REPAIRED TO MATCH SURROUNDING AREAS. COORDINATE ALL CUTTING AND PATCHING WITH OTHER TRADES.

C. CLEAN ALL EQUIPMENT AND TOUCH UP ANY MARS OR SCRATCHES BEFORE BENEFICIAL OCCUPANCY.

D. PRESSURE TEST ALL DUCT SYSTEMS FOR LEAKS PRIOR TO INSTALLATION OF INSULATION AT THE PRESSURE RATING OF THE DUCT SYSTEM CONSTRUCTION OR 1.25 TIMES THE MAXIMUM OPERATING PRESSURE, WHICH EVER IS GREATER. MAXIMUM DUCT SYSTEM LEAKAGE RATE SHALL BE 2 PERCENT.

E. PRESSURE TEST ALL PIPING SYSTEMS FOR LEAKS PRIOR TO INSTALLATION OF INSULATION AND AFTER CLEANING, FLUSH, AND FILL, AT 1.5 TIMES THE MAXIMUM SYSTEM OPERATING PRESSURE OR AT THE PIPING SYSTEM CONSTRUCTION PRESSURE RATING, WHICH EVER IS LESS. TEST FOR 24 HOURS WITH NO LOSS OF PRESSURE.

F. PROVIDE FOR EACH NEW PIECE OF MECHANICAL EQUIPMENT A PERMANENT LABEL (METAL, BAKELITE, PLASTIC, OR EQUIVALENT) WITH THE EQUIPMENT NAME/TAG/MARK PERMANENTLY EMBOSSED INTO THE LABEL. MOUNT LABEL ON UNIT, PERMANENTLY AFFIXED TO UNIT, LOCATED ADJACENT TO NAMEPLATE OR ADJACENT TO ACCESS DOOR IF NAMEPLATE IS MOUNTED WITHIN UNIT. LABEL SHALL INDICATE EQUIPMENT TAG, TENANT NAME, AND FLOOR.

G. PROVIDE FOR EACH NEW AND EXISTING DEVICE CONTROLLING MECHANICAL EQUIPMENT (THERMOSTAT, SENSOR, SWITCH, RHEOSTAT, TIMER, ETC.) A PERMANENT LABEL (METAL, BAKELITE, PLASTIC, OR EQUIVALENT) WITH THE CONTROLLED EQUIPMENT NAME/TAG/MARK PERMANENTLY EMBOSSED INTO THE LABEL. MOUNT LABEL PERMANENTLY AFFIXED TO DEVICE COVER (OR ON INSIDE OF HINGED COVERS) AND LOCATED SO AS NOT TO BLOCK DEVICE OPERATION OR INSTRUCTIONS.

H. PROVIDE SMOKE DETECTORS IN THE RETURN AIR OPENINGS OF ALL AIR HANDLING EQUIPMENT WITH AIR DELIVERY CAPACITIES OF 2000 CFM OR ABOVE TO SHUT DOWN THE UNIT UPON DETECTION OF SMOKE AND NOTIFY THE FIRE ALARM SYSTEM.

I. PROVIDE OPERATION & MAINTENANCE MANUAL FOR ALL NEW EQUIPMENT. PROVIDE TRAINING FOR OWNER'S REPRESENTATIVES ON MAINTENANCE AND OPERATION FOR ALL NEW EQUIPMENT. (LARGE OR SPECIAL EQUIPMENT ADDITIONS ONLY)

3.2 EQUIPMENT & MATERIALS INSTALLATION:

A. MECHANICAL EQUIPMENT SHALL BE AS INDICATED IN THE EQUIPMENT SCHEDULE OR APPROVED EQUIVALENT, AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH DIVISION 16, ELECTRICAL, BEFORE ORDERING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS; COORDINATE QUANTITY, SIZE, AND TYPE OF CONNECTION(S) AND OVERCURRENT PROTECTION; AND DISCONNECT(S), AND STARTER(S) REQUIREMENTS. DO NOT MOUNT DISCONNECT SWITCHES OVER UNIT NAMEPLATES. ALL ELECTRICAL WORK SHALL BE DONE IN CONFORMANCE WITH THESE SPECIFICATIONS, DIVISION 16 SPECIFICATIONS, THE NATIONAL ELECTRIC CODE, AND LOCAL CODES. WHERE CONFLICTING REQUIREMENTS MAY OCCUR, THE MORE STRINGENT SHALL GOVERN.

B. SUPPORT ALL DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE. DO NOT SUPPORT FROM OTHER DUCTWORK, PIPING, CONDUIT, ETC. SUPPORT ALL DUCTWORK WITH HANGERS AND SUPPORTS PER SMACNA. SUPPORT ALL PIPING WITH HANGERS, SUPPORTS, ANCHORS AND GUIDES PER ANSI CODE FOR PRESSURE PIPING, ANS B31.1 WITH ADDENDA 31.1 OA-69. SIZING AND SPACING OF HANGERS SHALL BE PER THESE STANDARDS, UNLESS OTHERWISE NOTED. "C" CLAMPS SHALL NOT BE USED UNLESS TACK WELDED OR STRAPPED TO STRUCTURAL STEEL MEMBERS.

C. INSULATION SHALL BE CONTINUOUS AT ALL WALL AND FLOOR PENETRATIONS (EXCEPT AT FIRE DAMPERS) AND AT HANGER SUPPORTS. HANGER SUPPORTS FOR INSULATED PIPING SHALL BE OUTSIDE INSULATION; PROVIDE INSULATED INSERTS AND SLEEVES AT HANGERS. INSULATION VAPOR BARRIER SHALL BE SEALED AT ALL JOINTS AND SEAMS, AND AT PENETRATIONS BY APPURTENANCES (DAMPER RODS, VALVE STEMS, ETC.). REPAIR INSULATION AT EXISTING DUCTWORK WHICH HAS BEEN REWORKED, TEARS AND PUNCTURES OF VAPOR BARRIER SHALL BE REPAIRED AND SEALED. ALL PIPING AND DUCTWORK PRESSURE TESTING SHALL BE PERFORMED BEFORE INSULATION IS APPLIED.

D. PROVIDE SLEEVES, CLAMPS FOR PIPING AT ALL WALL AND FLOOR PENETRATIONS, AND FIRE PROOFING AT ALL RATED WALL AND FLOOR PENETRATIONS. PROVIDE ESCUTCHEON PLATES AT ALL VISIBLE WALL AND CEILING PENETRATIONS.

E. INSTALL ALL NEW DUCTWORK AS HIGH AS POSSIBLE, TIGHT TO STRUCTURE ABOVE. TRANSITION DUCTWORK FLAT ON TOP TO MAINTAIN MAXIMUM BOTTOM OF DUCT ELEVATION. INSTALL ALL PIPING ABOVE CEILING AS HIGH AS POSSIBLE, WITH SLOPED PIPING AS HIGH AS SLOPE WILL ALLOW. RAISE ANY EXISTING DUCTWORK AND PIPING AS REQUIRED TO AVOID CONFLICT WITH NEW CEILING FEATURES AND NEW LIGHT FIXTURES, FIELD VERIFY HEIGHT OF EXISTING MECHANICAL WORK.

F. FLEXIBLE DUCT RUNOUTS TO DIFFUSERS SHALL BE SIZED TO MATCH THE DEVICE NECK, UNLESS OTHERWISE NOTED. MAXIMUM LOW PRESSURE FLEX. DUCT LENGTH IS 8 FT., PROVIDE ROUND GAL. STEEL DUCT RUNOUTS TO MAINTAIN MAXIMUM 8 FT. FLEX. LENGTH. DO NOT INSTALL FLEX DUCT THROUGH WALLS TO STRUCTURE, INSTALL ONLY HARD ROUND STEEL DUCTWORK THROUGH NON-RATED WALLS TO STRUCTURE (PROVIDE FD'S AT RATED WALL PENETRATIONS). FLEXIBLE DUCT RUNOUTS TO DIFFUSERS SHALL BE ADEQUATELY SUPPORTED AND INSTALLED FREE OF KINKS AND SAGS. FLEX DUCT CONNECTIONS TO LOW PRESSURE TRUNK DUCT SHALL BE MADE WITH SPIN-IN CONNECTIONS, NEW SPIN-IN CONNECTIONS SHALL NOT BE MADE WITHIN 5 FT. OF ANY TERMINAL UNIT OUTLET OR WITHIN 2.5 FT. ON CENTERS. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHERE REQUIRED.

G. MOUNT NEW THERMOSTATS/SENSORS AT LOCATIONS INDICATED ON DRAWINGS. T'STAT MOUNTING HEIGHTS SHALL BE PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON DRAWINGS FOR DIFFERENT WALL MOUNTING HEIGHTS OR CEILING MOUNTING. MOUNT T'STATS AT 54" AFF FOR FULL (SIDE) WHEELCHAIR ACCESS LOCATIONS AND AT 48" AFF FOR FRONT FACING ACCESS ONLY. LOCATE CEILING MOUNTED THERMOSTATS OUT OF THROW OF NEARBY AIR DISTRIBUTION DEVICES. T'STATS MOUNTED ON RAG'S SHALL BE MOUNTED ON THE BOTTOM OF THE GRILLE (WITHIN THE ROOM SERVED) UNLESS OTHERWISE NOTED. LOCATE THERMOSTATS ABOVE LIGHT SWITCHES WHERE SHOWN IN THE IMMEDIATE VICINITY OF SWITCHES. DO NOT LOCATE THERMOSTATS IN THE SAME WALL STUD SPACE AS DIMMERS AND RHEOSTATS. VERIFY EXACT LOCATION OF THERMOSTATS WITH ARCHITECT (REFER TO ARCHITECTURAL FLOOR PLANS AND FURNITURE PLANS AND ELECTRICAL LIGHTING PLANS FOR COORDINATION).

H. ALL 2X2 LAY-IN DIFFUSERS SHALL HAVE 4-WAY ADJUSTABLE THROW, UNLESS NOTED OTHERWISE. ADJUST ALL DIFFUSERS IN CORRIDORS OR WITHIN 3 FEET OF A WALL TO PROVIDE 2-WAY OR 3-WAY BLOW AWAY FROM OR PARALLEL TO WALLS.

I. PORTIONS OF DUCTWORK VISIBLE THROUGH AIR DISTRIBUTION DEVICES IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.

J. CONDENSATE DRAIN LINES SHALL BE SIZED TO MATCH UNIT CONNECTION SIZE (3/4" MINIMUM) AND AS NOTED ON PLANS, SHALL BE TRAPPED AT THE UNIT WITH A MINIMUM 2" DEEP WATER SEAL, AND SHALL BE ROUTED WITH A MINIMUM SLOPE OF 1/8" PER FOOT. DRAIN LINES SHALL BE TERMINATED TURNED DOWN ABOVE HUB DRAINS OR FLOOR DRAINS ON BUILDING INTERIOR; AT ROOF DRAINS, SPLASH BLOCKS OR DRY WELLS/FRENCH DRAINS ON BUILDING EXTERIOR; INTERIOR DRAINS MAY BE ROUTED DOWN IN WALLS AND BELOW COUNTERS AND TERMINATED AT THE TAILPIECE OF ANY SINK OR LAVATORY, SHOULD SUCH CONNECTION BE AVAILABLE (COORDINATE WITH PLUMBING).

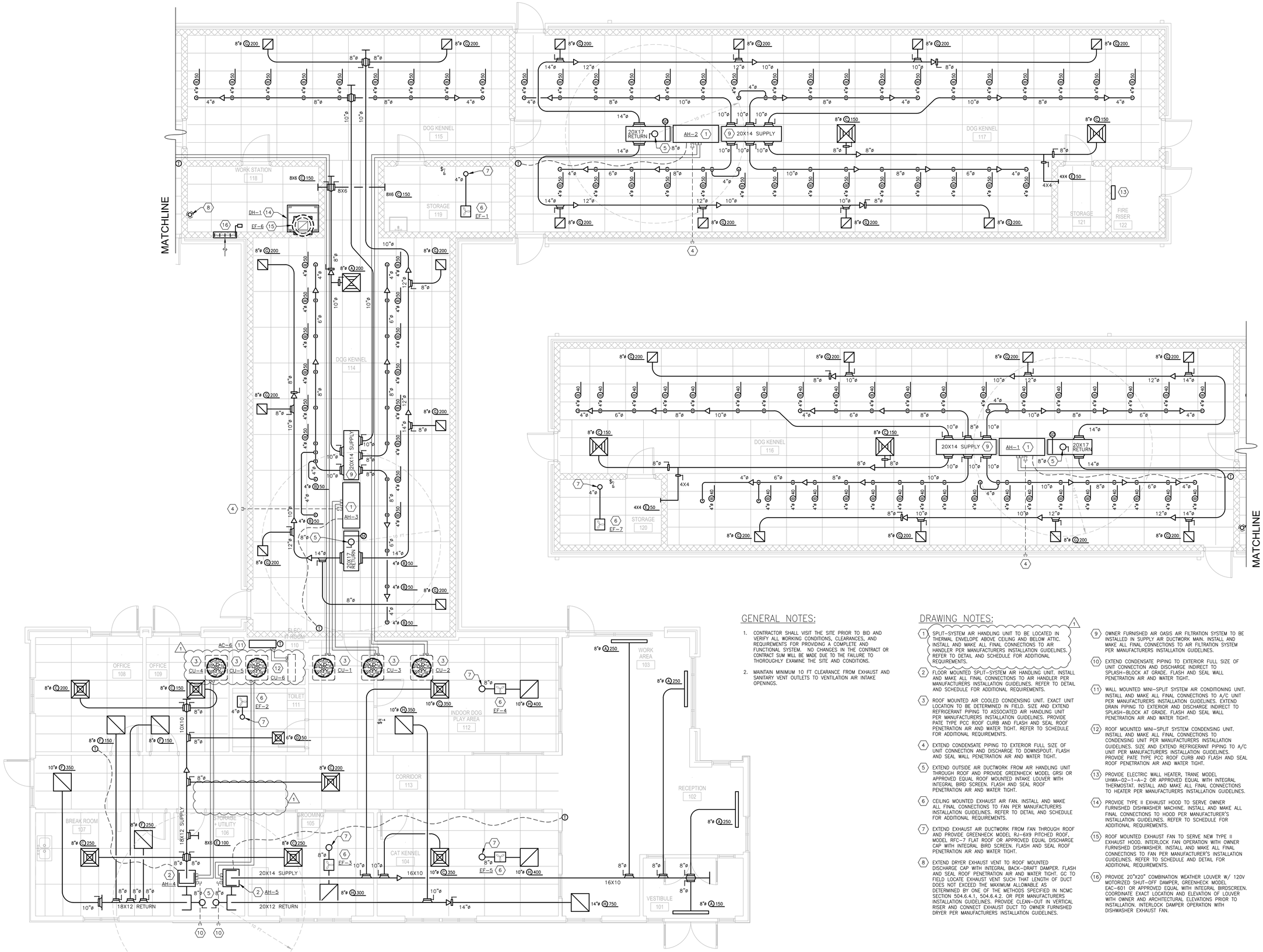
K. FLASH ALL ROOF AND EXTERIOR WALL PENETRATIONS AND SEAL WATER-TIGHT. PROVIDE WALL SLEEVES FOR ALL WALL PENETRATIONS. PROVIDE ROOF CURB BY EQUIPMENT MANUFACTURER FOR ALL ROOF MOUNTED EQUIPMENT. ROOF CURBS SHALL BE INSULATED, SPECIFICALLY SIZED TO MATCH THE SIZE AND WEIGHT OF THE EQUIPMENT SUPPORTED, AND DESIGNED TO CONFORM THE NRCA STANDARDS. ALL PIPING AND WIRING CONNECTIONS TO ROOF MOUNTED EQUIPMENT SHALL CONNECT THROUGH THE BOTTOM OF THE UNIT WITHIN THE UNITS' ROOF CURB WHERE UNITS ARE OFFERED WITH STANDARD BOTTOM CONNECTION OPTIONS.

GENERAL HVAC NOTES

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE HVAC SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES, AND CONTROLS COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL ITEMS AND LABOR REQUIRED FOR A COMPLETE HVAC SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS, AND THESE CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ADDITIONS TO THE CONTRACT.
2. ALL MECHANICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE MECHANICAL CONTRACTOR.
3. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR, EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER. REFRIGERANT COMPRESSORS SHALL BE GUARANTEED FOR FIVE YEARS.
4. COORDINATE EXACT THERMOSTAT LOCATION WITH OWNER AND ARCHITECTURAL ELEVATIONS PRIOR TO THERMOSTAT INSTALLATION.
5. FLEXIBLE DUCT RUN-OUTS TO DIFFUSERS SHALL BE INSTALLED FREE OF KINKS AND SAGS. MAXIMUM LENGTH OF FLEXIBLE DUCT TO BE INSTALLED AT ANY DIFFUSER SHALL BE 5'-0".
6. RUN DUCT UP WITHIN STRUCTURE OR THROUGH JOIST WEBS WHERE POSSIBLE & WHERE REQUIRED TO MAINTAIN CEILING HEIGHTS. PROVIDE OFFSETS IN DUCT WHERE REQUIRED WITH MAX. 45° ELBOWS. MAKE BRANCH TAPS OFF TOP, SIDES OR BOTTOM AS REQUIRED. NO BACK TO BACK 90° ELBOWS ALLOWED.
7. ALL INDIVIDUAL DUCTWORK SECTIONS SHALL BE WRAPPED PRIOR TO DELIVERY TO JOBSITE TO PREVENT CONTAMINATION. WRAPPING SHALL BE MAINTAINED UNTIL DUCTWORK IS IN PLACE.
8. AT THE END OF EACH SHIFT, THE CONTRACTOR SHALL SEAL THE OPEN ENDS OF DUCTWORK TO PREVENT DUST INFILTRATION.
9. DUCTWORK INSULATION SHALL BE INSTALLED PRIOR TO AHU START-UP. DUCTWORK INSULATION SHALL BE COMPLETED WITHIN ONE (1) WEEK OF COMPLETION OF DUCTWORK SEALING AND TESTING.
10. INCLUDE TWO (2) PRE-FILTER BANK CHANGES FOR ALL NEW AHU'S. INCLUDE COMPLETE FILTER BANK CHANGE AT SUBSTANTIAL COMPLETION/TURNOVER.
11. ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH SQUARE TO ROUND TRANSITIONS. SPIN-IN FITTINGS AT THE END OF CAPPED DUCTS ARE NOT ACCEPTABLE.
12. EXHAUST DUCTWORK SHALL NOT BE INSULATED.
13. PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.
14. ALL DUCT RUN-OUTS TO SUPPLY DIFFUSERS SHALL HAVE MANUAL VOLUME DAMPERS AS CLOSE TO TRUNK DUCT AS POSSIBLE.
15. THE BACK OF ALL SUPPLY DIFFUSERS SHALL BE INSULATED W/ FOIL BACKED FIBERGLASS INSULATION.
16. DUCT SMOKE DETECTORS SHALL BE PROVIDED AND INSTALLED BY IN THE RETURN AIR DUCT UPSTREAM OF ANY FILTERS BY AIR HANDLING UNIT EQUIPMENT MANUFACTURER. ACTIVATION OF THE SMOKE DETECTOR SHALL SHUT DOWN THE AIR HANDLING UNIT. ACTIVATION OF A DUCT SMOKE DETECTOR SHALL DE-ENERGIZE THE AIR HANDLING UNIT AND INITIATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
17. PROVIDE ALL SLEEVES AND FIRE STOPPING ASSOCIATED WITH DIVISION 15 (EXCLUDING FIRE PROTECTION) WORK. SEAL (FIRE, SMOKE AS REQUIRED) ALL PENETRATIONS CAUSED BY MECHANICAL WORK.
18. ALL HANGERS SHALL BE INSTALLED PRIOR TO THE APPLICATION OF FIREPROOFING. CONTRACTOR SHALL COORDINATE INSTALLATION WITH ARCHITECTURAL DIVISION.
19. ALL ROOF EQUIPMENT CURBS SHALL BE PROVIDED BY DIVISION 15. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
20. FURNISH AND INSTALL ALL ROOF MOUNTED SUPPORT STRUCTURES. INCLUDE ALL SUPPORTS, CURBS, ANGLES, CLIPS, ALL THREAD, BOLTS, AND OTHER APPURTENANCES REQUIRED TO SUPPORT AND MOUNT NEW WORK. COORDINATE WITH ROOFING TRADE CONTRACTOR.
21. ALL EQUIPMENT SUPPORTS ARE REQUIRED TO MEET ASCE 9.6.
22. ALL EQUIPMENT SHALL BE LABELED ACCORDING TO NUMBERING / IDENTIFICATION SYSTEM PER PLANS.
23. ALL FAN MOTORS SHALL HAVE A DISCONNECT SWITCH MOUNTED AT THE FAN.
24. ELECTRICAL CONTRACTOR TO PROVIDE ALL HIGH VOLTAGE ELECTRICAL WIRING, CONDUIT, DISCONNECT SWITCHES, FUSES, ETC. TO EXHAUST FANS AND AIR HANDLERS. ALL FINAL ELECTRICAL CONNECTIONS ARE BY ELECTRICAL CONTRACTOR.
25. ALL CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR.
26. ALL PIPING SHALL BE INSTALLED ABOVE FINISHED CEILINGS UNLESS OTHERWISE NOTED.
27. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

HVAC LEGEND

SYMBOL	DESCRIPTION
	EXISTING DUCTWORK TO REMAIN IN PLACE
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING SUPPLY GRILLE TO BE REMAIN IN PLACE
	EXISTING SUPPLY GRILLE TO BE REMOVED
	EXISTING RETURN GRILLE TO BE REMAIN IN PLACE
	EXISTING RETURN GRILLE TO BE REMOVED
	EXISTING THERMOSTAT TO REMAIN IN PLACE
	EXISTING THERMOSTAT TO BE REMOVED
	POINT OF CONNECTION BETWEEN NEW & EXISTING
	NEW DUCTWORK
	NEW SUPPLY DIFFUSER; SHADED AREAS INDICATE NON-FLOW DIRECTIONS
	NEW RETURN OR EXHAUST GRILLE
	FIRE DAMPER
	FIRE-SMOKE DAMPER
T	THERMOSTAT
H	HUMIDISTAT
	TRANSITION FROM ROUND TO SQUARE DUCT
	MANUAL DAMPER
	LOUVER
	MOTOR OPERATED DAMPER
	AIR PATTERN
SD	SMOKE DETECTOR
	BUTTERFLY VALVE
	2-WAY CONTROL VALVE
	FLOW SWITCH
	3-WAY CONTROL VALVE
	BALL VALVE
	SHUT-OFF VALVE
	GLOBE VALVE
	CHECK VALVE
	BALANCING VALVE
	STRAINER
	PRESSURE GAGE
	THERMOMETER
	PRESSURE REDUCING VALVE
	FLEXIBLE PIPE CONNECTION
OR	FLEXIBLE DUCT CONNECTION
	VANED ELBOW
	DUCT RIS



1 / M1.1 MECHANICAL FLOOR PLAN - HVAC

1/4" = 1' - 0"

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.
2. MAINTAIN MINIMUM 10 FT CLEARANCE FROM EXHAUST AND SANITARY VENT OUTLETS TO VENTILATION AIR INTAKE OPENINGS.

DRAWING NOTES:

1. SPLIT-SYSTEM AIR HANDLING UNIT TO BE LOCATED IN THERMAL ENVELOPE ABOVE CEILING AND BELOW ATTIC. INSTALL AND MAKE ALL FINAL CONNECTIONS TO AIR HANDLER PER MANUFACTURERS INSTALLATION GUIDELINES. REFER TO DETAIL AND SCHEDULE FOR ADDITIONAL REQUIREMENTS.
2. FLOOR MOUNTED SPLIT-SYSTEM AIR HANDLING UNIT. INSTALL AND MAKE ALL FINAL CONNECTIONS TO AIR HANDLER PER MANUFACTURERS INSTALLATION GUIDELINES. REFER TO DETAIL AND SCHEDULE FOR ADDITIONAL REQUIREMENTS.
3. ROOF MOUNTED AIR COOLED CONDENSING UNIT. EXACT UNIT LOCATION TO BE DETERMINED IN FIELD. SIZE AND EXTEND REFRIGERANT PIPING TO ASSOCIATED AIR HANDLING UNIT PER MANUFACTURERS INSTALLATION GUIDELINES. PROVIDE PATE TYPE PCC ROOF CURB AND FLASH AND SEAL ROOF PENETRATION AIR AND WATER TIGHT. REFER TO SCHEDULE FOR ADDITIONAL REQUIREMENTS.
4. EXTEND CONDENSATE PIPING TO EXTERIOR FULL SIZE OF UNIT CONNECTION AND DISCHARGE TO DOWNSPOUT. FLASH AND SEAL WALL PENETRATION AIR AND WATER TIGHT.
5. EXTEND OUTSIDE AIR DUCTWORK FROM AIR HANDLING UNIT THROUGH ROOF AND PROVIDE GREENHECK MODEL GRSI OR APPROVED EQUAL ROOF MOUNTED INTAKE LOUVER WITH INTEGRAL BIRD SCREEN. FLASH AND SEAL ROOF PENETRATION AIR AND WATER TIGHT.
6. CEILING MOUNTED EXHAUST AIR FAN. INSTALL AND MAKE ALL FINAL CONNECTIONS TO FAN PER MANUFACTURERS INSTALLATION GUIDELINES. REFER TO DETAIL AND SCHEDULE FOR ADDITIONAL REQUIREMENTS.
7. EXTEND EXHAUST AIR DUCTWORK FROM FAN THROUGH ROOF AND PROVIDE GREENHECK MODEL RJ-6X9 PITCHED ROOF, MODEL RFC-7 FLAT ROOF OR APPROVED EQUAL DISCHARGE CAP WITH INTEGRAL BIRD SCREEN. FLASH AND SEAL ROOF PENETRATION AIR AND WATER TIGHT.
8. EXTEND DRYER EXHAUST VENT TO ROOF MOUNTED DISCHARGE CAP WITH INTEGRAL BACK-DRAFT DAMPER. FLASH AND SEAL ROOF PENETRATION AIR AND WATER TIGHT. GC TO FIELD LOCATE EXHAUST VENT SUCH THAT LENGTH OF DUCT DOES NOT EXCEED THE MAXIMUM ALLOWABLE AS DETERMINED BY ONE OF THE METHODS SPECIFIED IN NCMC SECTION 504.6.4.1, 504.6.4.2. OR PER MANUFACTURERS INSTALLATION GUIDELINES. PROVIDE CLEAN-OUT IN VERTICAL RISER AND CONNECT EXHAUST DUCT TO OWNER FURNISHED DRYER PER MANUFACTURERS INSTALLATION GUIDELINES.
9. OWNER FURNISHED AIR OASIS AIR FILTRATION SYSTEM TO BE INSTALLED IN SUPPLY AIR DUCTWORK MAIN. INSTALL AND MAKE ALL FINAL CONNECTIONS TO AIR FILTRATION SYSTEM PER MANUFACTURERS INSTALLATION GUIDELINES.
10. EXTEND CONDENSATE PIPING TO EXTERIOR FULL SIZE OF UNIT CONNECTION AND DISCHARGE INDIRECT TO SPLASH-BLOCK AT GRADE. FLASH AND SEAL WALL PENETRATION AIR AND WATER TIGHT.
11. WALL MOUNTED MINI-SPLIT SYSTEM AIR CONDITIONING UNIT. INSTALL AND MAKE ALL FINAL CONNECTIONS TO A/C UNIT PER MANUFACTURERS INSTALLATION GUIDELINES. EXTEND DRAIN PIPING TO EXTERIOR AND DISCHARGE INDIRECT TO SPLASH-BLOCK AT GRADE. FLASH AND SEAL WALL PENETRATION AIR AND WATER TIGHT.
12. ROOF MOUNTED MINI-SPLIT SYSTEM CONDENSING UNIT. INSTALL AND MAKE ALL FINAL CONNECTIONS TO CONDENSING UNIT PER MANUFACTURERS INSTALLATION GUIDELINES. SIZE AND EXTEND REFRIGERANT PIPING TO A/C UNIT PER MANUFACTURERS INSTALLATION GUIDELINES. PROVIDE PATE TYPE PCC ROOF CURB AND FLASH AND SEAL ROOF PENETRATION AIR AND WATER TIGHT.
13. PROVIDE ELECTRIC WALL HEATER, TRANE MODEL UHWA-02-1-A-2 OR APPROVED EQUAL WITH INTEGRAL THERMOSTAT. INSTALL AND MAKE ALL FINAL CONNECTIONS TO HEATER PER MANUFACTURERS INSTALLATION GUIDELINES.
14. PROVIDE TYPE II EXHAUST HOOD TO SERVE OWNER FURNISHED DISHWASHER MACHINE. INSTALL AND MAKE ALL FINAL CONNECTIONS TO HOOD PER MANUFACTURER'S INSTALLATION GUIDELINES. REFER TO SCHEDULE FOR ADDITIONAL REQUIREMENTS.
15. ROOF MOUNTED EXHAUST FAN TO SERVE NEW TYPE II EXHAUST HOOD. INTERLOCK FAN OPERATION WITH OWNER FURNISHED DISHWASHER. INSTALL AND MAKE ALL FINAL CONNECTIONS TO FAN PER MANUFACTURER'S INSTALLATION GUIDELINES. REFER TO SCHEDULE AND DETAIL FOR ADDITIONAL REQUIREMENTS.
16. PROVIDE 20"X20" COMBINATION WEATHER LOUVER W/ 120V MOTORIZED SHUT-OFF DAMPER, GREENHECK MODEL EAC-601 OR APPROVED EQUAL WITH INTEGRAL BIRDSCREEN. COORDINATE EXACT LOCATION AND ELEVATION OF LOUVER WITH OWNER AND ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION. INTERLOCK DAMPER OPERATION WITH DISHWASHER EXHAUST FAN.

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METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	: 02.14.17
ZONING CHANGES	: 06.01.17

Mechanical Floor Plan - HVAC

M1.1

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OUTSIDE AIR TABLE

ROOM NAME	ZONE AREA GROSS SQ.FT. A_z	AREA OUTDOOR AIR: CFM/ft2 (Gross Area) R_a	AREA OUTDOOR AIR: REQUIRED O.A.	OCCUPANCY OUTDOOR AIR: CLASSIFICATION	OCCUPANCY OUTDOOR AIR: PERSONS PER 1000 ft2 (Net Area)	OCCUPANCY OUTDOOR AIR: NO. OF OCCUP. P_z	OCCUPANCY OUTDOOR AIR: CFM/ PERSON R_p	OCCUPANCY OUTDOOR AIR: REQUIRED O.A.	OCCUPANCY OUTDOOR AIR: TOTAL O.A. V_{bz}	ZONE DISTRIBUTION EFFECTIVENESS: E_z	ZONE DISTRIBUTION EFFECTIVENESS: REQ. O.A. V_{oz}	TOTAL OUTDOOR AIR PROVIDED: SUPPLY AIR PROVIDED	TOTAL OUTDOOR AIR PROVIDED: UNIT REQUIRED % O.A	TOTAL OUTDOOR AIR PROVIDED: UNIT % O.A. PROVIDED	TOTAL OUTDOOR AIR PROVIDED: TOTAL O.A. PROVIDED	EXHAUST AIR: CFM/SF (Gross Area)	EXHAUST AIR: REQUIRED E.A.	EXHAUST AIR: DESIGN E.A.
CAT KENNEL/PLAY/GROOMING	575	0.18	104	ANIMAL AREAS	10	6	7.5	45	149	0.8	186	950	19.6	20	190	0.9	518	1100
OFFICE/BREAK ROOM	440	0.06	26	OFFICE SPACES	5	2	5	10	36	0.8	45	700	6.4	20	140	–	0	0
RECEPTION AREA	375	0.06	23	MAIN ENTRY LOBBY	10	4	5	20	43	0.8	54	800	6.8	20	160	–	0	0
CORRIDORS	445	0.06	27	CORRIDORS	–	–	–	0	27	0.8	34	200	17.0	20	40	–	0	0
STORAGE/EQUIPMENT SPACES	410	0.12	49	STORAGE ROOMS	–	–	–	0	49	0.8	61	500	12.2	20	100	–	0	200
TOILETS	–	–	0	TOILET ROOM	–	–	–	0	0	0.8	0	50	0	20	10	50/W.C.	50	100

NOTES:
1. OUTSIDE AIR BASED ON NCMC TABLE 403.3.

TYPE II HOOD

MARK: DH-1

HOOD NO.	GREENHECK MODEL STYLE / CONFIGURATION	HOOD DIMENSIONS: SECTION LENGTH	HOOD DIMENSIONS: WIDTH	HOOD DIMENSIONS: HEIGHT	GREASE CLIP OR DRAIN	HOOD TEMP. RATING	TOTAL WEIGHT	SECTION LOCATION
1	GD2-42-S CONDENSATE HOOD - SINGLE BAFFLE	42.0 IN.	36 IN.	24 IN.	RIGHT	NA	151.0 LBS.	NA

HOOD SECTION # COLLAR #	EXHAUST PLENUM COLLARS: DISTANCE TO END (IN.)	WIDTH (IN.)	LENGTH (IN.)	DIAMETER (IN.)	VOLUME (CFM)	S.P. (IN. WC)	VELOCITY (FT/MIN)
1 / 1	21	11	13	NA	525	0.034	529
TOTAL EXHAUST CFM - SECTION 1					525.0	=	150.0 CFM / FT

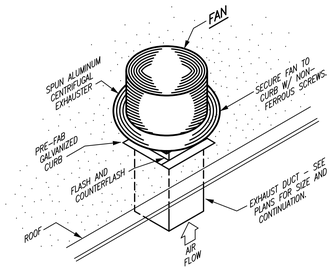
OPTIONS AND ACCESSORIES

430 18 GAUGE STAINLESS STEEL 100% CONSTRUCTION
FACTORY MOUNTED EXHAUST COLLAR(S)

SPLIT SYSTEM HEATING AND COOLING EQUIPMENT SCHEDULE

TAG	MFR.	MODEL	CONDENSING UNIT: COOLING CAPACITY: AMBIENT (°F)	TOTAL (MBH)	SENSIBLE (MBH)	SEER /EER	HEATING CAPACITY (MBH)	HEATING (COP)	COMP.: RLA	LRA	ELECTRIC: VOLTAGE	MCA	MOCP	UNIT WT. (LBS.)	EVAPORATOR UNIT: TAG	MFR	MODEL	CFM	O.A.	E.S.P. (INCH, W.C.)	ELECTRIC HEAT: STAGES	KW	MBH	ELECTRIC: VOLTAGE	MCA	MOCP	WT. (LBS.)	NOTES
CU-1	TRANE	4TWA3060B3	95	57.5	44.4	13.5/10.5	55.0	3.6	15.6	110	208/3	21	35	244	AH-1	TRANE	GAM5B0C60M	2000	400	0.6	1	5.76	19.7	208/1	38	40	170	1, 2, 3, 4
CU-2	TRANE	4TWA3060B3	95	57.5	44.4	13.5/10.5	55.0	3.6	15.6	110	208/3	21	35	244	AH-2	TRANE	GAM5B0C60M	2000	400	0.6	1	5.76	19.7	208/1	38	40	170	1, 2, 3, 4
CU-3	TRANE	4TWA3060B3	95	57.5	44.4	13.5/10.5	55.0	3.6	15.6	110	208/3	21	35	244	AH-3	TRANE	GAM5B0C60M	2000	400	0.6	1	5.76	19.7	208/1	38	40	170	1, 2, 3, 4
CU-4	TRANE	4TWA3036B3	95	37.4	27.1	14.5/12.0	33.8	3.5	10.4	73	208/3	14	20	197	AH-4	TRANE	GAM5B0C36M	1200	240	0.5	1	3.60	12.3	208/1	27	30	142	1, 2, 3, 4
CU-5	TRANE	4TWA3048B3	95	47.5	36.3	14.0/12.0	43.5	3.5	13.7	83	208/3	18	30	243	AH-5	TRANE	GAM5B0C48M	1600	320	0.5	1	5.76	19.7	208/1	38	40	166	1, 2, 3, 4

NOTES:
1. PROVIDE CONDENSING UNITS (MODEL TWA) WITH THE FOLLOWING ACCESSORIES:
   - ANTI-SHORT CYCLE TIMER
   - RUBBER ISOLATOR AND MANUFACTURERS MATCHING ROOF MOUNTING KIT
   - LOW AMBIENT KIT
2. PROVIDE AIR HANDLING UNITS (MODEL GAM) WITH THE FOLLOWING ACCESSORIES:
   - SINGLE POINT ELECTRICAL CONNECTION
   - ELECTRIC HEATER
   - 7D/24HR PROGRAMMABLE ZONE SENSOR
3. AIR HANDLING UNIT SUPPLY AIR FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS OF OPERATION.
4. PROVIDE APR CONTROL VALVE AS MANUFACTURED BY RAWAL DEVICES, INC. APR VALVE SHALL PROVIDE FOR HUMIDITY CONTROL UNDER VARYING LOAD CONDITIONS. COORDINATE EXACT VALVE SELECTION WITH RAWAL ENGINEERS FOR SPECIFIC APPLICATION AND UNIT TONNAGE. CONTACT: 800-727-6447

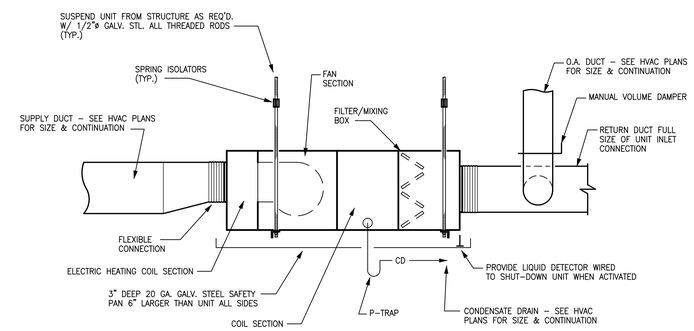


1 / M3.1 CENTRIFUGAL ROOF FAN
NOT TO SCALE

MINI-SPLIT SYSTEM HEATING AND COOLING EQUIPMENT SCHEDULE

TAG	MFR.	MODEL	CONDENSING UNIT: COOLING CAPACITY: AMBIENT (°F)	MAX (BTUH)	MIN (BTUH)	SEER	ELECTRIC: VOLTAGE	MCA	MOCP	UNIT WT. (LBS.)	EVAPORATOR UNIT: TAG	MFR	MODEL	CFM	E.S.P. (INCH, W.C.)	ELECTRIC HEAT: STAGES	KW	MBH	ELECTRIC: VOLTAGE	MCA	MOCP	WT. (LBS.)	NOTES
CU-6	MITSUBISHI	MUY-GL09NA	95	12,200	3,800	24.6	208/1	7	15	81	AC-6	MITSUBISHI	MSY-GL09NA	399	0.1	–	–	–	230/1	1.0	NOTE 1	22	2

NOTES:
1. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD SUPPLIED INTERCONNECTED WIRING.
2. PROVIDE RUBBER ISOLATOR AND MANUFACTURERS MATCHING ROOF MOUNTING KIT FOR CONDENSING UNIT.

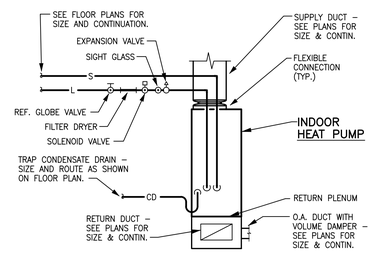


3 / M3.1 TYPICAL INSTALATION @ AHU
NOT TO SCALE

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL	TYPE	DRIVE TYPE	PERFORMANCE: AIR FLOW (CFM)	EXT. STATIC (IN W.C.)	FAN SPEED (RPM)	ELECTRICAL: VOLTS/ø/HZ.	FAN MOTOR (HP)	MOTOR FLA (AMPS)	APPROX. WEIGHT (LBS.)	NOTES
EF-1	GREENHECK	SP-A90	IN-LINE CEILING	DIRECT	100	0.2	700	115/1/60	–	20 WATTS	11	1, 3
EF-2	GREENHECK	SP-A90	IN-LINE CEILING	DIRECT	100	0.2	700	115/1/60	–	20 WATTS	11	1, 2
EF-3	GREENHECK	CSP-A510	IN-LINE CABINET	DIRECT	300	0.5	1070	115/1/60	–	3.11 A	36	1, 4
EF-4	GREENHECK	CSP-A710	IN-LINE CABINET	DIRECT	400	0.5	1080	115/1/60	–	3.20 A	36	1, 3
EF-5	GREENHECK	CSP-A710	IN-LINE CABINET	DIRECT	400	0.5	1080	115/1/60	–	3.20 A	36	1, 4
EF-6	GREENHECK	CUE-099-VG	ROOFTOP CENTRIFUGAL	DIRECT	525	0.5	1364	115/1/60	–	4.97 A	39	1, 5, 6
EF-7	GREENHECK	SP-A90	IN-LINE CEILING	DIRECT	100	0.2	700	115/1/60	–	20 WATTS	11	1, 3

NOTES:
1. PROVIDE WITH GRAVITY BACK-DRAFT DAMPER.
2. INTERLOCK FAN OPERATION WITH LIGHT SWITCH.
3. INTERLOCK FAN OPERATION WITH WALL SWITCH.
4. INTERLOCK FAN OPERATION WITH PROGRAMMABLE TIME CLOCK TO OPERATE DURING OCCUPIED HOURS OF OPERATION.
5. PROVIDE WITH MANUFACTURERS MATCHING PITCHED ROOF CURB.
6. INTERLOCK FAN WITH DISHWASHER OPERATION.

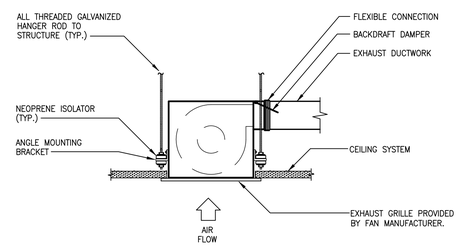


2 / M3.1 VERTICAL INDOOR HEAT PUMP
NOT TO SCALE

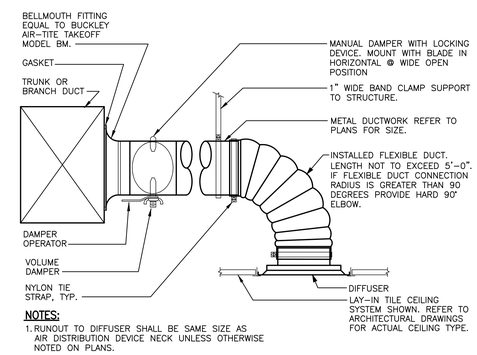
GRILLE, REGISTER AND DIFFUSER SCHEDULE

SYMBOL	MANUFACTURER	MODEL	SERVICE	MODULE (L" X W")	# SLOTS / SLOT WIDTH	FRAME TYPE	FINISH	MOUNTING	N.C.	NOTES
A	PRICE	TBDI375	INSULATED LINEAR SUPPLY DIFFUSER	48 X 5	3 / 3/4"	T-BAR	WHITE POWDER COAT	T-BAR	<30	1, 2, 4
B	ENVIRO TECH	ETIP	EYE BALL DIFFUSER	4"ø INLET	–	–	WHITE POWDER COAT	SURFACE	<30	1, 2
C	PRICE	SCD	SQUARE CONE SUPPLY DIFFUSER	24 X 24	–	TYPE 3 T-BAR	WHITE POWDER COAT	T-BAR	<30	1, 2
D	PRICE	SCD	SQUARE CONE SUPPLY DIFFUSER	12 X 12	–	TYPE 3 T-BAR	WHITE POWDER COAT	T-BAR	<30	1, 2
E	PRICE	31D	LOUVERED FACE SUPPLY REGISTER	SEE PLANS	–	C	WHITE POWDER COAT	SURFACE	<30	1, 2
F	PRICE	530	LOUVERED FACE RETURN GRILLE	24 X 24	–	TYPE TB	WHITE POWDER COAT	T-BAR	<30	1, 2
G	PRICE	530FF	LOUVERED FACE FILTER RETURN	20 X 20	–	TYPE TB	WHITE POWDER COAT	T-BAR	<30	1, 2, 3
H	PRICE	530FF	LOUVERED FACE FILTER RETURN	24 X 24	–	TYPE TB	WHITE POWDER COAT	T-BAR	<30	1, 2, 3

NOTES:
1. COORDINATE EXACT FRAME MOUNTING TYPE WITH ARCHITECTURAL CEILING PLAN.
2. NECK SIZE SIZE SHALL BE SAME AS BRANCH DUCT UNLESS OTHERWISE NOTED.
3. PROVIDE WITH STANDARD 2" MERV 8 FILTER.
4. DIFFUSER TO BE 2, 3 OR 4-WAY THROW IN DIRECTION AS INDICATED ON PLAN.



4 / M3.1 CEILING MOUNTED EXHAUST FAN
NOT TO SCALE



NOTES:
1. RUNOUT TO DIFFUSER SHALL BE SAME SIZE AS AIR DISTRIBUTION DEVICE NECK UNLESS OTHERWISE NOTED ON PLANS.

5 / M3.1 ROUND NECK DIFFUSER/DUCT DETAIL
NOT TO SCALE

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CONSULTING
6309 ARCHERFILED DR., SUITE 100
WAXHAW, NC 28173
980-272-2009
NORTH CAROLINA BOARD NO. C-3207

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK
WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	: 02.14.17

Mechanical Schedules & Details

M3.1

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ODA No. 163112 CADD File:

ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

1.01 SCOPE:

A. THESE SPECIFICATIONS AND THE ELECTRICAL DRAWINGS COVER FURNISHING ALL LABOR, EQUIPMENT, MATERIALS AND PERFORMING ALL OPERATIONS IN CONNECTION WITH THE INSTALLATION OF COMPLETE ELECTRICAL SYSTEMS AS SPECIFIED HEREIN AND AS SHOWN.

1.02 CODES AND REGULATIONS:

A. ALL WORK SHALL COMPLY WITH LOCAL LAWS, ORDINANCES AND REGULATIONS APPLICABLE TO THE ELECTRICAL INSTALLATION AND WITH THE REQUIREMENTS OF THE 2014 NATIONAL ELECTRICAL CODE.

B. OBTAIN ALL PERMITS AND LICENSES, AND PAY ALL FEES AS REQUIRED FOR EXECUTION OF THE CONTRACT. ARRANGE FOR NECESSARY INSPECTIONS AND PRESENT CERTIFICATES OF APPROVAL TO THE OWNER.

1.03 DRAWINGS:

A. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. COORDINATE THE INSTALLATION OF ELECTRICAL EQUIPMENT WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL SYSTEMS AND THE OWNER'S REPRESENTATIVE IN ORDER TO DETERMINE EXACT LOCATIONS.

1.04 STANDARDS FOR MATERIALS AND WORKMANSHIP:

A. ALL MATERIAL SHALL BE NEW (UNLESS SPECIFICALLY INDICATED TO BE REUSED) AND SHALL BEAR THE INSPECTION LABEL OF UNDERWRITER'S LABORATORIES, INC. (UL).

B. THE PUBLISHED STANDARDS AND REQUIREMENTS OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATIONS (NEMA), THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), THE INSTITUTES OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) AND THE AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) SHALL APPLY WHERE APPLICABLE.

C. SPECIFIED CATALOG NUMBERS AND TRADE NAMES ARE INTENDED TO DESCRIBE THE MATERIAL, DEVICES OR APPARATUS DESIRED. SIMILAR MATERIALS OF OTHER MANUFACTURERS, IF OF EQUAL QUALITY, CAPACITY OR CHARACTER MAY BE USED UPON OWNER'S APPROVAL.

D. THE INSTALLATION SHALL COMPLY WITH THE BASE BUILDING STANDARDS.

PART 2 PRODUCTS

2.01 GENERAL:

A. THE COMPONENTS OF THE ELECTRICAL SYSTEM SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE THEREOF EITHER FOR BENEFICIAL USE OR FINAL ACCEPTANCE, WHICHEVER IS EARLIER, AGAINST DEFECTIVE MATERIALS, DESIGN AND WORKMANSHIP.

B. MATERIALS OF THE SAME TYPE SHALL BE THE PRODUCT OF ONE MANUFACTURER.

2.02 CONDUIT:

A. CONDUIT SHALL BE GALVANIZED IMC OR EMT. INTERMEDIATE METALLIC CONDUIT SHALL BE USED WHERE SUBJECT TO DAMAGE OR EXPOSED. EMT MAY BE USED ABOVE CONCEALED CEILINGS OR WITHIN WALLS. TYPE MC CABLE WITH GROUND MAY BE USED WHERE PERMITTED BY CODE. HOME-RUNS SHALL BE EMT.

B. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SET-SCREW TYPE. CONNECTORS SHALL HAVE INSULATED THROATS. DIE-CAST FITTINGS ARE NOT ACCEPTABLE.

2.03 CONDUCTORS:

A. CONDUCTORS SHALL BE COPPER OF 98% CONDUCTIVITY, NO.12 MINIMUM, 600 VOLTS, UNLESS DESIGNATED OTHERWISE.

B. CONDUCTORS NO. 10 AND SMALLER SHALL BE SOLID WITH TYPE THHN/THWN INSULATION; NO. 8 AND LARGER SHALL BE STRANDED WITH TYPE XHHW INSULATION.

C. CONDUCTORS SHALL BE COLOR CODED. ALL CONDUCTORS SHALL BE TERMINATED PER EQUIPMENT UL LISTING.

2.04 DEVICES:

A. WALL SWITCHES SHALL BE 120-277 VOLTS, 20A:
SINGLE POLE HUBBELL CS1221 SERIES
THREE WAY HUBBELL CS1223 SERIES

B. WHERE TWO OR MORE DEVICES OCCUR, THEY SHALL BE MULTI-GANGED IN ONE-PIECE COVER-PLATE.

C. DUPLEX RECEPTACLES SHALL BE 125 VOLT, 15A, HUBBELL NO. 5262. RECEPTACLES ON A DEDICATED CIRCUIT SHALL HAVE A 20A RATING. HUBBELL NO. 5362.

D. COLOR OF DEVICES, AND TYPE AND COLOR OF COVER-PLATES SHALL BE AS SELECTED BY ARCHITECT.

E. WALL-MOUNTED DIMMERS SHALL BE LUTRON NOVA-T OR APPROVED EQUAL. PROVIDE FLUSH INSTALLATION. WHERE DIMMERS OCCUR ON THE SAME WALL AS SWITCHES, SWITCH SHALL BE SLIDE-TYPE TO MATCH DIMMER. DIMMERS SHALL BE RATED TO HANDLE THE WATTAGE SHOWN ON THE DRAWING. (DO NOT LOAD ABOVE 80%)

2.05 PANEL-BOARDS:

A. PANEL-BOARDS SHALL BE OF THE AUTOMATIC CIRCUIT BREAKER TYPE, THREE PHASE, FOUR WIRE, 120/208 V OR 277/480V SOLID NEUTRAL AS SCHEDULED. THE NEUTRAL BUS SHALL UTILIZE SET-SCREWS TO BOND THE NEUTRAL WIRE TO THE NEUTRAL BUS THROUGH HOLES DRILLED IN THE NEUTRAL BAR. PROVIDE 200% RATED NEUTRALS WHERE TWO NEUTRALS ARE SHOWN ON RISER DIAGRAM.

B. ALL CIRCUIT BREAKERS SHALL BE UL LABELED AND SHALL BE THERMAL AND MAGNETIC MOLDED CASE TYPE, QUICK-MAKE AND QUICK-BREAK, BOTH ON MANUAL AND ON MAGNETIC OPERATION. BREAKERS SHALL BE OF THE OVER-THE-CENTER TOGGLE OPERATING TYPE, WITH THE HANDLE GOING TO A POSITION BETWEEN "ON" AND "OFF" TO INDICATE AUTOMATIC TRIPPING. ALL MULTI-POLE BREAKERS SHALL BE INTERNAL COMMON TRIP. BREAKERS SHALL NOT BE RATED AT LESS THAT 10,000 RMS SYMMETRICAL AMPERES INTERRUPTING CAPACITY. ALL BREAKERS SHALL BE BOLT-ON TYPE.

C. PANEL-BOARDS SHALL BE SURFACE MOUNTED OR RECESSED AS SHOWN ON PLANS, WITH BAKED-ON ENAMEL TRIM, ADJUSTABLE TRIM CLAMPS AND PIANO HINGED DOOR WITH LOCK AND CATCH. PROVIDE TYPEWRITTEN DIRECTORIES UNDER PLASTIC, WITH ALL SPARES MARKED IN PENCIL. PROVIDE BAKELITE NAMEPLATE.

D. PANEL-BOARDS SHALL BE BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR CUTLER HAMMER.

E. ALL PANEL-BOARDS LOCATED WITHIN RAISED FLOOR AREA SHALL HAVE SHUNT TRIP MAIN CIRCUIT BREAKERS LINKED TO EPO SWITCH.

2.06 LIGHTING:

A. ALL LIGHTING FIXTURES, TRIM, ETC. SHALL BE AS INDICATED IN THE ARCHITECTURAL REFLECTED CEILING LEGEND, UNLESS NOTED OTHERWISE.

B. ALL EXISTING LIGHT FIXTURES TO BE RE-USED SHALL BE REMOVED, CLEANED, RE-LAMPED AND RELOCATED AS SHOWN. ALL NEW LIGHT FIXTURES SHALL MATCH EXISTING. FIXTURES SHALL BE LAMPED PER BUILDING STANDARD.

C. ALL LAMPS AND BALLASTS SHALL BE THE ENERGY CONSERVING TYPE. FLUORESCENT BALLASTS SHALL BE THE HIGH POWER FACTOR TYPE, CLASS A SOUND RATING, CLASS P PROTECTION AND CBM CERTIFIED. BALLASTS FOR HID LAMPS SHALL BE CONSTANT WATTAGE AUTO TRANSFORMER (CWA) TYPE.

D. ALL FLUORESCENT AND HID LAMPS REQUIRE 100 HOURS OF CONTINUOUS BURN-IN TIME TO SEASON THE LAMPS AND PREVENT CARBON-SCORCHING WHICH COULD DEGRADE LAMP LIFE BY 50%. ALL LAMPS TO BE BURNING AT TIME OF FINAL INSPECTION.

E. CONFIRM ALL CEILING TYPES BEFORE ORDERING NEW LIGHTING FIXTURES.

F. EACH LIGHTING FIXTURE SHALL HAVE BEEN TESTED AND CERTIFIED FOR PROPER OPERATION BY THE FIXTURE MANUFACTURER FOR THE TYPE MOUNTING AND CEILING ON/IN WHICH IT IS INSTALLED.

G. PROVIDE LAMPS WITH A MINIMUM COLOR RENDERING INDEX (CRI) OF 80. INCANDESCENT LAMPS SHALL BE 130 VAC RATING. ALL FLUORESCENT LAMPS SHALL BE THE SAME COLOR TEMPERATURE, PRODUCED BY THE SAME MANUFACTURER.

H. BATTERY PACKS FOR 2'X4' FIXTURES SHALL OPERATE TWO LAMPS AT 1300 LUMENS FOR A MINIMUM OF 90 MINUTES. PROVIDE 24-HOUR POWER.

2.07 DATA/TELEPHONE OUTLETS:

A. PROVIDE 4"x4" JUNCTION BOX WITH SINGLE GANG PLASTER RING AND 3/4" CONDUIT WITH PULL-STRING UP TO CEILING CAVITY FOR USE BY TENANT'S VENDOR. DEVICE, COVER-PLATE AND ALL CABLING BY TENANT'S VENDOR. COORDINATE TYPE OF TERMINATION AND LOCATION WITH THE TENANT'S VENDOR.

B. DATA/TELEPHONE OUTLETS IN SYSTEM TYPE FURNITURE SHALL BE FED FROM POKE-THRUS OR WALL FEEDS. INSTALL CONDUIT WITH PULL STRING. COORDINATE TERMINATION TYPE AND LOCATION WITH TENANT'S VENDOR.

PART 3 EXECUTION

3.01 COORDINATION:

A. BEFORE ANY PIPING, CONDUIT, OUTLETS, EQUIPMENT OR LIGHTING FIXTURES ARE LOCATED IN ANY AREA, COORDINATE THE SPACE REQUIREMENTS OF ALL TRADES. SUCH SHALL BE ARRANGED SO THAT SPACE CONDITIONS WILL ALLOW ALL TRADES TO INSTALL THEIR WORK, AND WILL ALSO PERMIT ACCESS FOR FUTURE MAINTENANCE AND REPAIR.

B. COORDINATION OF SPACE REQUIREMENTS WITH ALL TRADES SHALL BE PERFORMED SO THAT:
1. NO PIPING OR DUCTWORK, OTHER THAN ELECTRICAL, SHALL BE RUN WITHIN 42" OF PANEL-BOARDS, SWITCHBOARDS, OR TRANSFORMERS.
2. NO PIPES OR DUCTS SHALL BE RUN WITHIN DEDICATED SPACES, PER NEC 110.26(f).

3.02 PROTECTION OF MATERIALS:

A. ALL CONDUIT AND OTHER OPENINGS SHALL BE KEPT PROTECTED TO PREVENT ENTRY OF FOREIGN MATTER. FIXTURES, EQUIPMENT AND APPARATUS SHALL BE KEPT COVERED FOR PROTECTION AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL DAMAGE BEFORE AND DURING CONSTRUCTION.

B. THE ORIGINAL FINISH, INCLUDING SHOP COAT OF PAINT OF FIXTURE, APPARATUS OR EQUIPMENT THAT HAS BEEN DAMAGED SHALL BE RESTORED.

3.03 CONDUIT:

A. ALL CONDUIT SHALL BE INSTALLED CONCEALED EXCEPT IN UNFINISHED SPACES OR WHERE SHOWN OTHERWISE.

B. MINIMUM CONDUIT SIZE SHALL BE 1/2 INCH.

3.04 CONDUCTORS:

A. CONDUCTORS FOR LIGHTING AND RECEPTACLE CIRCUITS SHALL HAVE COLOR CODED JACKETS. THE WIRING SHALL BE COLOR CODED WITH THE SAME COLOR USED WITH ITS RESPECTIVE PHASE THROUGH THE ENTIRE JOB AS FOLLOWS:

120/208V	277/480V
PHASE A - BLACK	PHASE A - BROWN
PHASE B - RED	PHASE B - ORANGE
PHASE C - BLUE	PHASE C - YELLOW
NEUTRAL - WHITE	NEUTRAL - GREY
GROUND - GREEN	GROUND - GREEN

B. BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN NO. 12 AND WHERE THE HOME RUN FROM CENTER OF LOAD EXCEEDS 60'-0", THE CONDUCTORS FROM HOME RUN OUTLET TO PANEL SHALL BE NO. 10 MINIMUM.

C. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT.

3.05 GROUNDING:

A. RACEWAYS, BOXES, OUTLETS AND CABINETS SHALL BE BOUND TOGETHER TO FORM A CONTINUOUS METALLIC GROUNDING CIRCUIT IN ACCORDANCE WITH NEC ART. 250.

B. SIZE OF GROUNDING CONDUCTOR TO BE PER NEC UNLESS NOTED AS LARGER ON DRAWINGS.

C. A SEPARATE GROUND CONDUCTOR SHALL BE PROVIDED FOR EACH BRANCH CIRCUIT IN EACH CONDUIT HOME-RUN TO A PANEL-BOARD, DISTRIBUTION PANEL, SWITCHBOARD, ETC. AND EXTENDED TO CONNECT TO EACH DEVICE.

3.06 DOCUMENTATION:

A. PROVIDE AS-BUILT DRAWINGS OF COMPLETE INSTALLATION FOR OWNER'S FACILITIES DEPARTMENT. APPROVED SUBMITTALS, INSTALLATION INSTRUCTIONS AND MAINTENANCE/SUPPLY CONTACTS FOR ALL EQUIPMENT PROVIDED SHALL BE DOCUMENTED IN O&M MANUALS. SUBMIT THREE (3) COPIES FOR REVIEW PRIOR TO FINAL COMPLETION.

B. PROVIDE COMPLETE TYPED PANEL-BOARD DIRECTORIES INDICATED LOAD TYPE AND NOT LOCATION WITH FIELD CHANGES RECORDED. DO SIMPLY USE COPIES OF DESIGN PANEL SCHEDULES FROM DRAWINGS.

C. PROVIDE SUBMITTALS ON PANEL-BOARDS, TRANSFORMERS, LIGHT FIXTURES, AND FIRE ALARM SYSTEM/DEVICES FOR ARCHITECT/ENGINEER APPROVAL PRIOR TO PURCHASE. SUBMIT ELECTRICAL ROOM LAYOUT WITH CLEARANCES PER NEC 110.26.

GENERAL NOTES

1. ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. REFER TO THE DRAWINGS OF THE RESPECTIVE SYSTEMS PRIOR TO SUBMISSION OF BIDS FOR ADDITIONAL WORK WHICH MAY BE REQUIRED AS PART OF THIS WORK. NO ALLOWANCES WILL BE MADE FOR THE LACK OF COORDINATION BETWEEN DISCIPLINES OR SYSTEMS AND EQUIPMENT.
2. THE WORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DOCUMENTS FOR THE EXACT LOCATION OF LIGHT FIXTURES, EQUIPMENT, DEVICES, ETC. TO ASSURE PROPER PLACEMENT OF SAID DEVICES AND EQUIPMENT. SWITCHES SHALL BE PLACED ON LATCH SIDE OF ALL DOOR OPENINGS. WHERE A CONFLICT EXISTS BETWEEN ANY TWO DOCUMENTS, NOTIFY THE ARCHITECT PRIOR TO ANY INSTALLATION FOR RESOLUTION.
3. THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT BEING INSTALLED PRIOR TO INSTALLATION TO ASSURE THAT THE FEEDER, DISCONNECT, STARTER, OVER-CURRENT PROTECTION, ETC. MATCHES THE ACTUAL NAMEPLATE DATA AS SUPPLIED BY THE MANUFACTURER. FULLY COORDINATE EQUIPMENT TO BE PROVIDED TO ASSURE NO ADDITIONAL COSTS TO THE CONTRACT.
4. CONDUIT HOME-RUNS MAY BE COMBINED TO INCLUDE UP TO FOUR (4) CIRCUITS. PROVIDE QUANTITY OF NEUTRALS INDICATED FOR EACH CIRCUIT.
5. SPECIFIC REQUIREMENTS REGARDING MATERIALS, WORKMANSHIP AND THE WORK TO BE DONE ARE COVERED BY THE SPECIFICATIONS WHICH COMPLEMENT THE PLANS. WORK CALLED FOR BY THE SPECIFICATIONS OR THE PLANS IS REQUIRED THE SAME AS IF REQUIRED BY BOTH. WHERE A CONFLICT EXISTS BETWEEN THE PLANS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS OF THE TWO SHALL APPLY UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ARCHITECT/ENGINEER.
6. COORDINATE ALL CUSTOM RECEPTACLES AND CIRCUITS WITH EQUIPMENT FURNISHED BY TENANT. PROVIDE OUTLETS COMPATIBLE WITH EQUIPMENT REQUIREMENTS.
7. ALL ELECTRICAL EQUIPMENT SHALL CONFORM TO BASE BUILDING STANDARD. PROVIDE CIRCUIT BREAKERS AS REQUIRED. FIELD SURVEY EXISTING EQUIPMENT AND PROVISIONS. FULLY COORDINATE EQUIPMENT TO BE PROVIDED TO ASSURE NO ADDITIONAL COSTS TO THE CONTRACT.
8. SUPPORT ALL ELECTRICAL CONDUIT, RACEWAY, OUTLET AND JUNCTION BOXES VIA THREADED ROD OR DEDICATED INDEPENDENT #12 GA GALVANIZED TIE WIRE. DO NOT SECURE ANY ITEM EXCEPT LIGHT FIXTURES TO CEILING CONSTRUCTION OR SUPPORT WIRES EXCEPT: ABOVE "T-BAR" CEILING, ONE (1) 3/4" OR SMALLER CONDUIT MAY BE SUPPORTED BY TO THE SUPPORT WIRES. SUPPORT MULTIPLE CONDUITS FROM ADDITIONAL WIRES COMPLYING WITH NEC ART. 300.11.
9. ALL PANELS SHALL HAVE BAKELITE NAMEPLATE ON THE COVER, LABELED CIRCUIT NUMBERING AND TYPEWRITTEN PANEL-BOARD DIRECTORIES. DO NOT SIMPLY USE COPIES OF DESIGN PANEL SCHEDULES FROM DRAWINGS.
10. ALL CONDUIT PENETRATIONS OF FIRE RATED WALLS, FLOORS, AND PARTITIONS SHALL BE FIRE-STOPPED WITH A U.L. RECOGNIZED PRODUCT RESTORING THE INTEGRITY OF THE BARRIER PENETRATED. UTILIZE NELSON "FSP" FIRE-STOP PUTTY, "PCS" PIPE CHOKE SYSTEM, OR "CLK" FIRE-STOP CAULK TO PROVIDE A U.L. LISTED ASSEMBLY, OR APPROVED ALTERNATE.
11. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS OF ALL FLOOR CORES SHOWN ON PLANS. LOCATIONS SHALL BE COORDINATED WITH STRUCTURE BELOW. NOTIFY ARCHITECT OF ANY FIELD CONFLICTS FOR DIRECTION.
12. REFER TO EQUIPMENT CUT SHEETS AND MANUFACTURER'S DATA FOR ROUGH IN LOCATIONS OF ELECTRICAL CONNECTIONS AND INTERCONNECTIONS OF ALL EQUIPMENT.
13. CONTRACTOR SHALL COORDINATE ELEVATIONS AND PIPING SYSTEM SLOPES SUCH THAT DUCTWORK, PIPING, RACEWAY, CABLE TRAY, AND ASSOCIATED EQUIPMENT IS INSTALLED AT UNIFORM ELEVATIONS WITH MINIMAL OFFSET. PROVIDE COORDINATION DRAWING TO ENGINEER FOR REVIEW PRIOR TO EQUIPMENT ORDERS AND ROUGH-IN.
14. COORDINATE WITH SPECIALTY SYSTEMS VENDORS TO PROVIDE RACEWAY AND CABLING,POWER AND CONTROL INTERFACES AS REQUIRED FOR COMPLETE, OPERABLE SYSTEMS.
15. AFTER INSTALLATION OF ALL NEW DISTRIBUTION EQUIPMENT, THE CONTRACTOR SHALL CONDUCT A FULL SHORT CIRCUIT COORDINATION STUDY TO CONFIRM REQUIRED CIRCUIT BREAKER ADJUSTABLE SETTINGS AND FUSE RATINGS FOR ALL EQUIPMENT TO BE PROVIDED. PROVIDE REPORT INDICATING RECOMMENDED SETTINGS AND TRIP CURVES.

GENERAL ELECTRICAL NOTES

1. PREPLAN ALL WORK PRIOR TO PURCHASING ORDERING, OR FABRICATING ANY PART OF THE WORK DESCRIBED ON THESE DRAWINGS.
2. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF THE OTHER TRADES, AND RESOLVE CONFLICTS PRIOR TO INCURRING MATERIAL OR LABOR EXPENSES.
3. PRIOR TO DIGGING, NOTIFY UTILITY COMPANIES (WATER, SEWER, TELEPHONE, ELECTRIC, GAS) AND OBTAIN LOCATION OF ALL UNDERGROUND FACILITIES.
4. COMPLY WITH MANUFACTURERS TECHNICAL INSTRUCTIONS WHEN INSTALLING EQUIPMENT, DEVICES AND MATERIALS.
5. LOCATE FIXTURES AND CONDUIT GENERALLY AS SHOWN ON THE PLANS, COORDINATE ROUTING OF CONDUIT WITH BUILDING STRUCTURE AND WITH THE WORK OF THE OTHER TRADES TO PREVENT CONFLICTS.
6. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONFLICTS OF OMISSIONS PRIOR TO BIDDING THE PROJECT AS NO ADDITIONAL ALLOWANCE WILL BE MADE FOR THE ITEMS NOT INCLUDED IN THE ORIGINAL BID PRICE.
7. ON DRAWINGS, A LETTER AND NUMBER BESIDE A HOMERUN INDICATES THE PANEL BOARD AND CIRCUIT CONNECTION.
8. PROVIDE ADDITION SUPPORTS FOR ALL ELECTRICAL EQUIPMENT WHEREVER THE BUILDING STRUCTURE IS NOT SUITABLE FOR DIRECT MOUNTING.
9. ALL ELECTRICAL INSTALLATIONS ARE TO BE IN ACCORDANCE WITH THE CURRENT NEC.
10. ALL ELECTRICAL WORK SHALL COMPLY WITH STATE AND LOCAL CODES / ORDINANCES.
11. ALL ELECTRICAL MATERIALS AND EQUIPMENT ARE TO BE UL LABELED AND LISTED.
12. ALL CONDUCTORS SHALL BE THHN OR THWN COPPER.
13. A SEPARATE GROUNDING CONDUCTOR SHALL BE RUN WITH EACH CIRCUIT.
14. FAULT CURRENT MUST BE CALCULATED AFTER INSTALLATION AND BE LEGIBLY MARKED ON SERVICE EQUIPMENT WITH THE DATE CALCULATED TO COMPLY WITH ART. 110.24.
15. ALL PENETRATIONS OF FIRE RATED WALLS OR CEILINGS SHALL BE SEALED USING AN INTUMESCENT FIRE CAULK WITH ONE OF THE FOLLOWING UL RATING ASSEMBLY TYPES;
METAL PIPES: W-L-1049
PVC PIPES: W-L-2074
16. EACH CIRCUIT SHALL HAVE ITS OWN NEUTRAL; HOWEVER, COMMON NEUTRALS ARE ALLOWED FOR 2 OR 3 LIGHTING OR RECEPTACLE CIRCUITS PROVIDED THAT THE PHASE CONDUCTORS ARE FROM DIFFERENT PHASES.
17. RIGID METAL CONDUIT WILL BE USED IN ALL AREAS WHERE CONDUIT IS SUBJECT TO PHYSICAL DAMAGE OR IS BURIED; IMT MAY BE USED FOR RIGID EXCEPT WHERE EMBEDDED IN CONCRETE, IN CONTACT WITH THE EARTH, OR UNDERGROUND; RIGID METAL CONDUIT TO BE BURIED SHALL BE COATED WITH A BITUMINOUS COATING.
18. EMT MAY BE USED FOR RACEWAYS ABOVE FURRED CEILINGS, WITHIN DRYWALL PARTITIONS, EXPOSED IN ROOMS WITH EXPOSED CONSTRUCTION AND MECHANICAL / ELECTRICAL ROOMS, FOR SIZES 4" AND SMALLER
19. ALL INTERIOR EXIT AND EMERGENCY LIGHTS FOR BUILDING TO BE CONNECTED TO UNSWITCHED RELATED LOCAL LIGHTING CIRCUITS; ALL EXTERIOR EGRESS LIGHTS FOR BUILDING TO BE CONNECTED TO UNSWITCHED RELATED LOCAL EXTERIOR LIGHTING CIRCUIT.
20. HOME RUNS MAY BE GROUPED, BUT NO MORE THAN 2 CIRCUITS SHALL BE RUN IN 1/2"CONDUIT, AND NO MORE THAT 4 CIRCUITS SHALL BE RUN IN A 3/4" CONDUIT.
21. SINGLE PHASE BRANCH CIRCUIT CONDUCTORS SHALL HAVE THE FOLLOWING MAXIMUM LIMITS:
20A, 120V, THHN, #12, 90%±F, 65FT
20A, 120V, THHN, #10, 90%±F, 100FT
22. ELECTRICAL CONTRACTOR SHALL FURNISH ALL ITEMS NECESSARY FOR FINAL CONNECTION OF ALL EQUIPMENT AND FIXTURES.
23. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY FEES, PERMIT FEES, INSPECTIONS FEES, ETC., INCLUDING FEES FOR SETTING POLES AND RUNNING CONDUCTORS BETWEEN UTILITY POINT OF DELIVERY AND FACILITY.
24. ELECTRICAL CONTRACTOR SHALL INSTALL PULL BOXES AS NEEDED TO EASE WIRE PULLING.
25. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR FROM OCCUPANCY OF BUILDING BY OWNER.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	MTG HT UNO
X-1,3,5	ARROWHEAD INDICATES HOMERUN. X-1, 3, AND 5 ADJACENT TO HOMERUN ARROWHEADS INDICATE HOMERUN TO PANEL X, CIRCUIT NUMBERS 1, 3, AND 5.	
3,5	INDICATES CIRCUIT CONTINUATION OF CIRCUITS 3 AND 5 OF PANEL X.	
	MARKS ACROSS RACEWAY SYMBOLS INDICATE THE NUMBER OF NO.12 CONDUCTORS, UNLESS OTHERWISE NOTED. NO MARKS INDICATE TWO NO.12 CONDUCTORS. EQUIPMENT GROUNDING CONDUCTORS ARE NOT INDICATED BY MARKS, BUT ARE REQUIRED.	
	RACEWAY INSTALLED CONCEALED IN WALL OR ABOVE CEILING / CONCEALED BELOW FLOOR	
	DUPLEX RECEPTACLE OUTLET	18"
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET	18"
	QUADRUPLEX RECEPTACLE OUTLET	18"
	DUPLEX RECEPTACLE OUTLET MOUNTED @ COUNTER HEIGHT - COORDINATE WITH ARCHITECTURAL ELEVATION	AS NOTED
D / D	DUPLEX / QUAD RECEPTACLE ON DEDICATED CIRCUIT - NOTE 3	18"
/ +42"	GFCI DUPLEX / GFCI DUPLEX RECEPTACLE OUTLET - ABOVE COUNTER	18"/48"
	SWITCH RECEPTACLE OUTLET	18"
IG	ISOLATED GROUND TYPE DUPLEX RECEPTACLE (ORANGE)	18"
TR	LEVITON T5825-I TAMPER RESISTANT DUPLEX RECEPTACLE, 20A, 125 VOLT, 2-POLE IVORY IN COLOR, GROUNDED SCREW, BACK AND SIDE WIRED, INSTALL WITH CHILD RESISTANT WALL PLATE - SHUTTER SLIDES TO THE SIDE.	
	DUPLEX RECEPTACLE, 20A, NEMA 5-20R. MOUNT AS NOTED.	
	FLOOR MOUNTED DUPLEX RECEPTACLE AS NOTED, 20A, 125 VOLT, 2-POLE PEWTER IN COLOR, GROUNDED SCREW, BACK AND SIDE WIRED.	
	TELEPHONE OUTLET / SINGLE GANG	54"
	COMBINATION DATA/TEL OUTLET IN SYSTEM FURNITURE	18"
	120/208 VOLT SURFACE MOUNTED PANEL UNLESS OTHERWISE NOTED.	
	277/480 VOLT SURFACE MOUNTED PANEL UNLESS OTHERWISE NOTED.	
/	FUSIBLE / NON-FUSED DISCONNECT SWITCH	
	SURFACE-MOUNTED PLUGMOLD OUTLETS 12" O.C.	
$	SINGLE-POLE, SINGLE-THROW TOGGLE SWITCH	48"
$3 / $4	THREE-WAY TOGGLE SWITCH / FOUR-WAY TOGGLE SWITCH - NOTE 4	48"
$D	WALL-MOUNTED DIMMER SWITCH	48"
$M	MOTOR RATED TOGGLE SWITCH	48"
/ /	JUNCTION BOX-CEILING MOUNTED / WALL MOUNTED / FLOOR MOUNTED	
	NEW EXHAUST FAN MOTOR PROVIDED BY MECHANICAL CONTRACTOR, WIRED BY ELECTRICAL CONTRACTOR.	
SS	DOOR STATUS SWITCH	
EL	ELECTRIC DOOR LOCK	
PL	PUNCH LOCK	
CR	CARD READER	
DE	DELAYED EGRESS LOCK	
IC	INTERCOM STATION	
PB	PUSH BUTTON DEVICE - USE AS NOTED	
S	SPEAKER	
	IP PTZ CAMERA	
	IP CAMERA	

LEGEND NOTES

1. ALL SYMBOLS INDICATED IN THE LEGEND MAY NOT NECESSARILY BE USED ON THE PLANS.
2. UNLESS NOTED OTHERWISE, MOUNTING HEIGHT DIMENSIONS ARE TO THE CENTERLINE OF THE DEVICE OR OUTLET ABOVE GRADE OR FINISHED FLOOR.
3. LABEL COVER-PLATES OF ALL DEVICES ON DEDICATED CIRCUITS "DEDICATED."
4. PROVIDE INTERCONNECT CONDUCTORS AS REQUIRED TO PROVIDE MULTIPLE SWITCH POINTS IN EACH AREA SHOWN.

APPENDIX 'B'

NORTH CAROLINA ENERGY CONSERVATION CODE - 2012
APPENDIX B (NORTH CAROLINA BUILDING CODE 2012)
ELECTRICAL SUMMARY

METHOD OF COMPLIANCE: [X] NO CHANGE TO EXISTING BUILDING SYSTEM
ENERGY CODE: [X] PRESCRIPTIVE [ ] PERFORMANCE
ASHRAE 90.1: [X] PRESCRIPTIVE [ ] PERFORMANCE

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE
NUMBER OF LAMPS IN FIXTURE
BALLAST TYPE USED IN THE FIXTURE
NUMBER OF BALLASTS IN FIXTURE
TOTAL WATTAGE PER FIXTURE
SEE LIGHT FIXTURE INFORMATION ON E1.1

TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED: 0.5 W/SQ.FT. VS. 1.0 W/SQ.FT.

TOTAL SPACE WATTAGE 7.4 KW / TOTAL SQ. FT. 7,440 = 0.51W/SQ.FT.

THE SOURCE EFFICACY OF ALL EXTERIOR LIGHTS GREATER THAN 100W IS GREATER THAN 60 LUMENS PER WATT.

ADDITIONAL PRESCRIPTIVE COMPLIANCE

[ ] 506.2.1 MORE EFFICIENT MECHANICAL EQUIPMENT
[X] 506.2.2 REDUCED LIGHTING POWER DENSITY
[ ] 506.2.3 ENERGY RECOVERY VENTILATION SYSTEMS
[ ] 506.2.4 HIGHER EFFICIENCY SERVICE WATER HEATING
[ ] 506.2.5 ON-SITE SUPPLY OF RENEWABLE ENERGY
[ ] 506.2.6 AUTOMATIC DAYLIGHTING CONTROL SYSTEMS

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Electrical Legend

E0.1

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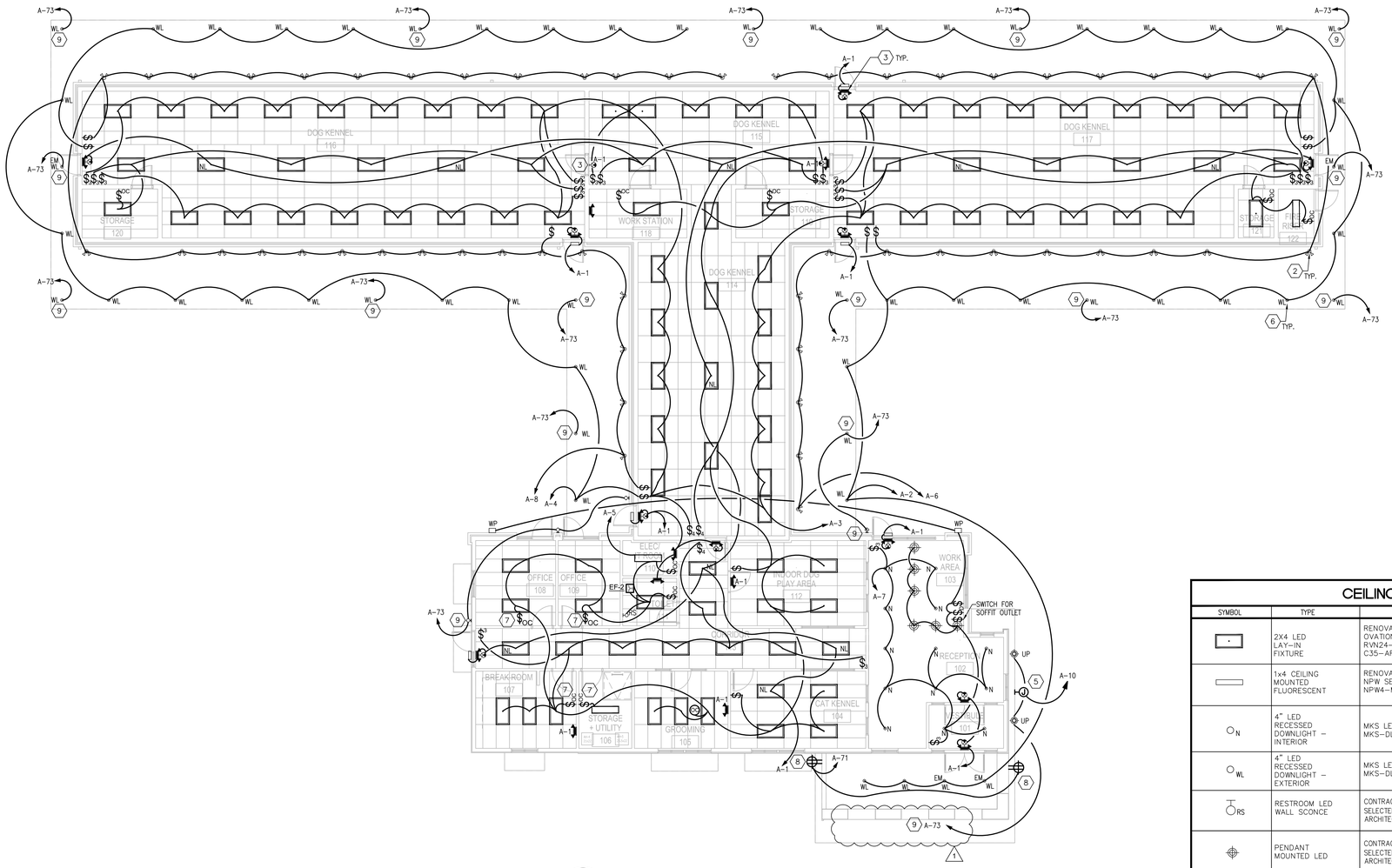

1 ELECTRICAL FLOOR PLAN - LIGHTING
E1.1 1/8" = 1' - 0"

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.
2. COORDINATE EXACT LOCATION/TYPE OF LIGHT SWITCHES/CONTROLS WITH TENANT PRIOR TO ROUGH IN.
3. VERIFY EXACT LOCATION OF LIGHTING FIXTURES AND CEILING HEIGHTS WITH ARCHITECTURAL PLANS.
4. ALL SWITCHING AND CONTROLS TO BE REVIEWED AND APPROVED WITH ARCHITECT AND OWNERS PRIOR TO PURCHASE AND ROUGH IN.

DRAWING NOTES:

1. EXHAUST FANS TO BE SWITCHED WITH LIGHTING. COORDINATE WITH MECHANICAL CONTRACTOR.
2. EXTERIOR WALL LIGHT. 40W LED WET LABELED 120V FIXTURE PROVIDED BY OWNER INSTALLED BY GENERAL CONTRACTOR. CONTROLLED VIA SWITCH LOCATED BY OWNER / ARCHITECT.
3. EXIT / EMERGENCY LIGHTING TO BE FEED WITH SEPARATE CIRCUIT A-1 AS SHOWN ON PLANS.
4. EXTERIOR EMERGENCY REMOTE HEADS LOCATED ABOVE EXIT DOOR. CIRCUIT AS SHOWN ON PLANS.
5. JBOX FOR EXTERIOR BUILDING SIGN. 1800W MAX. CONTROLLED VIA PHOTOCELL LOCATED ON THE NORTH SIDE OF THE BUILDING OR TIME CLOCK. COORDINATE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS WITH ARCHITECT / OWNER / MANUFACTURER.
6. EXTERIOR DOWNLIGHT. 24W LED WET LABELED 120V FIXTURE PROVIDED BY OWNER INSTALLED BY GENERAL CONTRACTOR. CONTROLLED VIA SWITCH LOCATED BY OWNER / ARCHITECT.
7. WALL MOUNTED OCCUPANCY SWITCH WITH MANUAL OVERRIDE.
8. OUTLET ADDED FOR SOFFIT LIGHTING FOR SEASONAL LIGHTING. SWITCHING TO BE AT WORK AREA DESK UNLESS OTHERWISE DIRECTED BY OWNER.
9. EXTERIOR LIGHTING TO BE CONTROLLED VIA PHOTOCELL / TIMECLOCK. CONNECT TO CIRCUIT A-73.

CEILING SYMBOL LEGEND

SYMBOL	TYPE	MODEL	LAMPS	VOLTS	NOTES
	2X4 LED LAY-IN FIXTURE	RENOVA OVATION RVN24-N-L040-UNI-DIM C35-AF	4k LUMENS 29.2W LED 3500K 0-10V HIGH OUTPUT FROSTED LENS	120V	
	1x4 CEILING MOUNTED FLUORESCENT	RENOVA NPW SERIES NPW4-MN-232-UNV	(2) 32W - T8	120V	
N	4" LED RECESSED DOWNLIGHT - INTERIOR	MKS LED MKS-DLT-4R-WR	1k LUMENS 24W LED 3000K CRI VALUE 80	120V	
WL	4" LED RECESSED DOWNLIGHT - EXTERIOR	MKS LED MKS-DLT-4R-WR-WR	1k LUMENS 24W LED 3000K CRI VALUE 80	120V	WET LOCATION "EM" INDICATES FIXTURE IS TO BE PROVIDED WITH 90 MIN. BATTERY BACK UP
RS	RESTROOM LED WALL SCONCE	CONTRACTOR SELECTED/ ARCHITECT	LED - 30W MAX	120V	WET LOCATION
	PENDANT MOUNTED LED	CONTRACTOR SELECTED/ ARCHITECT	LED - 45W MAX	120V	DIMMABLE
	LED TRACK LIGHTING	CONTRACTOR SELECTED/ ARCHITECT	LED - 150W MAX	120V	DIMMABLE
	EXTERIOR LED FLOOD	CONTRACTOR SELECTED/ ARCHITECT APPROVED	LED - 40W MAX	120V	WET LOCATION
	EXTERIOR LED WALL SCONCE	CONTRACTOR SELECTED/ ARCHITECT APPROVED	LED - 40W MAX	120V	WET LOCATION
WP	EXTERIOR LED WALL PACK	CONTRACTOR SELECTED/ ARCHITECT APPROVED	LED - 40W MAX	120V	WET LOCATION
UP	EXTERIOR LED IN-GRADE UP LIGHT	HOLM nBEC-26-UV-L20-K35-WF-BZ	LED - 24W	120V	WET LOCATION
EM	EXTERIOR EMERGENCY REMOTE HEADS	CONTRACTOR SELECTED/ ARCHITECT APPROVED	LED	120V	MOUNTED ABOVE EXIT DOOR. WET LOCATION. 90 MINUTE BATTERY BACK UP.
	LED WALL MOUNTED EXIT SIGN	CARPENTER MX SERIES MX-SP-R-U-W-E	LED FIXTURE	120V	SELF CONTAINED POWER PACK FOR 90 MIN BACK UP BATTERY.
	LED WALL MOUNTED EMERGENCY LIGHT	CARPENTER CLEL SERIES LED CLELI-E	LED FIXTURE	120V	SELF CONTAINED POWER PACK FOR 90 MIN BACK UP BATTERY.

ALL SUBSTITUTIONS MUST BE EQUAL AND APPROVED BY ARCHITECT AND ENGINEER

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BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	02.14.17
1 ZONING CHANGES	06.01.17

Electrical Floor Plan - Lighting

E1.1

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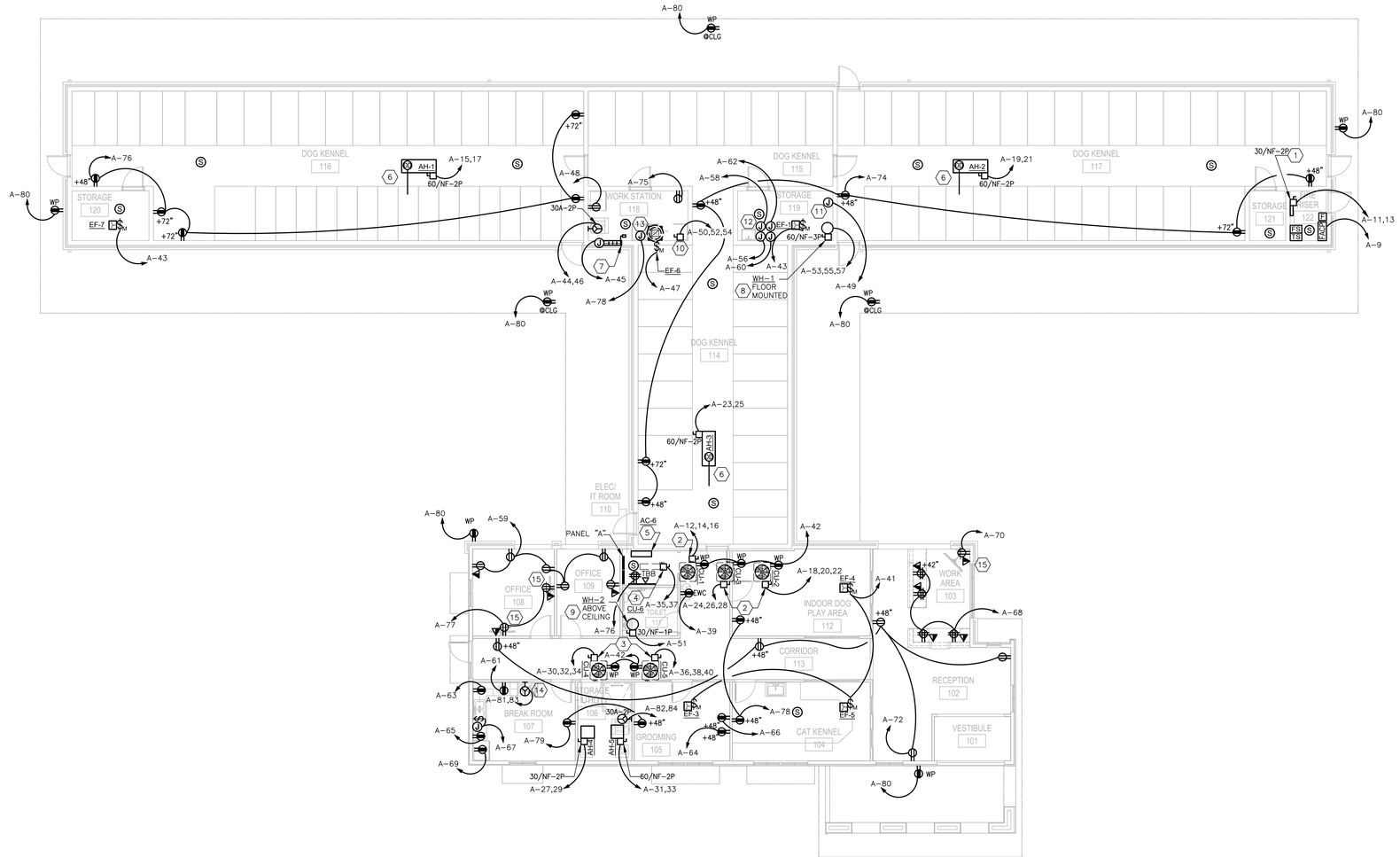

1 ELECTRICAL FLOOR PLAN - POWER

E1.2 1/8" = 1' - 0"

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.
2. VERIFY EXACT LOCATION OF POWER AND DATA OUTLETS WITH OWNER PRIOR TO ROUGH-IN.
3. REFER TO CIVIL DRAWINGS FOR LOCATION OF EMPTY CONDUIT FROM STREET TO BUILDING FOR TELEPHONE SERVICE.

DRAWING NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL AN ELECTRIC WALL HEATER, TRANE MODEL UHWA-02-1-A-2 OR APPROVED EQUAL WITH THERMOSTAT.
2. DISCONNECT FOR CONDENSING UNIT 60/NF-3P-3R.
3. DISCONNECT FOR CONDENSING UNIT 30/NF-3P-3R.
4. DISCONNECT FOR CONDENSING UNIT 30/NF-2P-3R.
5. INDOOR UNIT "AC-1" RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD SUPPLIED INTERCONNECTED WIRING.
6. STAND ALONE DUCT DETECTOR WITH REMOTE ALARM VISIBLE INDICATOR. COORDINATE WITH MECHANICAL CONTRACTOR.
7. COMBINATION WEATHER LOUVER W/ 120V MOTORIZED SHUT-OFF DAMPER. COORDINATE EXACT LOCATION AND ELEVATION OF LOUVER WITH OWNER AND ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION. INTERLOCK DAMPER OPERATION WITH DISHWASHER EXHAUST FAN AS INDICATED.
8. FLOOR MOUNTED ELECTRIC WATER HEATER. INSTALL AND MAKE ALL POWER CONNECTIONS TO WATER HEATER PER MANUFACTURERS INSTALLATION GUIDELINES.
9. ABOVE CEILING MOUNTED ELECTRIC WATER HEATER. INSTALL AND MAKE ALL POWER CONNECTIONS TO WATER HEATER PER MANUFACTURERS INSTALLATION GUIDELINES.
10. 208V-3P 49.0A DISHWASHER. ELECTRICAL CONTRACTOR TO VERIFY DISCONNECT WITH MANUFACTURER PRIOR TO INSTALLATION.
11. JBOX FOR WHOOPSIE AWAY CONTROL PANEL. SINGLE PHASE MCB TO SEN 60898 TYPE D – 10 AMP FUSE TO BS88 HCR – 16 AMP
12. DEDICATED CIRCUITS FOR THE CLEANWISE SYSTEM. ELECTRICAL CONTRACTOR TO PROVIDE A DEDICATED 20A 110V CIRCUIT FOR EACH MOTOR. ELECTRICAL CONTRACTOR TO VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH IN.
13. DISHWASHER HOOD. ELECTRICAL CONTRACTOR TO VERIFY EXACT ELECTRICAL REQUIREMENTS WITH MANUFACTURER.
14. OUTLET FOR FUTURE RANGE.
15. OUTLETS FOR TV. VERIFY MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO ROUGH IN.

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Electrical Floor Plan - Power

E1.2

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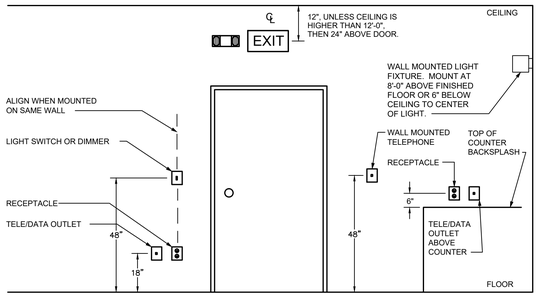


NOTES:
1. ALL DIMENSIONS ARE TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED.

2 / E3.1 DEVICE MOUNTING HEIGHTS DIAGRAM

NO SCALE

PANEL SCHEDULE

Panel ID: **A SECT 1** NEW
Voltage: 120/208V
Service: 3 PHASE, 4 WIRE
Mounting: SURFACE
Mains: 400A BREAKER
Neutral: SOLID
AIC: 10,000

Load Description	kVA	Wire Size	Brk	P	Ckt	A	B	C	Ckt	P	Brk	Wire Size	kVA	Load Description
EM / EGRESS LIGHTING ■	0.3	12	20	1	1	*	-	-	2	1	20	10	0.6	EXTERIOR DOWN LTG
KENNEL LIGHTING	1.3	12	20	1	3	-	*	-	4	1	20	10	0.5	EXTERIOR DOWN LTG
COORIDOR LIGHTING	1.4	12	20	1	5	-	-	*	6	1	20	10	0.9	EXTERIOR FLOOD LTG
FRONT LIGHTING	0.7	12	20	1	7	*	-	-	8	1	20	10	1.2	EXTERIOR FLOOD LTG
FACP ■	0.2	12	20	1	9	-	*	-	10	1	20	12	1.8	SIGN
WALL HEATER	2.0	10	30	2	11	-	-	*	12					
					13	*	-	-	14	3	35	8	6.1	CU-1
AH-1	6.3	8	40	2	15	-	*	-	16					
					17	-	-	*	18					
AH-2	6.3	8	40	2	19	*	-	-	20	3	35	8	6.1	CU-2
					21	-	*	-	22					
AH-3	6.3	8	40	2	23	-	-	*	24					
					25	*	-	-	26	3	35	8	6.1	CU-3
AH-4	4.5	10	30	2	27	-	*	-	28					
					29	-	-	*	30					
AH-5	6.3	8	40	2	31	*	-	-	32	3	20	12	4.0	CU-4
					33	-	*	-	34					
CU-6 / AH-6	1.1	12	15	2	35	-	-	*	36					
					37	*	-	-	38	3	30	10	5.2	CU-5
EWC	0.6	12	20	1	39	-	*	-	40					
EF-3,4,5	0.6	12	20	1	41	-	-	*	42	1	20	12	1.0	HVAC RCPT

Notes:
1 ■ PROVIDE CIRCUIT WITH HANDLE LOCK
2 PROVIDE PANEL WITH FEED THRU LUGS

Load Summary

	Connected kVA		Demand kVA	
Lighting:	10.8	125%	13.5	
Receptacles (1st 10 kVA):	10.0	100%	10.0	
Receptacles (> 10 kVA):	10.5	50%	5.3	
Electric Heat:	42.6	100%	42.6	
Ventilation:	1.4	100%	1.4	
Cooling:	30.3	100%	30.3	
Miscellaneous:	6.9	100%	6.9	
Spare:	0.0	100%	0.0	
Kitchen Equipment:	20.0	100%	20.0	
TOTAL CONNECTED kVA =	**132.5**		**130.0**	**=TOTAL DEMAND kVA**
			361.0	**=TOTAL DEMAND AMPS**

CONNECTED KVA PER PHASE
PHASE A 42.9 KVA
PHASE B 15.2 KVA
PHASE C 13.3 KVA

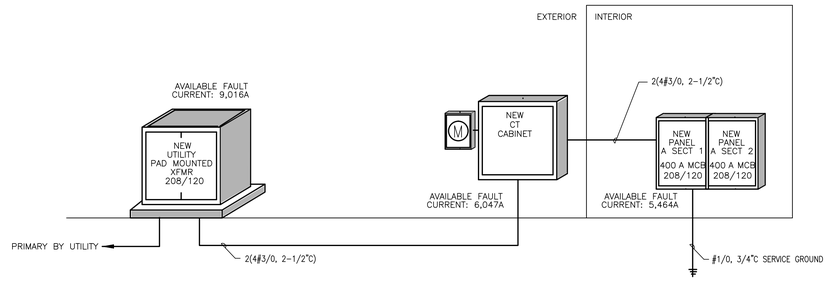
PANEL SCHEDULE

Panel ID: **A SECT 2** NEW
Voltage: 120/208V
Service: 3 PHASE, 4 WIRE
Mounting: SURFACE
Mains: 400A M.L.O.
Neutral: SOLID
AIC: 10,000

Load Description	kVA	Wire Size	Brk	P	Ckt	A	B	C	Ckt	P	Brk	Wire Size	kVA	Load Description
EF-1	0.2	12	20	1	43	*	-	-	44	2	30	10	2.5	STACKED W/DRYER
SHUT OFF DAMPER	0.6	12	20	1	45	-	*	-	46					
EF-6	0.6	12	20	1	47	-	-	*	48	1	20	12	1.2	REFIRGERATOR
WHOOPSIE AWAY	1.6	12	20	1	49	*	-	-	50					
WATER HEATER 2	2.0	10	30	1	51	-	*	-	52	3	60	6	14.2	DISHWASHER
					53	-	-	*	54					
WATER HEATER 1	10.0	8	40	3	55	*	-	-	56	1	20	12	1.0	CLEANWISE
					57	-	*	-	58	1	20	12	1.0	CLEANWISE
OFFICE RCPTS	1.4	12	20	1	59	-	-	*	60	1	20	12	1.0	CLEANWISE
BREAK RM RCPTS	1.0	12	20	1	61	*	-	-	62	1	20	12	1.0	CLEANWISE
BREAK RM RCPTS	1.0	12	20	1	63	-	*	-	64	1	20	12	1.5	GROOMING TABLE
BREAK RM RCPTS	1.0	12	20	1	65	-	-	*	66	1	20	12	1.5	GROOMING TABLE
DISHWAHER	1.6	12	20	1	67	*	-	-	68	1	20	12	0.6	RECEPTION RCPTS
REFRIDGERATOR	1.3	12	20	1	69	-	*	-	70	1	20	12	0.6	TV RCPT
SOFFIT RCPT	0.6	12	20	1	71	-	-	*	72	1	20	12	0.6	FRONT RCPTS
EXT. LTG. BY PC / TC	0.4	12	20	1	73	*	-	-	74	1	20	12	0.4	KENNEL RCPTS
REFRIGERATOR	1.0	12	20	1	75	-	*	-	76	1	20	12	0.4	TELEPHONE BOARD
TV OUTLETS	1.0	12	20	1	77	-	-	*	78	1	20	12	0.4	KENNEL RCPTS
CONV RCPTS	0.4	12	20	1	79	*	-	-	80	1	20	12	1.3	EXTERIOR OUTLETS
FUTURE RANGE	5.5	6	50	2	81	-	*	-	82	2	20	10	0.3	SITE LIGHTING
					83	-	-	*	84	1	20	12	1.8	SIGN

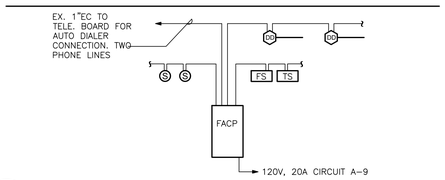
Notes: PANEL FED WITH FEED THRU LUGS

3



1 / E3.1 ELECTRICAL RISER DIAGRAM

NTS



3 / E104 FIRE ALARM RISER DIAGRAM

NO SCALE

NOTES:
1. FULLY ANALOG ADDRESSABLE FACP WITH MINIMUM 24HR BATTERY BACKUP.
2. FACP CONNECTED TO A UL APPROVED CENTRAL STATION.
3. SEE PLANS FOR EXACT DEVICE QUANTITY AND LOCATIONS.

FIRE ALARM SYSTEM MATRIX	BUILDING SYSTEM OUTPUTS																		CENTRAL COMM				
	ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	ACTIVATE EXTERNAL HORN/STROBE	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	RETURN ELEVATOR TO 2nd FLOOR	RETURN ELEVATOR TO 1st FLOOR	SHUNT TRIP AFTER ELEV. REACHES APPROPRIATE ELR.	SHUT DOWN RESPECTIVE AIR HANDLER	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW CHANGE OF STATUS ON CONTROL PANEL	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
DUCT SMOKE DETECTOR			X	X				X			X					X	X	X		X		
FIRE ALARM A.C. POWER FAILURE					X	X		X				X					X	X				X
FIRE ALARM SYSTEM LOW BATTERY					X	X		X				X					X	X				X
SPRINKLER WATER FLOW	X	X					X	X	X	X							X	X	X			
SPRINKLER TAMPER			X	X				X			X						X	X		X		

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NORTH CAROLINA PROFESSIONAL SEAL 032531 ENGINEER WILLIAM S. KING 2-14-2017

CONSULTING
6309 ARCHERFILED DR., SUITE 100
WAXHAW, NC 28173
980-272-2009
NORTH CAROLINA BOARD NO. C-3207

METROLINA BUILDERS
GENERAL CONTRACTORS

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUE	DATE
FOR CONSTRUCTION	: 02.14.17
ZONING CHANGES	: 06.01.17
3 ZONING CHANGES	: 09.06.17

Electrical Schedules & Riser

E3.1

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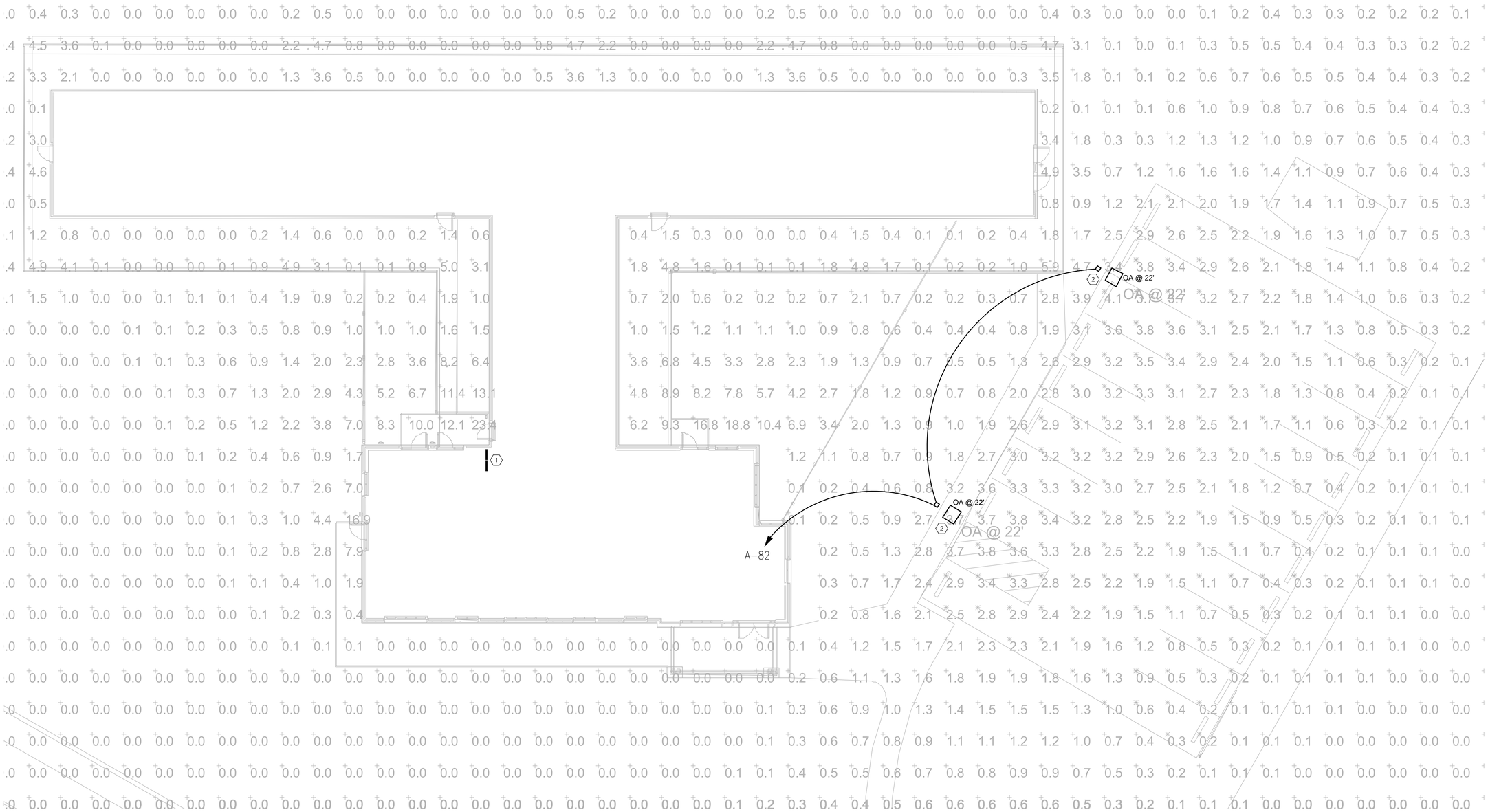
ODA No. 163112 CADD File:

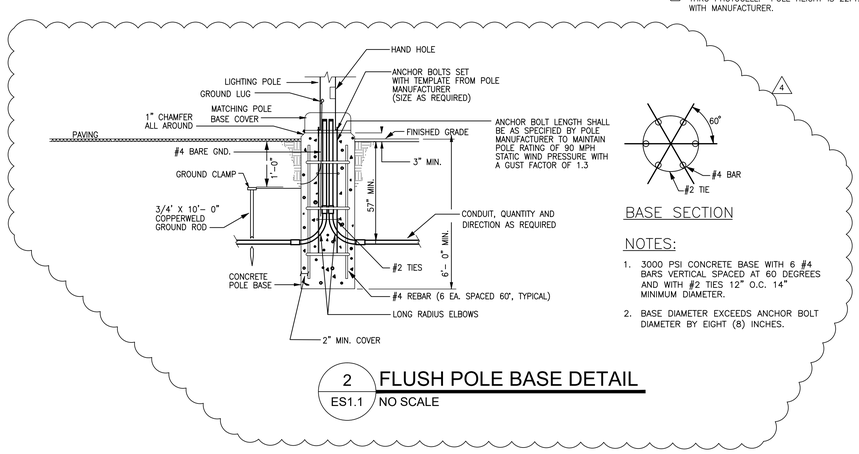


1 ELECTRICAL SITE PLAN - LIGHTING

ES1.1 1" = 20' - 0"

DRAWING NOTES:

1. APPROXIMATE LOCATION OF PANEL A. SEE POWER PLAN E1.2 FOR EXACT LOCATION.
2. LED POLE MOUNTED SITE LIGHTING TO BE CONTROLLED THRU PHOTOCELL. POLE HEIGHT IS 22FT. COORDINATE WITH MANUFACTURER.



BASE SECTION

NOTES:

1. 3000 PSI CONCRETE BASE WITH 6 #4 BARS VERTICAL SPACED AT 60 DEGREES AND WITH #2 TIES 12" O.C. 14" MINIMUM DIAMETER.
2. BASE DIAMETER EXCEEDS ANCHOR BOLT DIAMETER BY EIGHT (8) INCHES.

2 FLUSH POLE BASE DETAIL

ES1.1 NO SCALE

GENERAL NOTES:

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND VERIFY ALL WORKING CONDITIONS, CLEARANCES, AND REQUIREMENTS FOR PROVIDING A COMPLETE AND FUNCTIONAL SYSTEM. NO CHANGES IN THE CONTRACT OR CONTRACT SUM WILL BE MADE DUE TO THE FAILURE TO THOROUGHLY EXAMINE THE SITE AND CONDITIONS.
2. COORDINATE EXACT LOCATION OF POLES WITH SITE COORDINATOR PRIOR TO CONCRETE STUB UP AND TRENCH.
3. ALL SWITCHING AND CONTROLS TO BE REVIEWED AND APPROVED WITH ARCHITECT AND OWNERS PRIOR TO PURCHASE.
4. ALL EXTERIOR WALL LIGHTING IS SHOWN ON LIGHTING PLAN E1.1. SEE PLAN FOR LOCATIONS, TYPE, CIRCUITRY AND CONTROLS.

CEILING SYMBOL LEGEND

SYMBOL	TYPE	MODEL	LAMPS	VOLTS	NOTES
□ OA	LED POLE MOUNTED SITE LIGHT @ 22'	LITHONIA LIGHTING DSX1 LED P5 30K T4M MVOLT HS	1 LED FIXTURE 138W EACH	120V	

ALL SUBSTITUTIONS MUST BE EQUAL AND APPROVED BY ARCHITECT AND ENGINEER

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ZONING CHANGES	09.06.17
4 REVIEW COMMENTS	10.24.17

Electrical Site Plan - Lighting

ES1.1

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ODA No. 163112 CADD File:

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

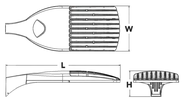
EPA: 1.01 ft² (0.09 m²)

Length: 33" (83.8 cm)

Width: 13" (33.0 cm)

Height: 7-1/2" (19.0 cm)

Weight (max): 27 lbs (12.7 kg)



A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability†
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background.

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA DDBXD

DSX1LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4 P7 P2 P5 P8 P3 P6 P9 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[2]	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[3] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT[4] 120[1] 208[1] 240[1] 277[1] 347[1,6] 480[1,6]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[7] RPUMBA Round pole universal mounting adaptor[7] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[8]

Control options		Other options	Finish
Shipped installed PER NEMA twist-lock receptacle only (controls ordered separate)[7] PER5 Five-wire receptacle only (controls ordered separate)[7,9] PER7 Seven-wire receptacle only (controls ordered separate)[7,9,11] DMG 0-10V dimming extend out back of housing for external control (leads exit fixture) DS Dual switching[7,9,12] PIR Bi-level, motion/ambient sensor, 8–15' mounting height, ambient sensor enabled at 5fc[7,9,14] PIRH Bi-level, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 5fc[7,9,14] PIR1FC3V Bi-level, motion/ambient sensor, 8–15 mounting height, ambient sensor enabled at 1fc[7,9,14]	PIRH1FC3V Bi-level, motion/ambient sensor, 15–30' mounting height, ambient sensor enabled at 1fc[7,9,14] BL30 Bi-level switched dimming, 30%[9,15] BL50 Bi-level switched dimming, 50%[9,15] PNMTD03 Part night, dim till dawn[9] PNMTD3 Part night, dim 3 hrs[9] PNMTD6 Part night, dim 6 hrs[9] PNMTD9 Part night, dim 9 hrs[9] FAO Field adjustable output[7]	**Shipped installed** HS House-side shield[10] SF Single fuse (120, 277, 347V)[7] DF Double fuse (208, 240, 480V)[7] L90 Left rotated optics[7] R90 Right rotated optics[7] BS Bird spikes EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

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Ordering Information

Accessories

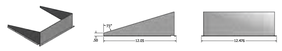
Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V)[13]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V)[13]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V)[13]
DSHORT SBK U	Shorting cap[14]
DSX1HS 30K U	House-side shield for 30 LED unit[10]
DSX1HS 40K U	House-side shield for 40 LED unit[10]
DSX1HS 50K U	House-side shield for 60 LED unit[10]
PUMBA DDBXD U[7,15]	Square and round pole universal mounting bracket (specify finish)[15]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish)[15]

For more control options, visit DSX1 and DSX1LE online.

NOTES
1 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
2 AMBPC is not available with BLC, LCCO, RCCO or P4, P7, P8, P9 or P13.
3 Not available with HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 Single fuse version (120, 277V or 347V). Double fuse (DF) requires 208V, 240V or 480V.
6 Not available in P1 or P10. Not available with BL30, BL50 or PNMTD options.
7 Sold in quantities of 2 or more.
8 Specify finish. Available as a separate combination accessory. For retrofit use only. PUMBA (finish) U 1.5 G vibration load rating per ANSI C136.31.
9 Specify voltage. Not available with MVOLT. Not available with 347V or 480V options. For more ordering information, see page 3.
10 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with CR option. Shorting cap included.
11 PIR3WHMS node required. It must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR. Node with integral dimming. Shorting cap included.
12 Requires (2) independently switched circuits. Not available with PER, PER5, PER7, PIR or PIRH. Not available in P1, P2, P3 or P4.
13 Requires (2) separately switched circuits.
14 Reference Motion Sensor table on page 3.
15 Square pole universal mounting adaptor is intended for decorative use only.
16 Not available with 347V, 480V, PNMTD, DS, For PER5 or PER7, see PER Table on page 3.
17 Not available with 347V, 480V, DS, BL30, BL50. For PER5 or PER7, see PER Table on page 3. Separate Dusk to Dawn required.
18 Not available with 347V, 480V or any dimming or bi-level options.
19 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory see Accessories information.
20 Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
21 For retrofit use only.

External Glare Shield



Drilling

HANDHOLE ORIENTATION

Tenon Mounting Slipfitter **

Tenon O.D.	Square Base	2 at 180°	2 at 90°	3 at 120°	4 at 90°	4 at 90°
2-3/8"	ASTZ0-190	ASTZ0-280	ASTZ0-290	ASTZ0-320	ASTZ0-390	ASTZ0-490
2-7/8"	ASTZ5-190	ASTZ5-280	ASTZ5-290	ASTZ5-320	ASTZ5-390	ASTZ5-490
4"	ASTZ5-190	ASTZ5-280	ASTZ5-290	ASTZ5-320	ASTZ5-390	ASTZ5-490

Pole orientation nomenclature: # of breaks at degrees from handhole (deg # and # side A)

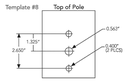
DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS
1 @ 90°	2 @ 280°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
Side B	Side B & D	Side B & C	Round pole only	Side B, C, & D	Sides A, B, C, D

Note: Review luminaire spec sheet for specific nomenclature

Pole tenon tested O.D.	2.5" x 180°	4" @ 180°	2.5" x 90°	3" x 120°	2.5" x 120°	4" x 120°	2.5" x 120°	4" x 120°
DSX SPA	Y	Y	Y	N	-	-	-	-
DSX RPA	Y	Y	N	N	Y	Y	Y	Y
DSX SPUMBA	Y	N	N	N	-	-	-	-
DSX RPUMBA	N	N	N	N	Y	Y	Y	N

** Fixtures at 250 require round pole top/bracket.

Template #8

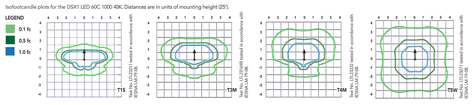


Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 1 homepage.

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').

LEGEND
0.1 fc
0.5 fc
1.0 fc



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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft²) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precisely modeled proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nightime Friendly™ product, meaning it is consistent with the LEEDᵐ and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

WARRANTY
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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4

Electrical
Site Plan -
Lighting Details

ES1.2

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ODA No. 163112 CADD File:

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	OA	2	Lithonia Lighting	DSX1 LED P5 30K T4M MVOLT HS	DSX1 LED P5 30K T4M MVOLT with houseside shield	LED	1	DSX1_LED_P5_30K_T4M_MVOLT_HS.ies	11163	0.9	138
	WL	15	Lithonia Lighting	LDN4 30/15 LO4AR LSS 120 EZ10 EL WL	4IN LDN, 3000K, 1500LM, 80 CRI, CLEAR, SEMI-SPECULAR REFLECTOR, 120V, eldoLED 10% 0-10V, BATTERYPACK WITH INTEGRAL TEST SWITCH, WET LOCATION RATED, *VERIFY VOLTAGE & ALL OPTIONS PRIOR TO ORDER	LED	1	LDN4_30_15_LO4AR_LSS.ies	1325	0.38	20.44
	WP	4	Lithonia Lighting	DSXW1 LED 10C 1000 30K T3M MVOLT DMG*	DSXW1 LED WITH (1) 10 LED LIGHT ENGINES, TYPE T3M OPTIC, 3000K, @ 1000mA , MVOLT, 0-10V DIMMING, *VERIFY ALL OPTIONS PRIOR TO ORDER	LED	1	DSXW1_LED_10C_1000_30K_T3M_MVOLT.ies	3606	0.9	38.8
	UP	2	Griven srl	RB280-DW-UNV-EXWB-H-*	INGRADE- Ruby R, 2700-6500K, UNV (100-277V), EXTRA WIDE OPTIC SYM, *VERIFY ALL OPTIONS PRIOR TO ORDER	20 Cree XPE WW and CW (All on)	1	RB280 Ruby R DW Extrawide.ies	1561	0.9	37
	WS	3	Lithonia Lighting	OLWX1 LED 40W 40K 120 PE DDB	40W 4000K LED WALL PACK, 120V, 120V BUTTON PHOTOCELL, DARK BRONZE FINISH, *VERIFY ALL OPTIONS PRIOR TO ORDER	LED	1	OLWX1_LED_40W_40K_DDB.ies	4000	0.9	38.82

Luminaire Locations

		Location						Aim		
No.	Label	X	Y	Z	MH	Orientation	Tilt	X	Y	Z
1	WL	26.42	133.87	10.00	10.00	0.00	0.00	26.42	133.87	0.00
2	WL	26.43	113.71	10.00	10.00	0.00	0.00	26.43	113.71	0.00
3	WL	26.42	93.70	10.00	10.00	0.00	0.00	26.42	93.70	0.00
4	WL	73.45	93.70	10.00	10.00	0.00	0.00	73.45	93.70	0.00
5	WL	103.44	93.71	10.00	10.00	0.00	0.00	103.44	93.71	0.00
6	WL	103.43	73.72	10.00	10.00	0.00	0.00	103.43	73.72	0.00
7	WP	90.95	59.06	8.00	8.00	0.00	0.00	90.95	59.06	0.00
8	WP	160.79	59.16	8.00	8.00	0.00	0.00	160.79	59.16	0.00
9	WL	77.19	133.88	10.00	10.00	0.00	0.00	77.19	133.88	0.00
10	WL	127.18	133.88	10.00	10.00	0.00	0.00	127.18	133.88	0.00
11	WL	167.19	133.87	10.00	10.00	0.00	0.00	167.19	133.87	0.00
12	WL	217.93	133.87	10.00	10.00	0.00	0.00	217.93	133.87	0.00
13	WL	217.93	113.70	10.00	10.00	0.00	0.00	217.93	113.70	0.00
14	WL	217.92	93.70	10.00	10.00	0.00	0.00	217.92	93.70	0.00
15	WL	180.10	93.69	10.00	10.00	0.00	0.00	180.10	93.69	0.00
16	WL	144.08	93.69	10.00	10.00	0.00	0.00	144.08	93.69	0.00
17	WL	144.08	73.70	10.00	10.00	0.00	0.00	144.08	73.70	0.00
18	WS	111.00	64.04	8.00	8.00	270.00	0.00	111.00	64.04	0.00
19	WS	86.98	45.66	8.00	8.00	270.00	0.00	86.98	45.66	0.00
20	WP	100.75	59.06	8.00	8.00	0.00	0.00	100.75	59.06	0.00
21	WP	146.84	59.16	8.00	8.00	0.00	0.00	146.84	59.16	0.00
22	WS	153.76	59.27	8.00	8.00	0.00	0.00	153.76	59.27	0.00
23	UP	169.42	40.67	0.92	0.10	180.00	-180.00	169.42	40.67	1.02
24	UP	169.42	30.66	0.92	0.10	180.00	-180.00	169.42	30.66	1.02
25	OA	227.00	92.28	22.00	22.00	119.04	0.00	228.00	91.72	0.00
26	OA	196.32	47.38	22.00	22.00	121.57	0.00	197.30	46.78	0.00

Statistics

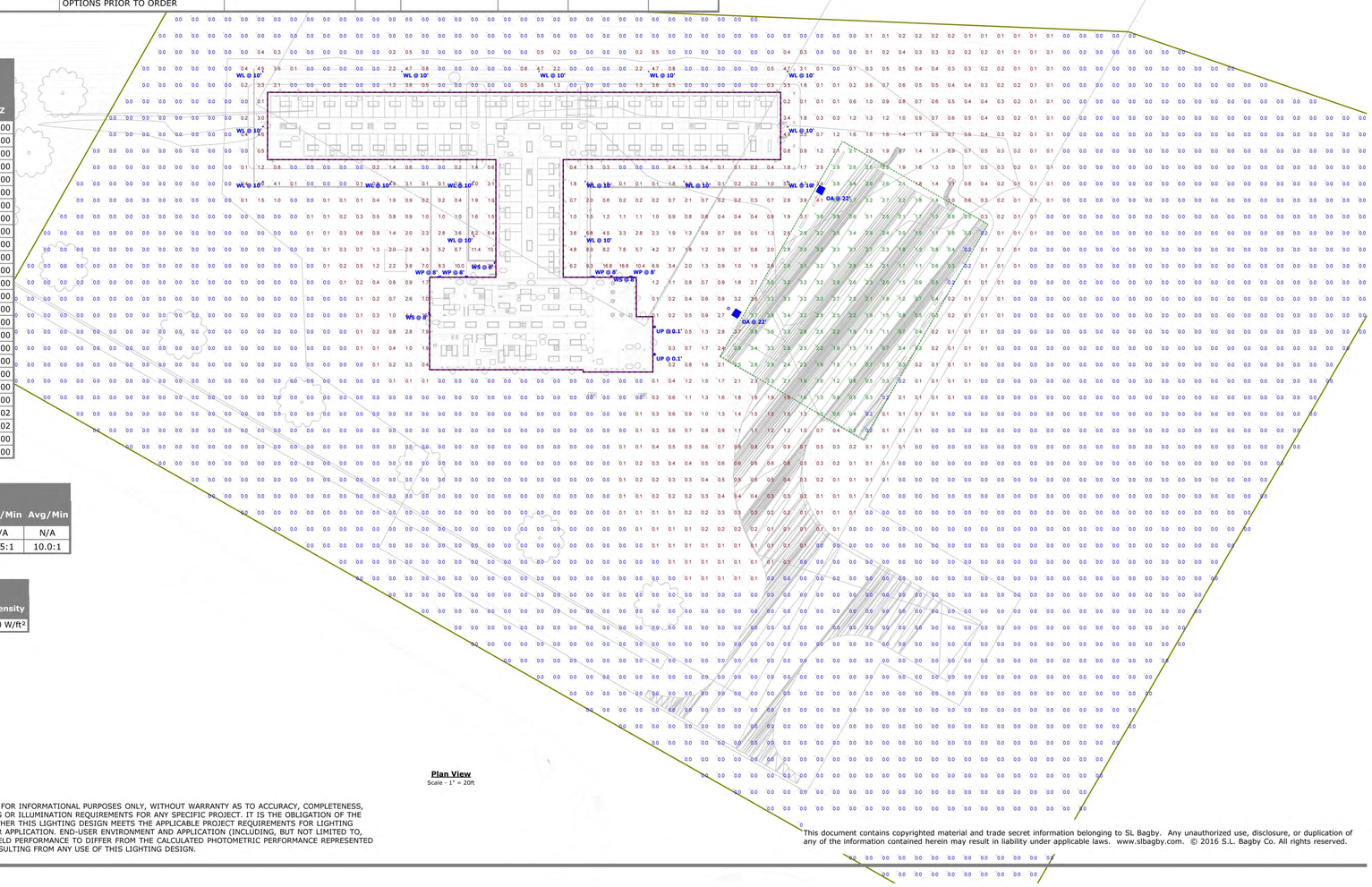
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ENTIRE AREA CALC	+	0.4 fc	23.4 fc	0.0 fc	N/A	N/A
PARKING AREA CALC ONLY	×	2.0 fc	4.1 fc	0.2 fc	20.5:1	10.0:1

Power Statistics

Description	# Luminaires	Total Watts	Area	Density
ENTIRE AREA- POWER DENSITY	26	928.3 W	112795.7 ft²	0.0 W/ft²

Note

1. CALC PLANS CURRENTLY SET AT GRADE LEVEL (0'-0").
2. SEE LUMINARE LOCATION TABLE & DESIGN FOR MOUNTING HEIGHTS & VERIFY.
3. VERIFY ALL OTHER OPTIONS PRIOR TO ORDER.



Plan View
Scale - 1" = 20ft

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METROLINA BUILDERS
GENERAL CONTRACTORS

BAGBY

BED & BARK

WAXHAW, NORTH CAROLINA

ISSUED	:	DATE
FOR CONSTRUCTION	:	02.14.17
1 ZONING CHANGES	:	09.06.17
1 REVIEW COMMENTS	:	10.24.17
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1 PHOTOMETRIC PLAN

ES1.3

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ODA No. 163112 CADD File: dwgs/_A0.1.dwg

01 PHOTOMETRIC PLAN

scale: 1"=20'