

9,512 SF

9,512 SF

 $\square$  2  $\square$  3  $\square$  4  $\square$  5

High Piled

AREA FOR FRONTAGE

4,500 SF

22

INCREASE1,5

ALLOWABLE AREA PER

10,500 SF

CODE REFERENCE

Allowable Area of Occupancy B

 $(4,797)10,500 = 0.457 + 4,715/15,750 = 0.299 = 0.756 \le 1.00$ 

TABLE

Perimeter which fronts a public way or open space having 20 feet minimum width =  $\underline{520}$  (F)

506.2<sup>4</sup> AREA

4,715 SF 9,000 SF

Percent of frontage increase  $I_f = 100[F/P - 0.25] \times W/30 = \frac{75}{2} (\%)$ 

<sup>4</sup> The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers

 $^{3}$  Maximum Building Area = total number of stories in the building x D (maximum  $^{3}$  stories) (506.2).

☐ S-1 Moderate ☐ S-2 Low

☐ Parking Garage ☐ Open ☐ Enclosed

Mixed Occupancy: No Yes Separation: <u>2</u> Hr. Exception: \_\_\_\_\_

Actual Area of Occupancy A + Actual Area of Occupancy B

BLDG AREA PER

(ACTUAL)

 $\square$  1  $\square$  2

I-2 Condition 1 2

Utility and Miscellaneous

**Special Uses** (Chapter 4 – List Code Sections): **N/A** 

Allowable Area of Occupancy A

**Special Provisions** (Chapter 5 – List Code Sections): **N/A** 

Separated Use (508.4) - See below for area calculations for each story.

1ST (A-2) RESTAURANT 4,797 SF 6,000 SF

Total Building Perimeter = 520 (P)

W = Minimum width of public way = 30 (W)

Frontage increase is based on the unsprinklered area value in Table 506.2.

<sup>1</sup> Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

<sup>1</sup> Frontage area increases from Section 506.2 are computed thus:

Ratio (F/P) = 1.0 (F/P)

<sup>2</sup> Unlimited area applicable under conditions of Section 507.

ALLOWABLE HEIGHT – WORST CASE A-2 ASSEMBLY

Accessory Occupancy Classification(s): N/A

I-3 Condition

I-3 Condition

Incidental Uses (Table 509): N/A

Non-separated Use (508.3)

1ST (B) CLINIC

must comply with Table 412.3.1.

Building Height in Feet (Table 504.3)

Building Height in Stories (Table 504.4)

Mercantile

Residential

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/* REDUCTION)	DETAIL # AND SHEET #	DESIGN# FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including							
columns, girders, trusses Bearing Walls		1			1		
Exterior							
North	>30	0	0				
East	>30	0	0				
West	>30	0	0				
South	>30	0	0				
Interior	730	0					
Nonbearing Walls and		Ιυ	0				
Partitions							
Exterior							
North		N/A	N/A				
East		N/A	N/A				
West		N/A	N/A				
South		N/A	N/A				
Interior		0	0				
Floor Construction		N/A	N/A				
Including supporting beams and	d joists						
Floor Ceiling Assembly		N/A	N/A				
Columns Supporting Floors		N/A	N/A				
Roof Construction, including su and joists	apporting beams	0	0				
Roof Ceiling Assembly		0	0				
Columns Supporting Roof		0	0				
Shaft Enclosures - Exit		N/A	N/A				
Shaft Enclosures - Other		N/A	N/A				
Corridor Separation		N/A	N/A				
Occupancy/Fire Barrier Separat	tion	2 HR	2 HR	G-102	UL U419		
Party/Fire Wall Separation		N/A	N/A	10.102	02 0410		
Smoke Barrier Separation		N/A	N/A				
Smoke Partition		N/A	N/A				
Tenant/Dwelling Unit/		N/A	N/A				
Sleeping Unit Separation				1			
Incidental Use Separation		N/A	N/A				

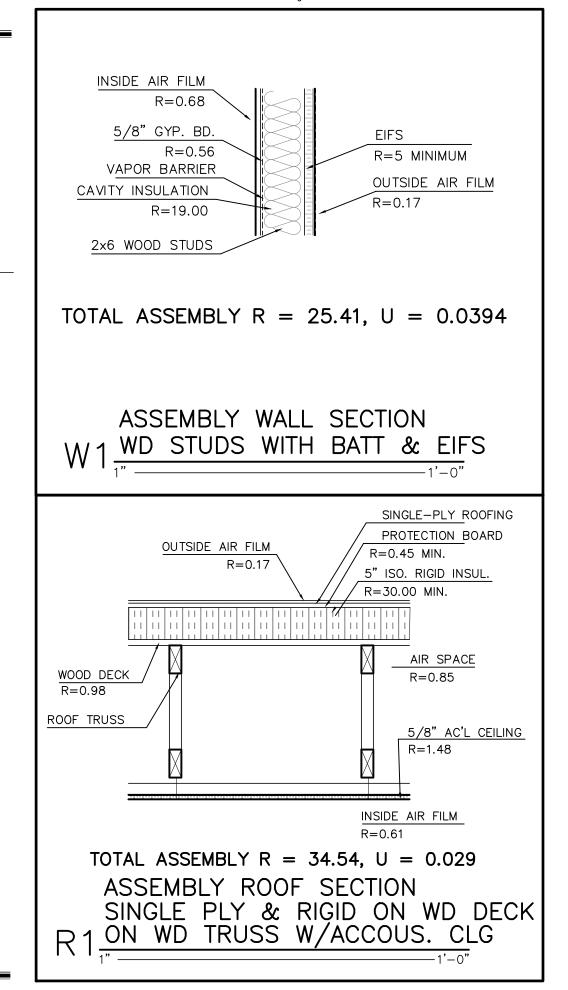
NO LIMIT

ACTUAL SHOWN ON PLANS (%)

42% FRONT, 5% REAR, 10% SIDES

ENERG	GY REQUIREMEN	NTS:		
Existing	g building envelope	complies with code:	] (If checked, the remain	der of this section is not applicable.)
Exempt	Building:	Provide code or s	tatutory reference:	
	Climate Zone:	□ 3A	⊠ 4A	☐ 5A
	Method of Compl	liance:		
	Energy Code:	Performance	Prescriptive	
	ASHSAE 90.1: Other:	☐ Performance ☐ Performance (If "Ot	☐ Prescriptive ther" specify source here)	) <u> </u>
ГНЕRN	MAL ENVELOPE	(Prescriptive method only		
		mbly (each assembly)	<b>,</b>	
	O	• •	LOPE, WOOD DECK, R	IGID INSULATION, SINGLE PLY
	U-Value	of total assembly:	<u>0.029</u>	
		of insulation: in each assembly:	<u>R-30</u> <u>N/A</u>	
		U-Value of skylight:	<u>N/A</u> <u>N/A</u>	
		are footage of skylights in		N/A
	Exterior Walls (ea	• •		
	•	on of assembly:	WOOD STUD, EIFS I	EXTERIOR
		of total assembly: of insulation:	<u>0.0394</u> <u>R-19 + R-5 ci</u>	
		(windows or doors with		
	Ţ	U-Value of assembly:	<u>0.45</u>	
		Solar heat gain coefficien		
		Projection factor:	< 025 (assumed)	
	1	Door R-Values:	<u><b>R 1.3</b></u> (minimum)	
	_	e (each assembly) <b>N/A</b>		
		on of assembly: of total assembly:		
		of insulation:		
		nditioned space (each ass	sembly) <b>N/A</b>	
		on of assembly:		
		of total assembly: of insulation:		
	K-vaiue (	of insulation:		
	Floors slab on gra	ade		
	_	on of assembly:	MONOLITHIC FOUN	<u>DATIONS</u>
		of total assembly:	N/A D 15	
		of insulation: al/vertical requirement:	<u>R-15</u> 24"	
	1101120116	il/Verticar requirement.	<u> 24                                    </u>	

**ENERGY SUMMARY** 



ALL NOTES APPLY TO ALL DRAWINGS AND ALL TRADES. IT IS T RESPONSIBILITY OF ALL CONTRACTORS AND TRADES TO COORDINATE T INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY A MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE REQUIREMENTS THE DRAWINGS, GENERAL REQUIREMENTS AND ALL ITEMS OF CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS AN TRADES. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS O THE CONTRACT DOCUMENTS FOR HIS EMPLOYEES' USE ON THE PROJECTO ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLE LIST OF DRAWINGS INFORMATIONAL G-101 COVER SHEET 2018 NCBCS G-102 2-HR RATED FIRE BARRIER UL DESIGN NO. U419 SITE WORK UNDER SEPARATE COVER

**STRUCTURAL** S-1 STRUCTURAL NOTES S-2 FOUNDATION PLAN S-3 ROOF FRAMING PLAN S-4 STRUCTURAL WALL SECTIONS S-5 STRUCTURAL WALL SECTIONS AND DETAILS

A-101 FLOOR PLAN AND BRICK

A-102 UTILITY FLOOR PLAN A-103 ROOF PLAN AND DETAILS A-201 EXTERIOR ELEVATIONS FRONT

AND LEFT SIDE A-202 EXTERIOR ELEVATIONS RIGHT SIDE AND REAR

A-301 BUILDING AND WALL SECTION A-302 WALL SECTIONS AND DETAILS A-303 PATIO PARTIAL BUILDING

A-401 DOORS, WINDOWS, FRAMES HARDWARE AND SCHEDULES

**ELECTRICAL** E-1 ELECTRICAL PLAN E-2 ELECTRICAL DETAIL, RISER DIAGRAM, NOTES AND PANEL

<u>PLUMBING</u> P-1 PLUMBING PLAN

PERMITTING STAMP:

# SHOPPES AT SUMMIT SHELL BUILDING

1625 BUFFALO LAKE ROAD SANFORD, NORTH CAROLINA



## ANDREW W. PRIVETTE, ARCHITECT

1920 FT. BRAGG ROAD - FAYETTEVILLE, N.C. 28303 - (910) 485-8567



NOVEMBER II, 2019

#### ALLOWABLE AREA LIFE SAFETY PLAN REQUIREMENTS – SEE TENANT COMPLETION DOCUMENTS Life Safety Plan Sheet #: N/A FOR SHELL BUILDING Primary Occupancy Classification(s): $\square$ A-1 $\square$ A-2 $\square$ A-3 $\square$ A-4 $\square$ A-5 Fire and/or smoke rated wall locations (Chapter 7) Assumed and real property line locations (if not on the site plan) Educational Exterior wall opening area with respect to distance to assumed property lines (705.8) Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2) ☐ F-1 Moderate ☐ F-2 Low Factory Occupant loads for each area ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM Hazardous Exit access travel distances (1017) ☐ I-3 Institutional

Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))

DEGREE OF OPENING

OTECTION (TABLE 705.8

UP, NS

⊠Yes □ No

⊠ Yes □ No

☐ Yes ☐ No

Dead end lengths (1020.4) Clear exit widths for each exit door

Actual occupant load for each exit door

purposes of occupancy separation

Location of doors with panic hardware (1010.1.10) Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)

Location of doors equipped with hold-open devices

The square footage of each fire area (202)

The square footage of each smoke compartment for Occupancy Classification I-2 (407.5) Note any code exceptions or table notes that may have been utilized regarding the items above

ACCES	SSIBLE DWEI	LLING UNITS	S (SECTION )	1107) - N/A			
TOTAL Units	Accessible Units	Accessible Units	TYPE A Units	TYPE A Units	TYPE B Units	TYPE B Units	TOTAL ACCESSIBLE UNITS
011115	REQUIRED	PROVIDED	REQUIRED	Provided	REQUIRED	Provided	PROVIDED

ACCESSIBLE P	PARKING (SE	CCTION 1106	) – <mark>SEE TENAN</mark>	IT COMPLETIO	N DOCUMENT	<mark>rs</mark>
LOT OR PARKING	TOTAL # OF PA	RKING SPACES	# OF ACC	CESSIBLE SPACES PRO	OVIDED	TOTAL#
AREA	REQUIRED	PROVIDED	REGULAR WITH	VAN SPAC	ES WITH	ACCESSIBLE
			5' ACCESS AISLE	132" ACCESS 8' ACCESS AISLE AISLE		PROVIDED
TOTAL						

τ	JSE	W	ATERCLOSI	ETS	URINALS		LAVATORIE	S	SHOWERS	DRINKING	FOUNTA
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX	/ TUBS	REGULAR	ACCESS
SPACE	EXIST'G										
	NEW										
	REQ'D										

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

SHOPPES
SHELL
1625 BUFFA
PRINGS/SANF

ANDREW W. PRIVETTE, AIA

1920 FT. BRAGG ROAD

FAYETTEVILLE,

NORTH CAROLINA 28303

TELE. (910) 485-8567

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**RAYWEST** 

DESIGNBUILD

JOB CODE: 19SUMMIT-SHELL DRAWN BY: **A. PRIVETTE** CHECKED BY: A. PRIVETTE DESIGNED TO BUILD

**COVER SHEET** BUILDING CODE SUMMARY

G-1

FEET) FROM PROPERTY LIN

Smoke Detection System:

Carbon Monoxide Detection

Exit Signs:

Fire Alarm:

9,512 SF

9,512 SF

Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)

A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for

Location of doors with electromagnetic egress locks (1010.1.9.9)

Location of emergency escape windows (1030)

LOT OR PARKING	TOTAL # OF PA	RKING SPACES	# OF AC	CESSIBLE SPACES PRO	OVIDED	TOTAL#
AREA	REQUIRED	PROVIDED	REGULAR WITH	VAN SPAC	ES WITH	ACCESSIBLE
			5' ACCESS AISLE	132" ACCESS AISLE	8' access aisle	PROVIDED

	USE		ATERCLOSE		TS (TABLE 2902.1) – SEE TENAN URINALS LAVATORIES			SHOWERS		FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX	/ TUBS	REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

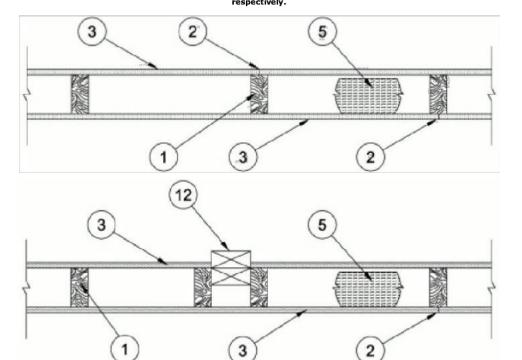
Bearing Wall Rating — 1 Hr

Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide <u>BXUV</u> or <u>BXUV7</u>

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),



. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.

2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.
3. Gypsum Board\* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6, 6A or 6B, Steel Framing Members\*.

When Items 6, 6B, or 6C **Steel Framing Members\***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members\***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs. **ACADIA DRYWALL SUPPLIES LTD** — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO - Type DBX-1 (finish rating 24 min)

CERTAINTEED GYPSUM INC — Type 1, Type SF3 (finish rating 20 min) or FRPC; Type C, Type X or Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-C-AR (finish rating 24 min), Type IP-C-AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SCX (finish rating 24 min), Type SCX (finish rating 24 min), Type WRX (finish rating 24 min)

CONTINENTAL BUILDING PRODUCTS OPERATING CO, LLC - Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min)

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type DGFS2 (finish rating 20 min), Type DAP, Type DD (finish rating 20 min), Type DAP, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LWX (finish rating 22 min), Type LWX (finish rating 22 min), Sheathing - Type LWX (finish rating 22 min), Water Rated - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated - Type LWX (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated - Type LWX (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Soffit - Type LWX (finish rating 22 min), Sof

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 22 min), Type FSW-2 (finish rating 22 min), Type FSW-G (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSM-C, Type FSW-G (finish rating 20 min), Type FSM-C, Type FSW-G (finish rating 20 min), Type FSL (finish rating 24 min),

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 or Type PG-C

PANEL REY S A — Type GREX, PRX, PRC, PRC2; Types RHX, MDX, ETX (finish rating 22 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

**THAI GYPSUM PRODUCTS PCL** — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SGX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type ULX (finish rating 20 min)

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. Gypsum Board\* — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), Type AG-C (finish rating 25 min.)

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min)

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type SHX (finish rating 24 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRX (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

USG BORAL ZAWAWI DRYWALL L L C SFZ — Types C, SCX

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX, Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

3B. **Gypsum Board\*** — (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. **CGC INC** — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

 ${\bf USG\;MEXICO\;S\;A\;DE\;C\;V}-{\bf Types\;AR,\;IP\text{-}AR}$ 

A1 1-HOUR FIRE BARRIER

SCALE: N.T.S.

3C. **Gypsum Board\*** — (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

3D. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade

RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3E. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally. **GEORGIA-PACIFIC GYPSUM L L C** — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. **Gypsum Board\*** — (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter. **CGC INC** — Type USGX (finish rating 22 min)

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V — Type USGX (finish rating 22 min.)

3G. Gypsum Board\* — (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. **Gypsum Board\*** — (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.

NATIONAL GYPSUM CO — SoundBreak XP Type X Gypsum Board

3I. Gypsum Board\* — (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. **Gypsum Board\*** — (As an alternate to Item 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. **CERTAINTEED GYPSUM INC** — Type SilentFX

3K. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed.

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSM-C, Type FSW-6 (finish rating 20 min)

3L. Gypsum Board\* — (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed

gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type 5-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".

MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

3M. **Gypsum Board\*** — (As an alternate to Items 3) — For Direct Application to Studs Only — For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.

3N. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3. **CERTAINTEED GYPSUM INC** — 5/8" Easi-Lite Type X (finish rating 24 min)

30. Wall and Partition Facings and Accessories\* — (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

 ${f RADIATION\ PROTECTION\ PRODUCTS\ INC}$  — Type RPP - Lead Lined Drywall

3P. **Gypsum Board\*** — (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.

NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3Q. **Gypsum Board\*** — (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally. **CONTINENTAL BUILDING PRODUCTS OPERATING CO, LLC** — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-

4. Steel Corner Fasteners — (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. Batts and Blankets\* — (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.

CERTAINTEED CORP
JOHNS MANVILLE
KNAUF INSULATION LLC

C/A, Type LGFC-WD, Type LGLLX

MANSON INSULATION INC

OWENS CORNING HT INC, DIV OF OWENS CORNING — Corning Fiberglas Corp

ROXUL INC — Acoustical Fire Batts

ROCK WOOL MANUFACTURING CO - Delta Board

INS765LD, and INS770LD are to be used for dry application only

THERMAFIBER INC — Type SAFB

5A. Fiber, Sprayed\* — (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft³. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft³, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS765LD or INS770LD.

U S GREENFIBER L L C — INS735 & INS745 for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS745,

5B. **Fiber, Sprayed\*** — (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft. **NU-WOOL CO INC** — Cellulose Insulation

5C. Batts and Blankets\* — Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.

THERMAFIBER INC — Type SAFB

5D. Glass Fiber Insulation — (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets\*** — (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted

to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed\*** — (Optional, Not Shown — Not for use with Items 6, 6A or 6B) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ). **AMERICAN ROCKWOOL MANUFACTURING, LLC** — Type Rockwool

5G. Fiber, Sprayed\* — (Optional, Not Shown — Not for use with Items 6, 6A or 6B). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft<sup>3</sup>.

INTERNATIONAL CELLULOSE CORP — Celbar-RL

6. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.
b. Steel Framing Members\* — Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommer. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

KINETICS NOISE CONTROL INC — Type Isomax

6A. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as

a. Furring Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

6B. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

PLITEQ INC — Type Genie Clip

6C. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured together with four self-tapping No. 8x1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Gypsum board attached to furring channels as described in Item 3. Side joint furring channels shall be attached to studs with RESILMOUNT Sound Isolation Clips located approximately 2 in. from each end of length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 16 in. OC., and secured to studs with No. 10  $\times$  2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7. Furring Channel — Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. Caulking and Sealants — (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

STC Rating — The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:
 A. Item 2, above — Nailheads Shall be covered with joint compound.

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets\* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members\* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.
 F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. Wall and Partition Facings and Accessories\* — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

1 Compatitions Backer Unite\* - (Ontional Item Not Shown - For Use On Face Of 1 Mr Systems With All Standard Items

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock QR-500 and QR-510

Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.

NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Non-Bearing Wall Partition Intersection** — (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. Mesh Netting — (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face

of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. Mineral and Fiber Board\* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. Oc. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14A. Mineral and Fiber Board\* — (Optional, Not Shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long fring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

HOMASOTE CO — Homasote Type 440-32

14B. **Glass Fiber Insulation** — (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets\*** — (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC. **THERMAFIBER INC** — Type SAFB

14D. Adhesive — (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. Gypsum Board\* — (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type FRPC, Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C - Type LGFC-C/A

**GEORGIA-PACIFIC GYPSUM L L C** — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

 $\mathbf{PANEL}\,\mathbf{REY}\,\mathbf{S}\,\mathbf{A}-\mathbf{Type}\,\,\mathbf{PRC}$ 

**THAI GYPSUM PRODUCTS PCL** — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

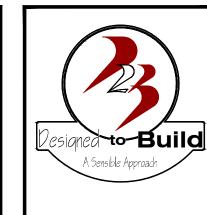
USG BORAL ZAWAWI DRYWALL L L C SFZ — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2016-07-14

ALL NOTES APPLY TO ALL DRAWINGS AND ALL TRADES. IT IS THI RESPONSIBILITY OF ALL CONTRACTORS AND TRADES TO COORDINATE THI INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY ALI OTHER CONTRACTORS AND TRADES. CONTRACTORS SHALL FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE REQUIREMENTS OI THE DRAWINGS, GENERAL REQUIREMENTS AND ALL CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS ANI TRADES. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS OI THE CONTRACT DOCUMENTS FOR HIS EMPLOYEES' USE ON THE PROJECTO ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLEI WITH THE WORK OF OTHER CONTRACTORS AND TRADES.

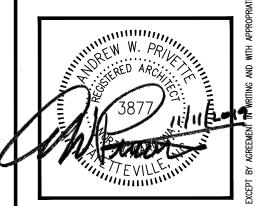


ANDREW W. PRIVETTE, AIA

1920 FT. BRAGG ROAD
FAYETTEVILLE,
NORTH CAROLINA 28303

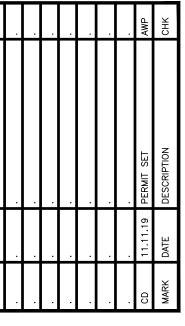
TELE. (910) 485-8567

andy@designedtobuild.com





SHOPPES AT SUMMIT
SHELL BUILDING
1625 BUFFALO LAKE RD
POUT SPRINGS/SANFORD, NORTH CAROLINA



JOB CODE: 19SUMMIT-SHELL
DRAWN BY: L. THAYER
CHECKED BY: A. PRIVETTE
COPYRIGHT:
DESIGNED TO BUILD

SHEET TITLE:
FIRE RATED ASSEMBLY
UL DESIGN NO. U305

PERMITTING STAMP:

G-102

#### GENERAL STRUCTURAL:

THE GOVERNING CODE IS NORTH CAROLINA BUILDING CODE (NCBC) 2018 EDITION AND/OR LOCAL COUNTY CODE AMMENDMENTS AND/OR ORDINANCES.

ANY REVISION INITIATED BY THE OWNER, GENERAL CONTRACTOR AND/OR THE SUBCONTRACTOR THAT DIRECTLY INFLUENCES OR CHANGES STRUCTURAL ELEMENTS INCLUDING, BUT NOT LIMITED TO FLOOR JOIST, BEAM OR HEADER SPANS; WALL HEIGHTS; BEAM OR HEADER SIZES; RELOCATION OF BEARING WALLS, FOOTING SIZES, ETC. AS INDICATED ON THESE DRAWINGS, ENGINEER OF RECORD SHALL BE NOTIFIED IN WRITING INDICATING THE PROPOSED CHANGES FOR REVIEW.

THESE DRAWINGS ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES. DIMENSIONS NOTED TAKE PRECEDENCE OVER SCALE.

ALL DIMENSIONS SHOWN ARE TO FACE OF STUD (F.O.S.), UNLESS OTHERWISE NOTED. DIMENSIONAL ADJUSTMENTS MAY INCLUDE, BUT ARE NOT LIMITED TO: CENTER LINE (C), FACE OF CONCRETE (F.O.C.) AND FACE OF MASONRY (F.O.M.)

COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE A KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS WHICH COULD AFFECT THEIR WORK.

IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS AND DRAWINGS REGARDING STRUCTURAL ISSUES, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES, SHALL BE REPEATED.

THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND CONSTRUCTION PROCEDURES, FABRICATION PROCESS, COORDINATION OF WORK WITH OTHER TRADES AND JOB SITE SAFETY. TEMPORARY BRACING, SHEATHING, SHORING, ETC., REQUIRED TO INSURE THE STRUCTURAL INTEGRITY/ STABILITY OF THE EXISTING BUILDINGS, SIDEWALLS, UTILITIES, ETC., DURING CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY.

#### **DESIGN LOADS**

|--|--|--|--|--|--|--|--|--|--|--|--|--|

ROOF LIVE LOAD	= 20 PSF
PRIVATE ROOMS	= 40 PSF
PUBLIC ROOMS AND CORRIDORS SERVING THEM	= 100 PSI
DECKS STAIRS AND EXITS DEAD LOAD (ACTUAL WEIGHTS WITH A MIN. OF)	= 100 PSF = 100 PSF = 15 PSF
GROUND SNOW LOAD (Pg)	= 10 PSF
EXPOSURE FACTOR (Ce)	= 1.00
THERMAL FACTOR (Ct)	= 1.00
IMPORTANCE FACTOR (I)	= 1.00

I'II OKTAWEL TACTOR (1)	- 1,00
ALLOWABLE DEFLECTION FACTOR FOR	
ROOF	
LIVE LOAD	= L/360
TOTAL LOAD	= L/240
FLOORS & DECKS	
LIVE LOAD	= L/480
TOTAL LOAD	= L/360
MEMBERS SUPPORTING MASONRY / BRICK	
LIVE LOAD	= L/600
TOTAL LOAD	= L/600
WIND LOAD	
ULTIMATE WIND SPEED	= 121 MPH (PER FIGURE 26.5-1A, ASCE 7-10)
EXPOSURE	= <i>C</i>

#### SEISMIC DATA

Ss = .241	S1 = .1026
SITE CLASSIFICATION	ON PERSUMPTIVE = D
Fa = 1.60	Fv = 2.39
Sms = .385	Sm1 = .245
CEICNIC DECICNICA	OFFE. Cdc = 257 Cda

SEISMIC DESIGN COEFF: Sds = .257 Sd1 = .163

SEISMIC DESIGN CATEGORY = C

SEISMIC FORCE RESISTING SYSTEM = LIGHT FRAME WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RESPONSE MODIFICATION COEFFICIENT(R) = 7 (AS PER ASCE 7-10, TABLE 12.2-1)

Cs = .0395

ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE

LATERAL DESIGN CONTROL = WIND

#### CONCRETE

ALL CONCRETE FOR FOOTINGS, FOUNDATION WALLS, RETAINING WALLS, AND FLOOR SLABS ON GRADE SHALI ATTAIN A MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTH AS FOLLOWS:

FOUNDATION WALLS, FOOTINGS AND GRADE SLABS : 3,000 PSI BASEMENT SLABS AND SLABS EXPOSED TO WEATHER : 3,000 PSI

ALL CONCRETE EXPOSED TO THE WEATHER AND SUBJECT TO FREEZING AND THAWING IN A MOIST WET CONDITION OR DEICING CHEMICALS SHALL BE AIR ENTRAINED, THE TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 5 PERCENT (5%) OR MORE THAN 7 PERCENT (7%) & MAXIMUM WATER CEMENT RATIO OF 0.45.

LOCATION OF CONCRETE		MAXIMUM SIZE OF AGGREGATE	SLUMP	MAXIMUM WATER/CEMENT RATIO BY WGT.
FOUNDATIONS (GRADE BEAMS & FOOTINGS)	3000 PSI	1 1/2 "	3"±1"	0.59 (0.46)
SLABS ON GRADE	3000 PSI	1"	4"±1/2"	0.48 (0.48)

ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED AND KEYS PROVIDED WHERE REQUIRED OR INDICATED ON THE DRAWINGS. CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, MAY BE PROPOSED BY THE CONTRACTOR. HOWEVER, THE LOCATIONS ARE SUBJECT TO REVIEW BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER. ALL VERTICAL CONSTRUCTION, CONTROL AND CONTRACTION JOINTS SHALL LIE IN TRUE VERTICAL PLANE.

ALL FORMWORK AND PLACING OF CONCRETE SHALL BE PLUMB, LEVEL, AND SQUARE. THE STRUCTURAL ENGINEER SHALL REVIEW AND APPROVE ANY PROPOSED FORMWORK DESIGN DIFFERENT FROM INDUSTRY STANDARD PRACTICES.

EXTERIOR SLAB AREAS SHALL BE BROOM FINISHED, UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. THE STROKES SHALL MAINTAIN THE SAME DIRECTION AT ADJACENT SURFACES. NO RIPPLES, BUMPS, OR ANY OTHER IRREGULARITIES WILL BE ACCEPTABLE

CONTRACTOR IS RESPONSIBLE FOR SUBMITTING CONCRETE MIX DESIGNS TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF ANY CONCRETE.

CONTRACTOR SHALL LOCATE CONTROL JOINTS AS REQUIRED (MAXIMUM SPACING IN ANY DIRECTION SHALL NOT EXCEED 12'-O".) REFER TO DETAILS

#### REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60 OR BETTER. ALL REINFORCING BAR DIMENSIONS SHOWN ON THE DRAWINGS ARE TO THE CENTER LINE OF BARS, UNLESS OTHERWISE NOTED. ALL CONCRETE AND REINFORCING STEEL SHALL BE FURNISHED, FABRICATED AND ERECTED IN ACCORDANCE WITH ACI STANDARD BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE STRUCTURES, (ACI 318-14). REINFORCED STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315).

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE CLEAR CONCRETE COVER PROVIDED FOR REINFORCEMENT SHALL BE:

A.	CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH	:	3"	
В.	EXPOSED TO EARTH OR WEATHER #6 THROUGH #18 BARS #5 BARS AND SMALLER	: :	2" 1.5"	
С.	NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND (SLABS AND WALLS)	:	0.75"	
D.	BEAMS, GIRDERS, COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	:	1.5"	

STEEL REINFORCING REQUIREMENTS IN CONCRETE FLOOR SLABS SHALL BE AS REQUIRED BY CODE AND/OR LOCAL JURISDICTIONS, OR PER SITE CONDITIONS.

#### TABLE 1-MINIMUM REINFORCING BAR LAP SPLICE AND ANCHORAGE DIMENSIONS TABLE

TABLE FOR A615 GI	RADE 60 - UNCOATED	REINFORCING			
	TOP E	BARS	OTHER BARS		
BAR SIZE	LAP (INCHES)	ANCHOR (INCHES)	LAP (INCHES)	ANCHOR (INCHES)	
#3	18	14	16	12	
#4	26	20	20	15	
#5	40	31	31	24	
#6	57	44	44	34	

WHEN LAPPING TWO DIFFERENT SIZE BARS, USE THE LAP DIMENSION OF THE SMALLER BAR OR THE ANCHORAGE DIMENSION OF THE LARGER BAR. USE WHICHEVER DIMENSION IS LARGER.

TOP BARS SHALL BE DEFINED AS BEAM AND SLAB HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE TOP REINFORCEMENT. HORIZONTAL REINFORCING IN WALLS SHALL BE CONSIDERED AS TOP BARS.

#### STRUCTURAL STEEL

HIGH STRENGTH BOLTS

ALL STEEL SHALL BE ASTM, A-992 MINIMUM, Fy=50 KSI UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL CONNECTIONS SHALL BE WELDED OR BOLTED. SHOP AND FIELD FASTENERS SHALL BE ASTM A-325 HSB (HIGH STRENGTH BOLTS). IN FRICTION TYPE CONNECTIONS USE "TURN-OF-NUT" METHOD IN TIGHTENING ALL BOLTS.

HOLES SHALL NOT BE CUT THROUGH BEAMS UNLESS INDICATED OR APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE STANDARD ANGLE WALL ANCHORS FOR BEAMS RESTING ON MASONRY.

STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST AISC MANUAL. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:-

W SHAPE BEAM AND COLUMNS : A992-GR50 (Fy = 50 KSI)STEEL PLATE, CHANNELS AND ANGLES : A36 (Fy = 36 KSI) STRUCTURAL PIPES AND TUBES : A500-GRADE "B" (Fy = 46 KSI)ANCHOR BOLTS : A307

BOLTED CONNECTIONS TO USE A325-TYPE N, HIGH STRENGTH BOLTS IN BEARING TYPE CONNECTIONS TIGHTENED TO A SNUG TIGHT CONDITION IN ACCORDANCE WITH RCSC SPECIFICATIONS.

BOLTS IN MOMENT CONNECTIONS SHALL BE ASTM A325-TYPE SC (SLIP CRITICAL). SLIP CRITICAL CONNECTIONS SHALL HAVE CONTACT SURFACES MEETING CLASS A SURFACE CONDITIONS BOLTS SHALL BE TENSIONED.

: A325

SHOP CONNECTIONS TO BE WELDED OR BOLTED. FIELD CONNECTIONS TO BE BOLTED UNLESS OTHERWISE SHOWN. BOLT HOLES TO BE STANDARD ROUND HOLES (d+1/16") UNLESS OTHERWISE NOTED. SHORT SLOTS SHALL BE PERMITTED NORMAL TO THE LOAD DIRECTION IN SLIP CRITICAL AND BEARING TYPE CONNECTIONS AS PER AISC REQUIREMENTS.

ALL WELDING WORK SHALL BE PERFORMED PER SPECIFICATIONS AND GUIDELINES OF AMERICAN WELDING

### STRUCTURAL LUMBER

STRUCTURAL LUMBER SHALL BE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) 2005 EDITION, PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION. ALL STRUCTURAL FRAME MEMBERS SHALL BE AS FOLLOW. UNLESS OTHERWISE NOTED:

#### SYP #2 (HEADERS & BEAMS)

Fb	BENDING	: 975 psi
Ft	TENSION (parallel to grain)	: 550 psi
Fv	SHEAR (parallel to grain)	: 175 psi
Fc ⊥	COMPRESSION (perpendicular to grain)	: 565 psi
Fc	COMPRESSION (parallel to grain)	: 1450 psi
Ε	MODULUS OF ELASTICITY	: 1,600,000 psi
Emin.	MODULUS OF ELASTICITY	: 580,000 psi
SPF STUL	O GRADE (POSTS & STUDS)	

Fb	BENDING	: 675 psi
Ft	TENSION (parallel to grain)	: 350 psi
Fv	SHEAR (parallel to grain)	: 135 psi
Fc ⊥	COMPRESSION (perpendicular to grain)	: 425 psi
Fc	COMPRESSION (parallel to grain)	: 725 psi
E	MODULUS OF ELASTICITY	: 1,200,000 psi

: 440,000 psi

#### DESIGN PROPERTIES FOR: MICROLLAM LVL (BEAM)

MODULUS OF ELASTICITY

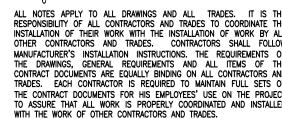
GRADE	= 1.9E	
Fb	BENDING	: 2,600 psi
Fv	SHEAR (parallel to grain)	: 285 psi
Fc 1	COMPRESSION (perpendicular to grain)	: 750 psi
Fc	COMPRESSION (parallel to grain)	: 2510 psi
Ε	MODULUS OF ELASTICITY	: 1,900,000 ps

## GRADE = 2.0E

PARALLAM PSL (BEAM)

Fb	BENDING	: 2,900 psi
Fv	SHEAR (parallel to grain)	: 290 psi
Fc _	COMPRESSION (perpendicular to grain)	: 750 psi
Fc	COMPRESSION (parallel to grain)	: 2,900 psi
Ε	MODULUS OF ELASTICITY	: 2,000,000 psi

ALL WOOD SHALL BE MINIMUM 8" ABOVE FINISH GRADE, OR SHALL BE PRESSURE TREATED.



WHERE INDICATED ON THE DRAWINGS ENGINEERED FLOOR "I" JOISTS SHALL BE MANUFACTURED BY WEYERHAEUSER TRUSS JOISTS. PRIOR TO ORDERING THE GENERAL CONTRACTOR SHALL ACQUIRE SHOP DRAWINGS FROM THE FLOOR JOIST MANUFACTURER AND SUBMIT THEM TO ENGINEER OF RECORD IN A TIMELY MANNER FOR REVIEW PRIOR TO ORDERING. IN THE EVENT THE GENERAL CONTRACTOR FAILS TO SUBMIT SHOP DRAWINGS TO STRUCTURAL ENGINEER THE GENERAL CONTRACTOR AND THE FLOOR JOIST MANUFACTURER SHALL BEAR ALL DESIGN, PERFORMANCE AND LEGAL RESPONSIBILITIES OF THE FLOOR SYSTEM(S) AND HOLD STRUCTURAL ENGINEER HARMLESS.

PROVIDE 3/4" TONGUE AND GROOVE PLYWOOD (APA 24/16 RATED STRUCT-I-FLOOR) GLUED AND NAILED TO THE FLOOR JOISTS TO MEET THE AMERICAN PLYWOOD ASSOCIATION (APA) APPROVED GLUED FLOOR SYSTEM, UNLESS OTHERWISE SPECIFIED.

LUMBER EXPOSED TO THE ELEMENTS, MASONRY INCLUDING BUT NOT LIMITED TO: POSTS, BEAMS, DECKING, DECK, FRAMING LEDGERS, ETC. SHALL BE PRESSURE TREATED.

REQUIRED POST SIZES FROM POINT LOADS AT GIRDER TRUSS BEAM AND/OR HEADER END LOCATIONS SHALL BE CONTINUOUS, BEARING ONTO BEAMS OR CONTINUOUS TO FOOTINGS AS INDICATED. PROVIDE SQUASH BLOCKS BETWEEN FLOOR FRAMING AS NECESSARY OR REQUIRED.

STRUCTURAL CONNECTORS INDICATED ON THESE DOCUMENTS SHALL BE PROVIDED BY SIMPSON STRONG-TIE COMPANY, INC., PROVIDE JOIST HANGERS AT EACH END OF ALL FLOOR JOISTS, AND/OR BEAMS FLUSH WITH ADJACENT BEAMS, HEADERS. PROVIDE COLUMN CAPS AND POST BASES AT ALL STRUCTURAL LOAD BEARING WOOD BEAMS.

STRUCTURAL MEMBERS INDICATED ARE REQUIRED MINIMUM SIZES AND MAY BE INCREASED TO ALIGN WITH ADJACENT FRAMING MEMBERS AS NECESSARY OR REQUIRED WITHOUT ADDITIONAL STRUCTURAL ENGINEERING AT THE GENERAL CONTRACTOR/OWNER'S DISCRETION.

#### PREFABRICATED WOOD TRUSSES

ALL PREFABRICATED WOOD TRUSSES SHALL BE SECURELY FASTENED TO THEIR SUPPORTING WALLS OR BEAMS WITH HURRICANE CLIPS OR ANCHORS. CLIPS OR ANCHORS TO BE SPECIFIED BY ENGINEER OF RECORD BASED ON REVIEW OF TRUSS SHOP DRAWINGS.

PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENERS" AS RECOMMENDED BY THE AMERICAN FOREST AND PAPER ASSOCIATION.

TRUSSES SHALL BE DESIGNED TO SUPPORT THE INDICATED DESIGN LOADS PLUS THE SELF-WEIGHTS OF THE TRUSSES.

TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND DESIGN NOTES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT'S JURISTICTION. DESIGN NOTES SHALL INCLUDE THE RATED LOAD CAPACITY OF THE CONNECTORS USED TO CONNECT THE TRUSS MEMBERS AT THE PANEL POINTS, CERTIFICATION OF THE CONNECTOR CAPACITIES AND THE MANUFACTURER'S LICENSE VERIFYNG THAT ARE CERTIFIED TO MANUFACTURE THE TRUSSES UTILIZING THE PROPOSED TRUSS CONNECTOR SYSTEM.

THE CONTRACTOR SHALL REVIEW ALL TRUSS FABRICATION AND INSTALLATION DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT AND PRIOR TO FABRICATION.

TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING SHALL BE DESIGNED BY THE TRUSS MANUCATURER'S ENGINEER. ALL BRACING AND BRIDGING SHALL BE INDICATED ON THE TRUSS INSTALLATION DRAWINGS.

THE CONTRACTOR SHALL KEEP TWO COMPLETE SETS OF THE REVIEWED TRUSS SHOP DRAWINGS AND CALCULATIONS ON THE JOB SITE. ONE SET OF THESE DRAWINGS SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR FOR FRAMING INSPECTION.

TRUSSES SHALL BE DESIGNED TO SUPPORT ALL SPECIFIED AND INDICATED LOADS IN ACCORDANCE WITH THE LOAD COMBINATIONS IN THE BUILDING CODE. THE TRUSS MANUCACTURER SHALL LACATE AND COMPUTE THE MAGNITUDES OF ALL SNOW DRIFT LOADS. THE TRUSS MANUFACTURER SHALL LOCATE AND COMPUTE AND ACCOUNT FOR ALL ADDITIONAL LOADS AND REACTIONS FROM ALL OVER-FRAMING AND PIGGY-BACK TRUSSES CONNECTED TO OR BEARING UPON OTHER SUPPORTING TRUSSES.

#### HANGER SCHEDULE U.N.O.

HANGER SCHI	EDULE
SIZE	HANGER
2x6 thru 2x12	LB
4x6 thru 4x14	HUSTF
4x16	HUTF
TJI	ITT
3 <sup>1</sup> / <sub>2</sub> " & 5 <sup>1</sup> / <sub>4</sub> "xPSL OR LV	L GLTV
7"x PSL OR LVL	HGLTV

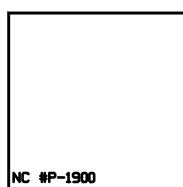
NOTES:

- 1. PROVIDE SKEWED, SLOPED HANGERS AS REQ'D.
- 2. USE HANGERS SHOWN ON SCHED. U.N.O. ON PLANS. 3. WHEN HANGERS ARE EXPOSED TO WEATHER OR IN CONTACT OF
- TREATED LUMBER USE "Z" GALVNIZED CONNECTIONS.

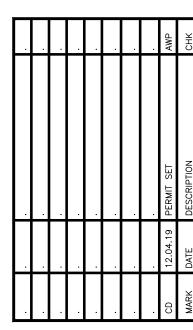
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ANDREW W. PRIVETTE, AIA 1920 FT. BRAGG ROAD FAYETTEVILLE, NORTH CAROLINA 28303 TELE. (910) 485-8567 andy@designedtobuild.com

KIRK M. EDMONDS, P.E. LLC P.O. BOX 6 MURRELLS INLET S.C. 29576 843-437-7131 KEDMONDS.PE@GMAIL.COM



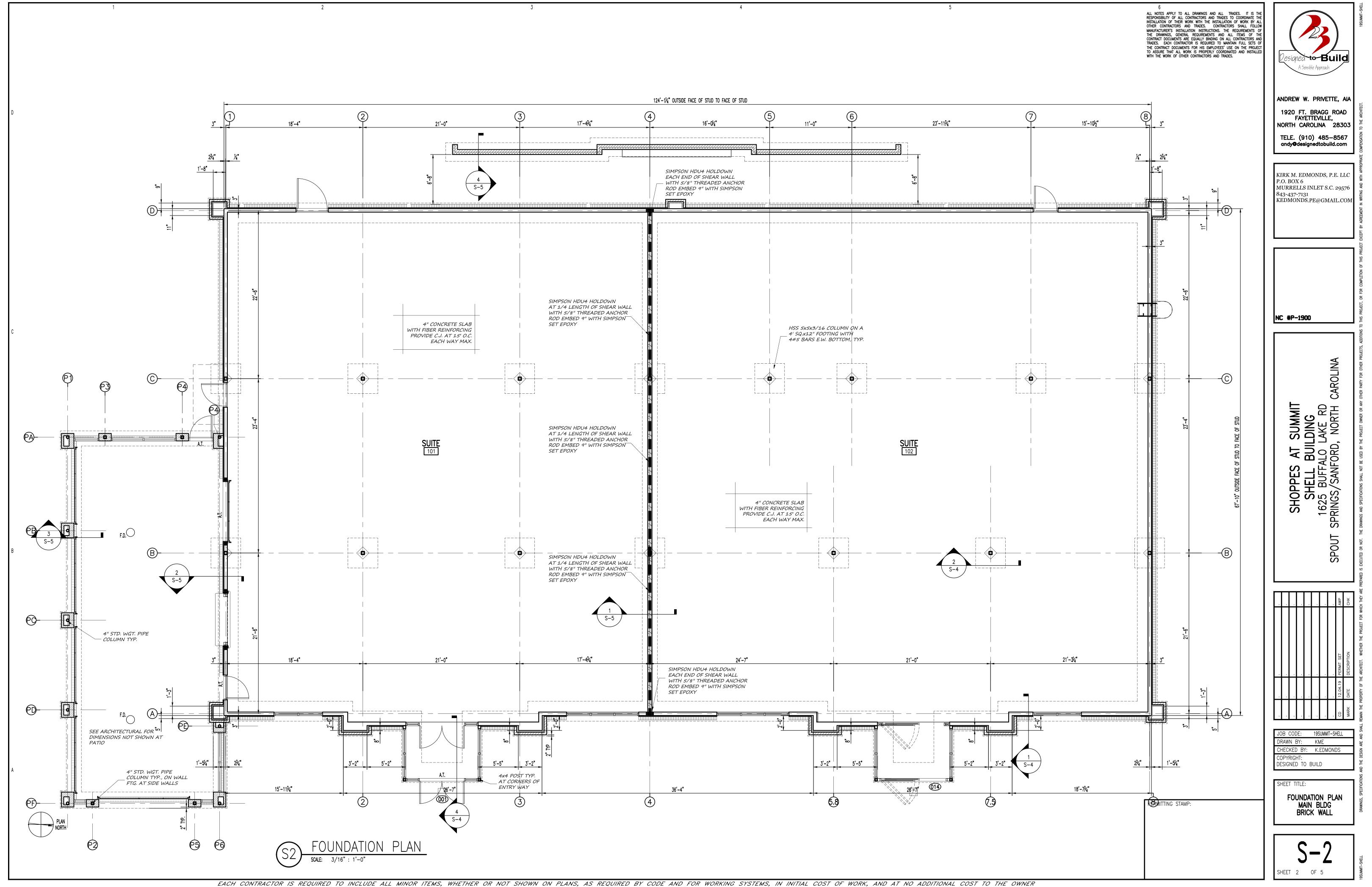
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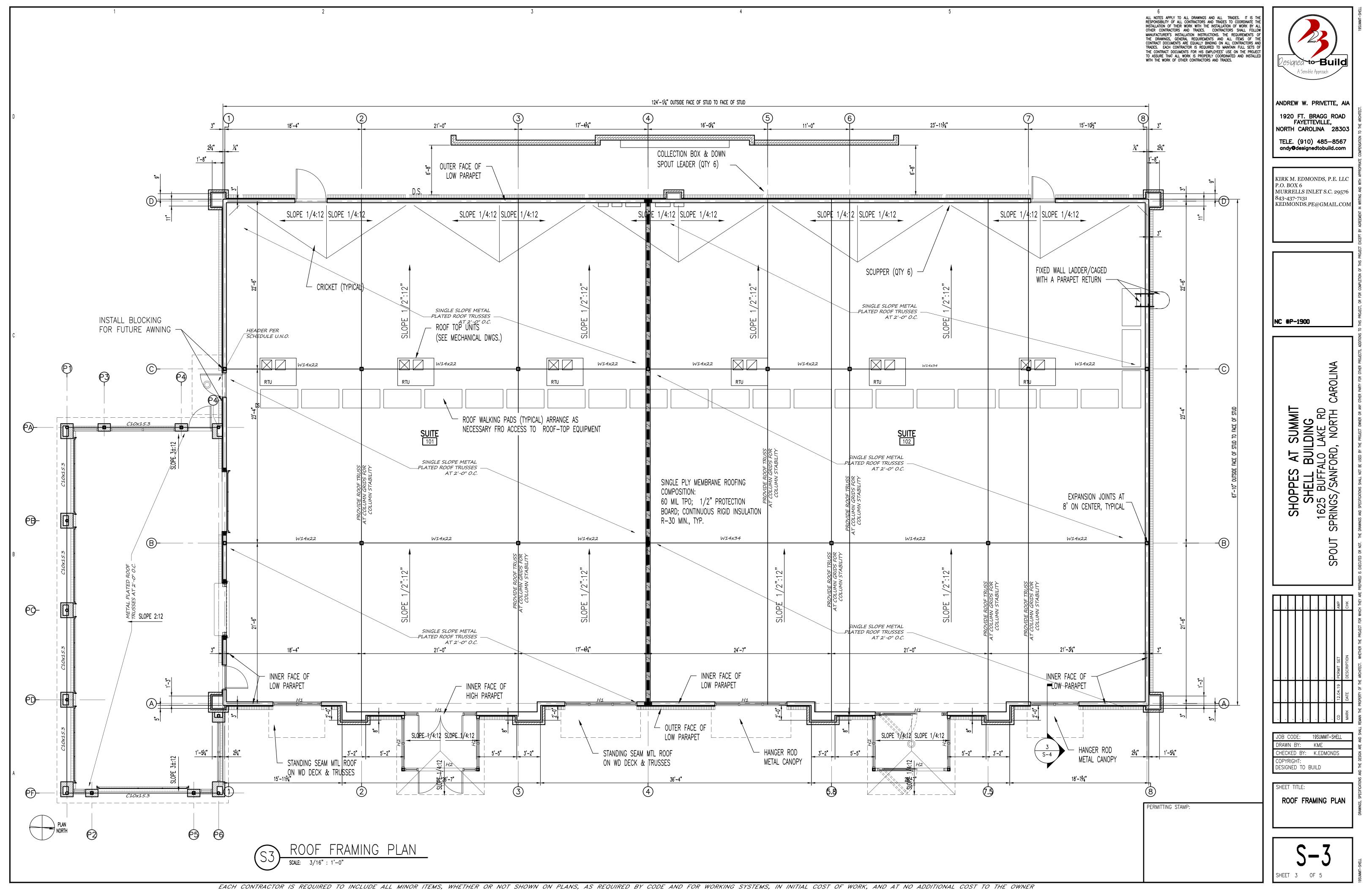


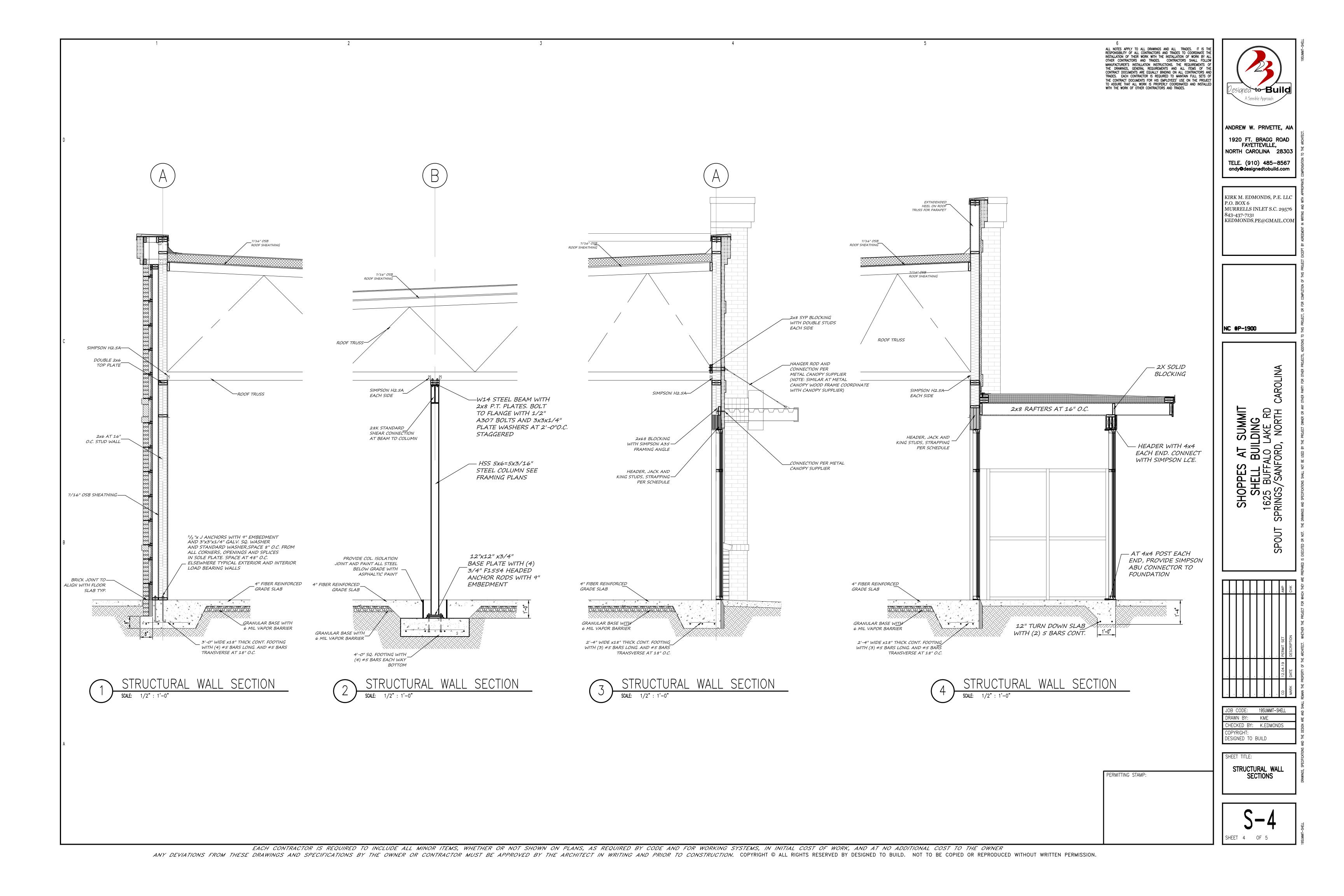
JOB CODE: 19SUMMIT-SHELL DRAWN BY: KMF CHECKED BY: K.EDMONDS DESIGNED TO BUILD

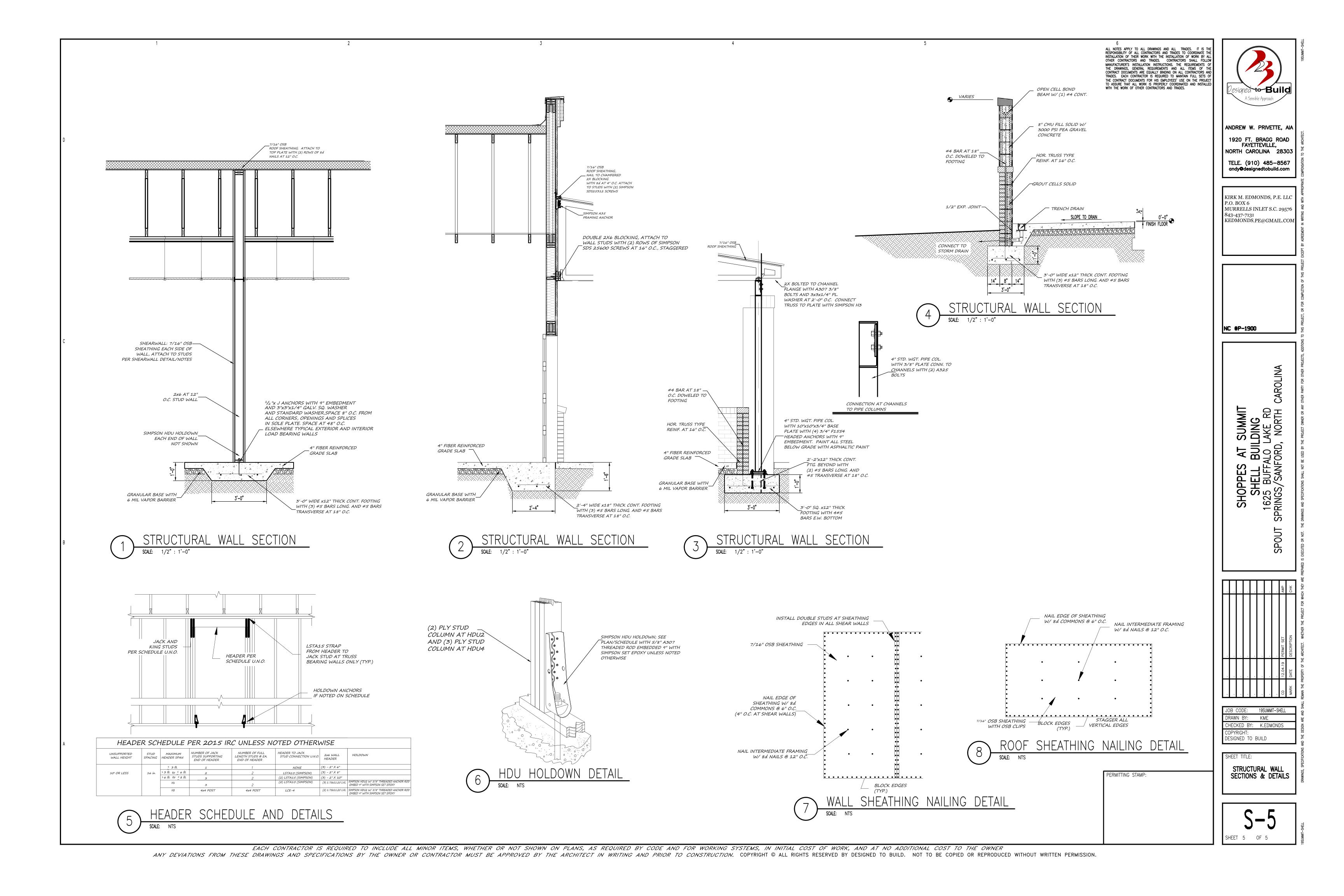
STRUCTURAL NOTES

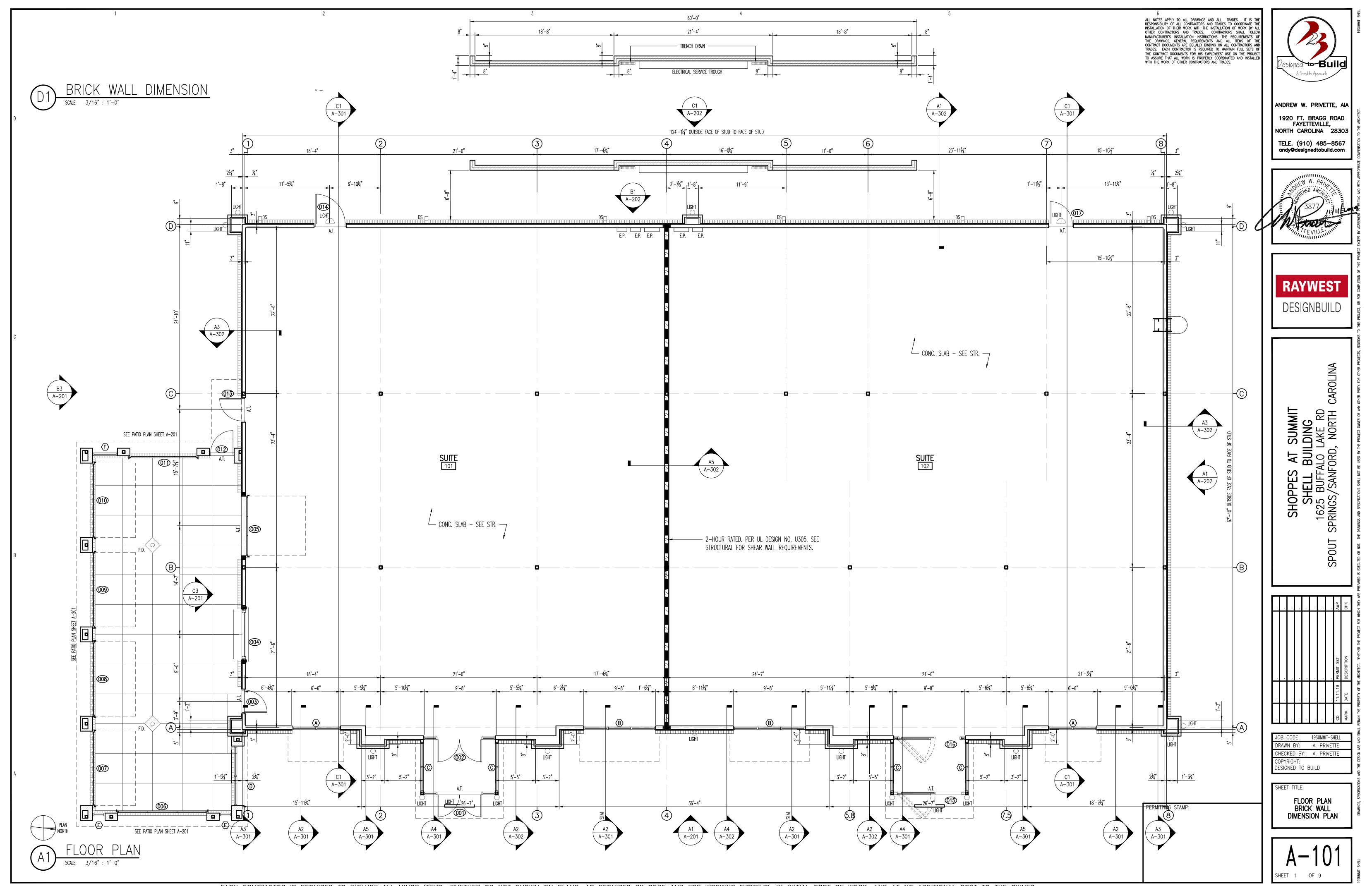
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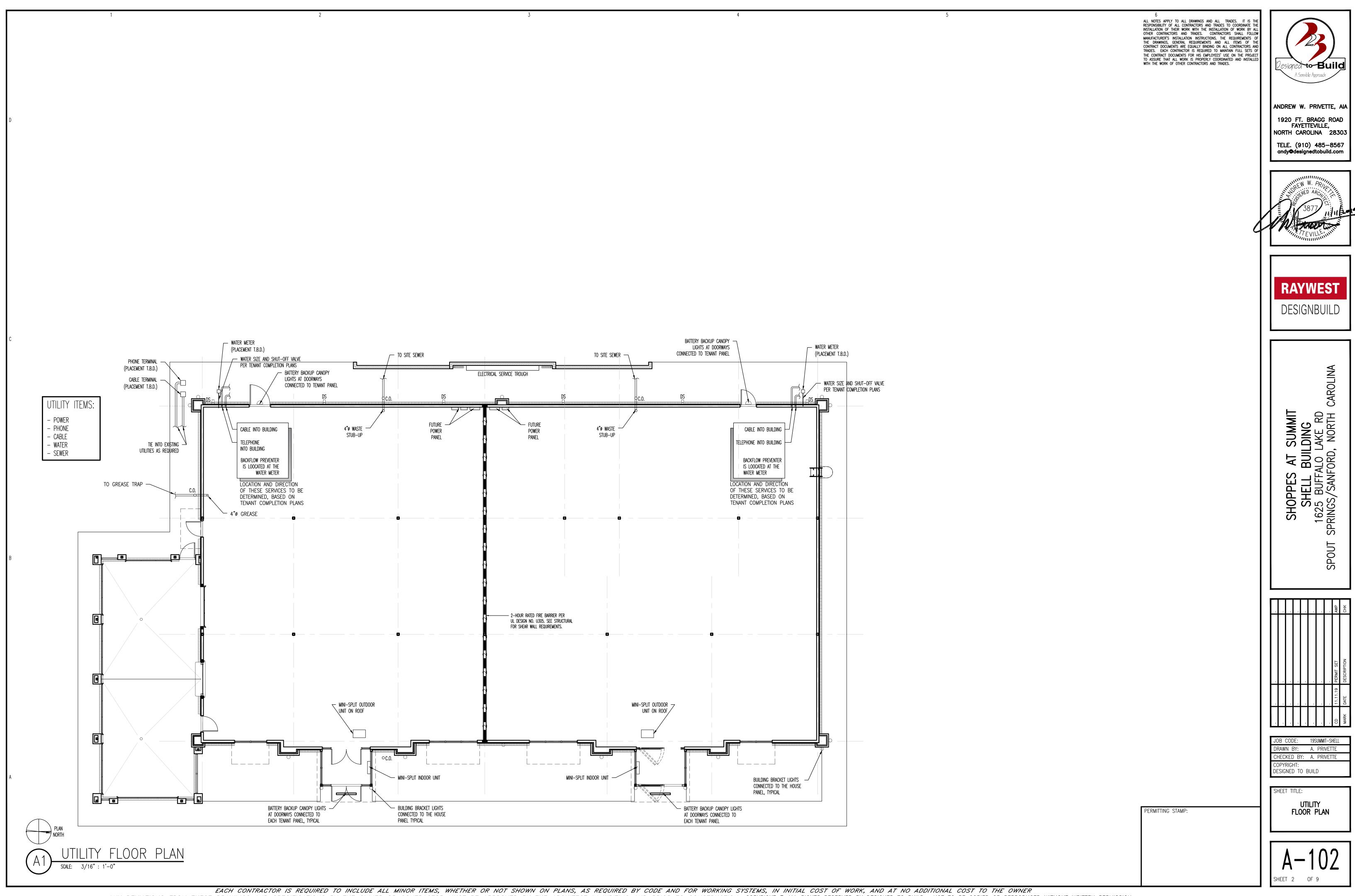


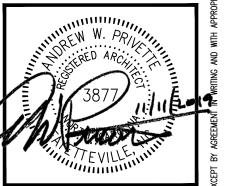


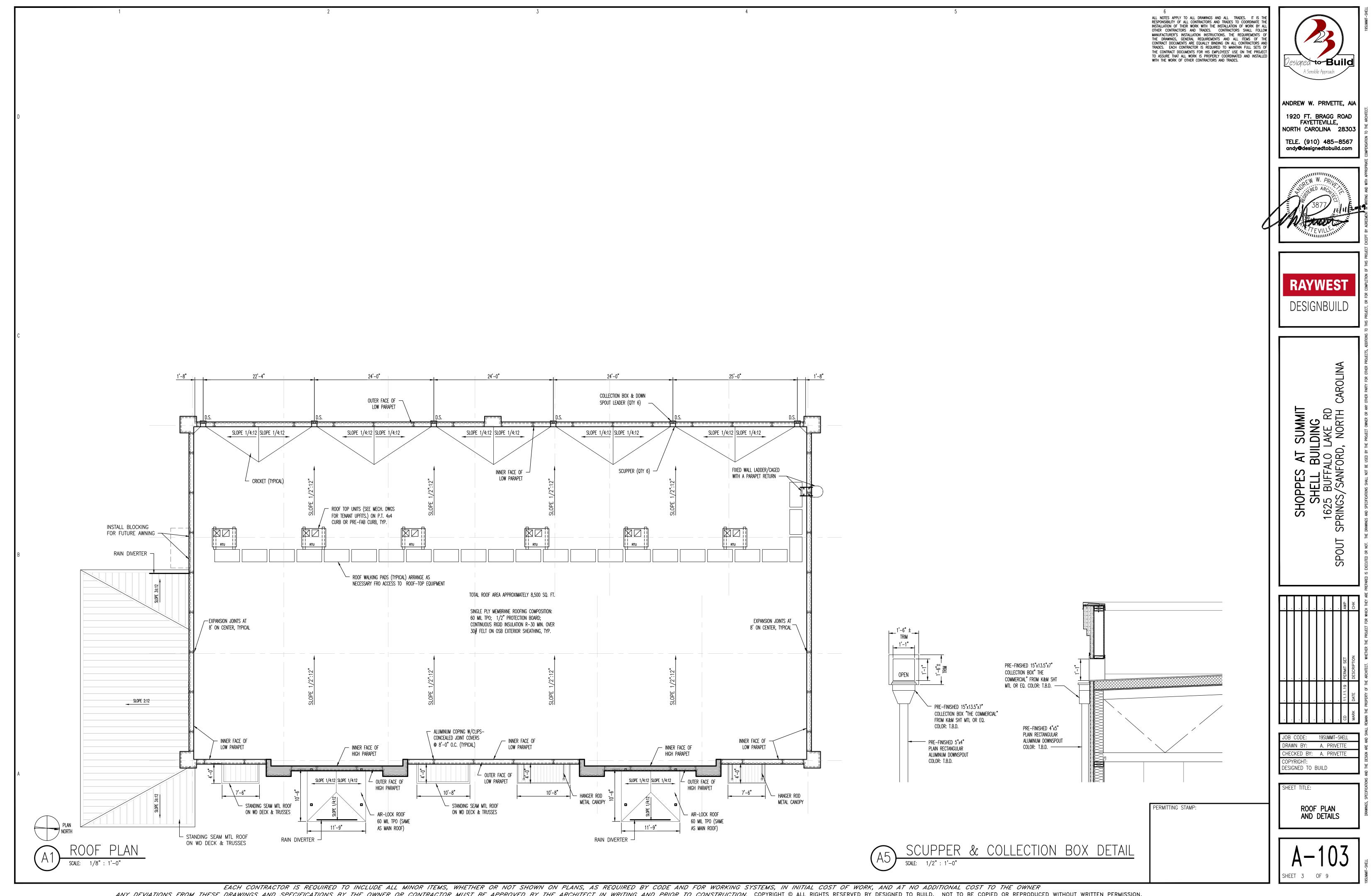


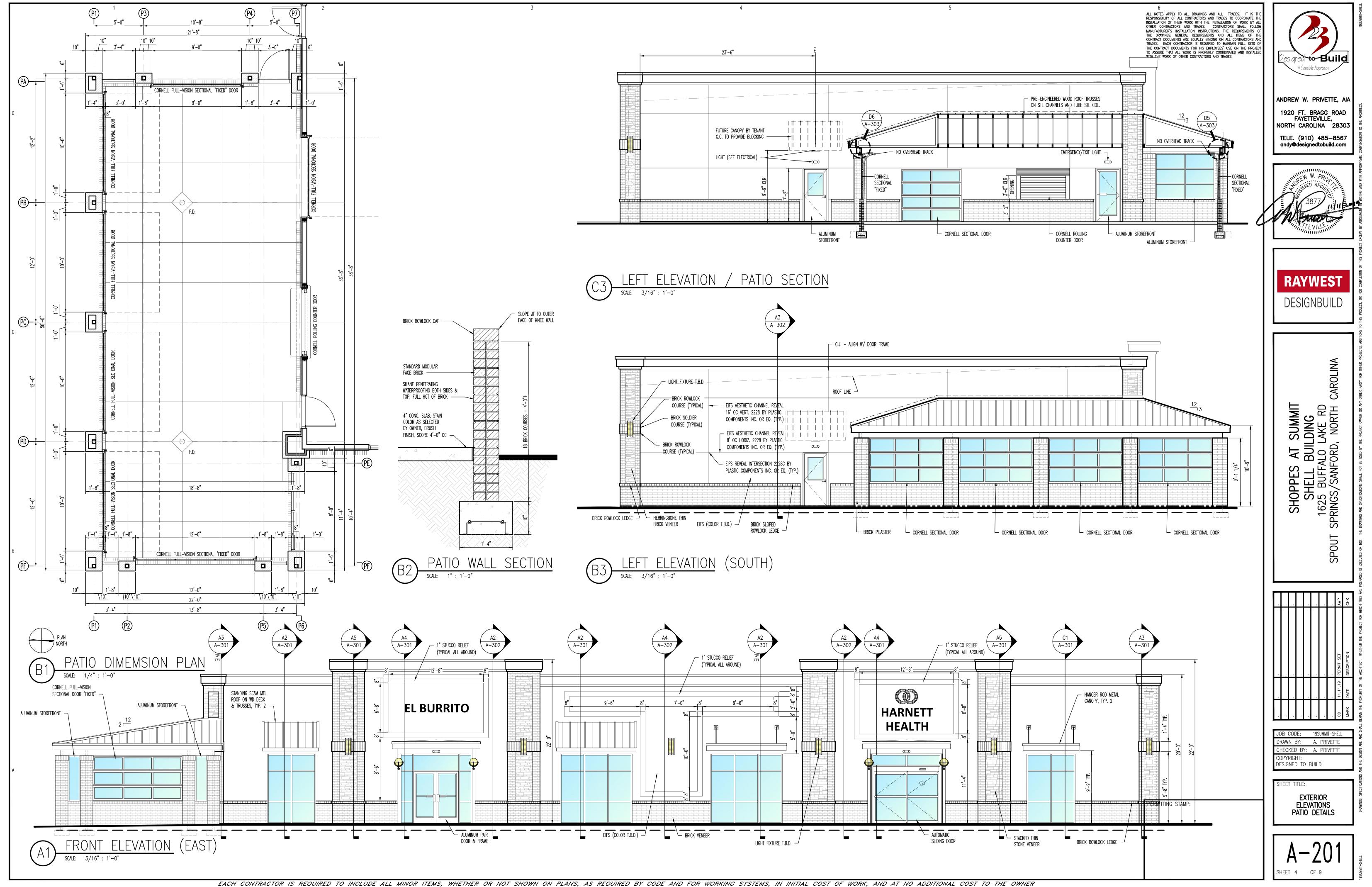


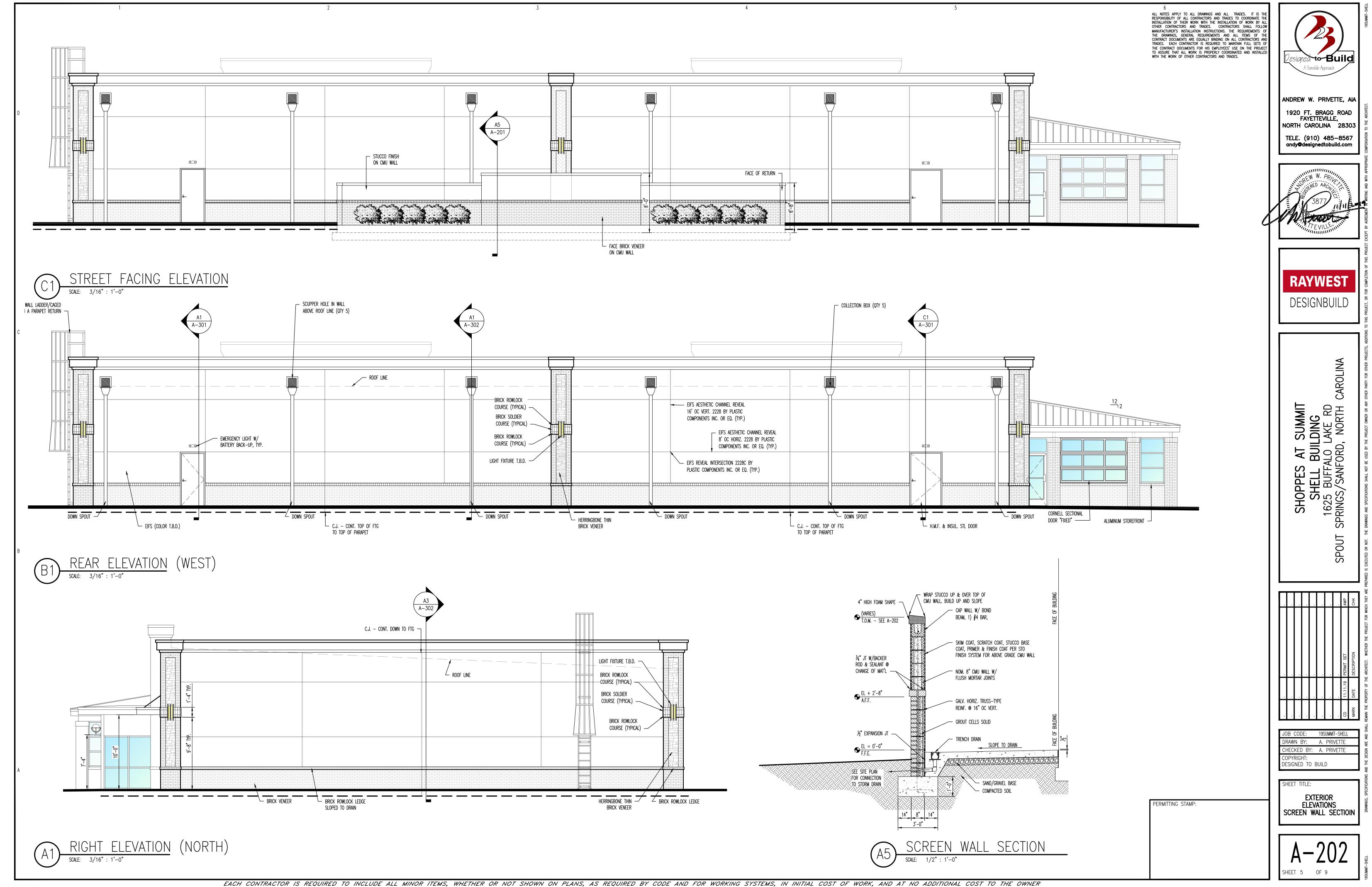


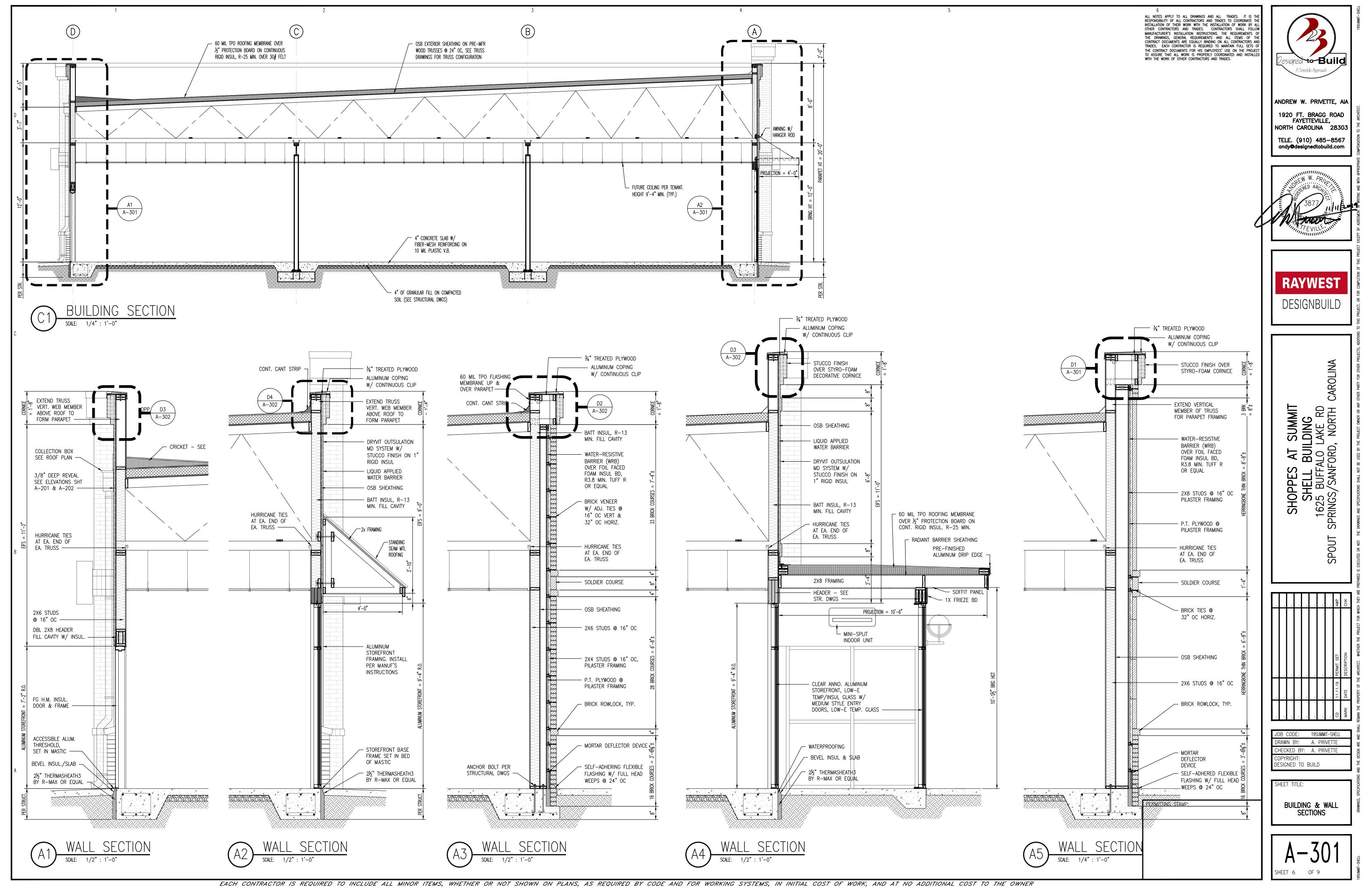


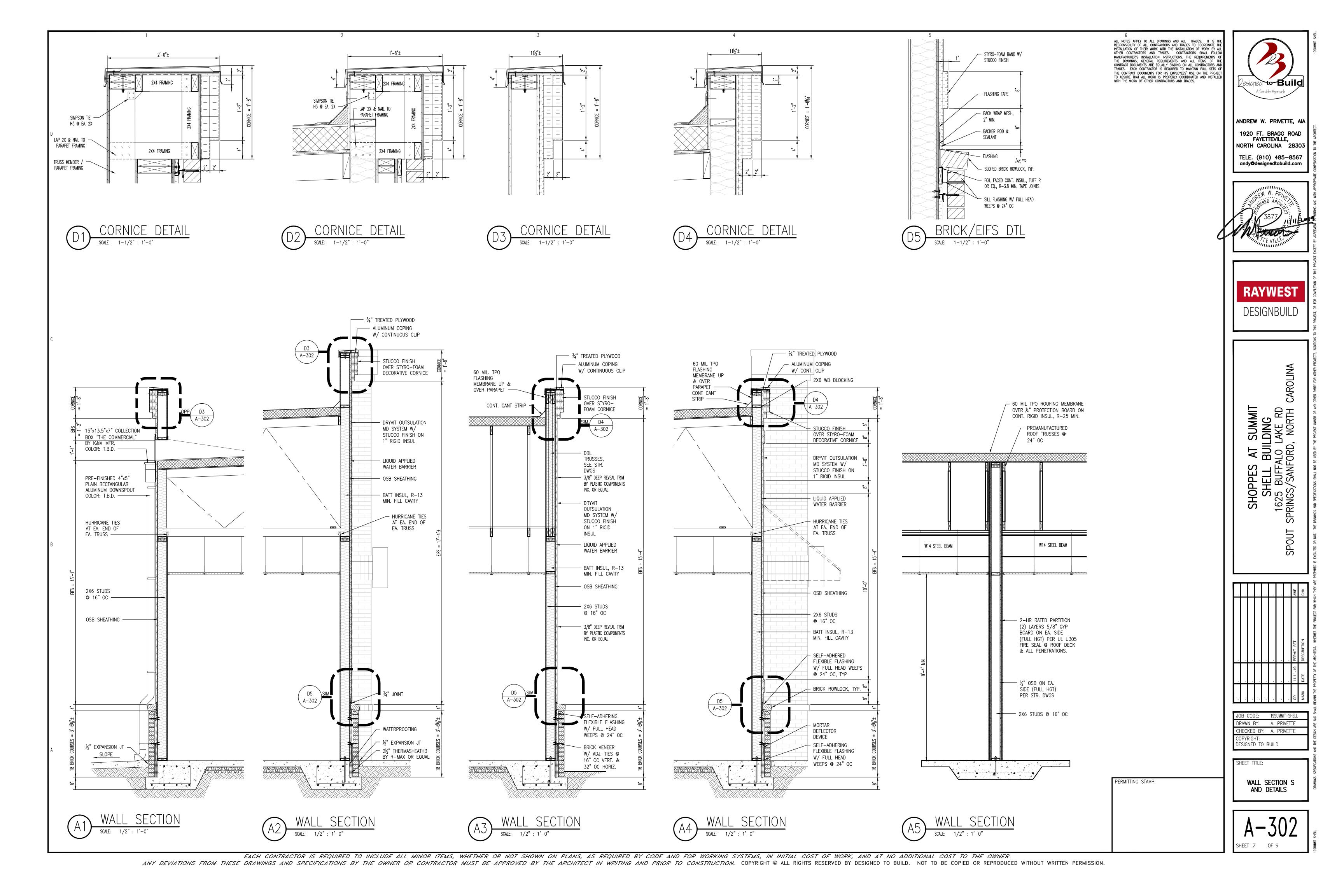


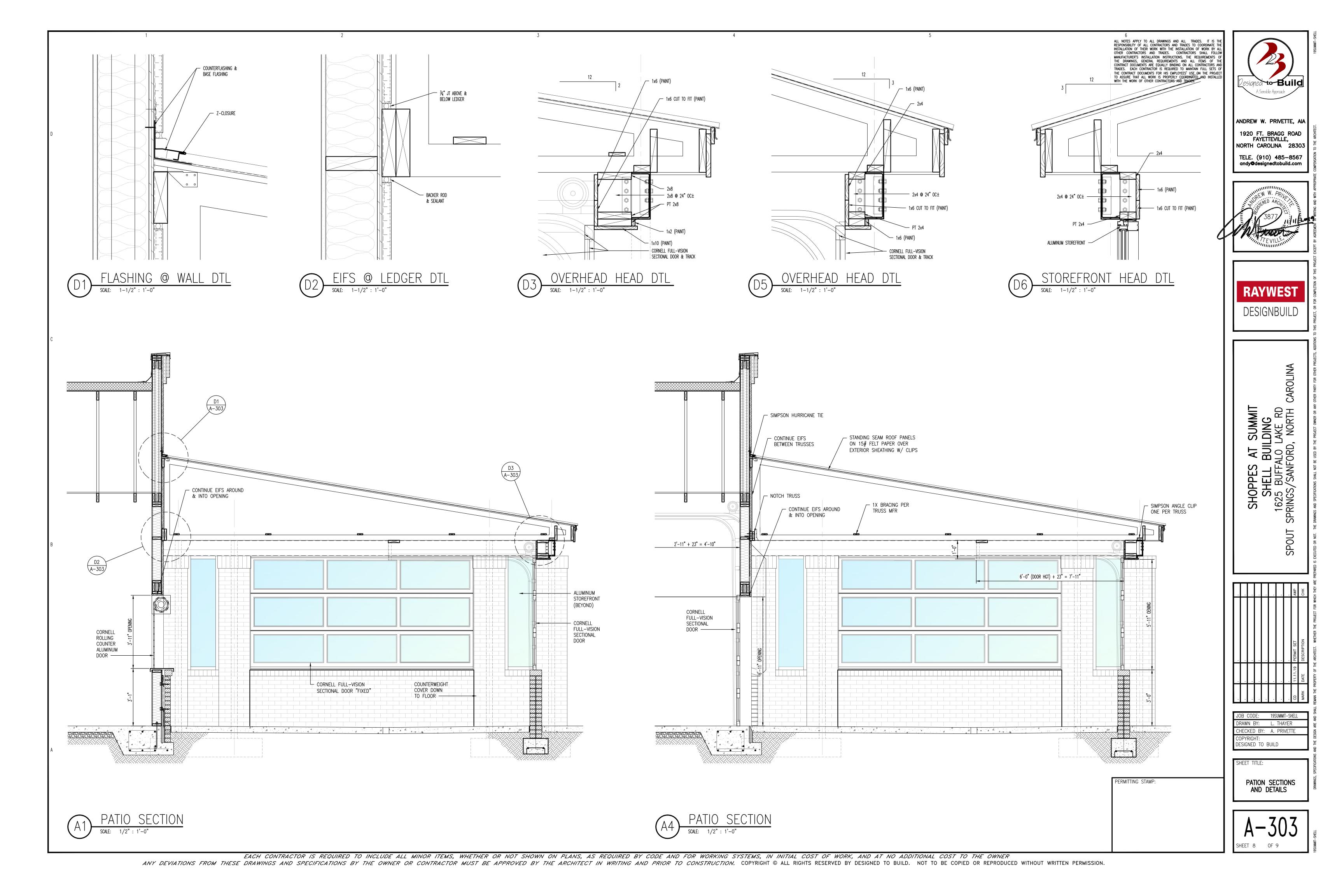


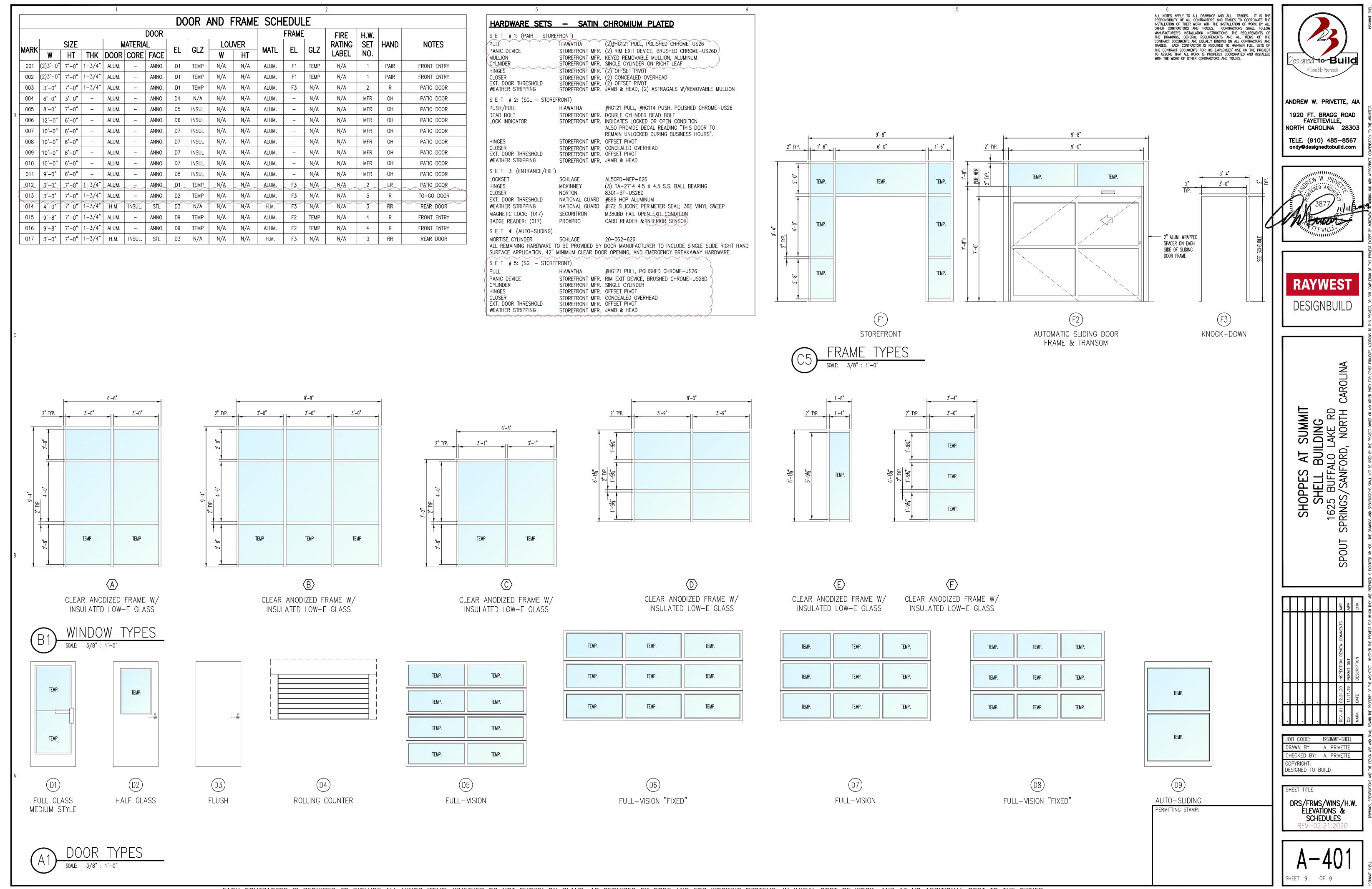


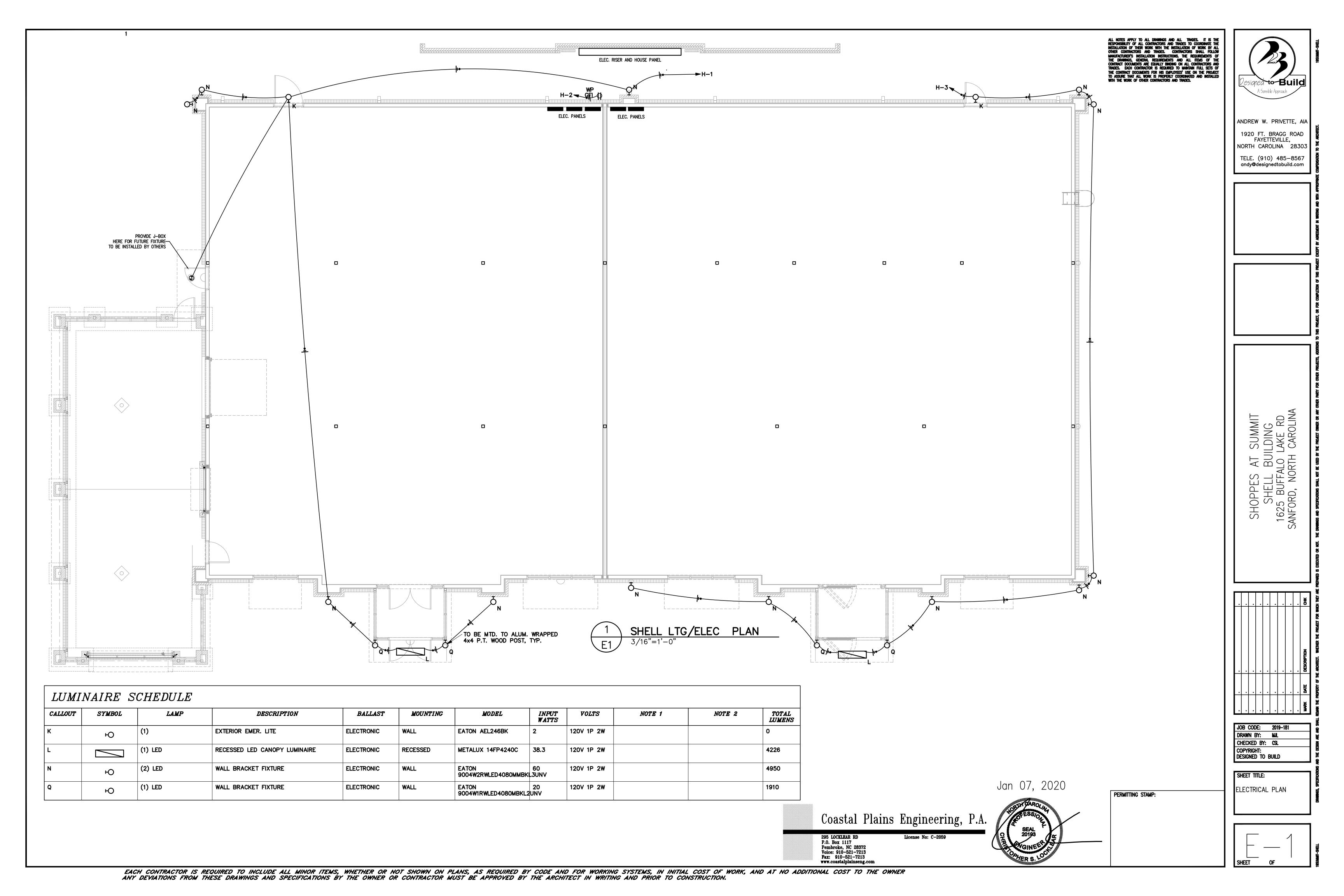


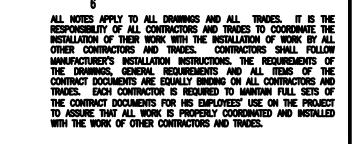












ANDREW W. PRIVETTE, AIA

1920 FT. BRAGG ROAD

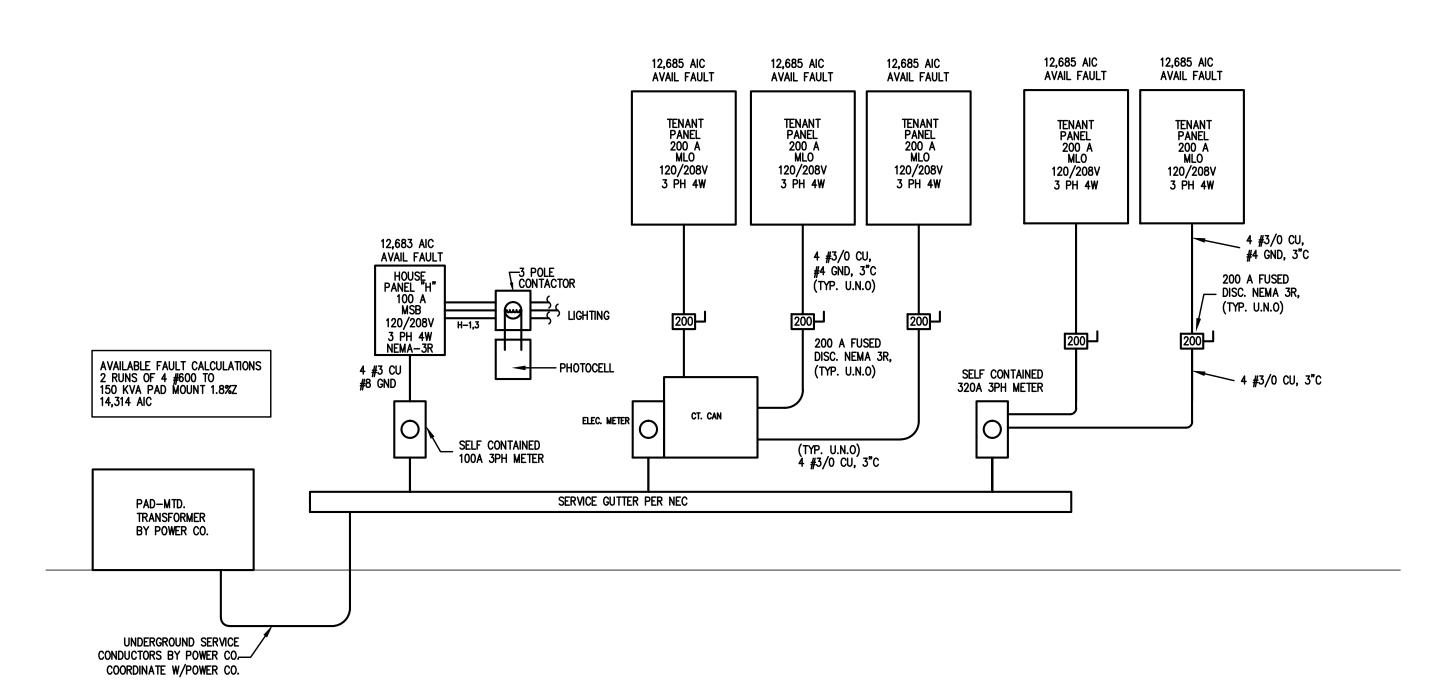
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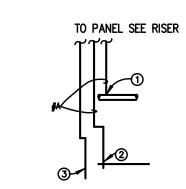
TELE. (910) 485-8567 andy@designedtobuild.com

SHOPPES A SHELL B 1625 BUFFALC ANFORD, NORT

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FAYETTEVILLE,





#### TYPICAL GROUNDING

## GROUNDING ELECTRODE DETAILS

GROUNDING ELECTRODE CONDUCTORS SHALL BE #4 BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC

3 3/4"x10' LONG COPPER CLAD GROUNDING ROD W/ #6 COPPER ① CONNECT TO METALIC WATER PIPE AS REQ'D.

2) #A COPPER GROUND PLACED TO BLDG STEEL

A=#4 CU TENANT PANELS A=#8 CU HOUSE PANEL

A=#3/0 CU GUTTER

**ELECTRIC RISER** 

CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR SERVICE. A COMPLETE AND WORKING SYSTEM IS REQUIRED FOR COMPLIANCE WITH THESE DOCUMENTS. DETERMINE THE POINT OF CONNECTION TO THE UTILITY WITH THE UTILITY REPRESENTATIVE AND PROVIDE ACCORDINGLY FOR A COMPLETE WORKING SYSTEM.

WIRE AND CABLE SHALL BE INSULATED, TYPE THWN OR THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTORS SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED. NO ROMEX PERMITTED.

EMT SHALL BE GALVANIZED STEEL TUBING, 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS.

PLASTIC CONDUIT SHALL BE RIGID, 3/4—INCH MINIMUM NON—METALLIC, HEAVY DUTY, HIGH IMPACT, POLYVNYLCHLORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2— INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH 72 INCHES FOR LIGHTING AND 36" FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUIDTIGHT OR WATERTIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUIDTIGHT OR WATERTIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TEL. OUTLETS TO BE MOUNTED BACK TO BACK, KEEP AT LEAST 2 INCHES BETWEEN RECEPTACLES AND TEL. OUTLETS.

ALL CONDUCTOR SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA.

CONTRACTOR SHALL ALIGN FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. AT NO TIME WILL AN IONIZATION DETECTOR BE LOCATED WITHIN 3'-0" OF A SUPPLY OR RETURN AIR

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS AND CONDUIT FOR THIS PROJECT THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT WHICH WILL ACTUALLY BE INSTALLED, RECOMPUTING WIRE AND BREAKER SIZES IF

ALL CONDUIT TERMINATING IN THE CEILING CAVITIES IS TO BE LABELED.

ALL CONDUIT SHALL BE COLOR CODED WITH 1/2" WIDE TAPE, 10'-0" ON CENTER IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE ARCHITECT AND OWNER, PRIOR TO INSTALLATION, FOR USE WITH ACTUAL EQUIPMENT.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER/ARCHITECT. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL REPLACED AT THE REQUEST OF THE ENGINEER/ARCHITECT AT THE

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS.

THE CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO THE INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING

ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND

WHERE EQUIPMENT PENETRATES EXTERIOR WALL OR ROOF THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ARCHITECT/ENGINEER.

ALL WORK IS TO BE DONE IN STRICT COMPLIANCE WITH THE LATEST VERSION OF THE NEC AND APPLICABLE STATE CODES

RECESSED FIXTURES INSTALLED IN RATED ASSEMBLIES SHALL BE INSTALLED WITH AN ENCLOSURE SO AS TO MAINTAIN THE RATING OF ASSEMBLY



M( FE	DOM DUNTING D FROM DTE	FLUSH UTILITY			VOLTS 20 BUS AMPS NEUTRAL	10	0	3P 4W	V		AIC 22,000 MAIN BKR 100 LUGS STANDARD
CKT #	CKT BKR	LOAD KVA	CIRCUIT	DESCRIF	TION		CKT #	CKT BKR	LOAE KVA		CUIT DESCRIPTION
1	20/1	0.299	LIGHTIN	3		a	2	20/1	0.18	REC	EPTACLE
3	20/1	0.5	LIGHTIN	3		Ь	4	20/1	О	SPA	<b>CE</b>
5	20/1	0	SPACE			[c	6	20/1	0	SPA	\CE
7	20/1	0	SPACE			[a	8	20/1	0	SPA	<b>CE</b>
9	20/1	0	SPACE			þ		20/1	0	SPA	<b>CE</b>
11	20/1	0	SPACE				12	20/1	0	SPA	<b>NCE</b>
13	20/1	0	SPACE				14	20/1	0	SPA	· - —
15	20/1	0	SPACE			þ	16	20/1	0	SPA	· - <del>-</del>
17	20/1	0	SPACE			c		20/1	0	SPA	
19	20/1	0	SPACE				20	20/1	0	SPA	· - <del>-</del>
21	20/1	0	SPACE				22	20/1	0	SPA	· <del></del>
23	20/1	0	SPACE				24	20/1	0	SPA	· - <del>-</del>
25	20/1	0	SPACE				26	20/1	0	SPA	
27	20/1	0	SPACE				28	20/1	0	SPA	
29	20/1	0	SPACE			C	30	20/1	0	SPA	ACE
	l		CONN KVA	CALC KVA				l	I	CONN KVA	CALC KVA
LI	GHTING	_	).799	0.999	(125%)		TOT	AL LOA	.D —		1.18
	ECEPTACL		).18	0.18	(50%>10)				3-PHAS	SE .	
• • •			· · · <del>· ·</del>	<del>-</del>	(			PS		- <del></del>	3.27
								ASE A			147%
								ASE B ASE C			153% 0%

Dec 02, 2019



SHEET TITLE:

ELECTRICAL DETAILS, NOTES AND PLUMBING NOTES.

SHEET

JOB CODE: 2019-181

DRAWN BY: MJL

CHECKED BY: CSL

DESIGNED TO BUILD

P.O. Box 1117 Pembroke, NC 28372 Voice: 910-521-7213 Fax: 910-521-7213

