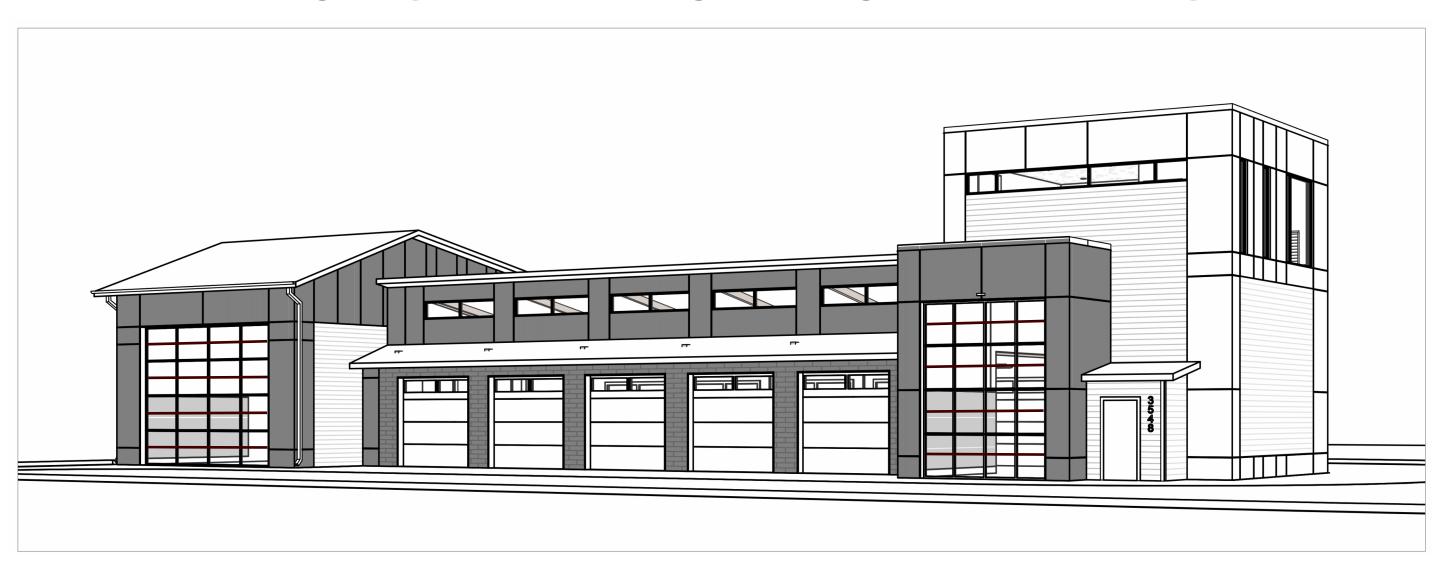
OFFICE ANNEX

6725 MONUMENT DRIVE. WILMINGTON, NC 28405

CONSTRUCTION DOCUMENTS



DESIGN TEAM ARCHITECT MARK LOUDERMILK

ARCHITECTURE, PLLC.

STRUCTURAL ENGINEERS WOODS ENGINEERING, PA

PLUMBING, MECHANICAL, **ELECTRICAL ENGINEERS** OT ENGINEERING, PLLC

GENERAL NOTES

- CODES: ALL WORK ON THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES, ORDINANCES, REGULATIONS, STANDARDS, AND ANY ADDITIONAL REQUIREMENT STATED IN ANY LAW, ORDINANCE, OR REGULATION PERTAINING TO CONSTRUCTION WITHIN THE LIMITS OF THE AUTHORITY HAVING JURISDICTION OVER THE PROPOSED WORK (INCLUDING BUT NOT LIMITED TO: FIRE, ACCESSIBILITY, ZONING, WATER, WASTEWATER, ENVIRONMENTAL, STRUCTURAL ARCHITECTURAL, HEALTH, FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL, AND ENERGY CONSERVATION). CONFORMITY TO ALL CODES APPLICABLE TO THIS PROJECT SHALL BE THE CONTRACTORS RESPONSIBILITY.
- EGRESS: ALL MEANS OF EGRESS SHALL BE CONTROLLED BY THE AUTHORITY HAVING JURISDICTION, INCLUDING EXITS, EXIT ACCESS, EXIT DISCHARGE, OTHER EGRESS PATHS, OCCUPANTS LOADS, SPRINKLER PROTECTION, ETC...
- ACCESSIBILITY: ALL BUILDING COMPONENTS, FIXTURES, ACCESSORIES, ETC. SHALL BE INSTALLED WITH MANEUVERING AND OPERATING CLEARANCES, MOUNTING HEIGHTS, ETC. IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT STANDARDS, ICC/ANSI A117.1, AND STATE ACCESSIBILITY CODE. FIELD VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND PROPOSED BUILDING DIMENSIONS PRIOR TO CONSTRUCTION, ANY VARIATIONS, DISCREPANCIES, OR FIELD ALTERATIONS TO THESE DESIGN DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION PRIOR TO CONSTRUCTION. IF CONTRACTOR COMMENCES CONSTRUCTION WITHOUT NOTIFYING ARCHITECT OF VARIATIONS, DISCREPENCIES, OR FIELD ALTERATIONS, THAT SHALL CONSTITUTE
- WAIVER TO ANY CLAIM BY CONTRACTOR FOR ADDITIONAL EXPENSES NECESSARY TO PERFORM WORK ASSOCIATED WITH THOSE CONDITIONS. SUBMITTALS: CONTRACTOR SHALL SUBMIT ALL NECESSARY BUILDING COMPONENTS, SYSTEMS, EQUIPMENT, MATERIALS, FINISHES, ETC. FOR REVIEW BY ARCHITECT/OWNER PRIOR TO PROCUREMENT, FABRICATION, AND/OR INSTALLATION.
- INSTALLATION: PROPER ASSEMBLY, INSTALLATION, AND OPERATION OF ALL MATERIALS, COMPONENTS, SYSTEMS, AND FINISHES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS AND ALL APPLICABLE CODES.
- INCIDENTAL WORK: ANY ITEMS NOT SPECIFICALLY SHOWN ON THE DRAWINGS, BUT WHICH ARE REASONABLY INCIDENTAL TO AND NECESSARY FOR THE SATISFACTORY COMPLETION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE CODES, ORDINANCES, REGULATIONS, AND STANDARDS, ARE INCLUDED WITHIN THE INTENT OF THESE DESIGN DRAWINGS.
- OWNER-PROVIDED WORK: LOCATION OF ALL OWNER-PROVIDED FIXTURES, EQUIPMENT, ETC. SHALL BE COORDINATED TO ENSURE PROPER ALIGNMENT FOR INSTALLATION AND OPERATION, BLOCKING, ETC.
- SAFETY: COMPONENTS FOR CONSTRUCTION SAFETY ARE NOT INDICATED IN THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL RULES AND OTHER REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), AND APPLICABLE STATE AND LOCAL SAFETY REQUIREMENTS DURING ALL
- INSPECTIONS: CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ALL ON-SITE INSPECTIONS REQUIRED PRIOR TO OCCUPANCY APPROVAL
- DIMENSIONS: UNLESS OTHERWISE INDICATED: WALLS ARE TO FACE OF STUD FRAMING AND TO FACE OF MASONRY; WINDOWS AND DOORS ARE TO CENTERLINE OF OPENING IN STUD FRAMING AND TO FACE OF MASONRY OPENING IN MASONRY; PLUMBING FIXTURES ARE TO CENTERLINE OF FIXTURE.
- BLOCKING: PROVIDE BLOCKING AS REQUIRED FOR INSTALLATION OF ALL PORTIONS OF THE WORK AND PER MANUFACTURER'S WRITTEN RECOMMENDATIONS, WHETHER OR NOT SPECIFICALLY INDICATED IN THESE DRAWINGS.
- METAL PROTECTION AT TREATED WOOD: METAL CONNECTORS THAT COME IN CONTACT WITH TREATED LUMBER SHALL BE STAINLESS STEEL OR "ZMAX" CORROSION RESISTANT MATERIALS TO HELP PROTECT AGAINST ACCELERATED CORROSION. CONTRACTOR SHALL COORDINATE COMPATIBILITY OF ALL METALS USED WITH TREATMENT PRODUCT(S) MANUFACTURER(S)'S WRITTEN RECOMMENDATIONS.
- HURRICANE TIES: CONTROLATOR SHALL PROVIDE HURRICANE TIES AND CONSTRUCTION CONNECTORS PER CODE AND AS REQUIRED BY AUTHORITY HAVING
- WINDOWS AND DOORS: WINDOWS AND DOORS ARE INDICATED USING NOMINAL DIMENSIONS. MATERIALS AND INSTALLATION SHALL COMPLY WITH DESIGN PRESSURE (DP) RATINGS, WATER INFILTRATION RATING, IMPACT/SAFETY GLAZING, WIND REQUIREMENTS, EGRESS HARDWARE, U-FACTOR / R-VALUE, ETC.. ALL EXTERIOR UNITS SHALL HAVE CORROSION-RESISTANT HARDWARE.
- LIFE SAFETY COMPONENTS: FINAL LOCATION OF FIRE EXTINGUISHERS, EMERGENCY LIGHTING, AND EXIT SIGNS TO BE AS DIRECTED BY LOCAL FIRE MARSHAL, AND ARE SUBJECT TO FINAL ON-SITE INSPECTION AND EVALUATION. CONTRACTOR SHALL MAKE REVISIONS AND/OR ADDITIONS IN ACCORDANCE WITH FIRE MARSHAL'S
- FIRE PROTECTION, PLUMBING, MECHANICAL, ELECTRICAL WORK: ALL FIRE PROTECTION, PLUMBING, MECHANICAL, AND ELECTRICAL WORK SHALL BE PERFROMED BY QUALIFIED, LICENSED (SUB)CONTRACTORS, AND BE IN ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, STANDARDS, ETC.. ALL COMPONENTS SHALL BE INSTALLED ABOVE THE FLOOD ELEVATION AS REQUIRED BY FEMA, LOCAL A.H.J., AND ALL APPLICABLE CODES
- PIPE INSULATION: CONTRACTOR SHALL INSULATE AND PROTECT PIPES AS REQUIRED BY CODE, AND AS REQURIED TO PROTECT PIPING EXPOSED TO EXTERIOR
- GRADING: CONTRACTOR SHALL COORDINATE SITE GRADING TO COMPLY WITH CODES AND ORDINANCES, AND TO MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING.

ABBREVIATIONS

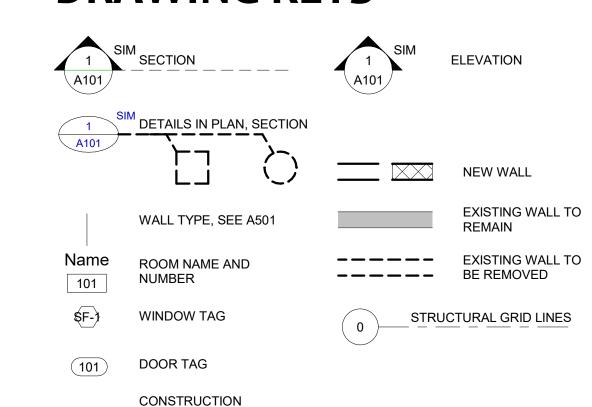
ACT	ACOUSTIC CEILING TILE	FTG	FOOTING	RM	ROOM
AFF	ABOVE FINISH	FV	FIELD VERIFY	RO	ROUGH OPENING
ALUM	FLOOR ALUMINUM	GA GWB	GAUGE GYPSUM WALL BOARD	RUB	RUBBER (WALL BASE)
BD	BOARD		BOARD	SD	SOAP
BLDG	BUILDING	HC	HANDICAPPED		DISPENSER
BRG	BEARING	HDW	HARDWARE	SECT	SECTION
		HM	HOLLOW METAL	SHT	SHEET
CAB	CABINET	HR	HOUR	SIM	SIMILAR
CH	CEILING HEIGHT	HT	HEIGHT	SLS	STAINLESS
CJ	CONTROL JOINT			CM	STEEL SURFACE
CL CLG	CENTER LINE CEILING	INSUL	INSULATION	SM	MOUNTED
CLR	CLEAR	JAN	JANITOR	SS	SERVICE SINK
CLST	CLOSET	JST	JOIST	STL	STEEL
CMU	CONCRETE	JT	JOINT	STOR	STORAGE
	MASONRY UNIT			STRUCT	STRUCTURAL
CONC	CONCRETE	LAM	LAMINATE	SUSP	SUSPEND (SUSPENDED)
CONT	CONTINUOUS	LAV	LAVATORY SINK		(OOOI LIVDLD)
CORR	CORRIDOR			T&G	TONGUE &
CPT	CARPET	M	MEN	140	GROOVED
CT	CERAMIC TILE	MAINT	MAINTENANCE	TEL	TELEPHONE
		MAT	MATERIALS	THLD	THRESHOLD
DBL	DOUBLE	MAX	MAXIUMUM	TOB	TOP OF
DF	DRINKING FOUNTAIN	MECH	MECHANICAL		BEARING
DIA	DIAMETER	MFR	MANUFACTURE R	TOM	TOP OF MASONRY
DIM	DIMENSION	MIN	MINIMUM		PARAPET
DS	DOWNSPOUT	MO	MASONRY	TYP	TYPICAL
DWG	DRAWING		OPENING		LINDEDWINEDO
EA	EACH	MTL	METAL	UL	UNDERWRITERS LABORATORIES
EJ	EXPANSION JOINT	NC	NONCOMBUSTIB LE	UON	UNLESS OTHERWISE
ELEC	ELECTRIC/ELEC TRICAL	NIC	NOT IN CONTRACT	USG	NOTED U.S. GYPSUM
EP	EPOXY PAINT	NO	NUMBER		COMPANY
EQ	EQUAL	NTS	NOT TO SCALE	VOT	A /IN IN /I
EQUIP	EQUIPMENT			VCT	VINYL COMPOSITION
EXG	EXISTING	OC	ON CENTER		TILE
EXP	EXPANSION	OFF	OFFICE	VERT	VERTICAL
EXT	EXTERIOR	ОН	OPPOSITE HAND	VEST	VESTIBULE
FC	FIRE CODE	PART	PARTITION	W	WOMEN
FD	FLOOR DRAIN	PLAM	PLASTIC	W/	WITH
FE	FIRE		LAMINATE	WAIN	WAINSCOT
	EXTINGUISHER	PLY	PLYWOOD	WC	WATER CLOSET
FEC	FIRE EXTINGUISHER	PT	PAINTED	WD	WOOD
	CABINET			WL	WALL
FOS	FACE OF STUD	RD	ROOF DRAIN	WM	WALL-MOUNTED
FRP	FIREGLASS	REC	RECESSED		
	REINFORCED PLASTIC	REF REQD	REFRIGERATOR REQUIRED		

SYMBOLS OF MATERIALS

	<i>3</i> 11 v		141711	
		BATT INSULATION		PARTICLE BOARD
ALL		BRICK		RIGID INSULATION
		CAST STONE		STEEL-LARGE SCA
	4 4 4 4	CONCRETE		WOOD-FINISH
		CONCRETE MASONRY UNITS		WOOD BLOCKING
NK		EARTH		
AL				
D)				

DRAWING KEYS

KEYNOTE



7/14/2023

DRAWING LIST

SHEET No.	SHEET TITLE
GENERAL	
G001	COVER SHEET
G101	BUILDING CODE SUMMARY
G102	LIFE SAFETY PLAN
STRUCTURAL	
S101	GENERAL NOTES
S102	TYPICAL CONCRETE AND WOOD DETAILS AND SCHEDULES
S201	FOUNDATION DETAIL
S202	ROOF FRAMING PLAN
S301	FOUNDATION SECTIONS
S401	ROOF FRAMING SECTIONS
S402	ROOF FRAMING SECTIONS
S501	SHEAR WALLS DETAILS
ARCHITECTU	RAL
A101	FLOOR PLANS
A102	CEILING PLAN
A103	ROOF PLAN
A201	EXTERIOR ELEVATIONS
A202	EXTERIOR ELEVATIONS
A203	EXTERIOR ELEVATIONS
A301.A	BUILDING SECTIONS
A301.B	BUILDING SECTIONS
A302	WALL SECTIONS
A303	WALL SECTIONS
A304	WALL SECTIONS
A305	WALL SECTIONS
A306	STAIRCASE SECTION AND PLAN
A307	STAIRCASE SECTION AND PLAN
A401	ENLARGED PLANS AND SECTIONS
A402	INTERIOR ELEVATIONS
A403	INTERIOR ELEVATIONS
	INTERIOR ELEVATIONS
A404	INTERIOR ELEVATIONS
A404 A501	DETAILS

A603 PLUMBING

PLUMBING SHCEDULE & SPECIFICATIONS PLUMBING DETAILS & LEGEND PLUMBING PLAN

STOREFRONT ELEVATION

SPECIFICATIONS

MECHANICAL M0.1

MECHANICAL SCHEDULES & SPECIFICATIONS MECHANICAL PLAN 1ST FLOOR M1.2 MECHANICAL PLAN 2ND FLOOR

ELECTRICAL E0.1

P0.2

ELECTRICAL SCHEDULES, LEGEND, NOTES AND SPECIFICATIONS E0.2 PANEL SCHEDULES, ELECTRICAL RISER AND DETAILS E1.1 PARTIAL LIGHTING PLAN - 1ST FLOOR PARTIAL LIGHTING PLAN - 1ST FLOOR

LIGHTING PLAN - 2ND POWER PLAN - 1ST FLOOR POWER PLAN - 2ND FLOOR







© 2023 MARK LOUDERMILK ARCHITECTURE, PLLC PROJECT NO: 23038 DATE: 7/14/2023 SCALE: 1" = 1'-0" DRAWN BY: PROJ MGR: **COVER SHEET**

BUILDING CODE SUMMARY

	S: 6725 MONUMENT D					
	OR AUTHORIZED AG BY: □ City □	GENT: L. Mark Loud County Stat		E #: (910) 622-0765	E-Mail:_ma	ark@loudermilkarch.com
	IFORCEMENT JURIS			State		
ONTAC	T: L. Mark Loudermilk,	, AIA				
ESIGNE		<u>FIRM</u>	<u>NAME</u>	LICENSE #	TELEPHONE #	EMAIL ADDRESS
IVIL	CTURAL	Mark Loudermilk Archite	,		(910) 769-3583	mark@loudermilkarch.com
LECTRI RE ALA	RM	OT Engineering, L	LC Christopher M. Lipp LC Christopher M. Lipp LC Christopher M. Lipp	incott, PE #026003 (910)791-8016 chr	is@otmep.com
LUMBIN ECHAN	ICAL		LC Christopher M. Lipp LC Christopher M. Lipp		•	·
TRUCT		Woods Engineering	Don R. Woods, PE	19575	(910) 343-8007	donwoods@woodseng.com
ETAININ THER	NG WALL >5' HIGH					
)18 NC	BUILDING CODE:					
	w Building Ad		st Time Interior Comple		04411	
	ased Construction - S sdiction for possible a					inspection jurisdiction ires and requirements
18 NC N/A	EXISTING BUILDING Chapte		teration Level I	□N/A	A	□N/A
_	escriptive Historic	· · · —	teration Level II	□Re	pair	Change of Use
☐Rep CONS	pair □Change TRUCTED:	_	teration Level III RENT OCCUPANCY(S) (Ch. 3)		Historic Property
	VATED: NCY CATEGORY (Ta		POSED OCCUPANC			
URREN	<u> </u>		□III □IV			
ROPOS	ED N/A I	■ II				
ASIC	BUILDING DATA	A:				
	UCTION TYPE:		□II-A □II-B	□ III-A		□IV □V-A ■V-B
PRINKL TANDPI			□PARTIAL □NFP. □CLASS I □CLAS			DRY □
RIMARY	∕ FIRE DISTRICT: ■	NO YES	BUILDING IS LESS	THAN 12 000 SE:	SDRINIKI ERS NC	OT.
		NO OYES	REQUIRED PER 90	03.2.10.		
		,	ntact the local inspect	ion jurisdiction for a	dditional procedu	res and requirements)
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	VABLE AREA:		O ENOLOGED DARK	INO CARACE		
RIMARY	OCCUPANCY CLAS					
RIMARY		LASSIFICATION(S	5):			
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PERCENT OF FRONTAGE INCREASE $I_f = 100 [F/P - 0.25] \times W/30 = 75$ (%)

FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2) THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4. THE MAXIMUM AREA OF

SHOWN ON PLANS

CODE REFERENCE

UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.

ALLOWABLE

(TABLES 504.3 & 504.4)

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

AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH 412.3.1

ALLOWABLE HEIGHT:

BUILDING HEIGHT IN FEET 55' - 0"

BUILDING HEIGHT IN STORIES 2

Structural Frame including columns, girders, trusses Bearing Walls Exterior North East West South Interior Nonbearing Walls and Partitions Exterior	J/A 0	0	RATING PROVIDED* (W/ REDUCTION)	DETAIL # AND SHEET #	FOR	DESIGN # FOR RATED PENETRATION	# FOR	ENERGY REQUIREMENTS: THE FOLLOWING DATA SHALL ENERGY CODE SHALL ALSO B PROJECT INFORMATION FOR COST FOR THE STANDARD RE EXISTING BUILDING ENVELOP	SE PROVIDED. EACH D THE PLAN DATA SHEE EFERENCE DESIGN VS
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Interior walls and partitions Floor Construction, including supporting beams and joists Floor Ceiling Assembly Columns Supporting Floors Roof Construction, including supporting beams and joists Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation	N	1							PERFORMANCE
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Floor Ceiling Assembly Columns Supporting Floors Roof Construction, including supporting beams and joists Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation	N								If 'Other' specify source
Columns Supporting Floors Roof Construction, including supporting beams and joists Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation		0						THERMAL ENVELOPE (Prescrip	ative method only)
Roof Construction, including supporting beams and joists Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation		I/A						THERWAL ENVELOPE (Frescrip	tive method only)
Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation	N	I/A						ROOF/CEILING ASSEMBI	LY (each assembly)
Roof Ceiling Assembly Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation	0)							OF ASSEMBLY
Columns Supporting Roof Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation								U-VALUE OF 1 R-VALUE OF IN	OTAL ASSEMBLY NSULATION
Shaft Enclosures - Exit Shaft Enclosures - Other Corridor Separation	0 N) 1/A						SKYLIGHTS IN	EACH ASSEMBLY
Shaft Enclosures - Other Corridor Separation		1/A							UE OF SKYLIGHT RE FOOTAGE OF SKYL
Corridor Separation	N	I/A							
Occupancy / Fire Barrier Separati		I/A						EXTERIOR WALLS (each	assembly) OF ASSEMBLY
		0						U-VALUE OF T	OTAL ASSEMBLY
Party / Fire Wall Separation Smoke Barrier Separation		1/A 1/A						R-VALUE OF IN	NSULATION Indows or doors with gla
Tenant / Dwelling Unit / Sleeping S		1/A							UE OF ASSEMBLY
Incidental Use Separation		1/A							R HEAT GAIN COEFFIC ECTION FACTOR
* Indicate section number permitti	ng reduction								R-VALUES
PERCENTAGE OF WALL	OPENING (CAL	CULATIONS:					WALLS BELOW GRADE (each assembly) OF ASSEMBLY
FIRE SEPARATION DISTANCE	DEGREE OF			OWABLE A	AREA AC	TUAL SHOWN O	N PLANS		OTAL ASSEMBLY
FEET) FROM PROPERTY LINES	(TABLE		8)	(%)		(%)		FLOORS OVER UNCOND	•
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								FLOORS SLAB ON GRAD	F (each assembly)
									OF ASSEMBLY
IFE SAFETY SYSTEM R	EQUIREME	NTS	:					U-VALUE OF T	OTAL ASSEMBLY
EMERGENCY LIGHTING:	ONO (⊙ YE	S					R-VALUE OF IN HORIZONTAL /	NSULATION / VERTICAL REQUIREN
EXIT SIGNS:	O NO	⊙ YE	S					SLAB HEATED	
FIRE ALARM: SMOKE DETECTION SYSTEMS:		O YE	S S ∐PARTIAL						
CARBON MONOXIDE DETECTION		O YE						STRUCTURAL DESIGN	SEE STRUCTU
								DESIGN LOADS:	
.IFE SAFETY PLAN REQ LIFE SAFETY PLAN SHEET # G		S:						IMPORTANCE FACTORS:	WIND (lw) SNOW (ls)
		 ^^	IONS (Chapter 7)						SEISMIC (le)
FIRE AND/OR SMOKE FASSUMED AND REAL F	PROPERTY LINE	E LOC	CATIONS (if not on					LIVE LOADS:	ROOF
EXTERIOR WALL OPENOCCUPANCY TYPES F								LIVE LOADS.	MEZZANINE
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• DEAD END LENGTHS (1020.4)	•		-(' //				WIND LOAD:	BASIC WIND SPEED
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LOCATION OF DOORSLOCATION OF DOORS						LAT (1010.1.9.7)		SPECTRAL RESPONSE AC	CELERATION $S_{ m S}$ _
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LOCATION OF EMERGITHE SQUARE FOOTAGE								DATA SOU	RCE:
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 NOTE ANY CODE EXCE ABOVE 	EPTIONS OR TA	ABLE I	NOTES THAT MA	Y HAVE BE	EEN UTILIZEI	O REGARDING TI	HE ITEMS	ANALYSIS PROCEDURE:	□ N/A □ SIMPLI
								ARCHITECTURAL, MECHA	
ACCESSIBLE DWELLING	SUNITS (SE	ECTIO	N 1107)					LATERAL DESIGN CONTROL:	□ N/A □ EA
						I		SOIL BEARING CAPACITIES: ☐ N/A	
TOTAL ACCESSIBLE ACCES			TYPE A UNITS	TYPE B UNITS				FIELD TEST (PROVIDE CO	PY OF TEST REPORT)
UNITS UNITS UNI REQUIRED PROV				REQUIRE				PRESUMPTIVE BEARING O	· ·
								PILE SIZE, TYPE AND CAP	
V/A N/A N/A					l				
N/A N/A N/A									
N/A N/A N/A									
N/A N/A N/A ACCESSIBLE PARKING	(SECTION '	1106)							

LAVATORIES

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

WATERCLOSETS URINALS

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

MALE FEMALE UNISEX

EXIST'G 0

MALE FEMALE UNISEX / TUBS REGULAR ACCESSIBLE

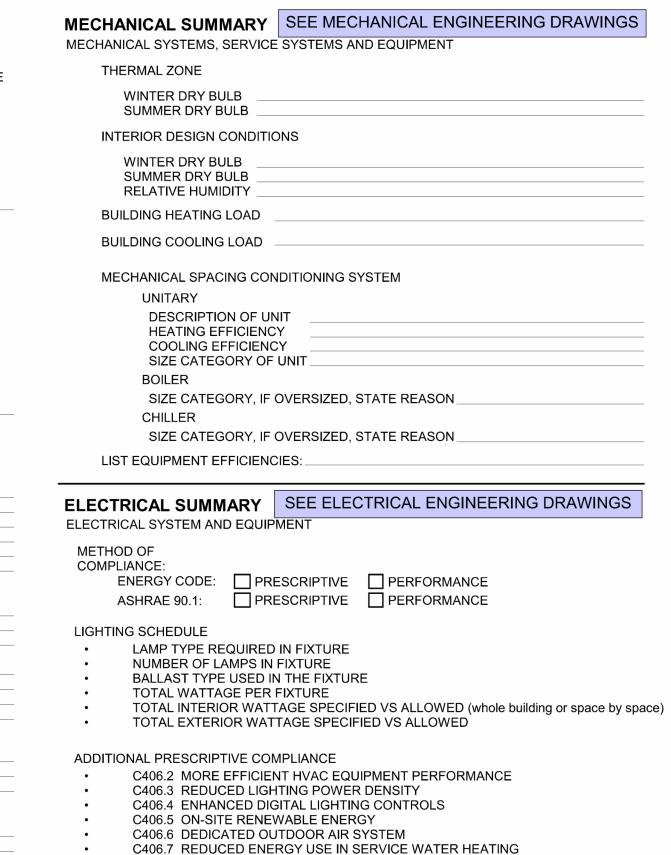
SHOWERS DRINKING FOUNTAINS

AISLE

RGY SUMMARY RGY REQUIREMENTS: FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE RGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE JECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN. TING BUILDING ENVELOPE COMPLIES WITH CODE: YES (the remiander of this section is not applicable) MPT BUILDING: YES Provide code or statutory reference: CLIMATE ZONE: 3 METHOD OF COMPLIANCE: ■ PRESCRIPTIVE (ENERGY CODE) PERFORMANCE (ENERGY CODE) ☐ PRESCRIPTIVE (ASHRAE 90.1) ☐ PERFORMANCE (ASHRAE 90.1) PERFORMANCE (OTHER) If 'Other' specify source here: RMAL ENVELOPE (Prescriptive method only) ROOF/CEILING ASSEMBLY (each assembly) RIGID INSULATION DESCRIPTION OF ASSEMBLY U-VALUE OF TOTAL ASSEMBLY R-VALUE OF INSULATION SKYLIGHTS IN EACH ASSEMBLY U-VALUE OF SKYLIGHT TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY **EXTERIOR WALLS** (each assembly) **BATT INSULATION** DESCRIPTION OF ASSEMBLY U-VALUE OF TOTAL ASSEMBLY R-VALUE OF INSULATION **OPENINGS** (windows or doors with glazing) U-VALUE OF ASSEMBLY SOLAR HEAT GAIN COEFFICIENT 0.45 PROJECTION FACTOR DOOR R-VALUES WALLS BELOW GRADE (each assembly) **DESCRIPTION OF ASSEMBLY** U-VALUE OF TOTAL ASSEMBLY R-VALUE OF INSULATION FLOORS OVER UNCONDITIONED SPACE (each assembly) DESCRIPTION OF ASSEMBLY U-VALUE OF TOTAL ASSEMBLY R-VALUE OF INSULATION FLOORS SLAB ON GRADE (each assembly) DESCRIPTION OF ASSEMBLY U-VALUE OF TOTAL ASSEMBLY R-VALUE OF INSULATION HORIZONTAL / VERTICAL REQUIREMENT SLAB HEATED RUCTURAL DESIGN SEE STRUCTURAL ENGINEERING DRAWINGS IGN LOADS: MPORTANCE FACTORS: WIND (lw) SNOW (Is) SEISMIC (le) IVE LOADS: ROOF MEZZANINE FLOOR GROUND SNOW LOAD: _ MPH (ASCE-7-98) BASIC WIND SPEED WIND LOAD: EXPOSURE CATEGORY SMIC DESIGN CATEGORY: OVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS: OCCUPANCY CATEGORY (TABLE 1604.5) SPECTRAL RESPONSE ACCELERATION $S_{ m S}$ ______ SITE CLASSIFICATION (ASCE 7) DATA SOURCE: BASIC STRUCTURAL SYSTEM ANALYSIS PROCEDURE: N/A SIMPLIFIED EQUIVALENT LATERAL FORCE ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? YES NO ERAL DESIGN CONTROL: N/A EARTHQUAKE WIND

PSF

PSF









ZIMMERE R DEVELOPMENT COMPANY

© 2023	MARK LOUDER	RMILK ARCHITECTURE, PLLC		
Mark	Date	Description		
PROJE	CT NO:			
DATE:		7/14/2023		
	•	7117/2025		
_SCALE: DRAWN BY: OU				
PROJ I	MGR:	LML		

SUMMARY

G101

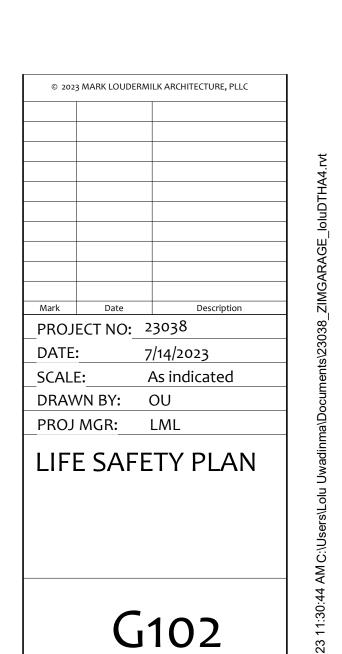
COMMON PATH = 50' - 6" ALLOWABLE COMMON PATH = 300' - 0"



- PROVIDE NEW FIRE EXTINGUISHERS IN CABINETS (FEC) AS SHOWN ON FLOOR PLANS. PROVIDE NEW FIRE EXTINGUISHERS IN KITCHEN (TYPE K), MECHANICAL, ELECTRICAL (TYPE B-C), FIRE PUMP, AND ELEVATOR
- FIRE EXTINGUISHER SHALL BE MINIMUM 3A-40BC RATING. MARK ALL RATED WALLS AND PARTITIONS PER 2018 IBC

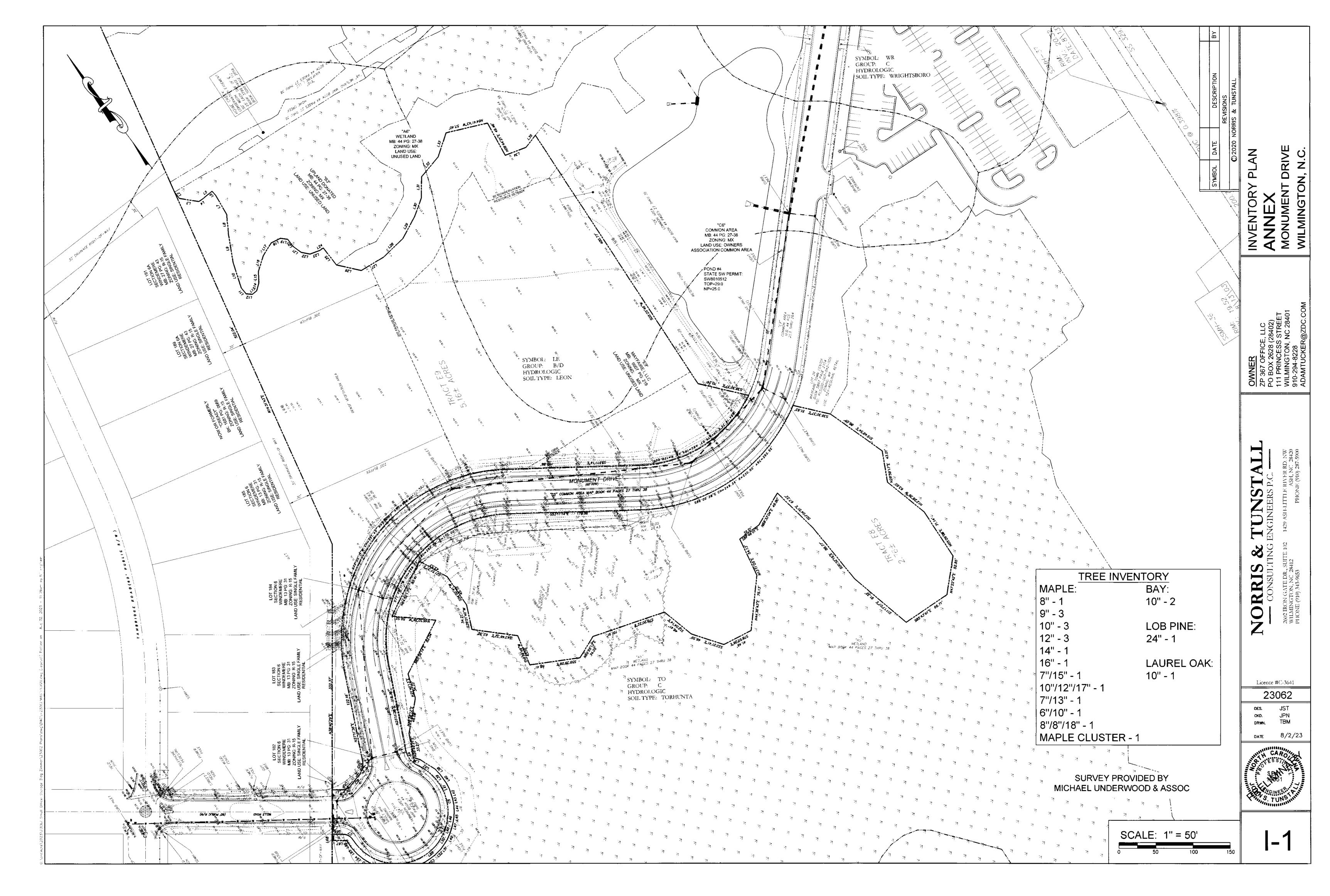
SITE NORTH

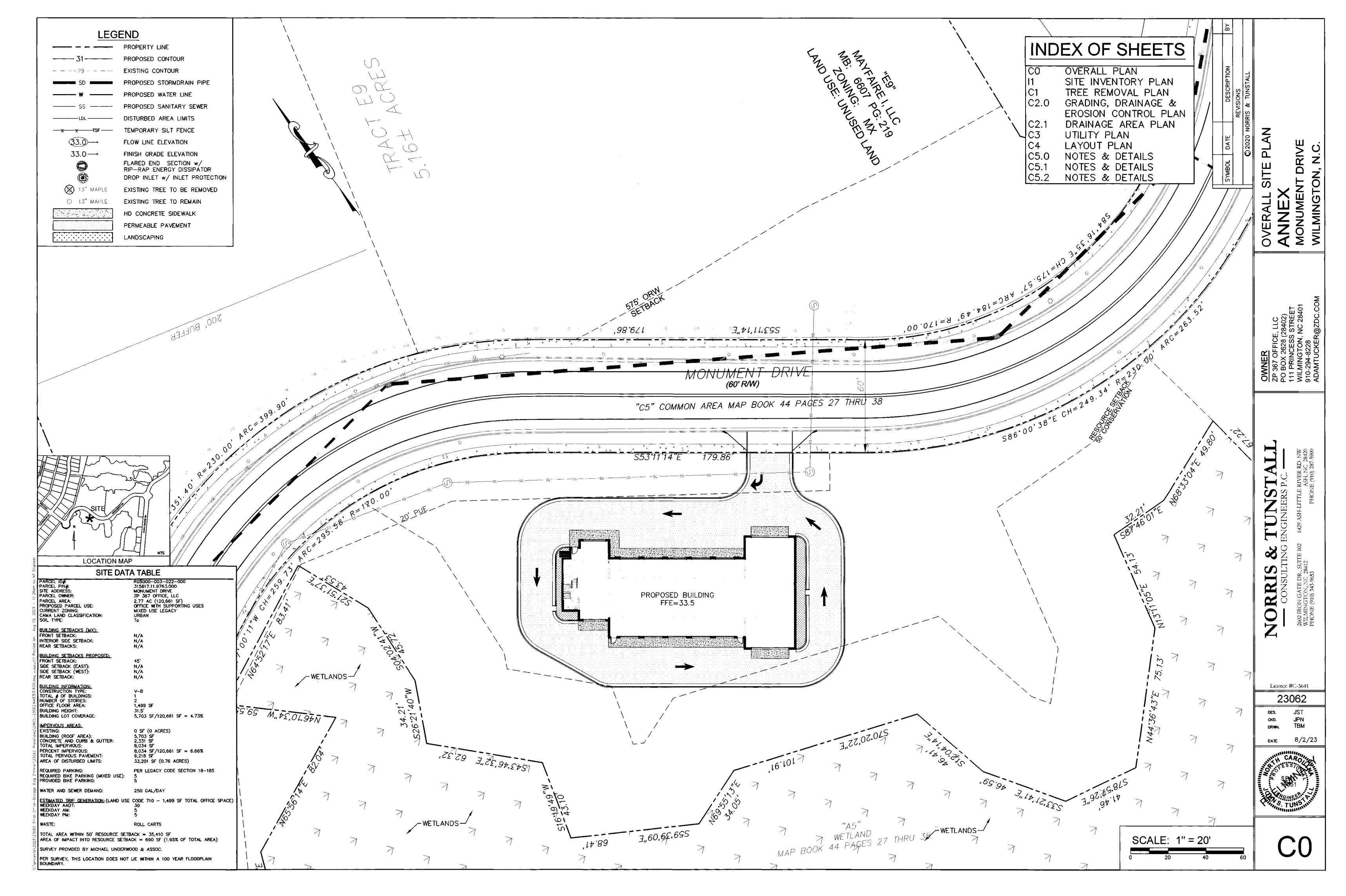


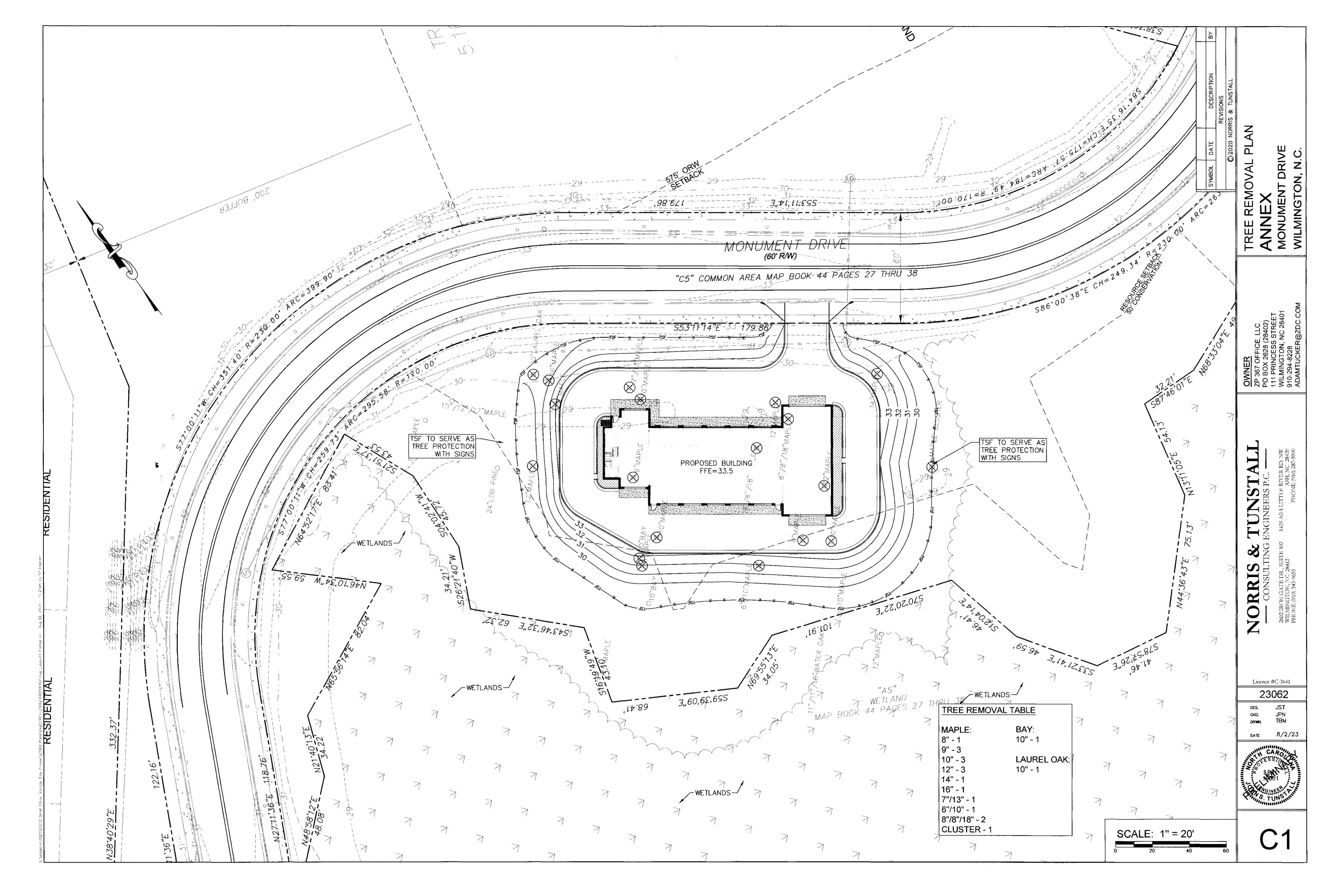


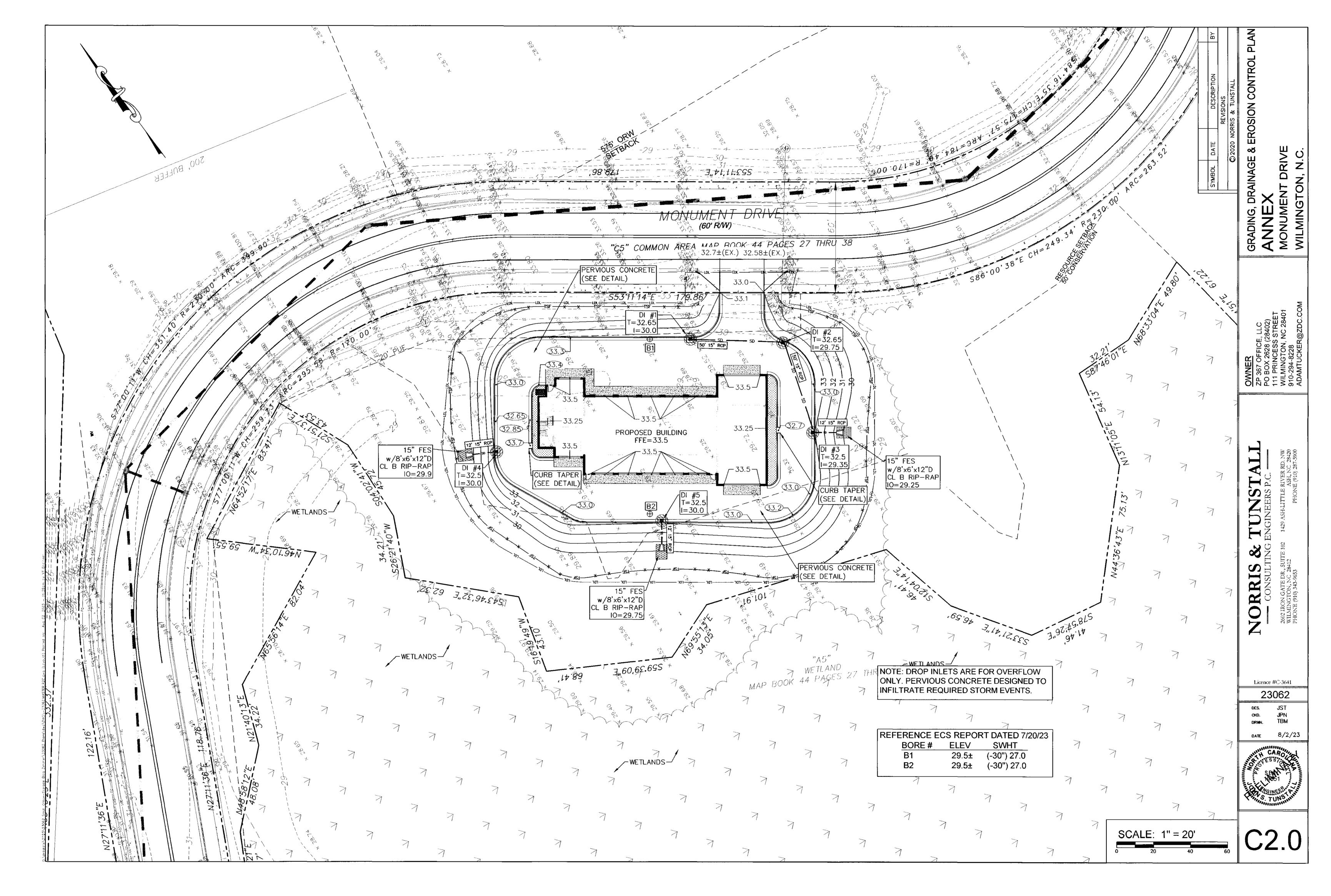
LIFE SAFETY PLAN 1/8" = 1'-0"

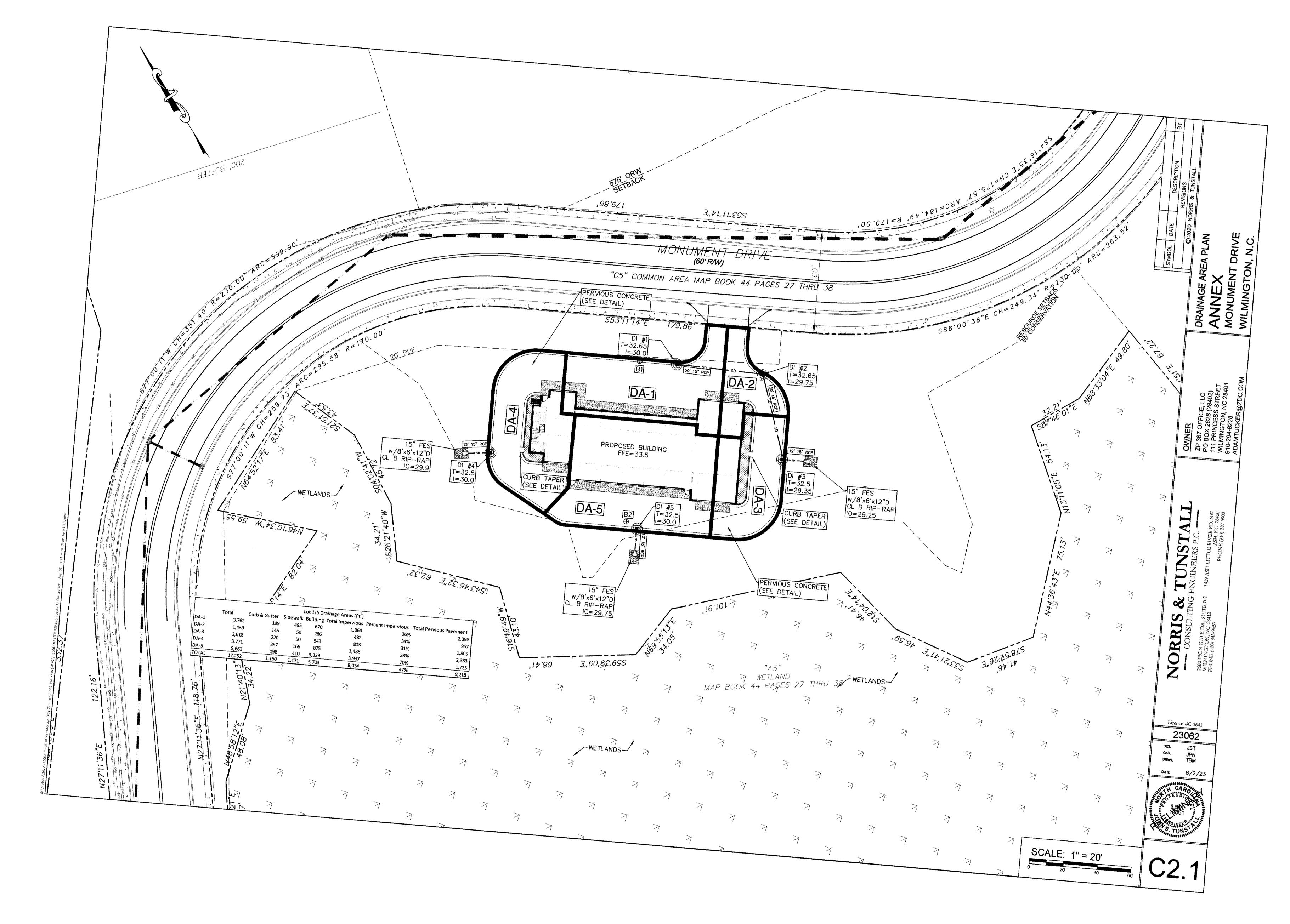
TOTAL SF = 5,288 SF

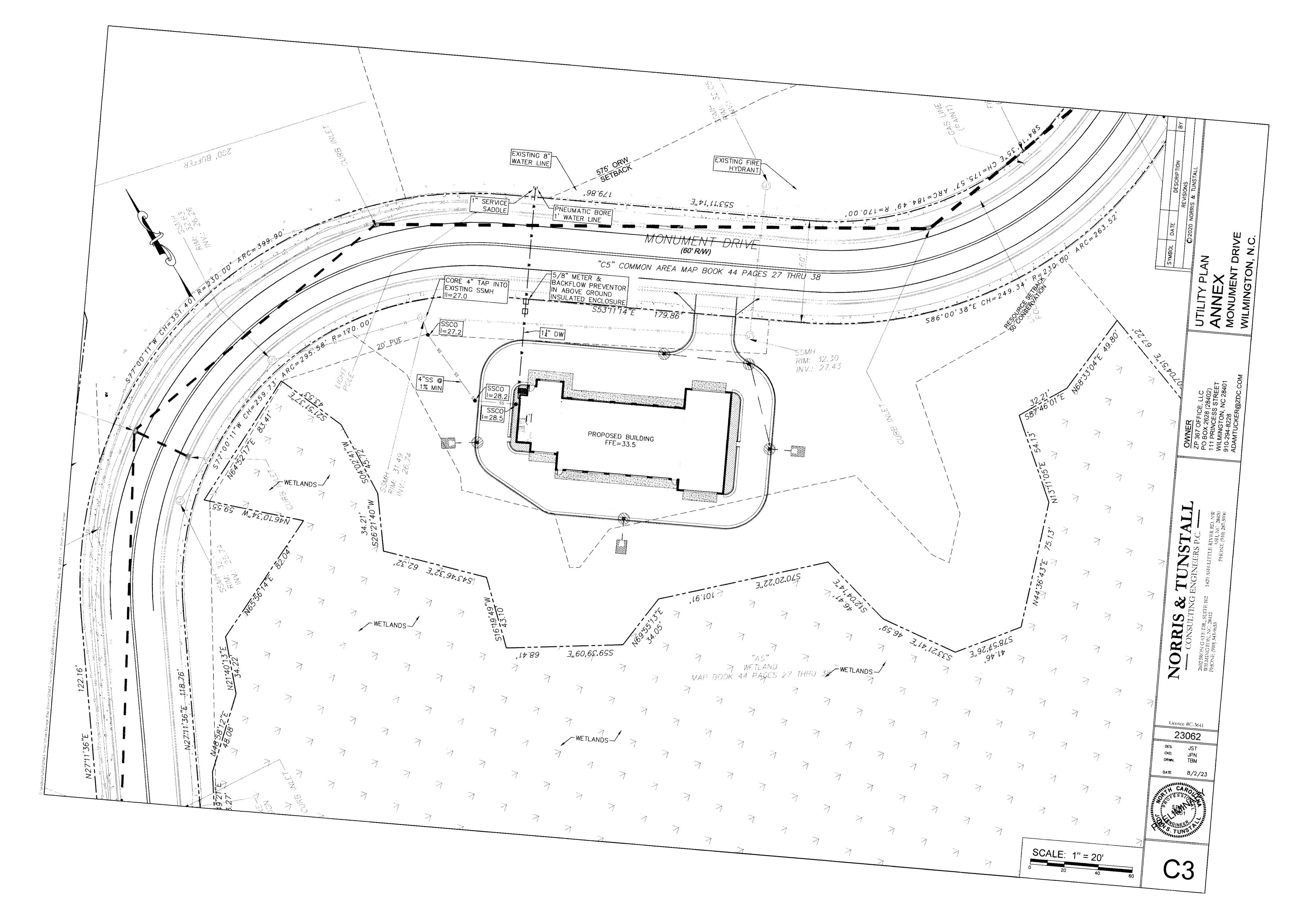


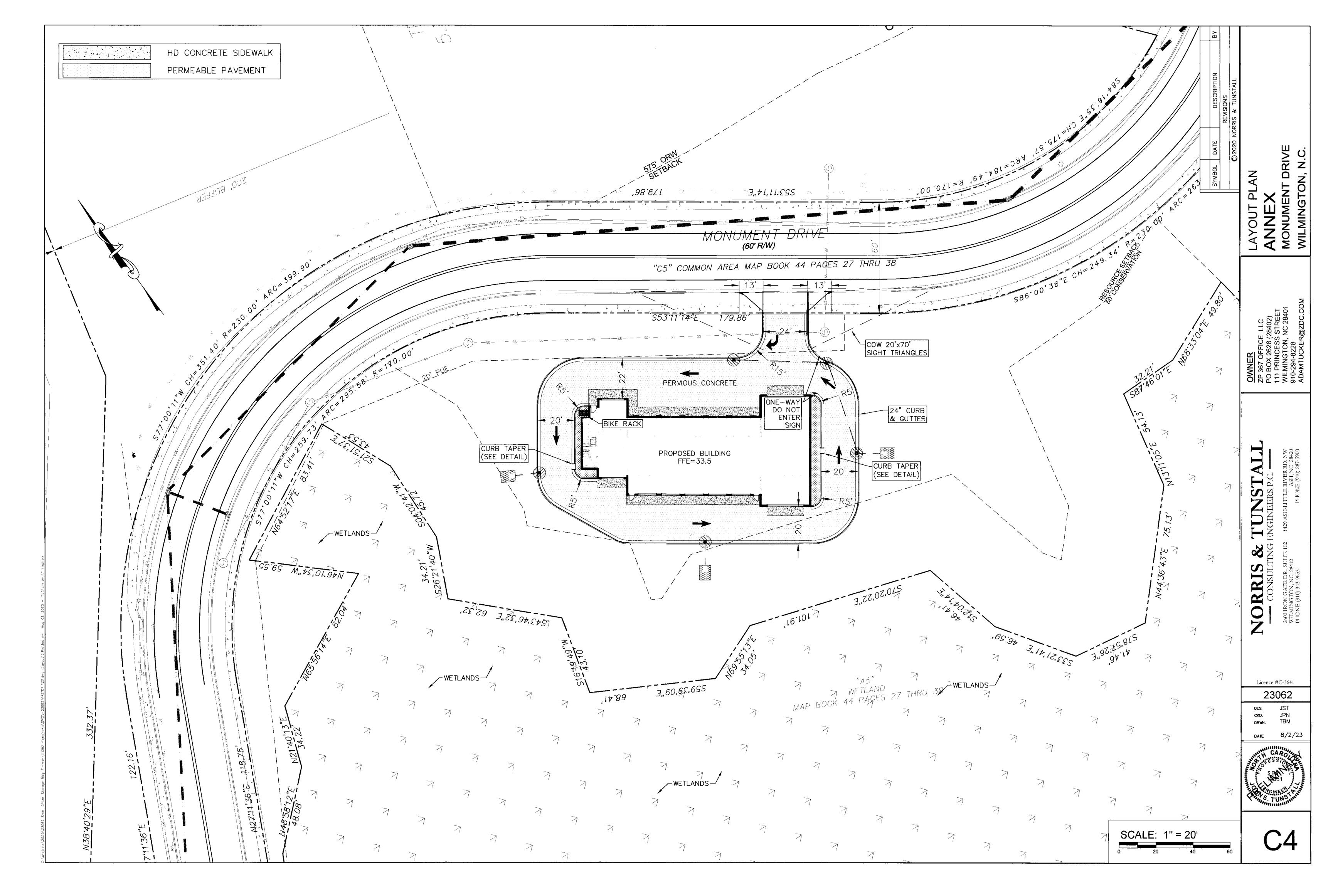


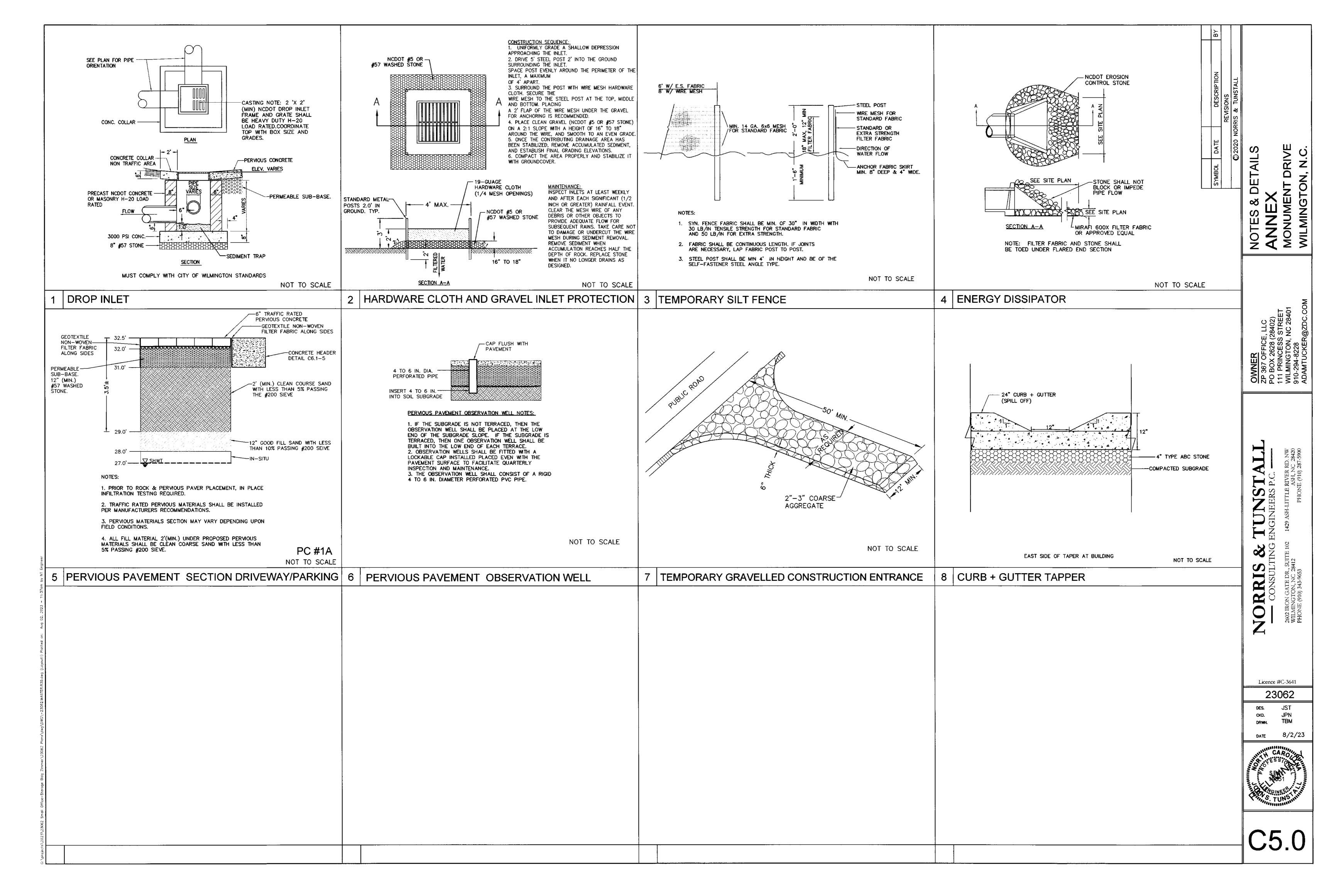


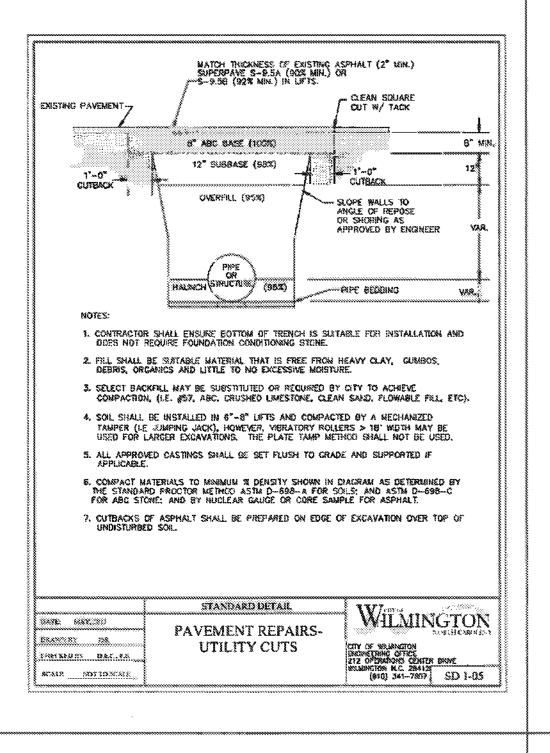








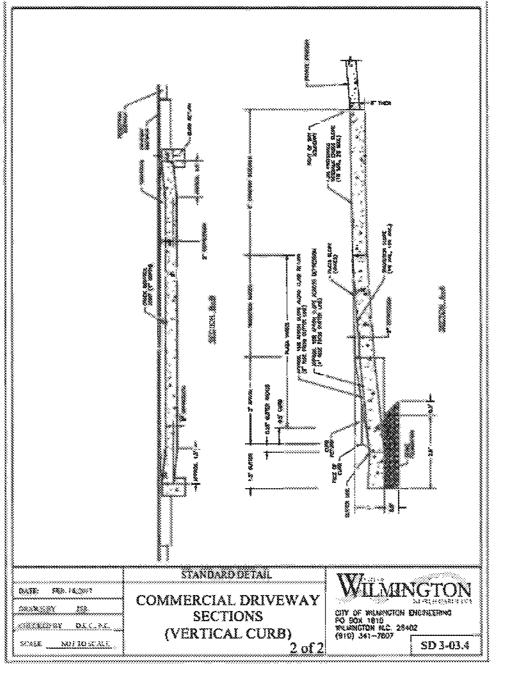




NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE
S WHERE THE MAJORITY OF A TREE'S ROOTS
LAY, 85% OF MOST TREE ROOTS ARE FOUND
IN THE TOP 24° OF THE SIR AND SUPPLY
THE MAJORITY OF MUTRIENTS AND WATER.
SEMERALLY, ROOTS SPREAD OUT 2-3X THE
HEIGHT OF THE TREE.

#300000000 87 8000 v.E.

SCALE NOTTO SCALE



VARIABLE AS DIRECTED BY THE ENGINEER

ORANGE, UV RESISTANT

FRONT VIEW

TREE PROTECTION AREA

DO NOT ENTER

ZONA PROTECTORA PARA

WARNING SIGN DETAIL

THE TREE PROTECTION FENCING SHALL NOT BE VICLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFT.
 WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO

FIGURE OF GREAT INTEL PROFESSION AND OUT ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100° M PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.

4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.

5. TREE PROTECTION FENCEM AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.

6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

STANDARD DETAIL

TREE PROTECTION

DURING

CONSTRUCTION

3. SIGNS SHALL BE PLACED AT 50" MAXINUM INTERVALS. PLACE A SIGN AT EACH END OF UNEAR TREE PROTECTION AND 50 ON CENTER THEREAFTER. FOR TREE

BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS OFTAILED.

PROHIBIDO ENTRAR

SHEET 2 of 2

WILMINGTON

CITY OF WALHINGTON ENCARERGING PO BOX 1810 WALHINGTON, NC 28402 (\$10) 341-7807

SD 15-09

_ORANGE, UV RESISTANT

SIDE VIEW

\$100 BK \$200 (\$100 BK)

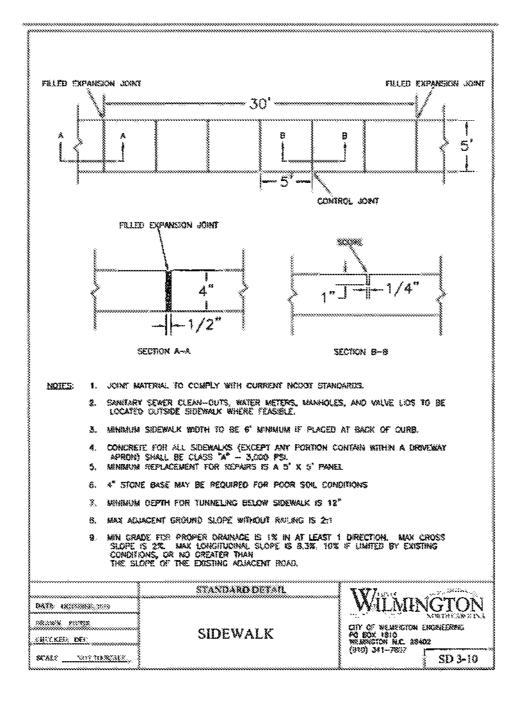
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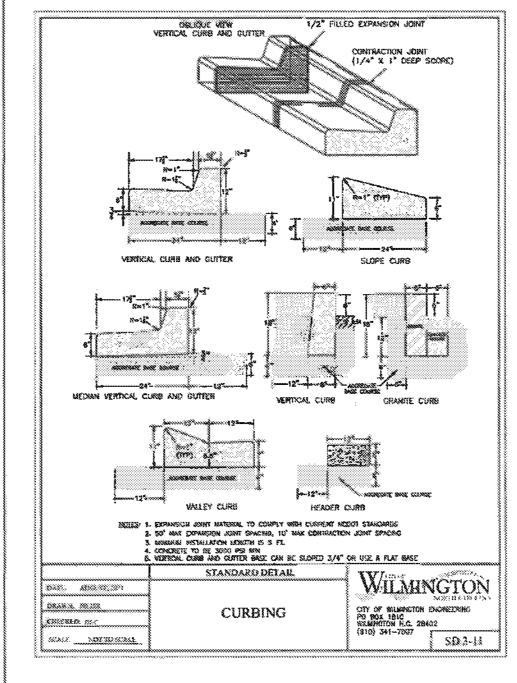
<u> Rockellay Rockel</u>

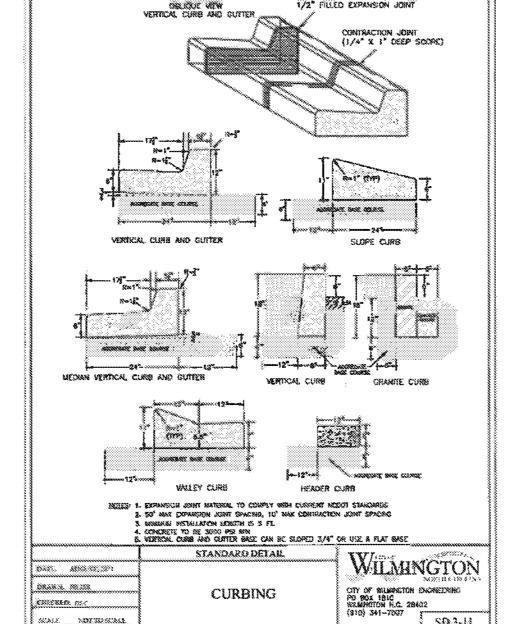
SCALE NOT TO SEALL

HIGH - TENESLE STRENGTH POLY BARRICADE FABRIC (TYPICAL)

HIGH - TENSILE STRENGTH









THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH FIELD CONSTRUCTION CONDITIONS

CONTRACTOR SHALL COORDINATE WORK WITHIN NODOT AND LOCAL RIGHT OF WAYS WITH PROPER AUTHORITIES AND SHALL MEET ANY REQUIREMENTS AS TO TRAFFIC CONTROL AND CONNECTION TO EXISTING STREETS.

3. CLEARING AND GRUBBING: REMOVE ALL TREES AS REQUIRED UNLESS OTHERWISE NOTED TO REMAIN, STUMPS, ROOTS, SHRUBBERY, ASPHALT, CONCRETE, STRUCTURES, BURIED UTILITIES, STORAGE TANKS, ETC. WITHIN LIMITS OF CONSTRUCTION.

4. STRIPPING: BEFORE EXCAVATING OR FILLING, REMOVE ALL TOPSOIL, WOOD, LEAVES, AND ANY OTHER UNSUITABLE MATERIAL

MUCKING: REMOVE ANY SOFT, ORGANIC SILT MATERIALS AND EXISTING BURIED CONSTRUCTION DEBRIS AS REQUIRED AND FILL TO SUBGRADE ELEVATIONS WITH A CLEAN SELECT—FILL COMPACTED AS SPECIFIED.

6. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR EXCAVATED SPOIL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES.

7. BORROW MATERIAL: THE CONTRACTOR SHALL FURNISH BORROW MATERIAL REQUIRED FROM OFF SITE AND OBTAIN ALL REQUIRED PERMITS ASSOCIATED WITH BORROW OPERATIONS.

FILL AND COMPACTION: AFTER STRIPPING THOSE AREAS DESIGNATED TO RECEIVE FILL SHOULD BE PROOFROLLED. THE TOP 8" OF SUBGRADE SHALL BE COMPACTED TO AT LEAST 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ANY AREA WHICH PUMPS OR RUTS EXCESSIVELY SHOULD BE UNDERCUT AND REPLACED WITH A CLEAN, SILTY OR CLAYEY SAND HAVING A UNIFIED SOIL CLASSIFICATION OF SP. SM. OR SC. FILL MATERIAL 5" OUTSIDE OF BUILDING AREAS SHALL THEN BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED TO 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIALS WITHIN BUILDING AREAS TO A LINE OUTSIDE THE BUILDING AREAS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOF MAXIMUM DRY DENSITY (ASTM D-698) WITH THE UPPER 12 INCHES OF SUBGRADE BEING COMPACTED IN 6 INCH LAYERS TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IN AREAS WHERE NO STRUCTURAL FILL IS TO BE PLACED THE UPPER 12 INCHES OF IN-PLACE SUBGRADE SHOULD BE COMPACTED TO AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IF THE MATERIAL IS TOO DRY TO COMPACT TO THE REQUIRED DENSITY EACH LAYER SHALL BE WETTED IN ACCORDANCE WITH COMPACTION REQUIREMENTS. IF THE MATERIAL IS TOO WET TO SECURE PROPER COMPACTION, IT SHALL BE HARROWED REPEATEDLY OR OTHERWISE AERATED WITH SUITABLE EQUIPMENT UNTIL OPTIMUM MOISTURE CONTENT IS OBTAINED. FILL SHALL BE PLACED IN SUCH A MANNER THAT THE SURFACE WILL DRAIN READILY AT ALL TIMES. SEE STRUCTURAL NOTES AND SOILS REPORT FOR ADDITIONAL REQUIREMENTS.

9. LAYOUT: THE CONTRACTOR SHALL PROVIDE ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION.

11. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION FROM SURVEY BY MICHAEL UNDERWOOD & ASSOCIATES, AND PROVIDED BY OWNER.

12. THE CONTRACTOR SHALL VERIFY DIMENSIONS AT JOBSITE.

13. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF RELOCATION OR DISCONNECTION OF ALL EXISTING UTILITIES WITH APPLICABLE AGENCIES AND AUTHORITIES.

14. ALL PAVEMENT AND BASE MATERIALS AND WORKMANSHIP SHALL CONFORM TO NCDOT STANDARDS.

15. WATER AND SEWER SERVICES SHALL BE INSTALLED TO MEET LOCAL AND STATE PLUMBING CODES. METER AND TAPS SHALL MEET ALL LOCAL REQUIREMENTS.

16. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE.

17. SEE SOILS REPORT FOR ADDITIONAL REQUIREMENTS.

18. CONTRACTOR SHALL NOTE THAT EARTHWORK QUANTITIES ARE HIS RESPONSIBILITY, PLANS DO NOT REPRESENT A BALANCED EARTHWORK CONDITION.

REINF, CONC, PIPE SHALL BE CLASS III W/RUBBER GASKETED JOINT OR "RAM NECK", INSTALL PER MANUFACTURER'S REQUIREMENTS.

20. USE WHITE LANE MARKING PAINT FOR ALL PAVEMENT MARKINGS. PAINT SHALL BE A CHLORINATED RUBBER ALKYD, FS TT-P-115, TYPE III, FACTORY MIXED, QUICK DRYING, NON-BLEEDING.

21. REFER TO THE PLUMBING DRAWINGS FOR LOCATION AND INVERTS OF NEW WASTE. WATER AND ROOF DRAIN LINES.

FIRE AND LIFE SAFETY NOTES:

NOTES:

1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION, GLEARLY NAME THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.

2. CRZ RADUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).

3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12° OF MULCH AND/OR LOCKING MATTS SHALL SE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.

4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO ADDIT CHARGE TO THE ROOTE ALTERNATE CONSTRUCTION METHODS. SINCE AS A

4. WHERE SIDEMALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE BOOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK. SHALL BE INFLEMENTED AS NECESSARY.

5. FOR ALL TREES, CUITING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE THURK IS PROHIBITED, DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIAS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DIMAGING THE BARK WITH LAWAMONERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.

CONTRACTOR SHALL REPAIR DAMAGE TO TREES.

FASHING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FIRE OF \$500/DAY, DISTURBANCE OTHER THAN THAT ALLOWED.

WORK ORDER AND FINE OF \$500/DAY. DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

SMEET 1 of 2

STANDARD DETAIL

TREE PROTECTION

DURING

CONSTRUCTION

1. FIRE HYDRANTS MUST BE WITHIN 150' OF THE FIRE DEPARTMENT CONNECTION. 2. THE FIRE DEPARTMENT CONNECTION MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.

Wilmigton

(910) 741-4804 | CEP 10 (910) 741-7804 | CEP 10 (910)

3. LANDSCAPING AND PARKING CANNOT BLOCK OR IMPEDE THE FIRE DEPARTMENT CONNECTIONS OR FIRE HYDRANTS. A 3' CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT CONNECTION AND THE FIRE HYDRANT.

4. FIRE HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.

5. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS.

6. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS BEING DELIVERED TO THE JOB SITE.

7. THE CONTRACTOR WILL MAINTAIN ALL-WEATHER EMERGENCY ACCESS TO CONSTRUCTION SITE AT ALL TIMES.

B. TEMPORARY STREET SIGNS SHALL BE INSTALLED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADWAYS ALLOWS PASSAGE BY VEHICLES.

9. UNDERGROUND FIRE LINE AND PRIVATE WATER MAINS MUST BE PERMITTED AND INSPECTED BY THE WILMINGTON FIRE DEPARTMENT FROM THE PUBLIC RIGHT-OF-WAY TO THE BUILDING. CONTACT THE WILMINGTON FIRE DEPARTMENT DIVISION OF FIRE AND LIFE SAFETY AT 910-343-0696 FOR ADDITIONAL INFORMATION.

10. A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.

11. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMODATE BASE FIRE FLOW REQUIREMENTS OF THE STRUCTURE.

12. ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.

13. THE CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF

SEC. 510 OF THE 2018 FIRE CODE. 14. BUILDING CONSTRUCTION TYPE: II-B

15. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696

16. ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM MUST BE ELECTRICALLY SUPERVISED.

PERMEABLE PAVEMENT CONSTRUCTION SEQUENCE

The following is a typical construction sequence to properly install pervious concrete. The means and methods of installation shall be determined by the contractor and shall be installed per the manufacturer recommendations, product standards and industry

Step 1. Construction of the permeable pavement shall only begin after the entire contributing drainage area has been stabilized. The proposed site should be checked for existing utilities prior to any excavation. Do not install the system in rain or snow.

Step 2. Temporary erosion and sediment (E&S) controls (sitt fence) are needed during installation to divert stormwater away from the permeable pavement area until it is completed. The proposed permeable pavement area must be kept free from sediment during the entire construction process. Construction materials that are contaminated by sediments must be removed and replaced with clean materials.

Step 3. Where possible, excavators or backhoes should work from the sides to excavate the aggregate layer to its appropriate design depth and dimensions.

Step 4. In-situ soil testing shall be done after excavation to verify existing infiltration rate. Soils testing shall be conducted by an appropriately qualified professional, the testing can be done by the contractor, the designer, or a third party hired by owner. The results of the testing shall be given to the designer of record for review. If results show a lower infiltration rate than the rate of design the depth of aggregate must be revised.

Step 5. The native soils along the bottom and sides of the permeable pavement system should be scarified or tilled to a depth of 3 to 4 inches prior to the placement of the filter layer or filter fabric.

Step 6. Filter fabric should be installed on the sides of the aggregate layer.

Step 7. Place observation wells as shown on plans.

Step 8. Inspect all aggregate prior to placement. Ensure aggregate is clean, tree of fines and conform to the plans and specifications. All aggregate shall be spread (not dumped). Moisten and spread the washed stone without driving on the soil subgrade, being careful not to damage the observation wells. Follow compaction recommendations by the permeable pavement manufacturer or that from industry guidelines.

Step 9. Ensure edge restraints and barriers between permeable pavement are installed

Step 10. Contractor is to follow standard installation procedures for the specific type of pervious pavement that is being installed. For this project pervious concrete will be installed. Only certified and experienced contractors shall install the pervious concrete and installation shall be per the manufacturer recommendations, product standards and industry guidelines. Pervious concrete shall be constructed in accordance with the latest version of ACI 522.1, Specifications for Pervious Concrete.

Step 11. After installation, protect the installed pervious concrete until project completion, including routing construction traffic away from the installed pervious concrete. Contractor shall provide protection techniques including mats, plastic sheeting and barriers to ensure the pervious concrete remains protected until project completion.

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Licence #C-3641

JST DES. JPN CKD.

8/2/23 DATE



Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

TION E: GROUND STAE		
Re	equired Ground Stabil	ization Timeframes
ite Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
Perimeter dikes, swales, ditches, and perimeter slopes	7	None
High Quality Water (HQW) Zones	7	None
Slopes steeper than 3:1	7	If slopes are 10° or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope
	Ite Area Description Perimeter dikes, swales, ditches, and perimeter slopes High Quality Water (HQW) Zones Slopes steeper than 3:1 Slopes 3:1 to 4:1	Required Ground Stabil Stabilize Within this many calendar days after ceasing land disturbance Perimeter dikes, swales, ditches, and perimeter slopes High Quality Water (HQW) Zones Slopes steeper than 3:1 7 Slopes 3:1 to 4:1 Areas with slopes

spracticable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below

 Temporary grass seed covered with straw or
 Permanent grass seed covered with straw or other mulches and tackifiers other mulches and tackifiers Geotextile fabrics such as permanent soil Rolled erasion control products with or reinforcement matting without temporary grass seed Hydroseeding Shrubs or other permanent plantings covered Appropriately applied straw or other mulch. Plastic sheeting · Uniform and evenly distributed ground cover

sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES [PAMS] AND FLOCCULANTS Select flocculants that are appropriate for the soils being exposed during

 Apply flocculants at or before the inlets to Erosion and Sediment Control Measures. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.

construction, selecting from the NC DWR List of Approved PAMS/Flocculants.

Provide ponding area for containment of treated Stormwater before discharging Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures

EQUIPMENT AND VEHICLE MAINTENANCE Maintain vehicles and equipment to prevent discharge of fluids.

Provide drip pans under any stored equipment. Identify leaks and repair as soon as feasible, or remove leaking equipment from the

Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).

Remove leaking vehicles and construction equipment from service until the problem has been corrected

Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers. 2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.

Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.

Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers. Anchor all lightweight items in waste containers during times of high winds. Empty waste containers as needed to prevent overflow. Clean up immediately if

Dispose waste off-site at an approved disposal facility.

On business days, clean up and dispose of waste in designated waste containers.

 Do not dump paint and other liquid waste into storm drains, streams or wetlands. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. Contain liquid wastes in a controlled area.

4. Containment must be labeled, sized and placed appropriately for the needs of site Prevent the discharge of soaps, solvents, detergents and other liquid wastes from

construction sites

Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.

Provide staking or anchoring of portable toilets during periods of high winds or in high Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace

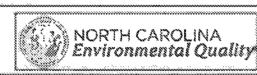
with properly operating unit.

Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably

Protect stockpile with silt fence installed along toe of slope with a minimum offset of

Provide stable stone access point when feasible.

Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



Do not discharge concrete or cement slurry from the site. Dispose of, or recycle settled, hardened concrete residue in accordance with local

and state solid waste regulations and at an approved facility. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.

Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.

Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project Locate washouts at least 50 feet from storm drain inlets and surface waters unless it

can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the

approving authority. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.

Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.

At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

IERBICIDES, PESTICIDES AND RODENTICIDES

Store and apply herbicides, pesticides and rodenticides in accordance with label

Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of

Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately. Do not stockpile these materials onsite.

AZARDOUS AND TOXIC WASTE

Create designated hazardous waste collection areas on-site.

Place hazardous waste containers under cover or in secondary containment. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

SELF-INSPECTION, RECORDKEEPING AND REPORTING

Inspect	Frequency (during norms) business hours)	Inspection records must include:
(1) foin gauge maintained in good working order	Dally	Daily rainfolf amounts. If no daily rain gauge observations are made during weekend holiday periods, and no individual-day rainfall information available, record the cumulative rain measurement for those attended days (and this will determine if a site inspection needed). Days on which no rainfall occurred shall be recorded "zero." The permittee may use another rain-monitoring decaptored by the Division.
(2) E&X Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1 Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (5DOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discolaration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	if visible sedimentation is found outside site limits, then a recor of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has be the site limits, 2. Description, evidence, and date of corrective actions taken, 3. An explanation as to the actions taken to control future releases.
(5) Streams or watlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or webland has increased visible sedimentation or stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, a 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this perm of this permits.
(6) Circumd stabilization measures	After each phase of grading	The phase of grading (installation of perimeter E&SC measures, clearing and grubbleg, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

NORTH CAROLINA ## Environmental Quality

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING . E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the

and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING 1. Occurrences that must be reported

Permittees shall report the following occurrences: (a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

122.41(m)(3)]

(e) Noncompliance

of this permit that

may endanger

They are 25 gallons or more,

They are less than 25 gallons but cannot be cleaned up within 24 hours,

 They cause sheen on surface waters (regardless of volume), or They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(g) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure complian with the federal or state impaired-waters conditions.
(b) Oil spills and ralease of hazardous substances per item 1(b)-(c) above	 Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses (40 CFR 122.41(m)(3))	 A report at least ten days before the date of the bypass, if passible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR	 Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the

quality and effect of the bypass.

case by-case basis

with the conditions 💮 Within 7 calendar days, a report that contains a description of the

Within 24 hours, an oral or electronic notification

noncompliance, and its causes; the period of noncompliance,

including exact dates and times, and if the noncompliance has not

prevent reoccurrence of the noncompliance. (40 CFR 122.41(I)(6).

Division staff may waive the requirement for a written report on a

been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and

EROSION CONTROL NOTES AND MAINTENANCE PLAN:

ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE, LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF-INCH RAINFALL.

ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.

SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND WATTLES, BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY

4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.

SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX, WITH THE USE OF EXTRA STRENGTH FABRIC. WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8. FEET MAX. WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE, THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF-FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED

SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. THE ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OF BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED AND KEPT CLEAN

SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN WHEN THE DESIGN STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR IF THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED FROM BAFFLES WHEN DEPOSITS REACH HALF THE HEIGHT OF THE 1ST BAFFLE. FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.

8. LAND QUALITY REQUIRES: ALL SEEDED AREAS WILL BE FERTILIZED. RESEEDED AS NECESSARY, AND MULCHED, ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN, TO MAINTAIN A VIGOROUS DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS. WATER QUALITY REQUIRES ALL SEEDED AREAS WILL BE FERTILIZED. RESEEDED AS NECESSARY AND MULCHEI ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, ALL SLOPES STEEPER THAN 3" HORIZONTAL TO 1' VERTICAL (3:1) AND ALL HIGH QUALITY WATER (HQW) ZONES SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN SEVEN (7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY, ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY

FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECT SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

10. BASIN OUTLET STRUCTURES AND SKIMMERS SHALL WITHDRAW WATER FROM THE

11. CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY AND AFTER HEAVY RAINS. DAMAGES SHOULD BE REPAIRED PROMPTLY. FILLED TO OVER 75% CAPACITY WITH RAIN WATER IT SHOULD BE VACUUMED OR ALLOWED TO EVAPORATE TO AVOID OVERFLOWS, REFORE HEAVY RAINS THE CONTAINERS LIQUID LEVEL SHOULD BE LOWERED OR THE CONTAINER COVERED TO AVOID AN OVER FLOW DURING RAIN. WHEN SOLIDS HAVE HARDENED THEY

SHOULD BE REMOVED AND RECYCLED.

PERMANENT SEEDING RECOMMENDATIONS FOR FALL AND

SEEDING MIXTURE (lb/1000 sf) TALL FESCUE PENSACOLA BAHIAGRASS SERICEA LESPEDEZA KOBE LESPEDEZA

SEEDING NOTES:

1. FROM SEPT. 1 THRU MAR. 1, USE UNSCARIFIED SERICEA SEED. 2. ON POORLY DRAINED SITES OMIT SERICEA AND INCREASE KOBE TO

3. WHERÉ A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE TO 40 lbs/acre.

NURSE PLANTS: BETWEEN APR. 15 AND AUG. 15, ADD 10 lbs/acre GERMAN MILLET OR 15 lbs/ocre SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUG. 15 ADD 25 lbs/gcre RYE (GRAIN).

BEST POSSIBLE FEB 15—MAR. 20 FEB.15—APR. 30 EARLY SPRING: SEPT. 1—SEPT. 30 SEPT. 1—OCT. 31 SOIL AMENDMENTS:

APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000-5,000 Ibs/acre (68.9-114.8 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE (USE THE LOWER RATE ON SANDY SOILS) AND 1,000 lbs/acre (22.9 lbs/1,000 sf) 10-10-10 FERTILIZER.

APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH, ANCHOR STRAW BY TACKING WITH ASPHALT. NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING

F GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR, ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 lbs/acre (11.5 lbs/1.000 sf) 10-10-10 FERTILIZER, MOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

PERMANENT SEEDING RECOMMENDATIONS FOR LATE SPRING AND EARLY SUMMER

SEEDING MIXTURE SPECIES RAT PENSACOLA BAHIAGRASS RATE (lb/acre) SS 50 (lb/1000 sf) SERICEA LESPEDEZA 0.23 COMMON BERMUDA

. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA. 2. USE COMMON BERMUDAGRASS ONLY ON ISOLATED SITES WHERE IT CANNOT BECOME A PEST. BERMUDAGRASS MAY BE REPLACED WITH 5 lbs/acre CENTIPEDEGRASS.

SEEDING DATES APRIL 1-JULY 15

GERMAN MILLET

SOIL AMENDMENTS APPLY LIME AND FERTILIZE ACCORDING TO SOIL TESTS, OR APPLY 3,000 Ibs/acre OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS (68.9 lbs/1,000 sf) GROUND AGRICULTURAL LIMESTONE AND 500 lbs/gcre (11.5 lbs/1,000 sf) 10-10-10 FERTILIZER.

APPLY 4,000 lb/acre (91.8 lbs/1,000 sf) GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT. NETTING, OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING

REFERTILIZE THE FOLLOWING APRIL WITH 50 lbs/acre (1.15 lbs/1,000 sf) NITROGEN. REPEAT AS GROWTH REQUIRES. MAY BE MOWED ONLY ONCE A YEAR. WHERE A NEAT APPEARANCE IS DESIRED, OMIT SERICEA AND MOW AS OFTEN AS NEEDED.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER SEEDING MIXTUR

ABOVE GRADE WASHOUT STRUCTURE

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

PIEDMONT - MAY 1 - AUG. 15 COASTAL PLAIN - APR. 15 - AUG. 15 SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 lb/acre

I. ACTUAL LOCATION DETERMINED IN FIELD

75% OF THE STRUCTURES CAPACITY.

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE

3.CONCRETÉ WASHOUT STRUCTURE NEEDS TO BE

MINTAINED WHEN THE LIQUID AND/OR SOLID REAGHES

1. ACTUAL LOCATION DETERMINED IN FIELD

SHALL BE MAINTAINED WHEN THE LIQUID

AND/OR SOLID REACHES 75% OF THE

ADEQUATE HOLDING CAPACITY WITH A

3.CONCRETE WASHOUT STRUCTURE NEEDS

BE SUBSTITUTED AT A RATE OF 50 lb/acre.

MOUNTAINS - MAY 15 - AUG. 15

TO BE CLEARY MARKED WITH SIGNAGE

MINIMUM 12 INCHES OF FREEBOARD.

GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10 FERTILIZER. APPLY 4,000 lb/acre STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT,

ETTING, OR A MULCH ANCHORING TOOL, A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE, RESEED, REFERTILIZE

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY

AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE SPECIES RATE (lb/acre) RYE (GRAIN)

MOUNTAINS - AUG. 15 - DEC. 15 COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 15 SOIL AMENDMENTS:

FOLLOW SOIL TEST OR APPLY 2,000 Ib/acre GROUND AGRICULTURAL LIMESTONE AND 1,000 Ib/acre 10-10-10 FERTILIZER. APPLY 4,000 Ib/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. REPAIR AND REFERTILIZE DAMAGE AREAS IMMEDIATELY. TOP DRESS WITH 50 lb/acre OF NITROGEN IN MARCH, IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15. OVERSEED WITH 50 Ib/gcre KOBE (PIEDMONT AND COASTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN

FEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE SPECIES RATE (lb/acre) RYE (GRAIN) ANNUAL LEŚPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN

IN MOUNTAINS)

LATE FEBRUARY OR EARLY MARCH.

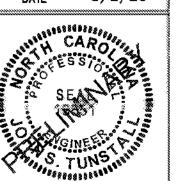
ABOVE 2,500 FEET: FEB. 15 - MAY 15 BELOW 2,500 FEET: FEB. 1 - MAY 1 PIEDMONT -JAN. 1 - MAY 1 COASTAL PLAIN DEC. 1 - APRIL 15

SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 ib/acre GROUND AGRICULTURAL LIMESTONE AND 750 lb/acre 10-10-10

APPLY 4,000 Ib/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. REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED. REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

Licence #C-3641 23062

JST DES. CKD. ЛЬИ TBM DRWN. 8/2/23 DATE



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19









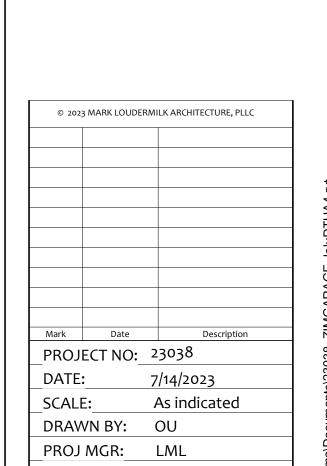
Mark Date Description
PROJECT NO: 23038
DATE: 7/14/2023
SCALE: As indicated
DRAWN BY: OU
PROJ MGR: LML

FLOOR PLANS

A101

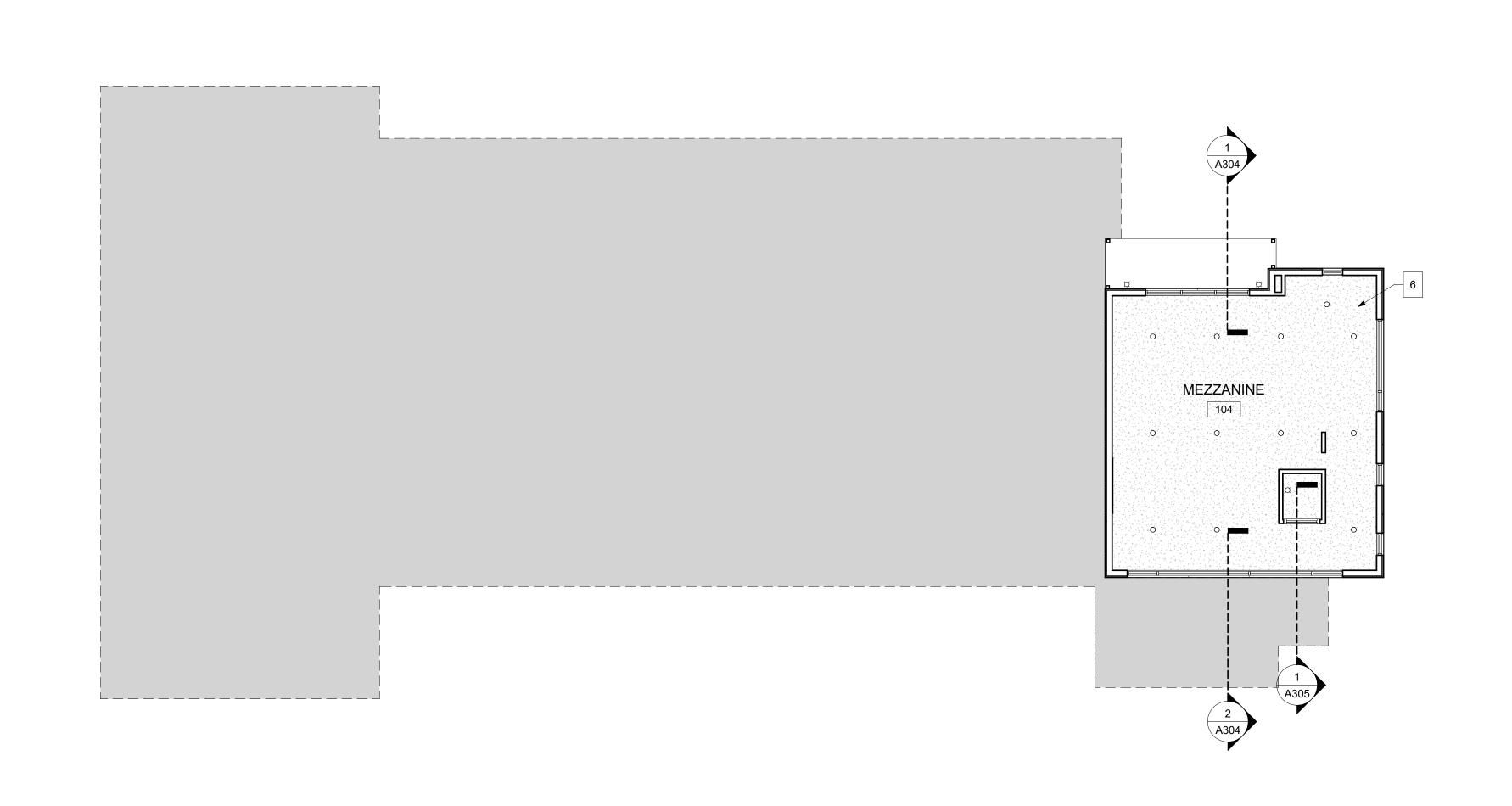




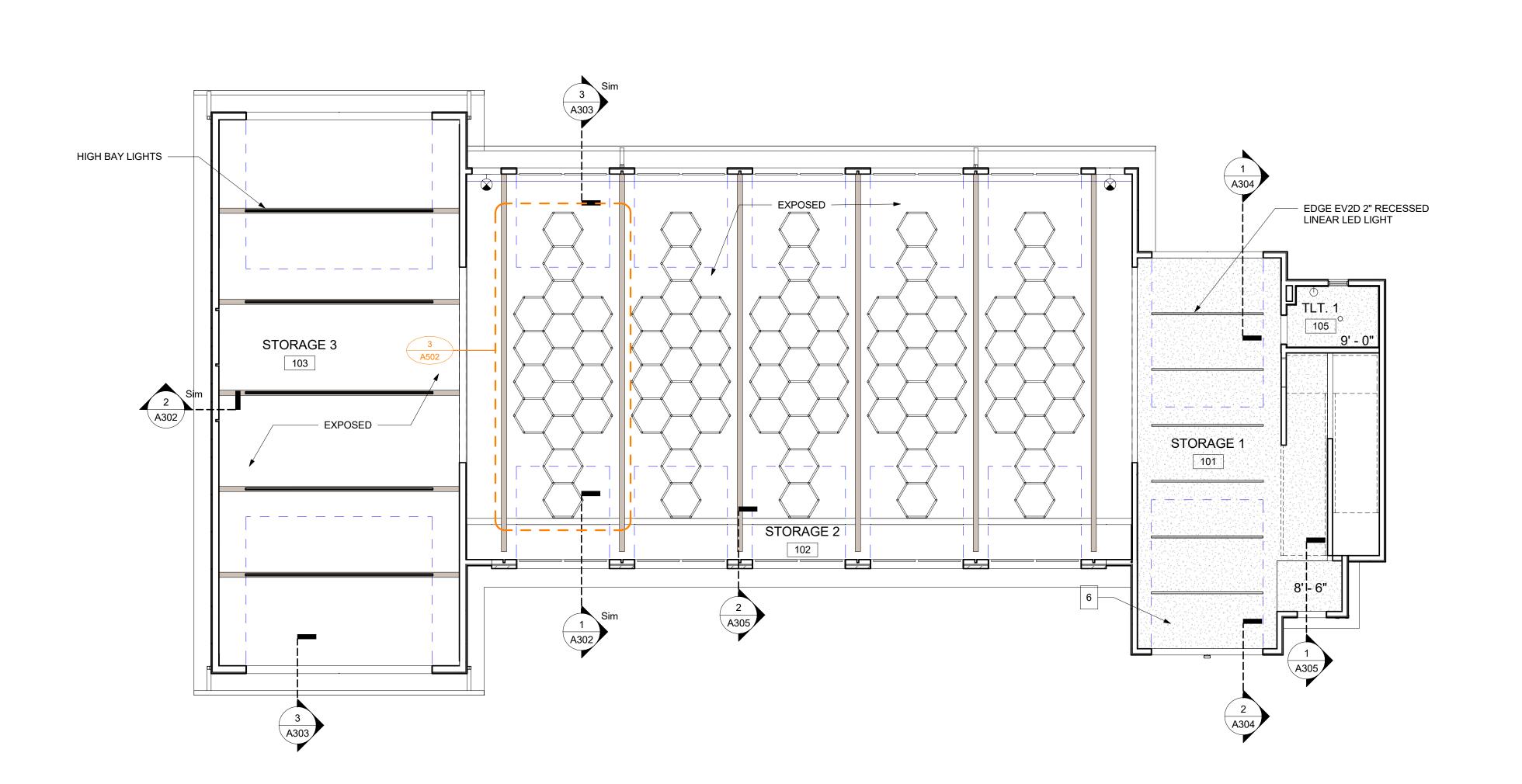


A102

CEILING PLAN



SECOND FLOOR REFLECTED CEILING PLAN



FIRST FLOOR REFLECTED CEILING PLAN

CEILING LEGEND

EXIT SIGN SINGLE FACE, CEILING MOUNTED

CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY

CEILING NOTES

SEE FINISH SCHEDULE FOR ACT TYPES.
SEE MECHANICAL DRAWINGS FOR G.R.D. TYPES, LOCATIONS,

AND ADDITIONAL WORK. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND

LOCATIONS
CEILING HEIGHTS INDICATED ARE FROM FINISH FLOOR.
CEILINGS AT LANDINGS, RAMPS ETC., REFER TO NEAREST
FLOOR LEVEL. COORDINATE WITH EXTERIOR WINDOW

ALL EXPOSED LINTELS SHALL BE PAINTED.
ATTACH CEILING TO BOTTOM OF BEAM OR TRUSS, UNLESS
SPECIFIED OTHERWISE.

SITE NORTH

INTERIOR - GWB CEILINGS /BULKHEADS

SUPPLY DIFFUSER

RETURN GRILLE

EXHAUST GRILLE

MULLION LOCATIONS.

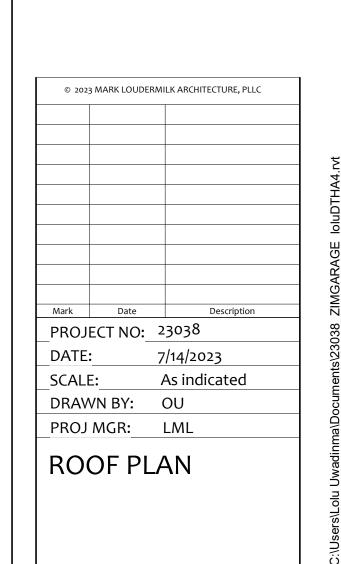
WALL MOUNTED LIGHT

EXPOSED

N. C. N. C.







A103

ROOF PLAN 1/8" = 1'-0" PVC ROOFING SYSTEM OVER RIGID INSULATION

PVC ROOFING SYSTEM OVER RIGID INSULATION

PVC ROOFING SYSTEM OVER RIGID INSULATION

CRICKET

C.H. CONDUCTOR HEAD

D.S. DOWNSPOUT

S.B. SPLASHBLOCK

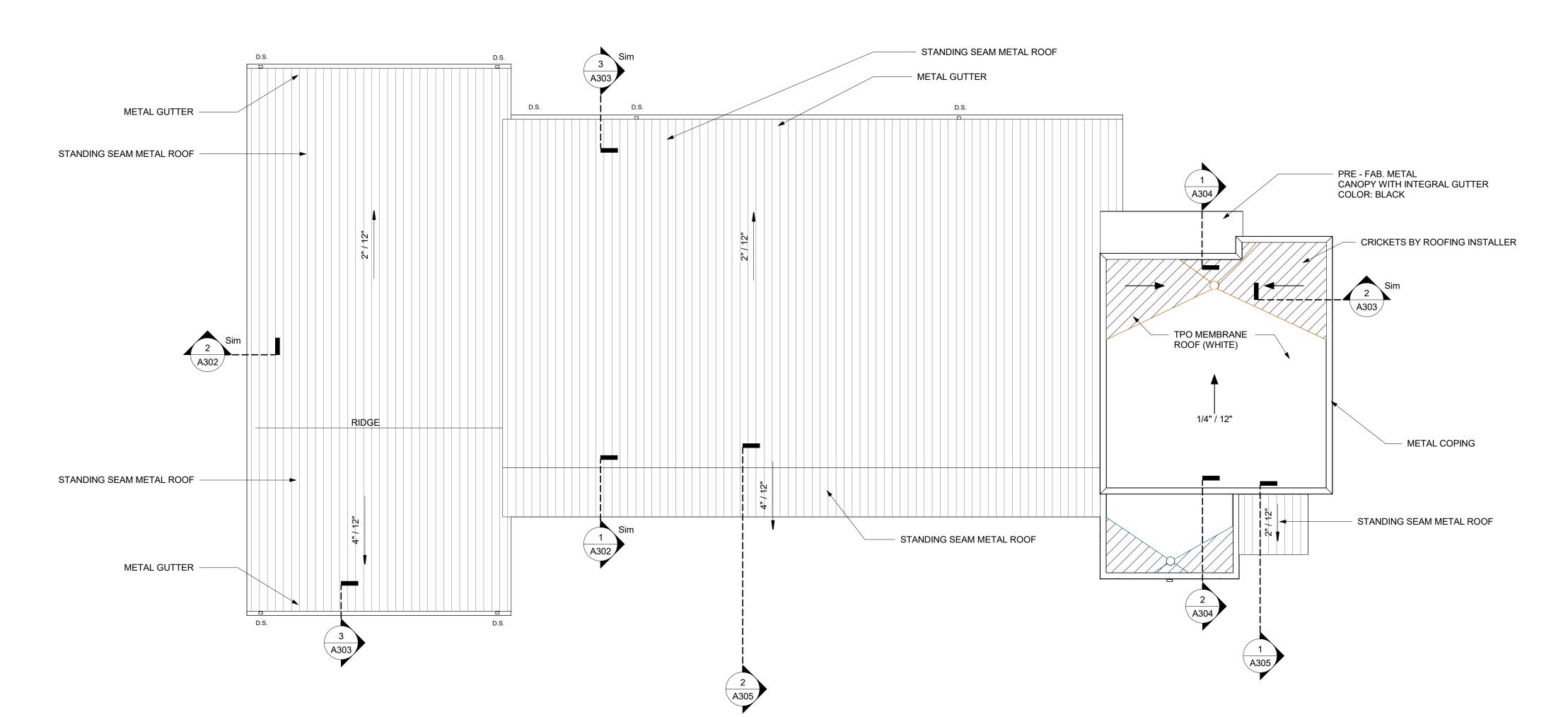
ROOF NOTES AND LEGEND

1. SLOPE ALL CRICKETS 1/2" / 12" MINIMUM, EXCEPT WHERE REQUIRED TO MAINTAIN MINIMUM 8" ROOFING/FLASHING TURN-UP HEIGHT.

2. TIE DOWNSPOUTS INTO BOOT AT GRADE AND CONNECT TO STORMWATER SYSTEM, UNLESS OTHERWISE NOTED. REFER TO CIVIL DRAWINGS

FOR CONTINUATION.

PROVIDE CRICKETS AT ALL ROOF TOP EQUIPMENT, FIRE VENTS, EXHAUST FANS, CURBS, ETC. AS REQUIRED TO MAINTAIN POSITIVE DRAINAGE.









EAST ELEVATION 7

1/8" = 1'-0"

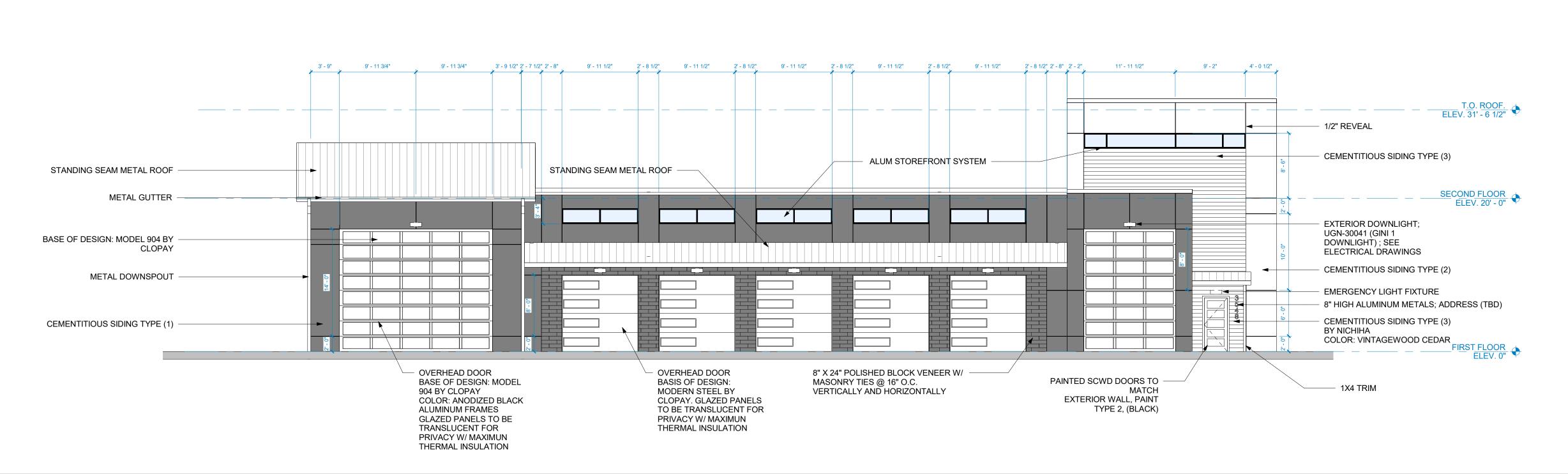


© 2023 MARK LOUDERMILK ARCHITECTURE, PLLC Description 7/14/2023 1/8" = 1'-0"

Mark Date PROJECT NO: 23038 DATE: SCALE: DRAWN BY: OU PROJ MGR: LML EXTERIOR ELEVATIONS

A201

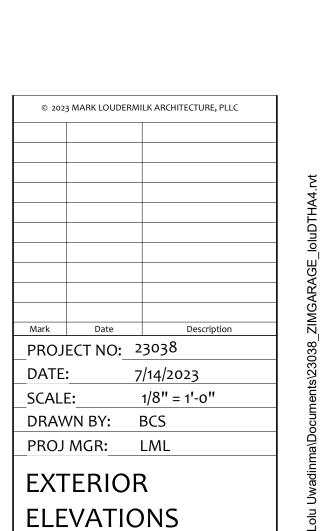
METAL GUTTER SECOND FLOOR ELEV. 20' - 0" 1/2" REVEAL METAL DOWNSPOUT - CEMENTITIOUS SIDING TYPE (1) FIRST FLOOR ELEV. 0"











A202

SOUTH ELEVATION
1/8" = 1'-0"

WEST ELEVATION 7

4* PARAPET CAP, WHITE

T.O. ROOF
ELEV. 31*-6 12*

ALUM STOREFRONT
SYSTEM

SECOND FLOOR
ELEV. 20*-0

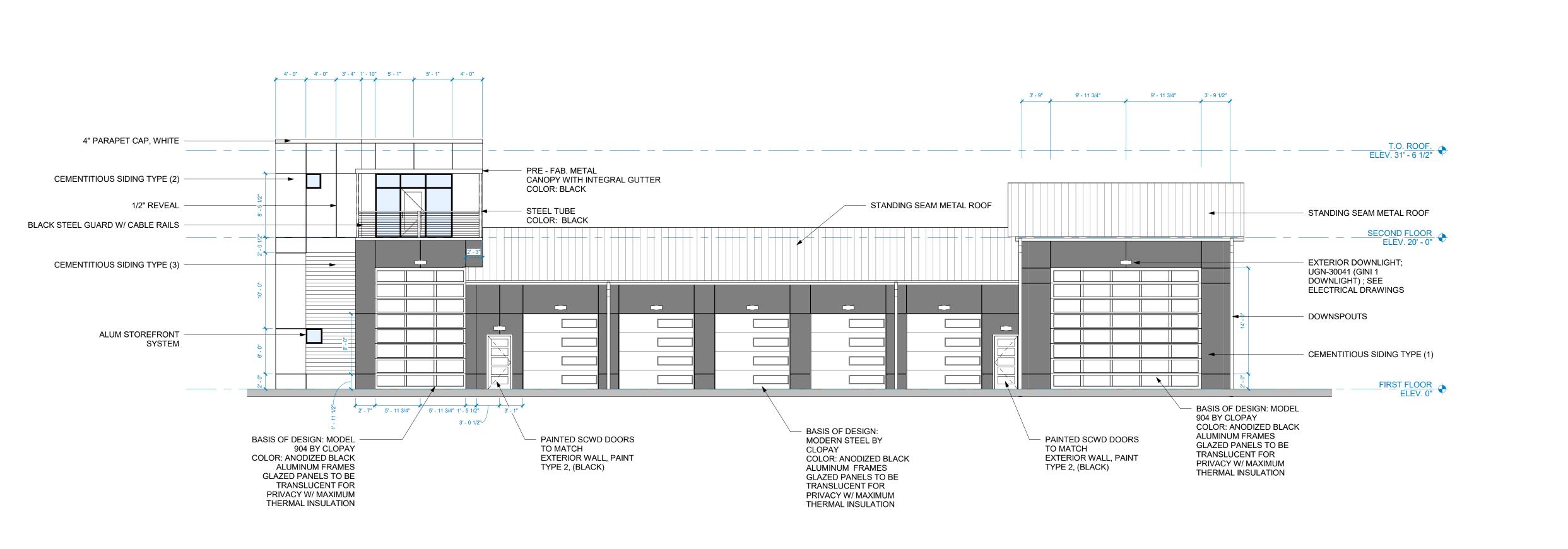
METAL GUTTER

METAL DOWNSPOUT
CEMENITIOUS SIDING TYPE (1)
CEMENITIOUS SIDING TYPE (2)
CEMENITIOUS SIDING TYPE (2)
CEMENITIOUS SIDING TYPE (3)

FIRST FLOOR
ELEV. 0*

PLEV. 0*

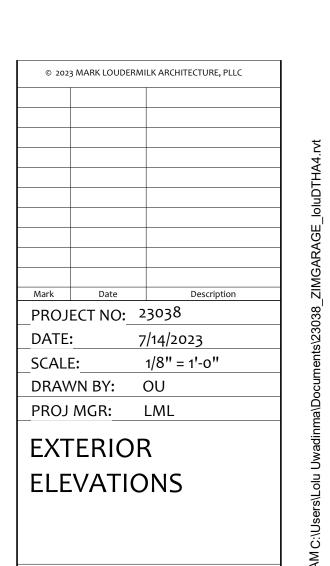
ELEV. 0*

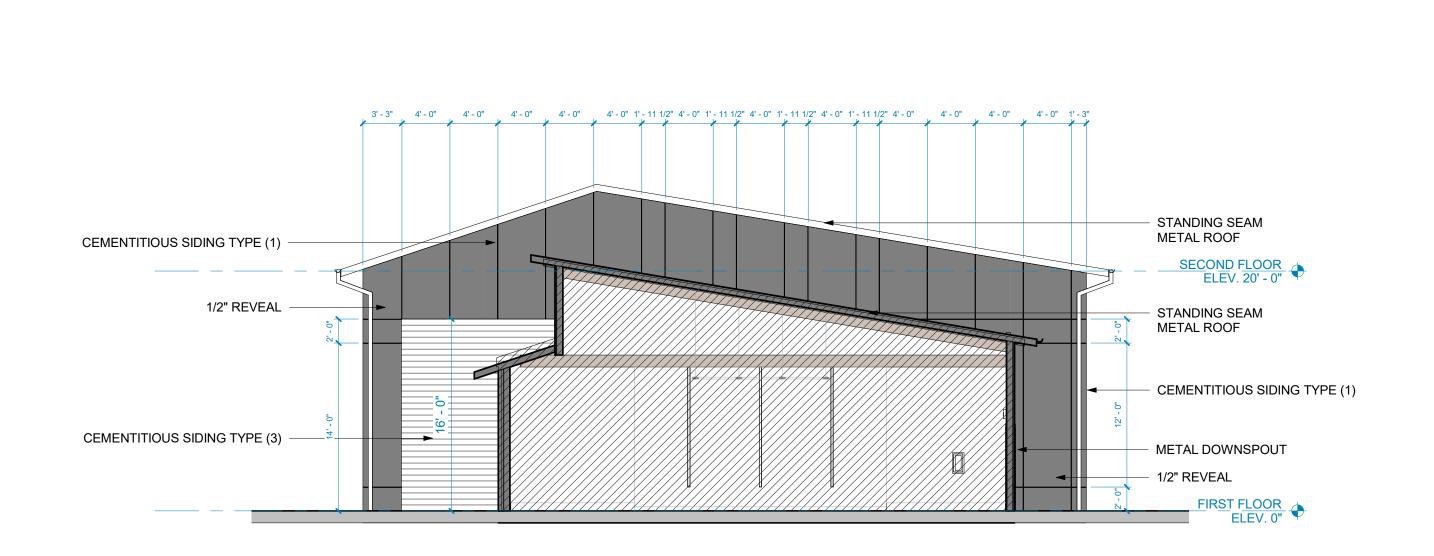












3'-1" 4'-51/2" 4'-6" 3'-31/2" 4'-0" 2'-10" 4'-0"

PRE - FAB. METAL -

STEEL TUBE -

COLOR: BLACK

CANOPY WITH INTEGRAL GUTTER COLOR: BLACK 4" PARAPET CAP, WHITE

T.O. ROOF.

ELEV. 31' - 6 1/2"

CEMENTITIOUS SIDING
TYPE (2)

SECOND FLOOR ELEV. 20' - 0"

1/2" REVEAL

CEMENTITIOUS SIDING TYPE (1)

5' - 0" 5' - 0"

EXTERIOR ELEVATION 2
1/8" = 1'-0"

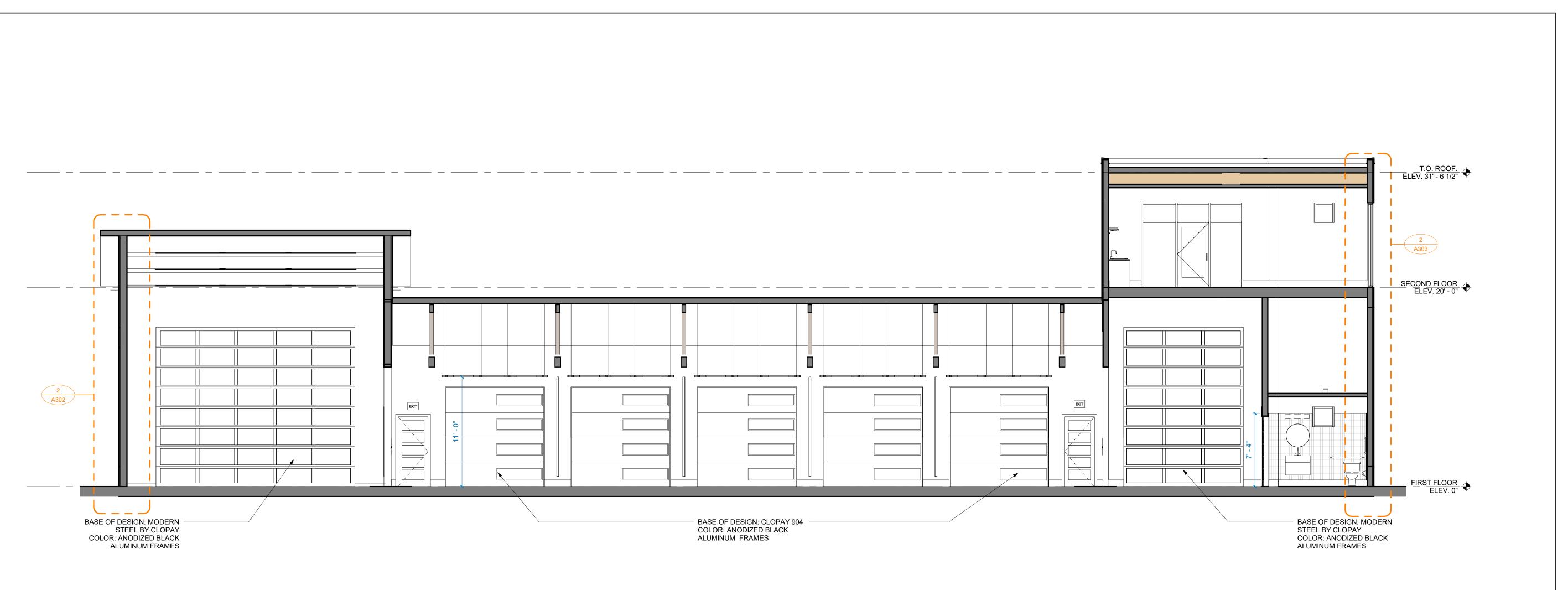
BUILDING SECTION 2

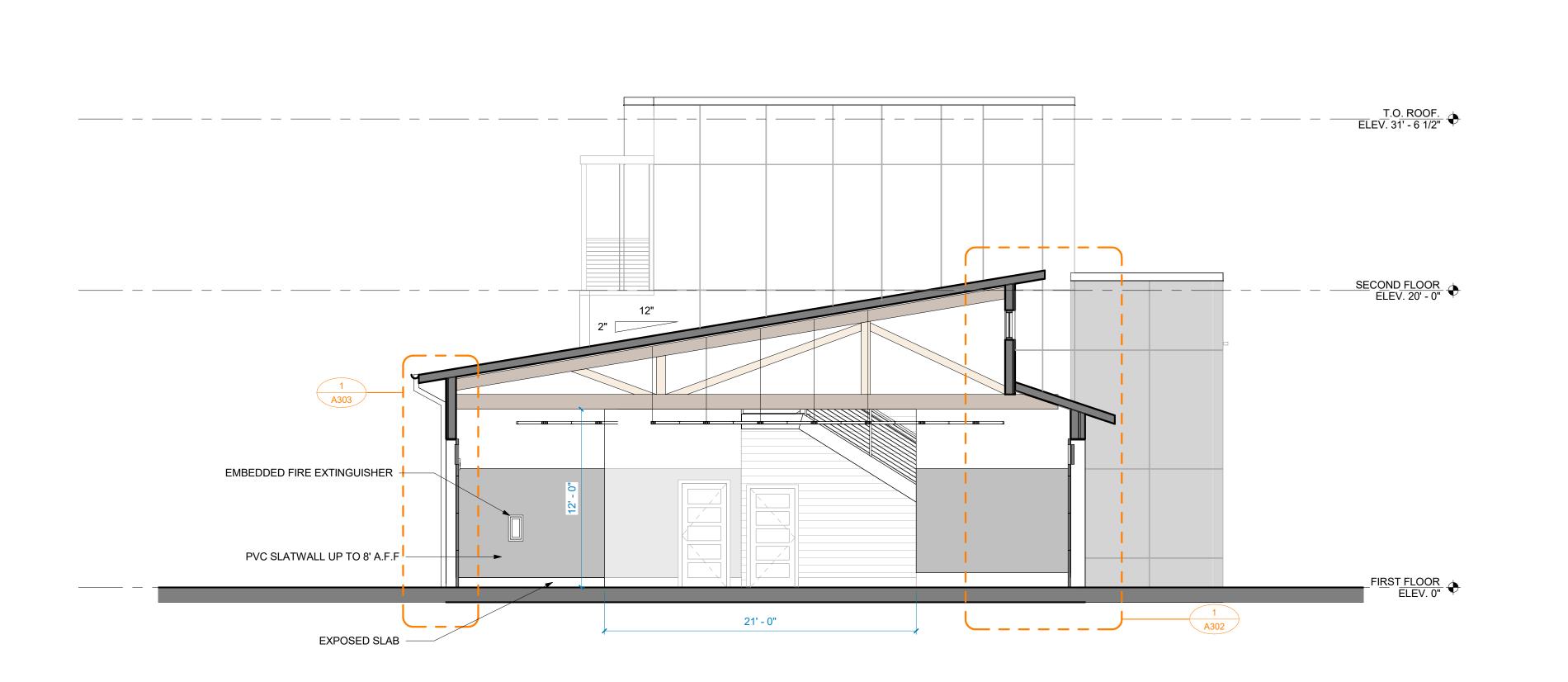
3/16" = 1'-0"

PROJ MGR: LML

BUILDING SECTIONS

A301.A





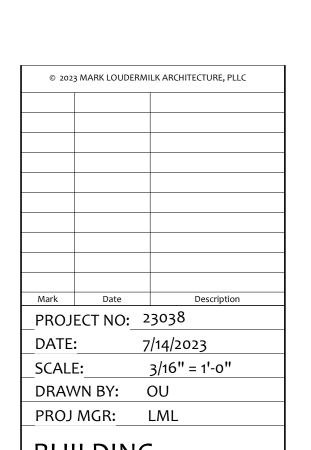






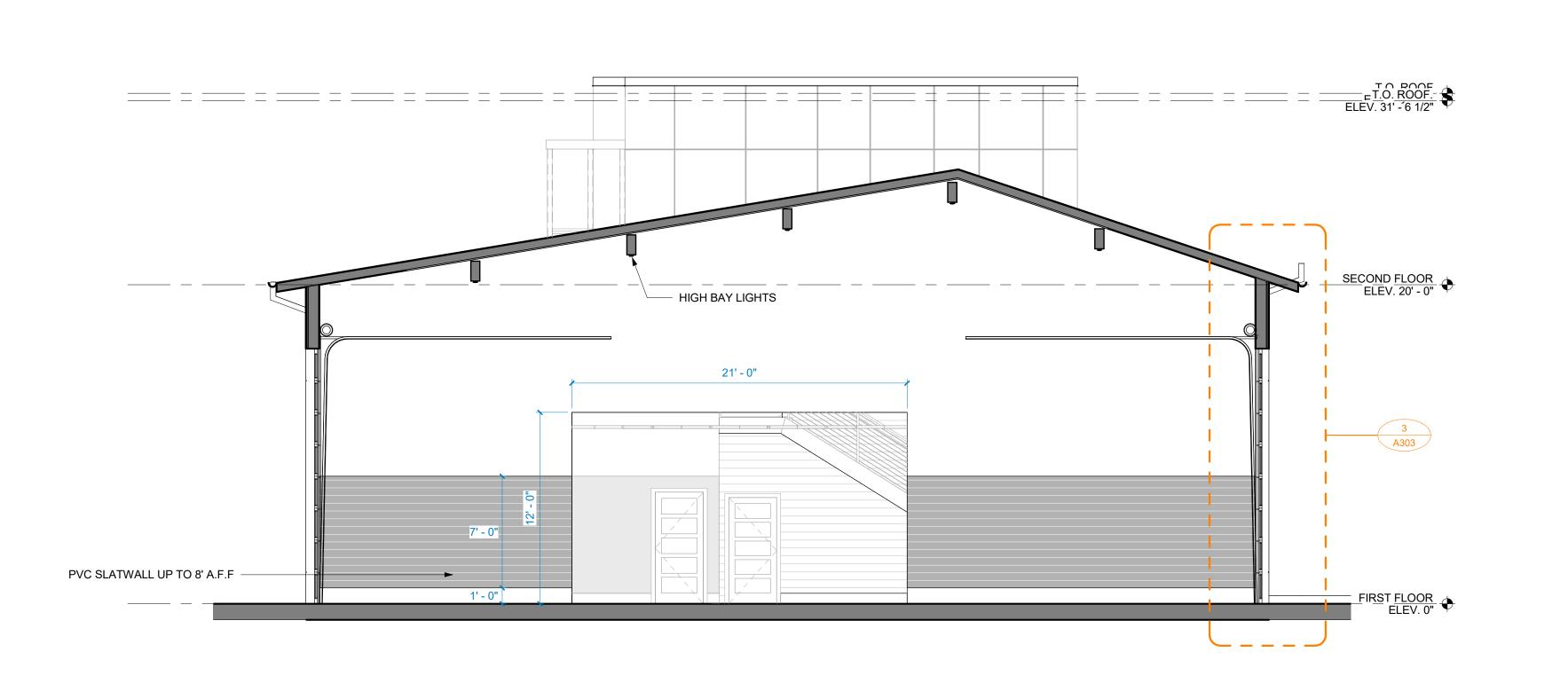
BUILDING SECTION 4
3/16" = 1'-0"





BUILDING SECTIONS

A301.B



1 A304

PVC SLATWALL UP TO 8' A.F.F

SECOND FLOOR ELEV. 20' - 0"

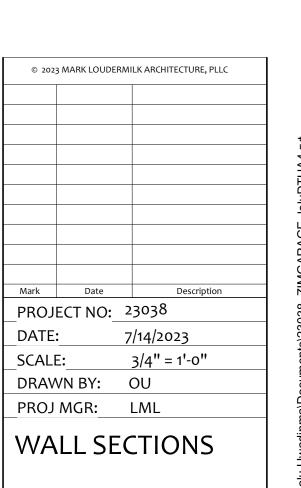




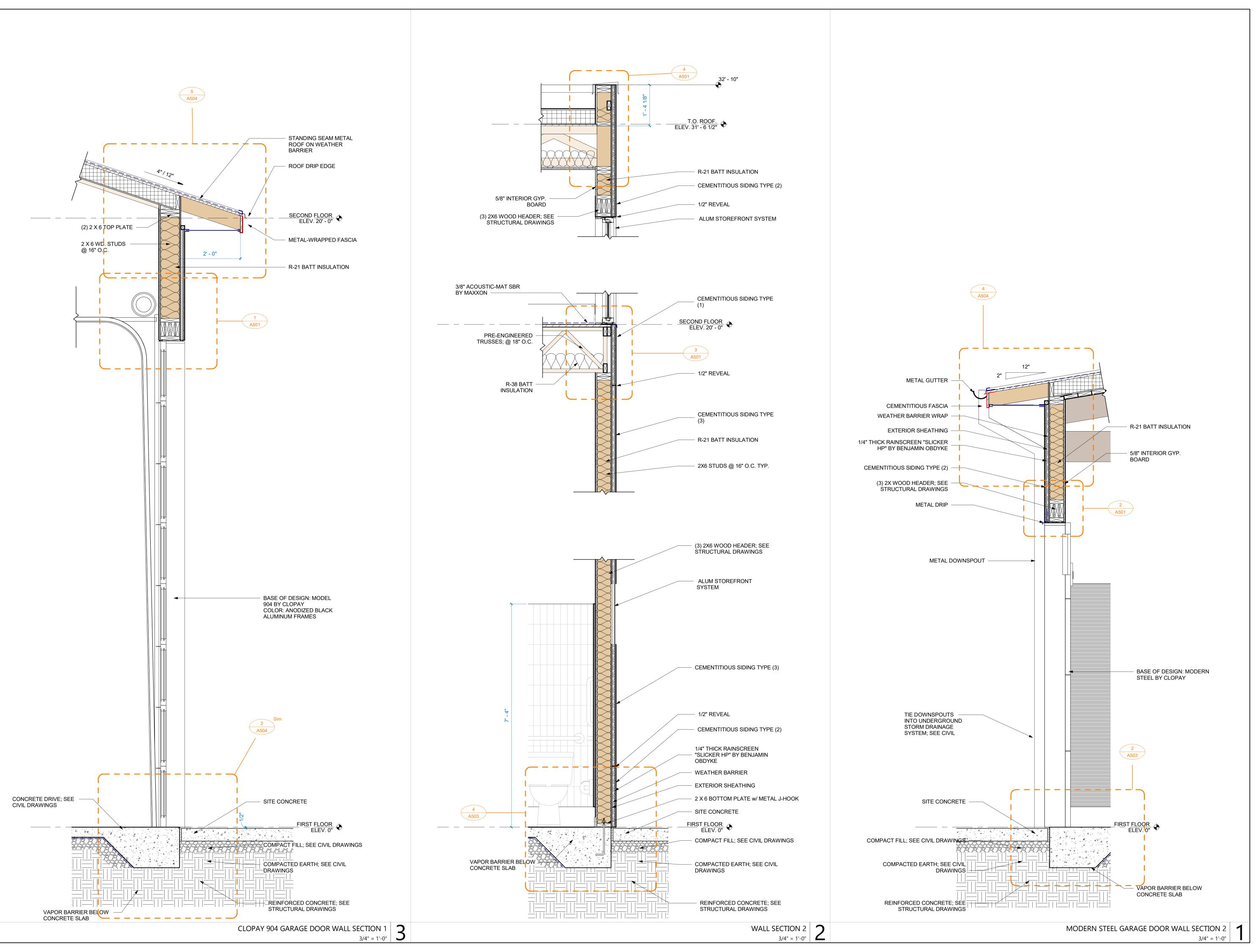
www.loudermilkarch.com







A302

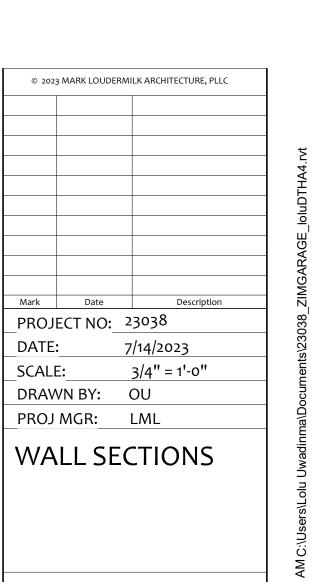


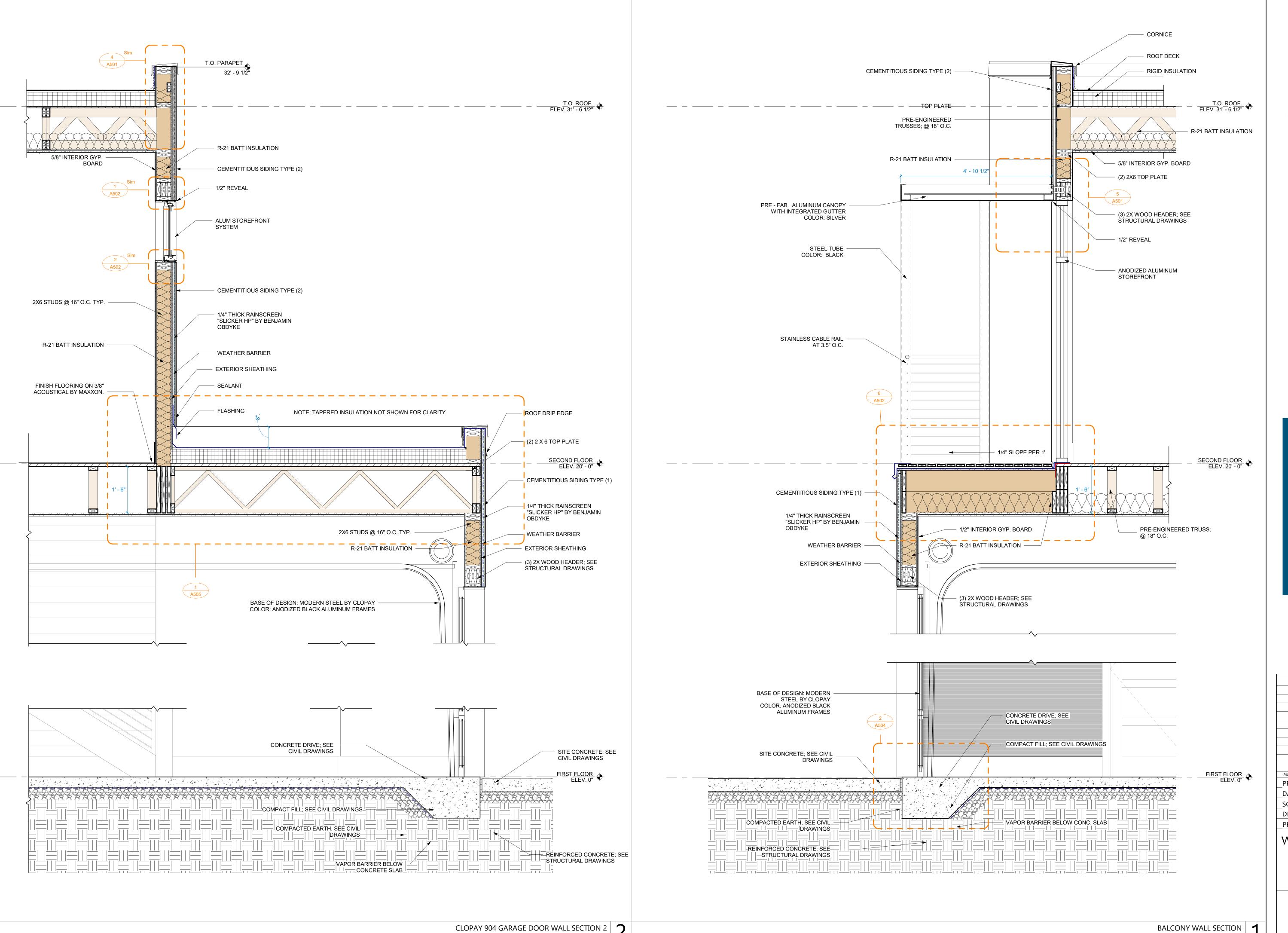
















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4304

3/4" = 1'-0"



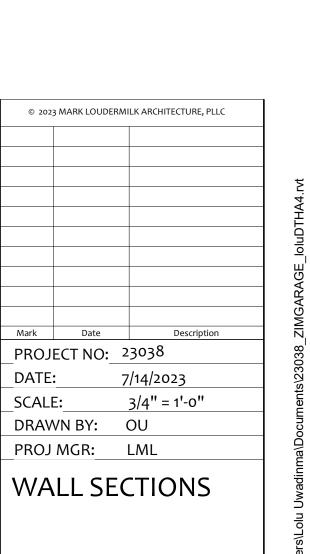
www.loudermilkarch.com







AN





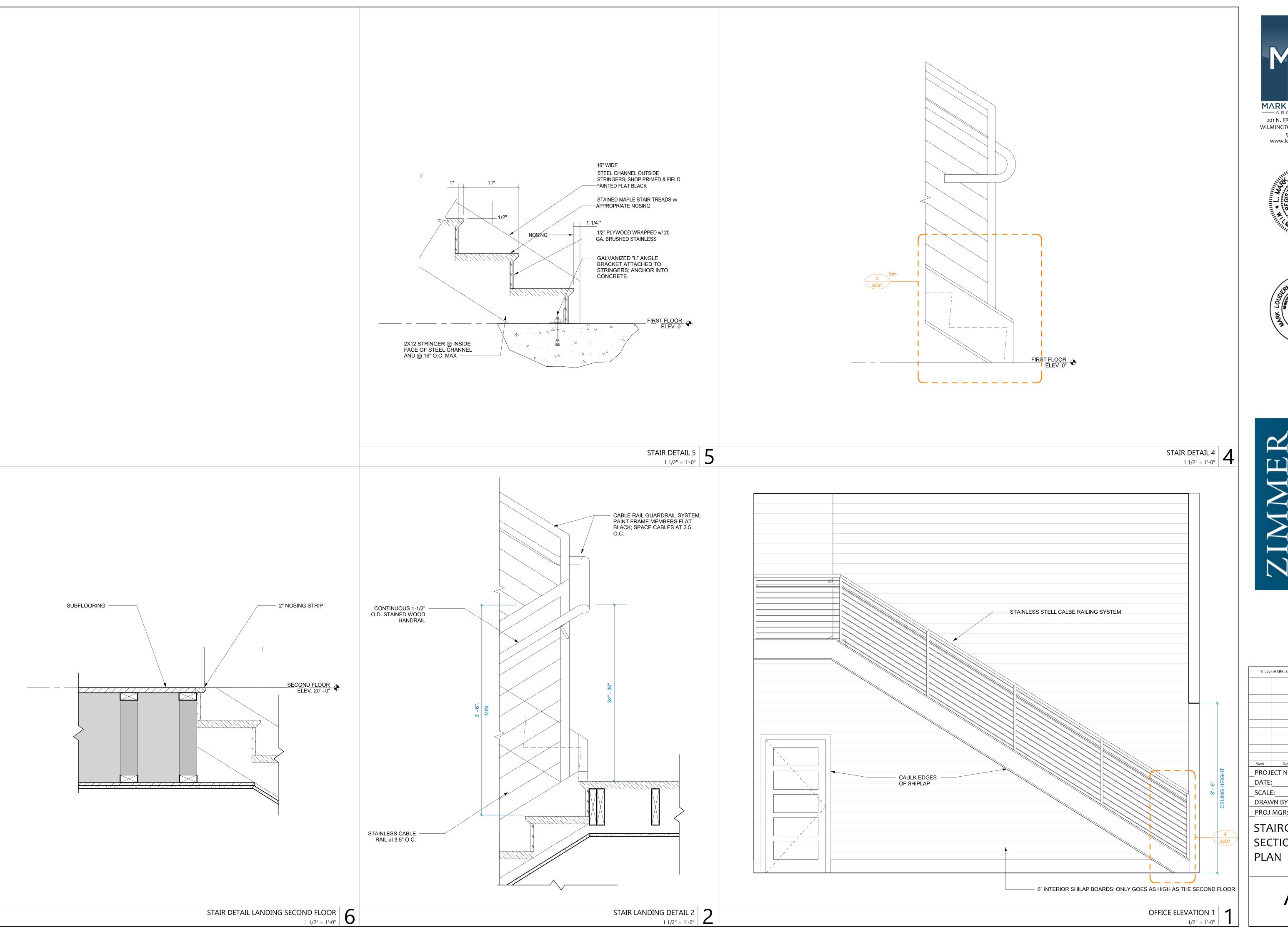








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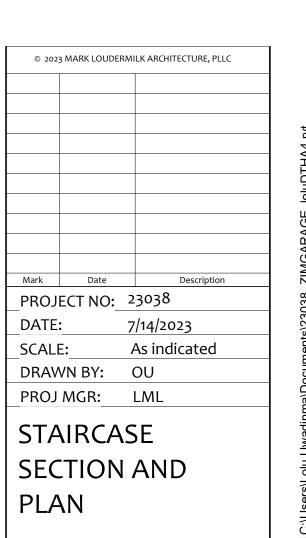














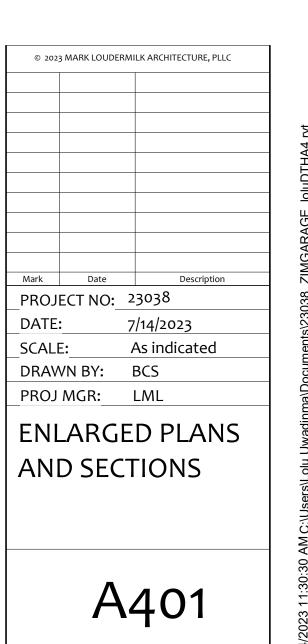


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ANNEX



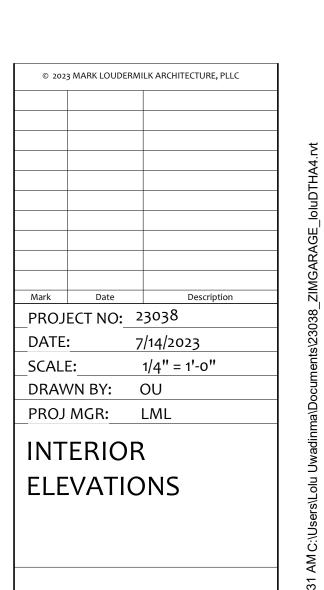
1/2" = 1'-0"

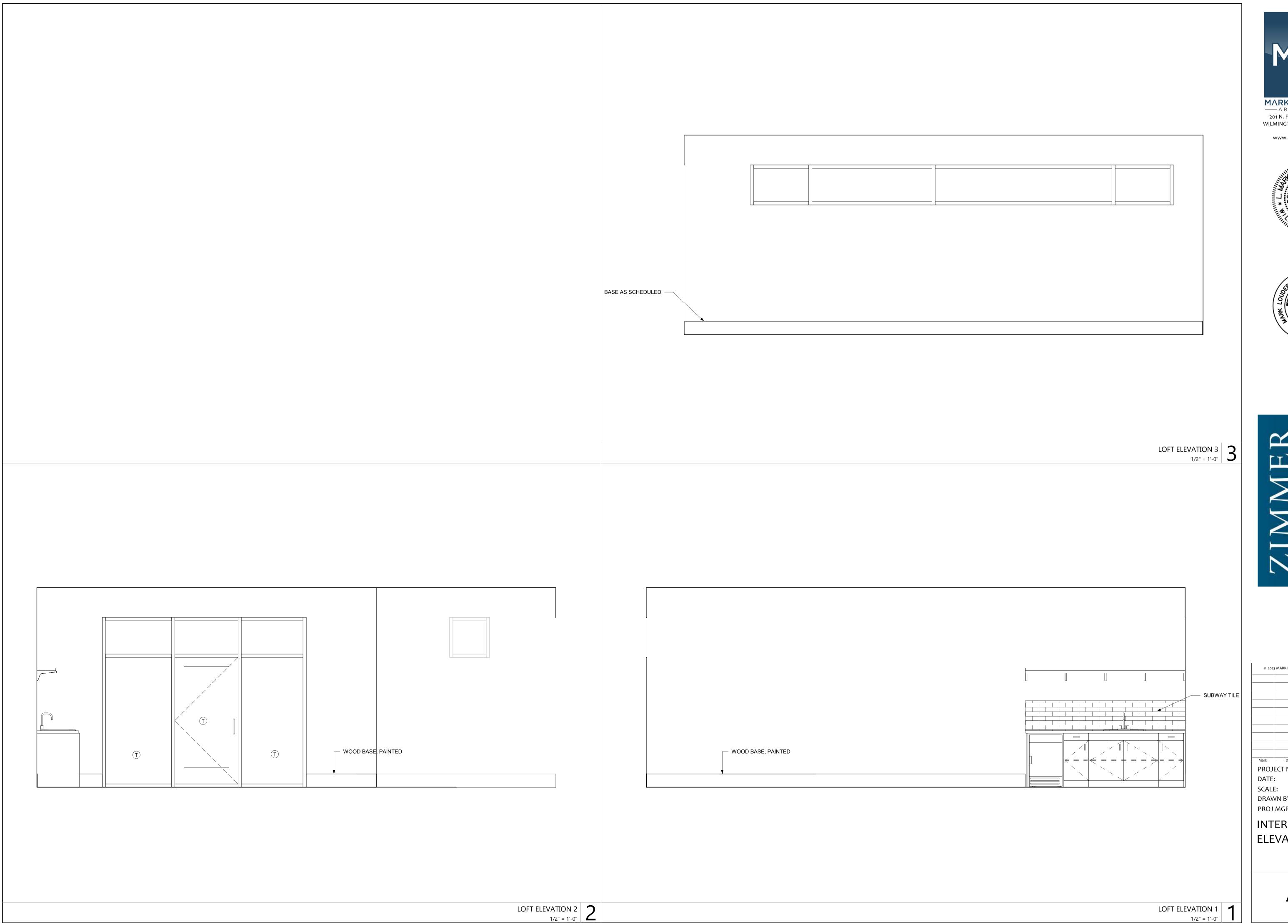










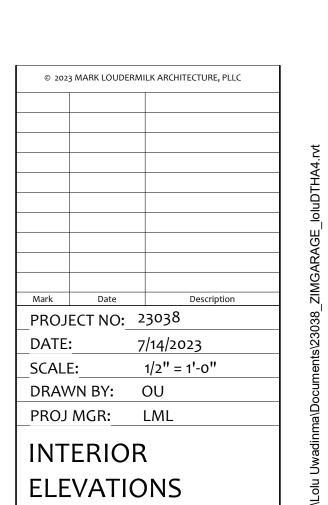








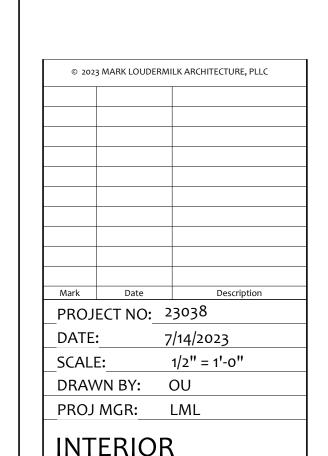




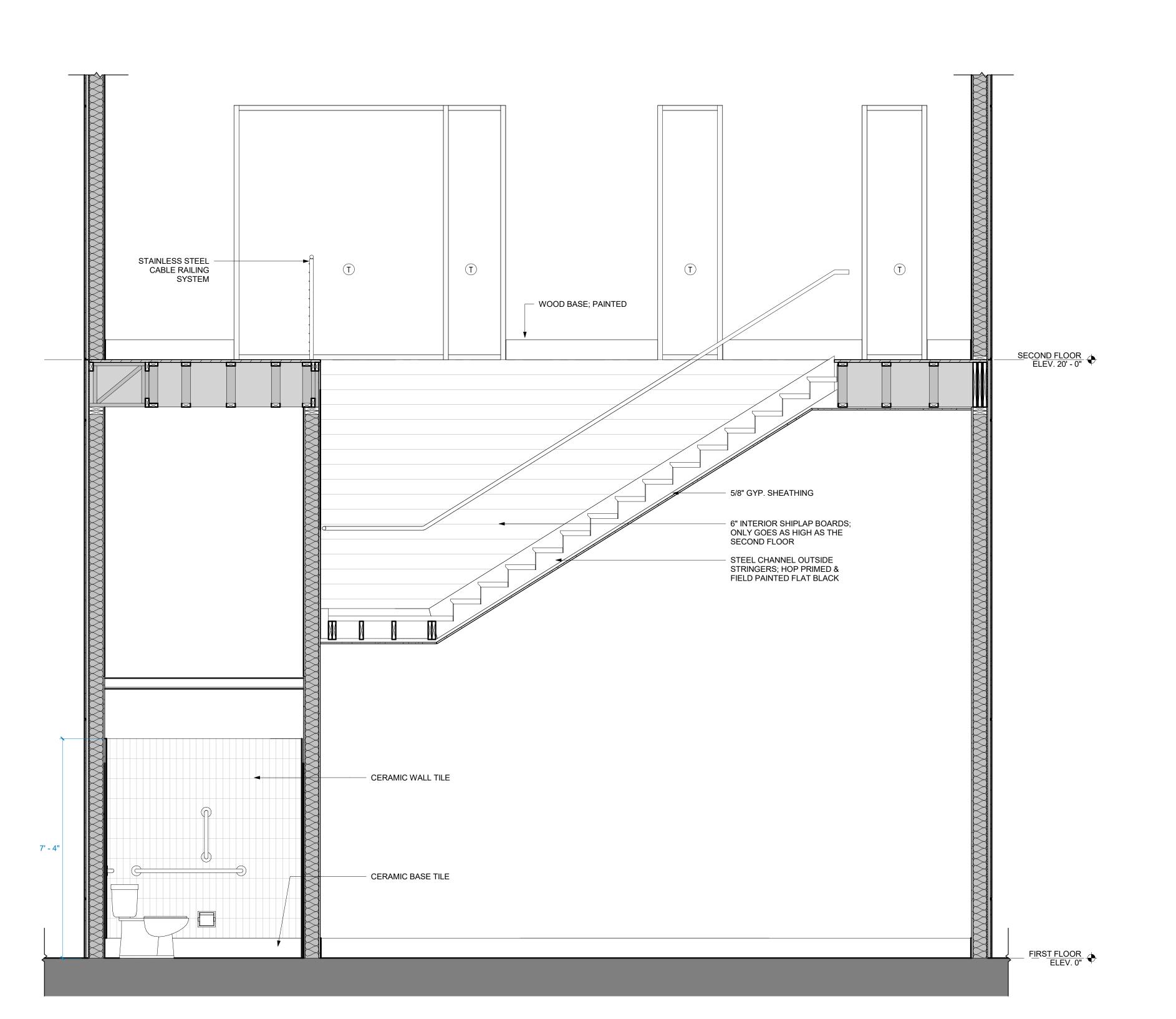


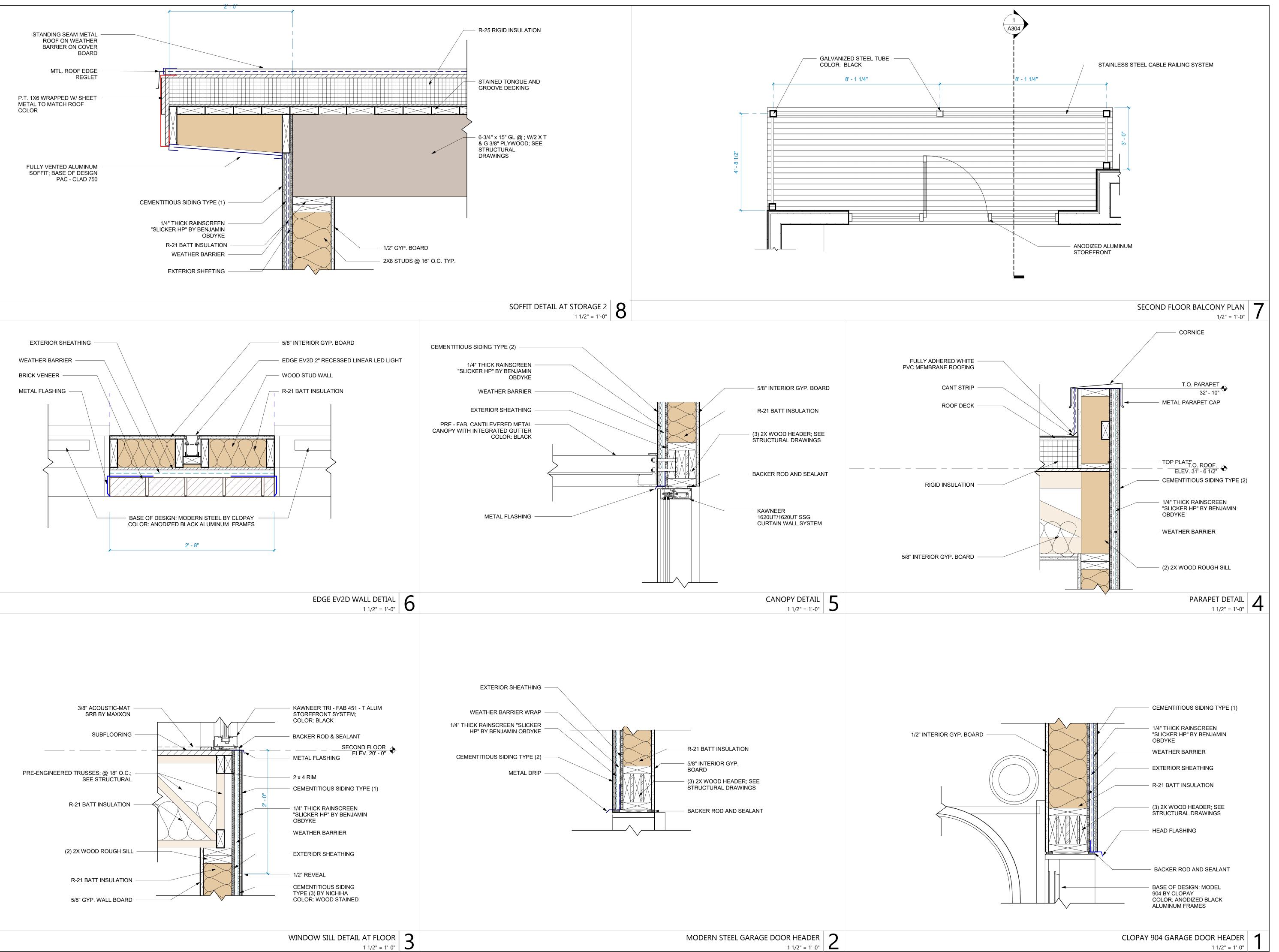






INTERIOR ELEVATIONS



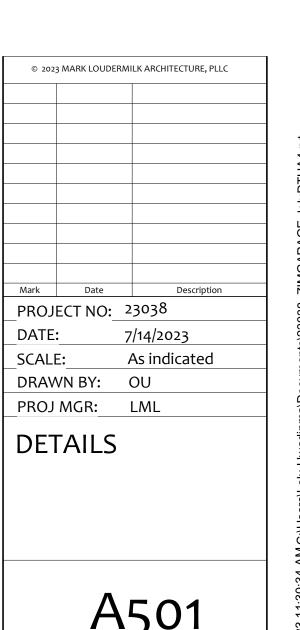


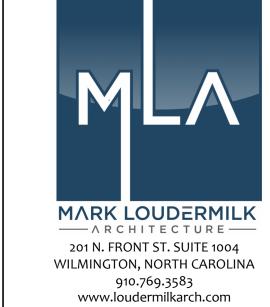








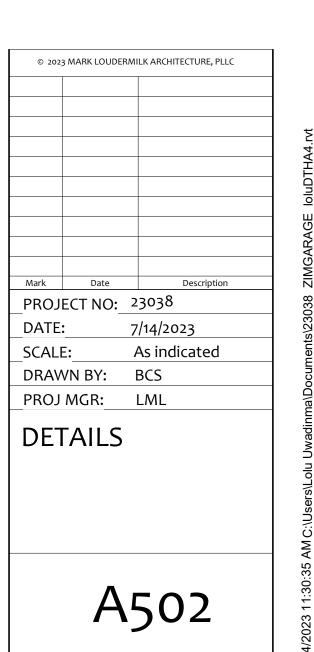


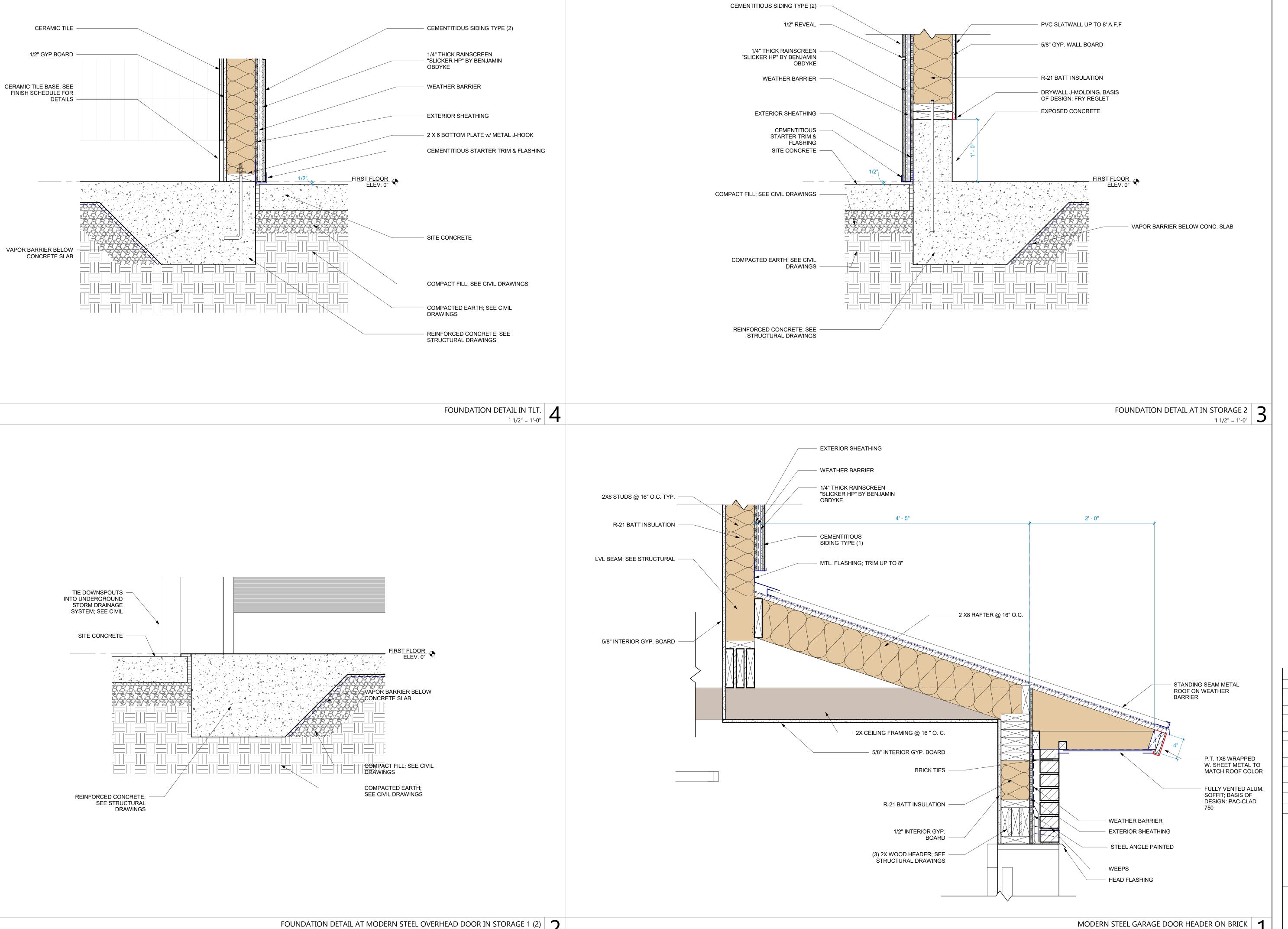












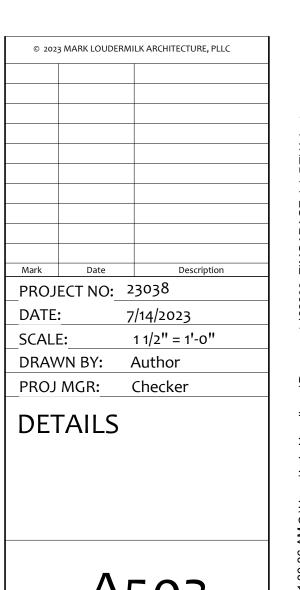
1 1/2" = 1'-0"



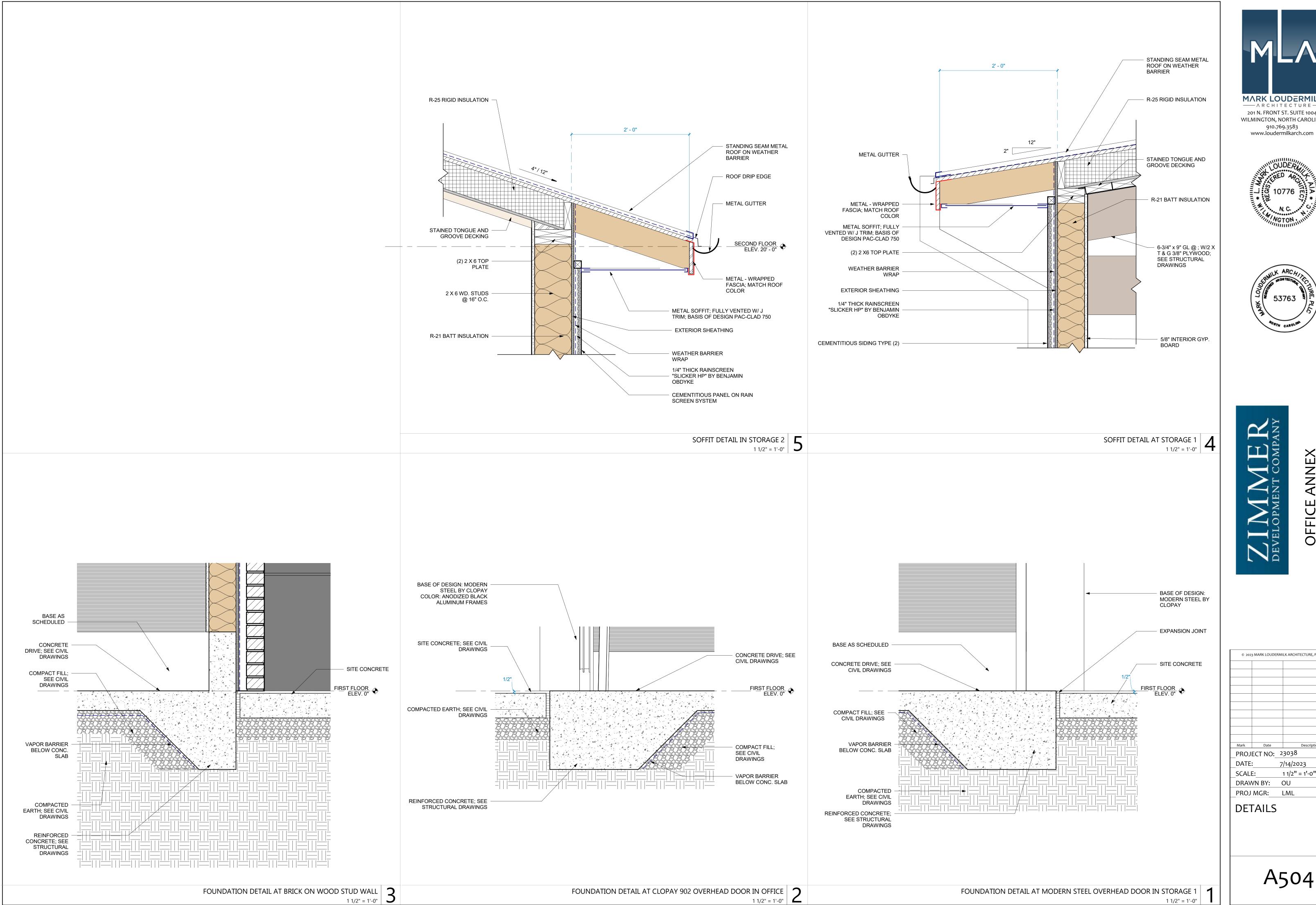








1 1/2" = 1'-0"



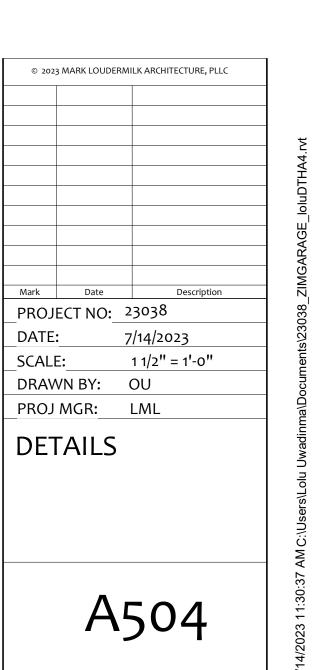












ROOF DRIP EDGE

- (2) 2 X 6 TOP PLATE

CEMENTITIOUS SIDING TYPE (1)

- 1/4" THICK RAINSCREEN "SLICKER HP" BY BENJAMIN OBDYKE

WEATHER BARRIER

- EXTERIOR SHEATHING

(3) 2X WOOD HEADER; SEE STRUCTURAL DRAWINGS

Section 8 - Callout 1

1 1/2" = 1'-0"

EXTERIOR SHEATHING

- 1/4" THICK RAINSCREEN "SLICKER HP" BY BENJAMIN OBDYKE

CEMENTITIOUS SIDING TYPE (2)

NOTE: TAPERED INSULATION NOT SHOWN FOR CLARITY

2X6 STUDS @ 16" O.C. TYP.

R-21 BATT INSULATION -

WEATHER BARRIER

— R-25 RIGID INSULATION

FLASHING

PRE-ENGINEERED TRUSSES;

5/8" INTERIOR GYP. BOARD

@ 18" O.C.

2X LEDGER

2X6 STUDS @ 16" -O.C. TYP.

R-21 BATT INSULATION -

WOOD BASE; PAINTED -

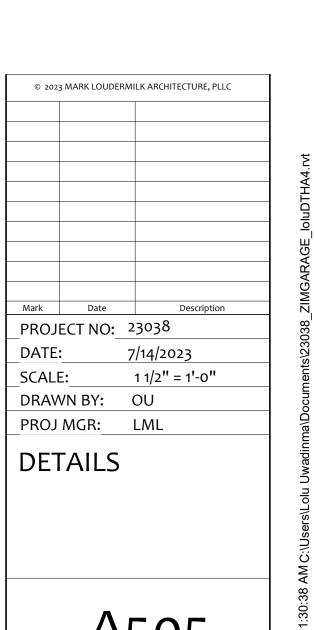
FINISH FLOORING ON 3/8" -ACOUSTIC-MAX BY

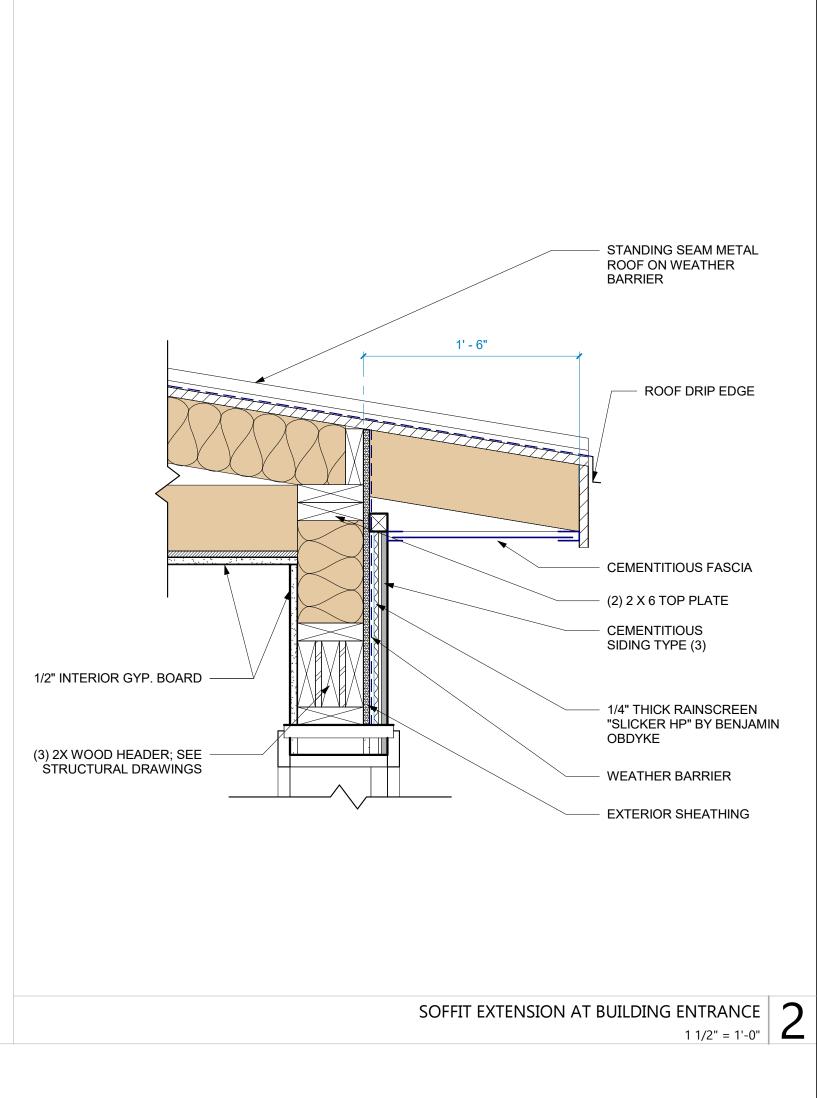
PRE-ENGINEERED TRUSSES; @ 18" -O.C.

LVL BEAM; SEE STRUCTURAL

MAXXON.







MARK LOUDERMILK

WIDTH

	DOOR SCHEDULE										
	DOOR				FRAME						
	SI	ZE							DE	ΓAIL	
MARK	WIDTH	HT	TYPE	MATL	FIN	TYPE	MATL	FIN	HEAD	JAMB	COMMENTS
FIRST FL											
101	3' - 0"	7' - 0"	В	SCWD	PT	1	HM	PT	H1	J1	
102	3' - 0"	7' - 0"	В	SCWD	PT	1	HM	PT	H1	J1	
103	3' - 0"	7' - 0"	В	SCWD	PT	1	HM	PT	H1	J1	
104	3' - 0"	7' - 0"	В	SCWD	PT	1	HM	PT	H1	J1	
106	12' - 0"	16' - 0"	E	-	-	-	-	PT	-	-	BASE OF DESING: Clopay 904
107	12' - 0"	16' - 0"	E	-	-	-	-	PT	-	-	BASE OF DESING: Clopay 904
108	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
109	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
110	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
111	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
112	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
113	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
114	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
115	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
116	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
117	10' - 0"	10' - 0"	С	-	-	-	-	PT	-	-	BASE OF DESING: Morden Steel by Clopay
118	20' - 0"	16' - 0"	D	-	-	-	-	ANOD	-	-	BASE OF DESING: Clopay 904
119	20' - 0"	16' - 0"	D	-	-	-	-	PT	-	-	BASE OF DESING: Clopay 904
128	3' - 0"	6' - 8"	В	SCWD	PT	1	HM	PT	H1	J1	
25001:5		•				•		•			
SECOND				1							
120	3' - 2"	6' - 4"	A	ALUM	-	-	ALUM	ANOD	-	-	
123	3' - 0"	7' - 0"	В	SCWD	-	-	WD	PT	-	-	

WALL TYPE GENERAL NOTES

- 1. SEE CODE SHEETS, G100- AND G500-SERIES, FOR REQUIRED FIRE RATINGS OF ALL WALL ASSEMBLIES. MULTIPLE LAYERS OF GWB MAY BE REQUIRED AT RATED PARTITIONS. COORDINATE WITH U.L. DESIGN(S).
- 2. PROVIDE SOUND-ATTENUATING FIRE BATT INSULATION IN RATED STUD-FRAMED PARTITIONS AND FIBERGLASS SOUND BATT INSULATION IN NON-RATED STUD PARTITIONS.

1/2" GYPSUM

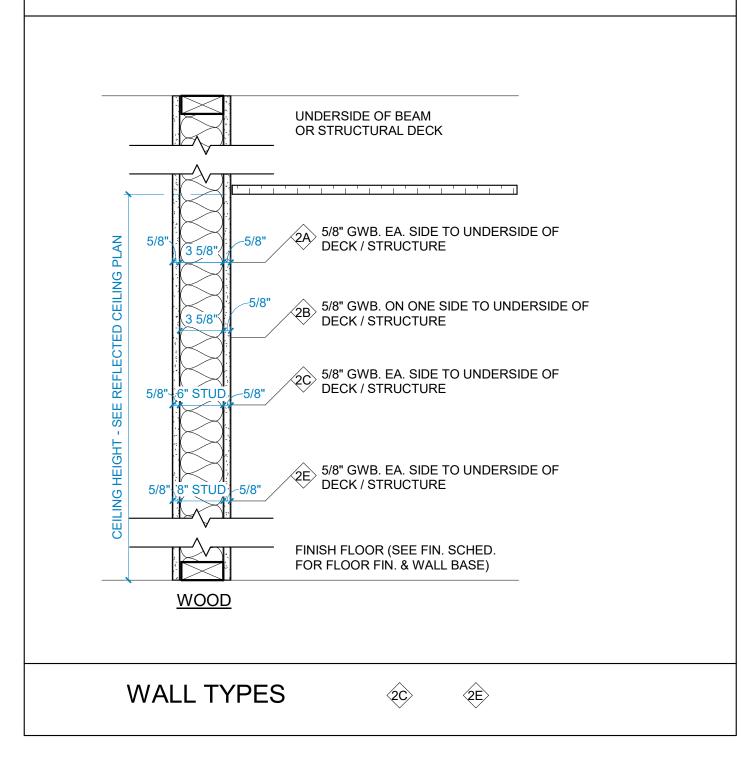
WOOD FRAME

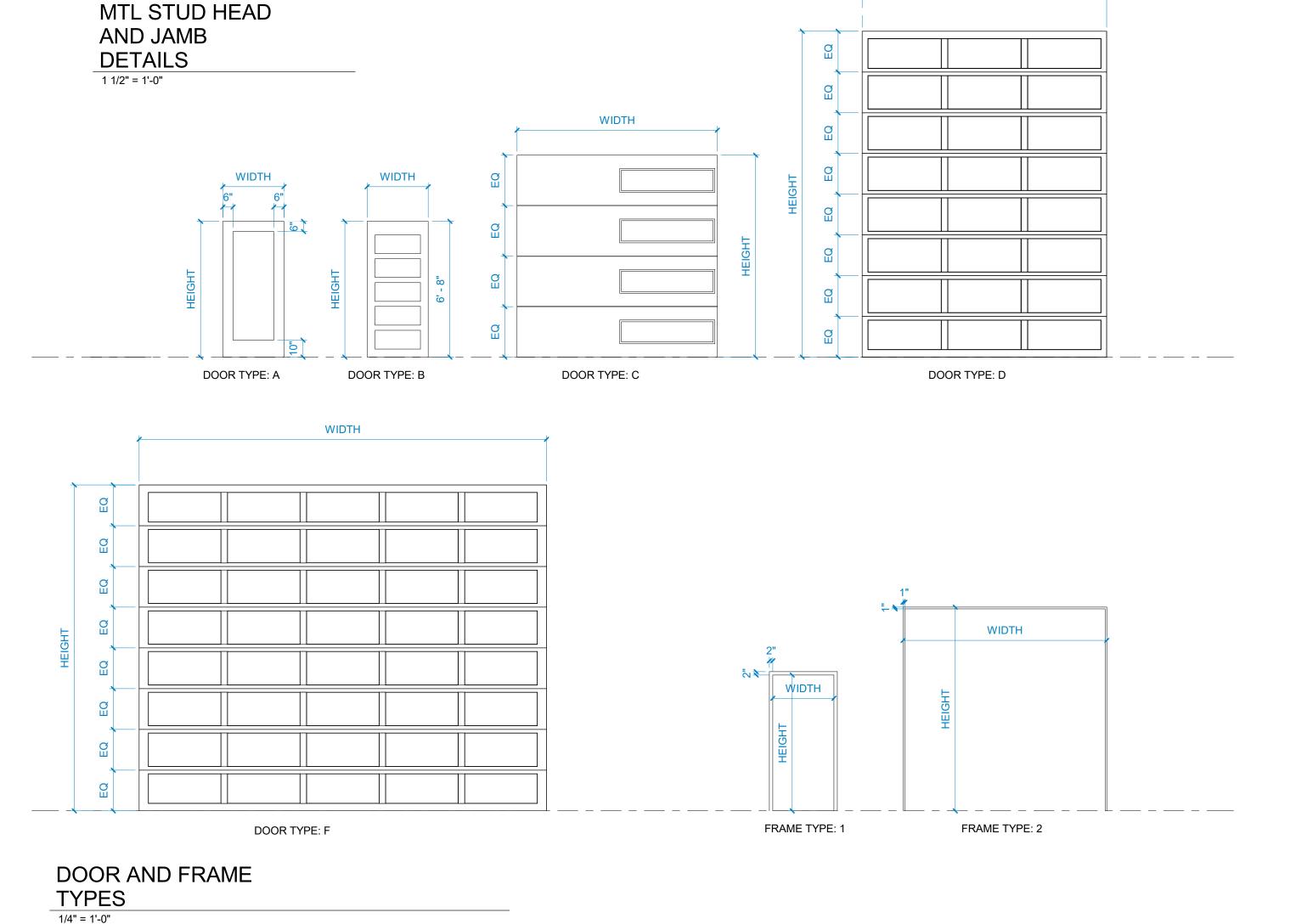
BOARD, BOTH SIDES

WOOD STUD HEADER

- 3. PROVIDE MOLD AND MOISTURE RESISTANT GWB AT ALL STUD-FRAMED PARTITIONS IN WET LOCATIONS, INCLUDING TOILET ROOMS, AND AT SINKS AND LAVATORIES. EXTEND TO END OF CASEWORK RUN, INCLUDING SIDEWALLS WHERE ADJACENT TO SINKS.
- 4. BRACE NON-STRUCTURAL METAL STUD PARTITIONS WHERE NOT ATTACHED TO STRUCTURE ABOVE OR WHERE HEIGHT OF STRUCTURE EXCEEDS MANUFACTURER'S LIMITING HEIGHT FOR 5PSF @ 16" O.C., OR PROVIDE COLD-FORM FRAMING. SEE SPECIFICATIONS AND STRUCTURAL DRAWINGS.
- 5. SEE STRUCTURAL FOR BRACING OF PART-HEIGHT MASONRY PARTITIONS, INCLUDING MASONRY PARTITIONS WITH METAL STUD PARTITIONS CONTINUING ABOVE.
- 6. SEE STRUCTURAL AND SPECIFICATIONS FOR MASONRY TIES IN MULTIPLE-WYTHE MASONRY WALLS AND PARTITIONS. CORRUGATED AND MESH TIES ARE NOT ACCEPTABLE.
- PROVIDE BULLNOSE MASONRY UNITS AT OUTSIDE CORNERS AND PER SPECIFICATIONS.
 PROVIDE SPECIAL-SHAPED MASONRY UNITS PER DETAILS AND SPECIFICATIONS.
 FILLALL CORES IN MASONRY UNITS AT THE FOLLOWING LOCATIONS: MECHANICAL ROOMS.
- 9. FILL ALL CORES IN MASONRY UNITS AT THE FOLLOWING LOCATIONS: MECHANICAL ROOMS / MEZZANINES / PENTHOUSES / EQUIPMENT PLATFORMS, ELEVATOR MACHINE ROOMS, AND AS INDICATED. SEE SPECIFICATIONS.
- 10. PROVIDE ACOUSTICAL SEALANT AT PARTITIONS IN THE FOLLOWING LOCATIONS: MECHANICAL ROOMS / MEZZANINES / PENTHOUSES / EQUIPMENT PLATFORMS, AND ELEVATOR MACHINE ROOM. SEE SPECIFICATIONS.
- 11. PROVIDE CONTROL JOINTS IN MASONRY WALLS AS INDICATED ON PLANS, ELEVATIONS, DETAILS, AND AS SPECIFIED. WHERE JOINTS ARE NOT SHOWN, PROVIDE ACCORDING TO B.I.A AND N.C.M.A. TEK NOTES. SUBMIT SHOP DRAWING FOR ARCHITECT'S APPROVAL.

WALL TYPE GENERAL NOTES





1/2" GYPSUM

FOR WALL TYPE

WOOD FRAME

J1

BOARD, BOTH SIDES

WOOD STUD; SEE PLAN

FINISH SCHEDULE LEGEND NAME DESCRIPTION NOT APPLICABLE / EXISTING TO REMAIN CONCRETE WITH SEALER/HARDENER CERAMIC TILE FLOORING PORCELAIN FLOOR TILE RESINOUS FLOORING RUBBER TILE RUBBER FLOORING / STAIR TREAD & RISER RUBBER STAIR TREAD W/ INTEGRAL RISER VINYL COMPOSITION TILE VINYL SHEET WOOD FLOORING CERAMIC TILE BASE RESILIENT WALL BASE WOOD BASE NOT APPLICABLE / EXISTING TO REMAIN CERAMIC TILE FLOORING GYPSUM WALL BOARD NOT APPLICABLE / EXISTING TO REMAIN EXPOSED STRUCTURE, FIRE PROTECTOIN, PLUMBING, MECHANICAL, ELECTRICAL, TECHNOLOGY GYPSUM BOARD CEILING ORIENTATION ON PLANS NORTH WALL IS UP, EAST IS RIGHT, SOUTH IS DOWN, WEST IS LEFT GENERAL NOTES WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS SEE A102 REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC. PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.

MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE

PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS

WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM

ENCLOSURES. REFER TO REFLECTED CEILING PLANS

RECOMMENDED BY MANUFACTURERS' GUIDELINES.

ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER

GYPSUM BOARD FINISHES





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Mark Date Description

PROJECT NO: 23038

DATE: 7/14/2023

SCALE: As indicated

DRAWN BY: BCS

DOOR AND FINISH
SCHEDULE

A601

11:30:39 AM C:\Users\Lolu Uwadinma\Documents\









SF-9

9' - 1"

2' - 0"

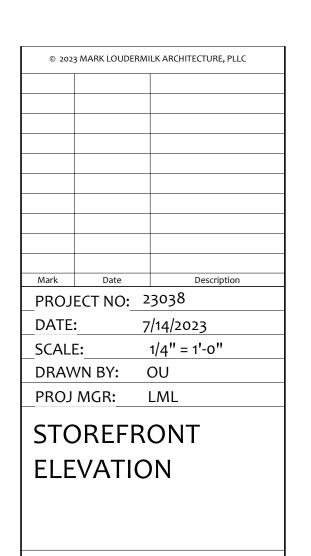
7' - 1"

SF-4

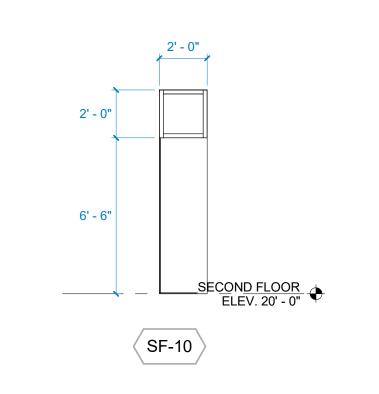
- ANODIZED ALUMINUM STOREFRONT

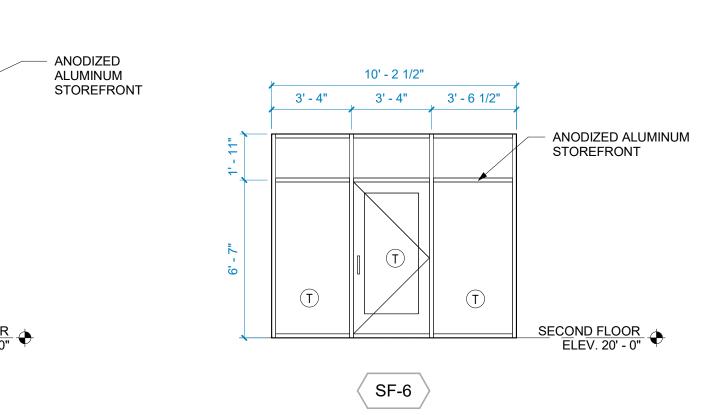
TEMPERED GLASS

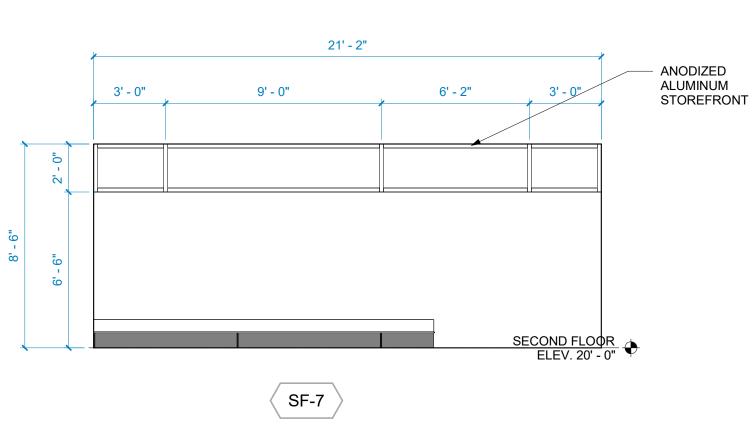
SECOND FLOOR ELEV. 20' - 0"

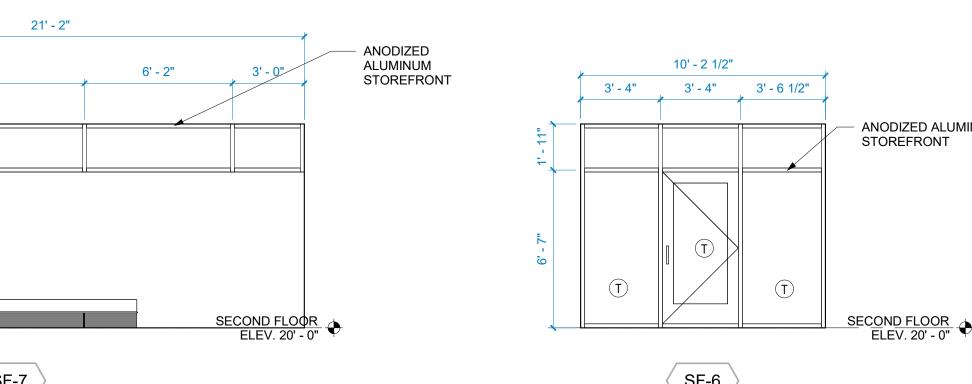


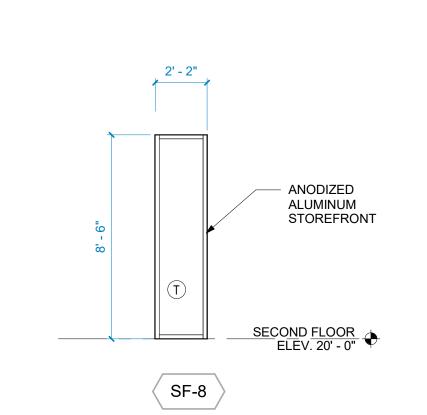
A602











CLADDING & FINISHES					
ITEM	MANUFACTURER	PRODUCT	SPECIFICATIONS		
CEMENTITIOUS SIDING TYPE 1	JAMES HARDIE ARCHITECTURAL SERIES	FINE SAND PANELS 4X10	COLOR: SW 6253 OLYMPUS WHITE		
CEMENTITIOUS SIDING TYPE 2	JAMES HARDIE ARCHITECTURAL SERIES	FINE SAND PANELS 4X10	COLOR: SW 6236 GRAYS HARBOR		
CEMENTITIOUS SIDING TYPE 3	NICHIHA	ARCHITECTURAL WALL PANELS	TYPE: VINTAGEWOOD, COLOR: CEDAR		
BLOCK VENEER	E. DILLON & COMPANY	ARCHITECTURAL BLOCK REFLECTIVE SERIES	SIZE: 6" X 24", COLOR: SHADOW, JOINTS: OVERLAP COURSE BELOW		
PARAPET CAP/COPING	DREXEL; CONTACT PATRICK MULLIGAN (980) 266-1175	ECONO COPING SYSTEM W/ 6" FACE	COLOR: SILVER		
FASCIA	DREXEL; CONTACT PATRICK MULLIGAN (980) 266-1175	8" FASCIA EC	COLOR: SILVER		
PVC SLATWALL	STOREWALL	HEAVY DUTY SLATWALL	COLOR: GRAPHITE STEEL. UP TO 8' A.F.F. PROVIDE TRIM AT ALL		
ALUM STOREFRONT SYSTEM	KAWNEER	TRI - FAB 451-T	COLOR: ANODIZED BLACK		

		OVERHEAD DOORS	
ITEM	MANUFACTURER	PRODUCT	SPECIFICATIONS
OVERHEAD DOOR (1)	CLOPAY	MODEL 904	DIMENSIONS: 16' X 20', QUANTITY: 2, COLOR: ANODIZED BLACK
OVERHEAD DOOR (2)	CLOPAY	MODEL 904	DIMENSIONS: 12' X 16', QUANTITY: 2, COLOR: ANODIZED BLACK
OVERHEAD DOOR (3)	CLOPAY	MODERN STEEL	DIMENSIONS: 10' X 10', QUANTITY: 10, COLOR: ANODIZED BLACK

FLOORING						
ITEM	MANUFACTURER	PRODUCT	Specifications			
TILE 1" HEXAGON	DALTILE	COASTAL KEYSTONES	MEDITERRANEAN MIST BLEND CK92			
TILE (BATHROOM WALLS)	BY OWNER					
TILE (BATHROOM FLOOR)	BY OWNER					
LVT FLOORING	BY OWNER					







JDERMILK ARCHITECTURE,	, PLLC
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A603

- 1.0 CODES AND STANDARDS
- 1.1 "2018 North Carolina State Building Code" and "International Building Code", 2015.
- 1.2 "Minimum Design Loads for Buildings and other Structures" SEI/ASCE 7-16
- 1.3 "Building Code Requirements for Structural Concrete (ACI 318-14)" American Concrete Institute 2014.
- 1.4 "Manual of Standard Practice", Concrete Reinforcing Steel Institute, latest edition.
- 1.5 "Residential Code Requirements for Structural Concrete" (ACI 332-14) and Commentary
- 1.6 "National Design Specification for Wood Construction with 2015 NDS Supplement," ANSI/AWC NDS-2015.
- Project Located in: City of Wilmington, County of New Hanover, State of North Carolina.
- 2.1 Gravity Loads: (Reduced where allowed)

GRAVITY LOADS					
Location	Uniform (psf)	Concentrated (lbs) (Over 2.5'x2.5')			
Roof Loads:					
Dead Load	20				
Live Load	20	300			
Floor Loads:					
Dead Load	25				
Floor Live Loads:					
Ground Floor	100				
2nd Floor Office	50	2,000			

2.2 Drifting Snow Loads per Referenced codes and standards

Pq = 10 psI = 1.0

Ce = 1.0Ct = 1.0

2.3 Risk Category = II

2.4 Wind Loads per Referenced codes and standards

Main Wind Force Resisting System: V 144 mph Exposure Category "B"

Building is enclosed & Internal Pressure coefficient (GCpi) = +0.18 & -0.18Topographic Factor Kzt = 1.0

Wind Directionality Factor, Kd = 0.85Calculated Wind Base Shear (Vult For MWFRS): Vx = 41.2k Vy = 104k

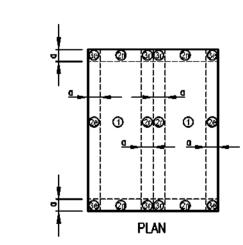
Components and Cladding:

	Components and Cladding Wind Pressure (psf)									
Walls	Walls Area < 10ft ²		< 20ft ²		Area < 50ft ²		Area < 100ft ²		Area < 500ft ²	
Zone 4	37.8	-41.0	36.2	-39.4	33.8	-37.0	32.0	-35.4	28.2	-31.4
Zone 5	37.8	-50.6	36.2	-47.4	33.8	-42.6	32.0	-39.4	28.2	-31.4
Roof	Roof Area < 10ft ²		Area < 20ft ²		Area < 50ft ²		Area < 100ft ²		Area < 500ft ²	
Zone 1	21.8	-69.8	20.2	-69.8	18 .6	-41.0	16.0	-21.8	16.0	-21.8
Zone 2e	21.8	-69.8	20.2	-69.8	18.6	-41.0	16.0	-21.8	16.0	-21.8
Zone 2n	21.8	-101.9	20.2	-87.5	18.6	-69.8	16.0	-55.4	16.0	-37.8
Zone 2r	21.8	-101.9	20.2	-87.5	18.6	-69.8	16.0	-55.4	16.0	-37.8
Zone 3e	21.8	-101.9	20.2	-87.5	18.6	-69.8	16.0	-55.4	16.0	-37.8

- Areas noted are effective wind areas as per ASCE 7-16, 26.2 definitions. See figures below for Zone locations.
- 3. Plus and minus signs signify pressures acting toward and away from surfaces, respectively.

Zone 3r 21.8 -121.1 20.2 -103.5 18.6 -79.5 16.0 -63.4

- 4. Design pressures shown in table are Strength Design wind pressures. Allowable Stress Design wind pressures may be calculated by multiplying table pressures by 0.6. 5. Tributary area = greater of LxW or LxL/3.
- 6. Design for strength using loads from ASCE-7 or from this table. Deflections may be calculated based on 42% of these loads.



Corner Zone Dimensions a = 6ft

ELEVATION

COMPONENT & CLADDING ROOF PRESSURES h = 25ft "corner zone"

RX=RY=6.5, Ω X= Ω Y=3.0, CDX=CDY=4.0

2.5 Seismic Loads per referenced Codes and Standards Seismic Design Category = "B" Site class = "D" (Per Geotech Seismic Importance Factor = 1.0

Building Height Limit = NL Report) Basic Seismic - Force - Resisting System Anglysis Procedure - 12.8.1 ASCE 7-16 Spectral Response Coefficients: Building Wall System: Equivalent Lateral Force Procedure Light framed wood walls sheathed with wood Base Shear = 5k structural panels rated for shear resistance

SD1 = 0.106aCs = 0.024

2.6 Guardrail designed per referenced Codes and Standards

Uniform load = 50 plf, any direction Concentrated load = 200 lbs. any direction Intermediate Rail: (all those expect handrail)

2.7 Flood Loads: Project is not located in a flood zone. 3.0 FOUNDATIONS:

- 3.1 Foundation design is based on geotechnical report #22:29793 by ECS Southeast, LLP Engineering, Wilmington, NC dated December 22, 2020. This report is available for inspection at the office of the architect or owner. The recommendations contained in this report are herein made part of the requirements of these contract documents.
- 3.2 Top of footing (T/FTG) elevations are shown on the drawings or are to be determined by the Contractor in the field in accordance with the guidelines set forth in the drawings.
- 3.3 Bottom of exterior footings, shall bear at a minimum depth of 1'-0" below final grade to provide frost protection and protective embedment

3.4 Testing and Inspection:

- a. All areas to have slabs on grade shall be proof rolled in accordance with and under observation fo the Geotechnical Engineer and approved prior to preparation for concrete placement.
- b. All foundation bearing strata shall be inspected and approved by the Geotechnical Engineer prior to any concrete placement.
- c. Geotechnical Engineer shall be the sole judge as to suitability of all foundation and/or slab bearing
- d. Footing bearing elevations shall be adjusted in the field as required to meet the design bearing pressures by additional excavation or compaction and/or backfilling or by other means acceptable to the Geotechnical Engineer.
- 3.5 Undercutting to remove existing fill beneath footings and slab shall be performed at the direction of the Geotechnical Engineer.
- 3.6 Footings shall bear on strata capable of sustaining a minimum bearing pressure of 2000 psf.
- 3.7 Engineered Fill: All fill material shall be selected in accordance with the Geotechnical Report Material shall be a clean, low plastic soil with a plasticity index less than 30 (less than 15 is preferred), liquid limit less than 50, and unit weight of 120 pcf (+ 5 pcf)
- 3.8 Compaction: All fill shall be placed in loose lifts not exceeding 8 inches in thickness and compacted to a minimum of 95 percent Standard Proctor (ASTM D-698) except that the top 12 inches shall be compacted to a minimum of 96 percent Standard Proctor, Moisture shall be controlled to within 3 percent above or below optimum content.
- 3.9 Contractor shall review all construction considerations as outlined in the Geotechnical report and bid accordingly.

4.0 CONCRETE:

All concrete shall be in accordance with the American Concrete Institute (ACI) 301 and 318.

4.2 Concrete shall have a 28 day compressive strength and density as follows:

...3,000psi, Density = ± 145 pcf a. Footings, and Interior Slab-on-grade..... Exterior Slab on Grade..... ...4,000psi, Density = ± 145 pcf

4.3 Concrete Mix Designs:

- a. Submittals: Submit written reports of each proposed concrete mix not less than 15 days prior to the start of work.
- Mix designs, including water, cement ratios and slumps, shall be prepared in accordance with ACI 301-05. Section 4. Cement shall conform to ASTM C 150 Type 1 or at contractor's option, ASTM C 595 Type IP where fly ash is permitted. Normal weight aggregate shall conform to ASTM C 33 and light weight aggregate shall conform to ASTM C 330. No admixtures containing calcium chloride shall be permitted in any concrete.
- Aggregate size shall be #67 stone for supported slabs or other formed concrete elements; #57 stone for slabs on grade and footings or other concrete elements formed from and poured against earth; #76 stone for masonry grout.

Water reducing admixture shall be used in all concrete.

- e. Air entraining admixture in accordance with ACI 301 shall be used in all concrete exposed freezing and thawing during construction or service conditions.
- Concrete subjected to freezing/thawing shall have a maximum water/cement ratio of 0.45 and shall contain the amount of air entraining agent specified in ACI 301-05 Section 4.

4.4 Curing:

-63.4

See specifications for curing method options and apply within two (2) hours after completion of finishing to all concrete flatwork and walls, U.N.O., other than footings and grade beams.

- 4.4 Use a non-corrosive, non-chloride accelerating admixture in concrete exposed to temperatures below 40 degrees. Uniformly heat the water and aggregates to a temperature of not less than 50 degrees. Place and cure concrete in accordance with ACI 306.
- 4.5 When hot weather conditions exist, place and cure concrete in accordance with ACI 301. Cool ingredients before mixing to maintain concrete temp, at time of placement below 95 degrees.
- 4.6 Reinforcing in all abutting concrete, including footings shall be continuous through or around all corners or intersections. Dowels or splices shall be equal in size and spacing to the reinforcing in the abutting members.
- 4.7 Refer to architectural drawings for door and window openings, drips, reglets, washes, masonry anchors, brick ledge elevations, slab depressions and miscellaneous embedded plates, bolts, anchors, angles, etc.
- 4.8 Refer to plumbing, mechanical and electrical drawings for underfloor, perimeter and other drains and for sleeves, outlet boxes, conduit, anchors, etc. The various trades are responsible for their items.
- 4.9 Base plates, anchor bolts, support angles and other steel exposed to earth or granular fill shall be covered with a minimum of 3" of concrete.
- 4.10 Fill slabs, not shown on the structural drawings, shall be reinforced with a minimum of 6 x 6 x W2.0 x W2.0 WWM unless noted otherwise on other drawings.
- 4.11 Finishing tolerance shall be within Class B in accordance with ACI 301 and consideration shall be given to sequencing of concrete placement to facilitate control of finish elevations.
- 4.12 Non-shrink grout shall be pre-mixed, non-corrosive, non-metallic, non-staining containing silica sands, Portland cement, shrinkage compensating and water reducing agents. Product shall only require the addition of water. Minimum compressive strength shall be 2500 psi after one day and 7000 psi after 28 days. Grout shall be free of gas producing or air releasing and oxidizing agents and contain no corrosive iron, aluminum
- 4.13 Tolerance for anchor bolts and other embedded items shall be per the AISC Code of Standard Practice Section 7.5.
- 4.14 Unless otherwise shown in the architectural drawings, provide \(\frac{1}{2} \) chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

5.0 REINFORCING STEEL:

- 5.1 Reinforcing shall be domestic new billet steel conforming to ASTM A615, Grade 60 or 60S including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.
- 5.2 Field heat bending of concrete reinforcing steel is not permitted.
- 5.3 Welded wire mat and fabric shall conform to ASTM A184 and A185 respectively and shall be provided in flat sheets. Welded wire mat/fabric shall be lapped 0'-6" at all splices.

5.4 Bar Splices:

		f'c = 3,000psi		f'c = 4,000psi	f'c = 5,000psi	
Bar Size	너 (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)	ഥ (in)	Class "B" Lap Splice (in)
#3	17	22	1 5	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56

- Values are based on normal weight concrete.
- Ld = minimum embed of rebar
- 3. Class "B" lap splice refers to minimum distance bars must be lapped for a full tension splice.
- 7.0 GENERAL FRAMING NOTES:
- 7.1 All exterior and interior load bearing walls shall be SPF #2 u.n.o. see plans and load bearing wall schedule for locations, spacing and stud sizes.

See plans and load bearing wall schedule for locations, spacing, and load bearing study species.

All interior non-load bearing wall, shall be SPF #2, or approved equal. All sill and top plates shall be SYP #2 or better. Sill plates shall be pressure treated.

All LSL Stud Framing shall be 1.55E TimberStrand LSL or approved equal.

All pressure treated 2x material shall be SYP #2 or better and shall be treated in accordance with AWPA Standard U1 to the requirements of Use Category 3B (UC3B) for above ground use and Use Category 4A (UC4A) for ground contact use.

All pressure treated Glulam (GL) members shall be Rosboro Treated X-Beam 2400F_b-1.9E or approved equal. All Glulams shall be Rosboro 24F-V4 or better. All Laminated Veneer Lumber (LVL) shall be Louisiana Pacific, Gang-Lam 2950F_b-2.0E or approved equal.

7.2 All roof and floor trusses shall be Builders First Source or approved equal. Truss supplier shall construct trusses to provide full bearing on all walls and girders. The truss supplier shall also submit drawings for review prior to fabrication. The shop drawings shall show the following:

- Layout plan - Bearing locations
- Truss elevations
- Mechanical openings
- Structural calculations - Professional engineer seal to certify design. Engineer must be licensed in the state where this project is
- Hurricane clips and tie downs

7.3 Floor deck/diaphragm

located

- Floor deck shall be 3/4-inch Exposure 1 grade tongue and groove OSB or approved equal.
- Place long direction perpendicular to framing - Stagger end joints
- Glue and nail panels down with 10d common

Provide the following nail pattern: @ 6" O.C. @ panel edge

@ 12" O.C. @ interior of panel.

- Exterior and shear wall sheathing shall be 1/16" OSB or plywood, or approved equal.
- See S5 Sheets for shear wall nailing requirements block all edges. - All other non-shear Wall sheathing shall be nailed to supports w/ 8d @ 3"o.c. edges and 12"o.c. field.
- 7.5 Roof Deck/Diaphragm
 - Roof sheathing shall be 5/8-inch exterior grade plywood or OSB u.n.o.
 - Place long direction perpendicular to framing
 - Stagger end joints - Provide roof sheathing clips, Simpson PSCL/PSCA or approved equal at all unsupported edges.
- Nail to supporting members with 8d Ring shank @ 6" o.c. edges and 12" o.c. field.
- 7.6 See plan for location of Shear Walls and sheets \$5.0 sheet series for framing requirements.
- 7.7 [X] number in box notes the required number of bundled studs in that location. Bundled studs shall rest on framing member below or provide solid blocking from sub-floor to plate or girder below. Good framing practices shall be used in all cases.
- 7.8 All strap and tie connections shall have z-max (q185) triple zinc coating (or hot-dipped galvanized). All nails shall be hot-dipped advanized.
- 7.9 Do not bend coil straps
- 7.10 Unless noted otherwise, connect all building components per table 2304.9.1 fastening schedule, per referenced Codes and Standards
- 8.0 SHEAR WALL AND UPLIET HOLDOWN SYSTEM:
- 8.1 See plans for shear wall locations and designations. See schedule on S5 Sheets for shear wall holdown requirements and typical details.
- 8.2 See roof plan and sections for uplift requirements.
- 9.0 CONSTRUCTION AND SAFETY:
- 9.1 Woods Engineering P.A.'s responsibility is limited to the details and information shown on these drawings. It is the responsibility of the Contractor to provide adequate safety measures required by local codes as well as OSHA Standards for the Construction Industry.
 - This should include, but not be limited to the following: Shoring to protect new as well as existing structures. Necessary Scaffoldina.
 - Material Handling Equipment. Trench Boxing.
- 10.0 SHOP DRAWING SUBMITTAL:
- 10.1 Contractor shall submit Electronic copies (PDF format) of each shop drawing for review. Shop drawings shall be reviewed by the Contractor prior to submission to the Engineer. The Contractor shall allow 10 working days for shop drawing approval.
- 11.0 STRUCTURAL INSPECTIONS:
- 11.1 Special Inspections are not required for this project. However, material inspections per Chapter 17 of the 2018 NCSBC are required.



254 North Front Street Phone: 910.343.8007 Suite 201 Fax: 910.343.8088 Wilmington, NC 28401 www.woodseng.com

ARRREVIATIONS

FOUNDATION

FAR SIDE

FOOTING

GAUGE

HEADED

HORIZONTAL

HIP TRUSS

GALVANIZED

GIRDER TRUSS

FTG

GALV

HORIZ

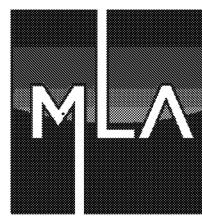
GA

HD

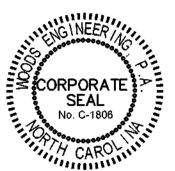
FINISHED FLOOR ELEVATION

HOLLOW STRUCTURAL SECTION

<u> BBRE\</u>	<u>/IATIONS</u>		
	AT	IFM	INSIDE FACE OF MASONRY
	AND	INT	INTERIOR
	ANCHOR BOLTS	JBE	JOIST BEARING ELEVATION
ı	AMERICAN CONCRETE INSTITUTE	JT	JOINT
DL	ADDITIONAL	K	KIP-S
DL -	ABOVE FINISHED FLOOR	KB	KICKER BRACE
r iC		KSI	
	AMERICAN INSTITUTE OF STEEL		KIPS PER SQUARE INCH
4	CONSTRUCTION	(L)	LONG SIDE REINFORCEMENT
il	AMERICAN IRON AND STEEL	LB	LONG BAR
-	INSTITUTE	LBS	POUNDS
) ^!	ALTERNATE	LLH	LONG LEG HORIZONTAL
CH	ARCHITECTS — ARCHITECTURAL	LLV	LONG LEG VERTICAL
TM	AMERICAN SOCIETY FOR	LO	LOW
<u>-</u>	TESTING AND MATERIALS	LOC	LOCATION
\$	AMERICAN WELDING SOCIETY	LWC	LIGHT WEIGHT CONCRETE
вопт	BOTTOM CHOPP EXTENSION	MAX	MAXIMUM
X	BOTTOM CHORD EXTENSION	MC	MOMENT CONNECTION
-	BELOW FINISHED FLOOR	MECH	MECHANICAL
DG	BUILDING	MFR	MANUFACTURER
_	BEAM STEEL	MID	MIDDLE
S	BOTTOM OF STEEL	MIN	MINIMUM
G	BEARING	MISC	MISCELLANEOUS
WN	BETWEEN	MOW	MIDDLE OF WALL
	CONTRACTION JOINT	MP	MASONRY PILASTER
_	CENTERLINE	d	NAILS — PENNY
R	CLEAR	No	NUMBER
U	CONCRETE MASONRY UNITS	NS	NEAR_SIDE
L	COLUMN	NTS	NOT TO SCALE
NC	CONCRETE	NWC	NORMAL WEIGHT CONCRETE
NN	CONNECTION	OC	ON CENTER
	CONSTRUCTION JOINT	OFB	OUTSIDE FACE OF BRICK
NT	CONTINUOUS	OFM	OUTSIDE FACE OF MASONRY
NTR	CONTRACTOR	OFS	OUTSIDE FACE OF STUD
J	COMPOSITE STEEL JOIST	OPNG	OPENING
RD	CENTERED	OPP	OPPOSITE HAND
A	DEFORMED BAR ANCHOR	PEBS	PRE-ENGINEERED BUILDING
-,	DELEGATED DESIGN		SUPPLIER
FL	DEFLECTION	PED	PEDESTAL
PR	DEPRESSION - DEPRESSED	PL	PLATE
Ţ	DETAIL	PSF	POUNDS PER SQUARE FOOT
.G	DIAGONAL	PSI	POUNDS PER SQUARE INCH
	DIAMETER	PSL	PARALLEL STRAND LUMBER
1_	DIMENSION	PLF	POUNDS PER LINEAR FOOT
iT	DISTANCE	PT	PRESSURE_TREATED
G(S)	DRAWING(S)	REF	REFERENCE
L(S)	DOWEL(S)	REINF	REINFORCING
	EACH	REQD	REQUIRED
-V	ELEVATION	(S)	SHORT SIDE REINFORCEMENT
BED	EMBEDDED — EMBEDMENT	SB	SHORT BAR
G	ENGINEER	SCHD	SCHEDULE
R	ENGINEER OF RECORD	SF	STEP FOOTING
	EQUAL	SIM	SIMILAR
UIP	EQUIPMENT	SOG	SLAB ON GRADE
	EACH FACE	SPEC(S)	SPECIFICATION(S)
	EXPANSION JOINT	SPF `´	SPRUCE PINE FÚR
D	EDGE OF DECK	SQ	SQUARE
М	EDGE OF MASONRY	STD	STANDARD
S	EDGE OF SLAB	STIFF	STIFFENER
W	EDGE OF WALL	STIRR	STIRRUP
	EACH WAY	STL	STEEL
ST	EXISTING	STR	STRUCTURAL
P	EXPANSION	SW	SHEAR WALL
Γ	EXTERIOR	SYP	SOUTHERN YELLOW PINE
k I	FOUNDATION	-	TOO

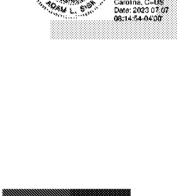


MARK LOUDERMILK 201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com









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AN

FFICE

TOP CHORD EXTENSION

UNLESS NOTED OTHERWISE

TOP OF CONCRETE

VEHICLE BARRIER

VERIFY IN FIELD

WELDED WIRE FABRIC

TOP OF STEEL

TOP OF WALL

VERTICAL

TCX

UNO

VERT

© 2023 MARK LOUDERMILK ARCHITECTURE, PLLC. PROJECT NO: 23038 DATE: 7/5/2023 SCALE: DRAWN BY: CHECKED BY: AS

DO NOT SCALE DIGITAL OR HARD COPIES OF THESE DRAWINGS:

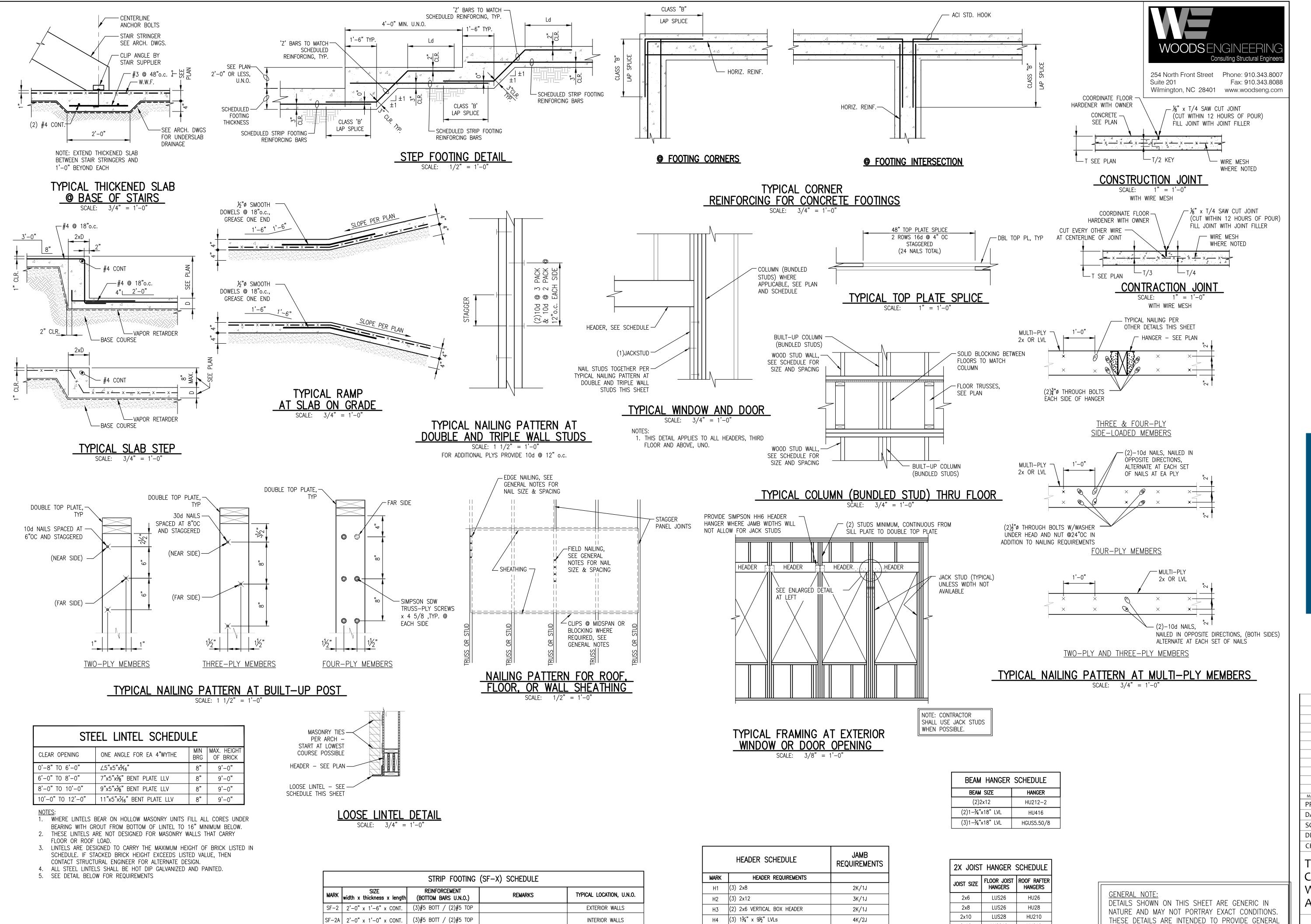
Unless Specifically Noted - Drawings, Plans, Sections, Details, Etc. are a graphic representation of the framing conditions and/or requirements. Length of members shall be based on dimensions shown on the

architectural and structural plans and details.

S101

GENERAL

NOTES



H5 (3) 1¾" x 11¼" LVLs

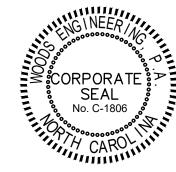
WITH WALL FRAMING

1. 2x's TO HAVE 7/6" OSB OR PLYWOOD BETWEEN PLYS TO FLUSH OUT

MARK LOUDERMILK

MARK LOUDERMILK
— ARCHITECTURE

201 N. FRONT ST. SUITE 1004
WILMINGTON, NORTH CAROLINA
910.769.3583
www.loudermilkarch.com







ANA

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Mark Date	Description
PROJECT NO:	
DATE:	7/5/2023
SCALE:	
DRAWN BY:	JM

TYPICAL
CONCRETE AND
WOOD DETAILS
AND SCHEDULES

S102

2x12

LUS210

- JOIST HANGERS NOT REQUIRED WHERE

EQUIVALENT) U.N.O. ON PLAN

- PROVIDE SIMPSON HANGERS AS SHOWN (OR

DETAILS SHOW JOISTS SITTING ON LEDGER

HU210

GUIDELINES FOR TYPICAL CONSTRUCTION CONDITIONS.

INDICATES 7-1/4" WIDE

CONCRETE CURB

NOTES - FOUNDATION PLAN

- 1. SEE S1.0 SHEETS FOR ADDITIONAL GENERAL NOTES, FOUNDATION NOTES, CONCRETE NOTES, REINFORCING STEEL NOTES AND TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
- 2. DATUM ELEVATION = TOP OF UPPER SLAB ELEVATION = ASSUMED 0'-0" OTHER ELEVATIONS ARE NOTED AS (+ OR -) FROM DATUM ELEVATION.
- 3. FOOTINGS SHALL BE MONOLITHIC W/ SLAB U.N.O.
- 4. SLAB-ON-GRADE SHALL BE 4" THICK 3000 psi CONCRETE WITH WWM6x6xW2.0xW2.0 ON 15 mil VAPOR RETARDER, ON 6" CLEAN SANDS WITH LESS THAN 20% FINES PASSING #100 SIEVE (SP,SW,SP-SM) OR APPROVED EQUAL ON WELL COMPACTED SUB GRADE.
- 5. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
- 6. SEE S5.0 SHEETS FOR SHEAR WALL INFORMATION AND REQUIREMENTS.
- 7. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR
- 8. DIMENSIONS SHOWN ARE TO E.O.S. AND O.F.B. (U.N.O.) COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
- 9. IF DISCREPANCYS EXIST NOTIFY (AOR) AND (EOR) FOR CLARIFICATIONS.

FOUNDATION LEGEND

SPREAD FOOTING DESIGNATION
SEE SCHEDULE S1 SHEETS

SF-X
STRIP FOOTING DESIGNATION
SEE SCHEDULE S1 SHEETS

LBW #1
2x6 @ 16"o.c. LOAD BEARING WALL

LBW #2 1.75x5.5 LSL @ 12" o.c.

LOAD BEARING WALL

LBW #3
1.75x7.25 LSL @ 16" o.c.
LOAD BEARING WALL

2x WALLS (ABOVE)

WOOD SHEATHED SHEAR WALL. SEE
PLAN FOR SHEATHING SIDES. SEE S5
SHEETS FOR NOTES & DETAILS AND
ATTACHMENT REQUIREMENTS

INDICATES APPROXIMATE LOCATION OF SHEAR WALL HOLDOWN SEE SCHEDULE ON S5 SHEETS

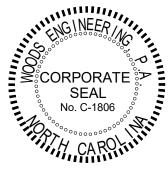
WOOD POST - "X" DENOTES
NUMBER OF BUNDLED STUDS TO
MATCH LBW WALL STUD SIZE



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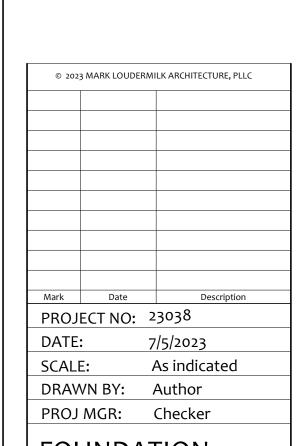


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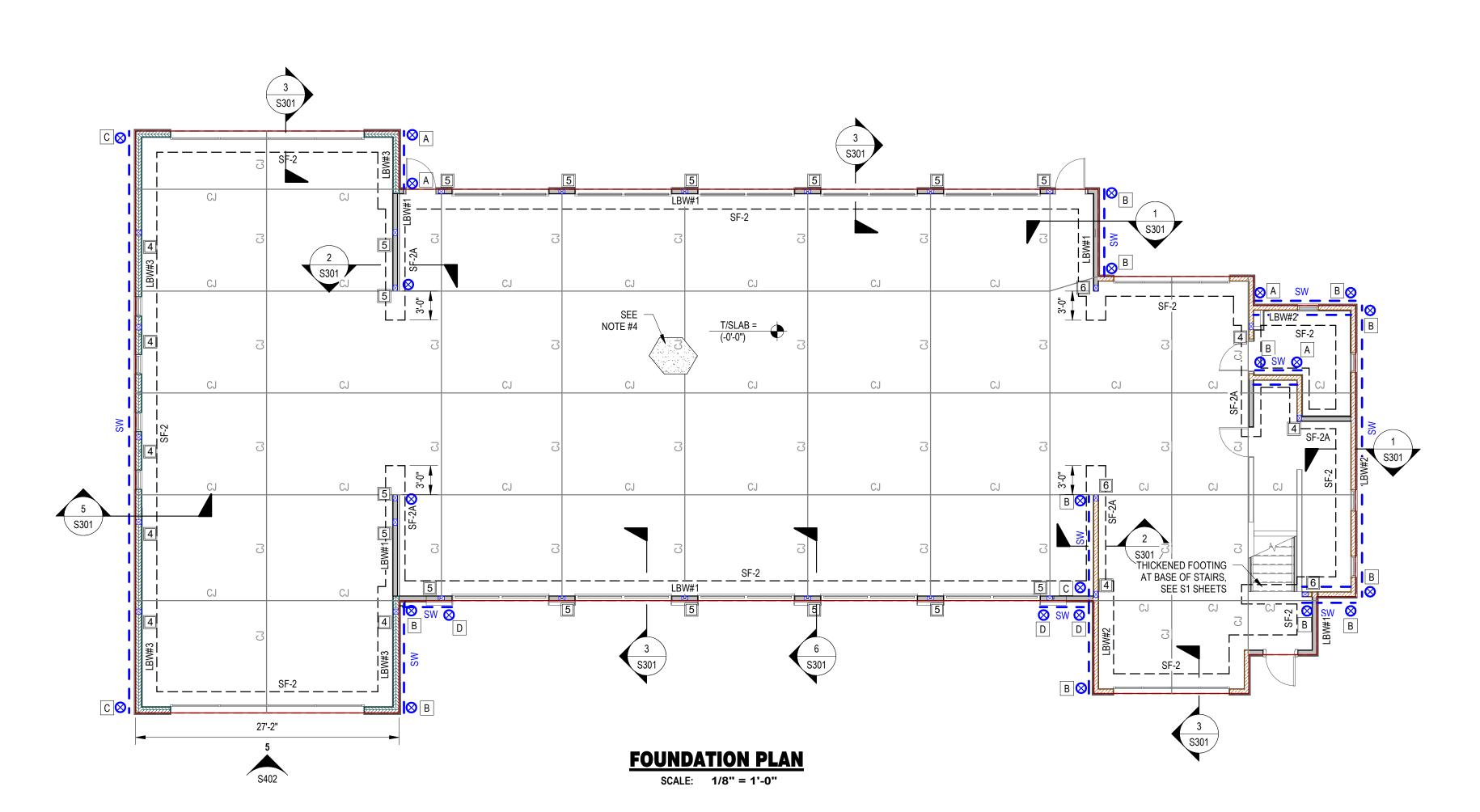








FOUNDATION PLAN



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

NOTES - FLOOR AND ROOF PLAN

- 1. FOR GENERAL FRAMING INFORMATION, SEE S1.0 SHEETS.
- 2. HEADERS, BEAMS & LOAD BEARING WALLS SHOWN ARE FOR FRAMING BELOW THIS LEVEL. SHEAR WALLS REFER TO WALLS BELOW.
- 3. SUBFLOOR SHALL BE EXTERIOR GRADE 3/4" TONGUE AND GROOVE
- 4. DECK SUB FLOOR SHALL BE 3/4" PT PLYWOOD WITH WITH
- WATERPROOFING MEMBRANE AND SLOPED SLEEPERS SEE ARCH.
- 5. ROOF SHEATHING SHALL BE 5/8" O.S.B. SPAN AS NOTED ON PLAN.
- 6. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
- 7. TRUSS DESIGNER TO COORDINATE WEIGHT AND LOCATION OF ROOF TOP MECHANICAL UNITS WITH MECHANICAL DRAWINGS. SEE DETAIL ON S4 SHEETS FOR TYPICAL ROOF TOP MECHANICAL CURB DETAIL.
- 8. ROOF DECK SHALL BE 3x SYP#1 (E=1.6e6) WITH 7/16" OSB ROOF SHEATHING ON TOP. SPAN AS SHOWN ON PLAN. ATTACH 3x DECKING TO SUPPORTING MEMBERS WITH (1) SIMPSON SDWS22600 @ EACH PLANK

NOTE: CONTRACTOR TO PROVIDE MIN. (3) STUDS UNDER ALL GIRDER TRUSSES UNLESS NOTED OTHERWISE.

LEGEND - FLOOR AND ROOF PLAN

_____ 2x8 PT @ 16"o.c. U.N.O.

S1 SHEETS

INDICATES GIRDER TRUSS -SEE PLAN & SCHEDULE ON

HEADER - SEE PLAN & SCHEDULE

ON S1 SHEETS WOOD BEAM - SEE PLAN FOR SIZE

2x6 @ 16"o.c. LOAD BEARING WALL

1.75x5.5 LSL @ 12" o.c.

LOAD BEARING WALL 1.75x7.25 LSL @ 16" o.c. LOAD BEARING WALL

2x WALLS (ABOVE) TANK TO THE PARTY OF THE PARTY 7/16" PLYWOOD SHEATHED SHEAR WALL SEE PLAN FOR SHEATHING SIDES . SEE S 5 SHEETS FOR NOTES & DETAILS AND ATTACHMENT REQUIREMENTS

> INDICATES APPROXIMATE LOCATION OF SHEAR WALL HOLDOWN SEE SCHEDULE ON S5 SHEETS

WOOD POST - "X" DENOTES NUMBER OF BUNDLED STUDS TO MATCH LBW WALL STUD SIZE

> STEEL TUBE COLUMN BY CANOPY SUPPLIER



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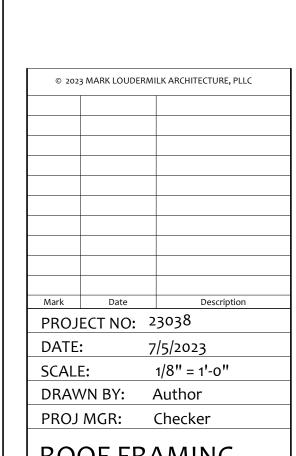
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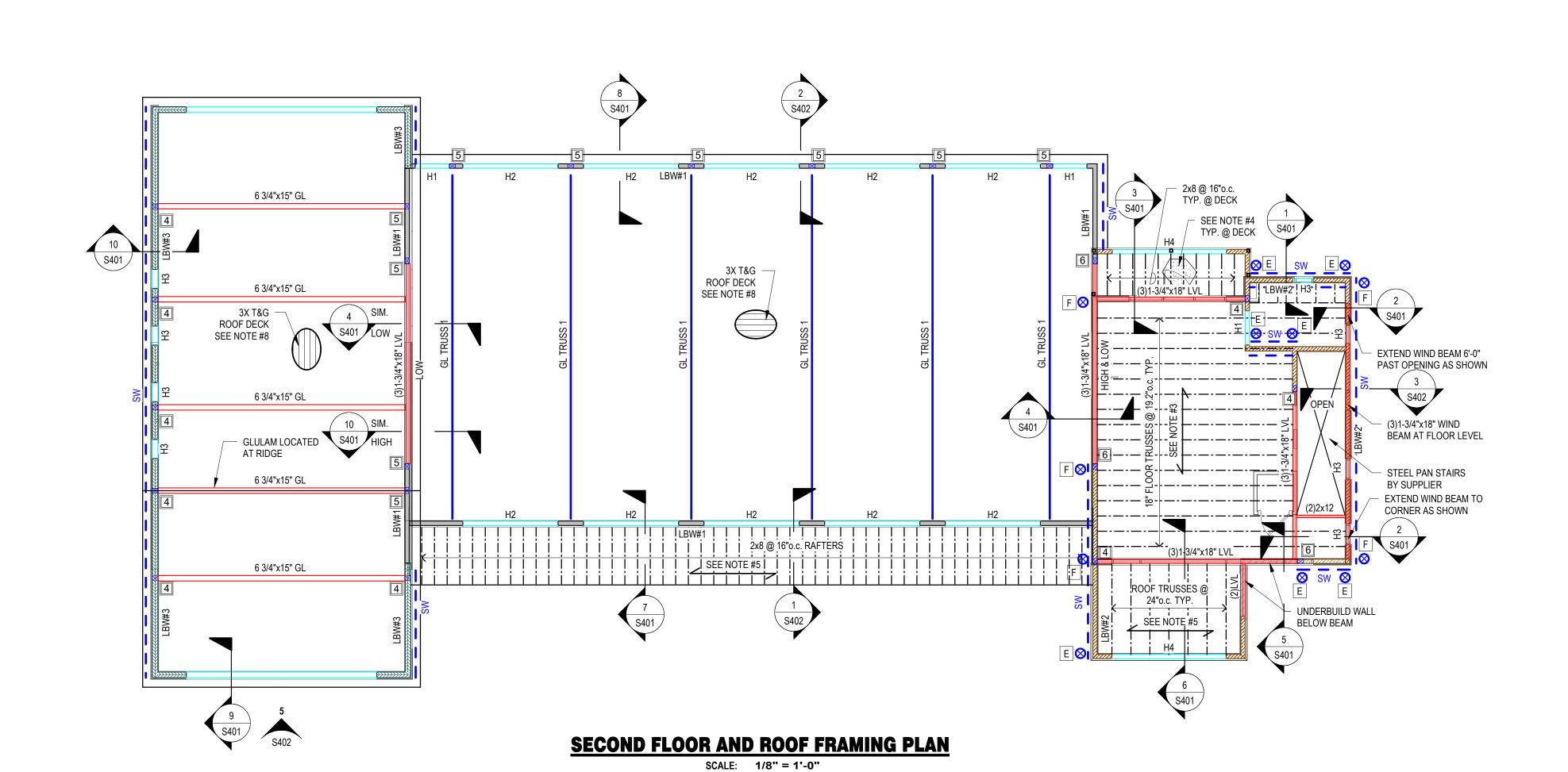


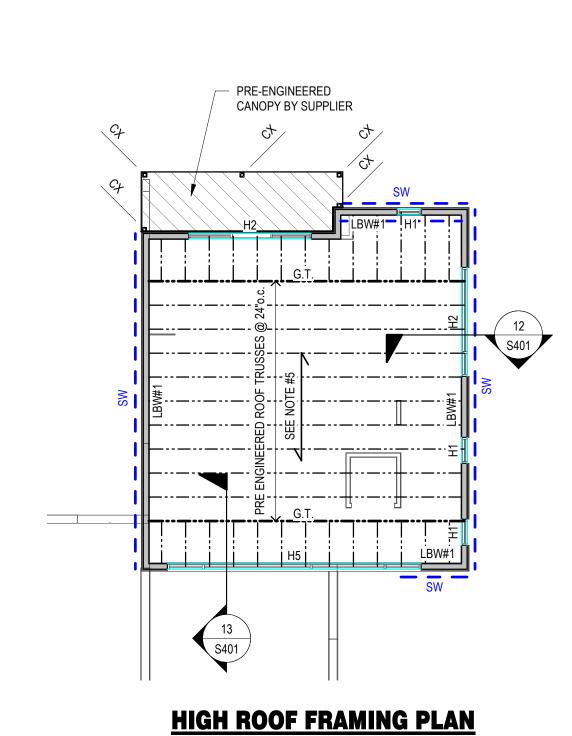




ROOF FRAMING PLAN

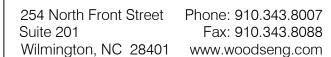
S202





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



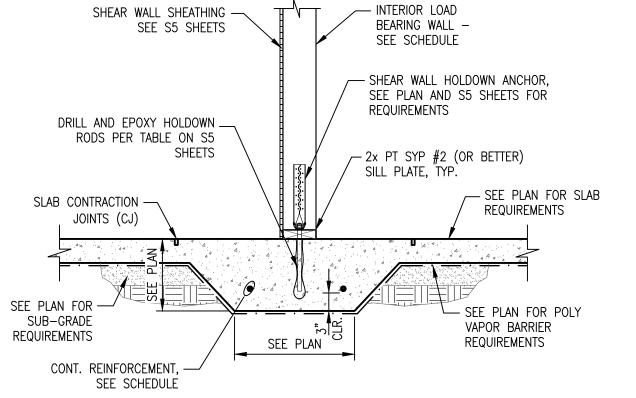






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___ VERIFY DIMENSION W/

- L3x2x¾6"xCONT. ALONG DOOR &

____ 1'-0" #4 @ 32" o.c.

HEADED STUDS @ 18"o.c.

RETURNS OF OPENING W/ 1/2" øx3"LONG

— SEE PLAN FOR SLAB

REQUIREMENTS

SEE PLAN FOR POLY

VAPOR BARRIER

REQUIREMENTS

SEE SCHEDULE FOR

FOOTING REINFORCING

PURCHASED DOOR

| CONTRACTOR TO VERIFY |

1/2" ISOLATION JOINT —

SLOPE

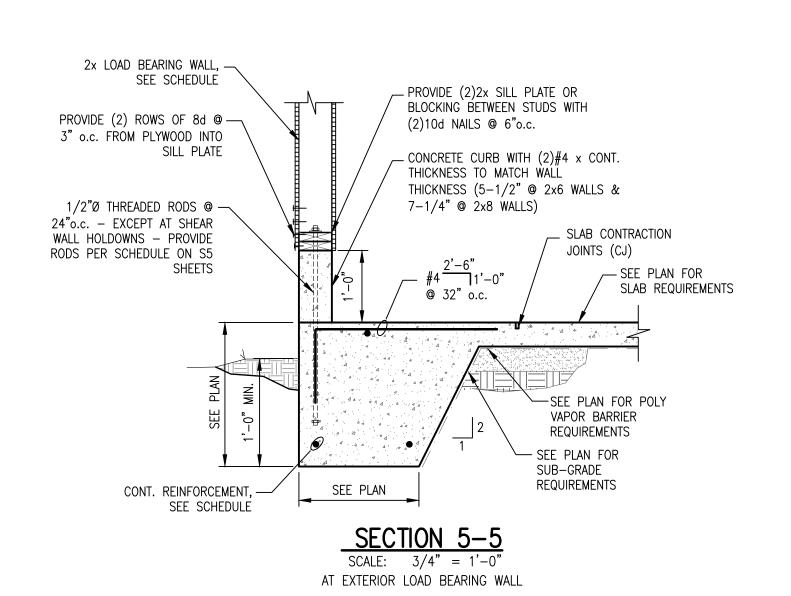
(1) #4 CONT. —

SCHEDULE

DIM. AND SLOPE WITH

DOOR SUPPLIER.

SCALE: 3/4" = 1'-0"TYPICAL AT INTERIOR SHEAR WALL HOLDOWNS



2x LOAD BEARING WALL, —

PROVIDE SIMPSON MASA ANCHOR @ -

SHEAR WALLS. SEE DETAIL "A", THIS

SHEET. NOTE: ANCHOR MUST BE A

MINIMUM OF 8" FROM ANY CORNER.

PROVIDE (2) ROWS OF 8d @ —

3" o.c. FROM PLYWOOD INTO

32"o.c., TYPICAL & @ 24"o.c. @

SEE SCHEDULÉ

SILL PLATE

CONT. REINFORCEMENT, —

SEE SCHEDULE

_ WHERE SHEAR WALL IS SHEATHED ON

WALL SHEATHING, SEE —

__ 2x LOAD BEARING WALL,

— SIMPSON H2.5A EVERY OTHER

STUD, LOCATE NEAR TITENS,

TYP @ LOAD BEARING WALLS

— SEE PLAN FOR SLAB

REQUIREMENTS

— SEE PLAN FOR POLY

VAPOR BARRIER

REQUIREMENTS

SEE SCHEDULE

SEE PLAN

SCALE: 3/4" = 1'-0"

AT INTERIOR LOAD BEARING WALL

S1.0 SERIES SHEETS

1/2"Ø THREADED RODS @ 24"o.c. —

HOLDOWNS - PROVIDE RODS PER

SLAB CONTRACTION —

SEE PLAN FOR —

SUB-GRADE

REQUIREMENTS

JOINTS (CJ)

CONT. REINFORCEMENT, -

SEE SCHEDULE

EXCEPT AT SHEAR WALL

SCHEDULE ON S5 SHEETS

2x PT SYP #3 (OR BETTER) — SILL PLATE, TYP.

BOTH SIDES - PROVIDE 5/8"Øx8"

LONG SIMPSON TITEN HD @ 32"o.c.

PROVIDE (2)2x SILL PLATE OR

(2)10d NAILS @ 6"o.c.

9 32" o.c.

SCALE: 3/4" = 1'-0"

AT EXTERIOR LOAD BEARING WALL

BLOCKING BETWEEN STUDS WITH

. SLAB CONTRACTION

— SEE PLAN FOR

SLAB REQUIREMENTS

JOINTS (CJ)

-SEE PLAN FOR POLY

VAPOR BARRIER

REQUIREMENTS

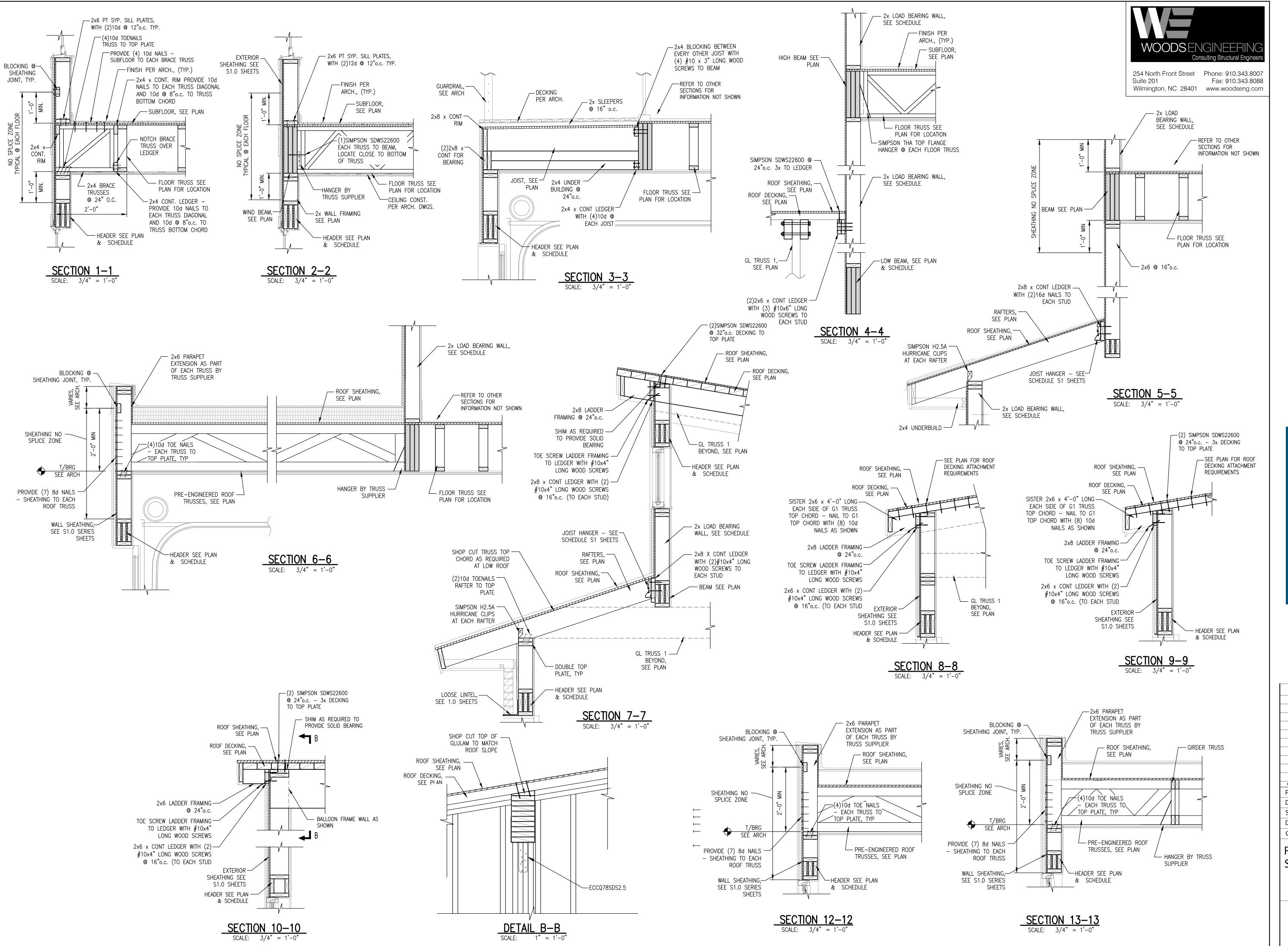
— SEE PLAN FOR

REQUIREMENTS

SUB-GRADE



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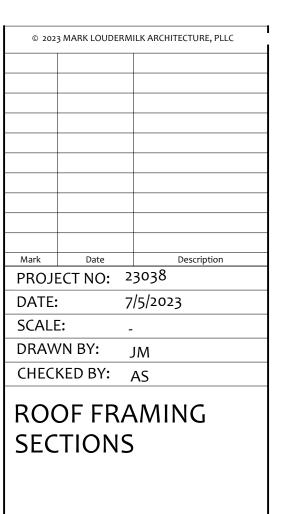


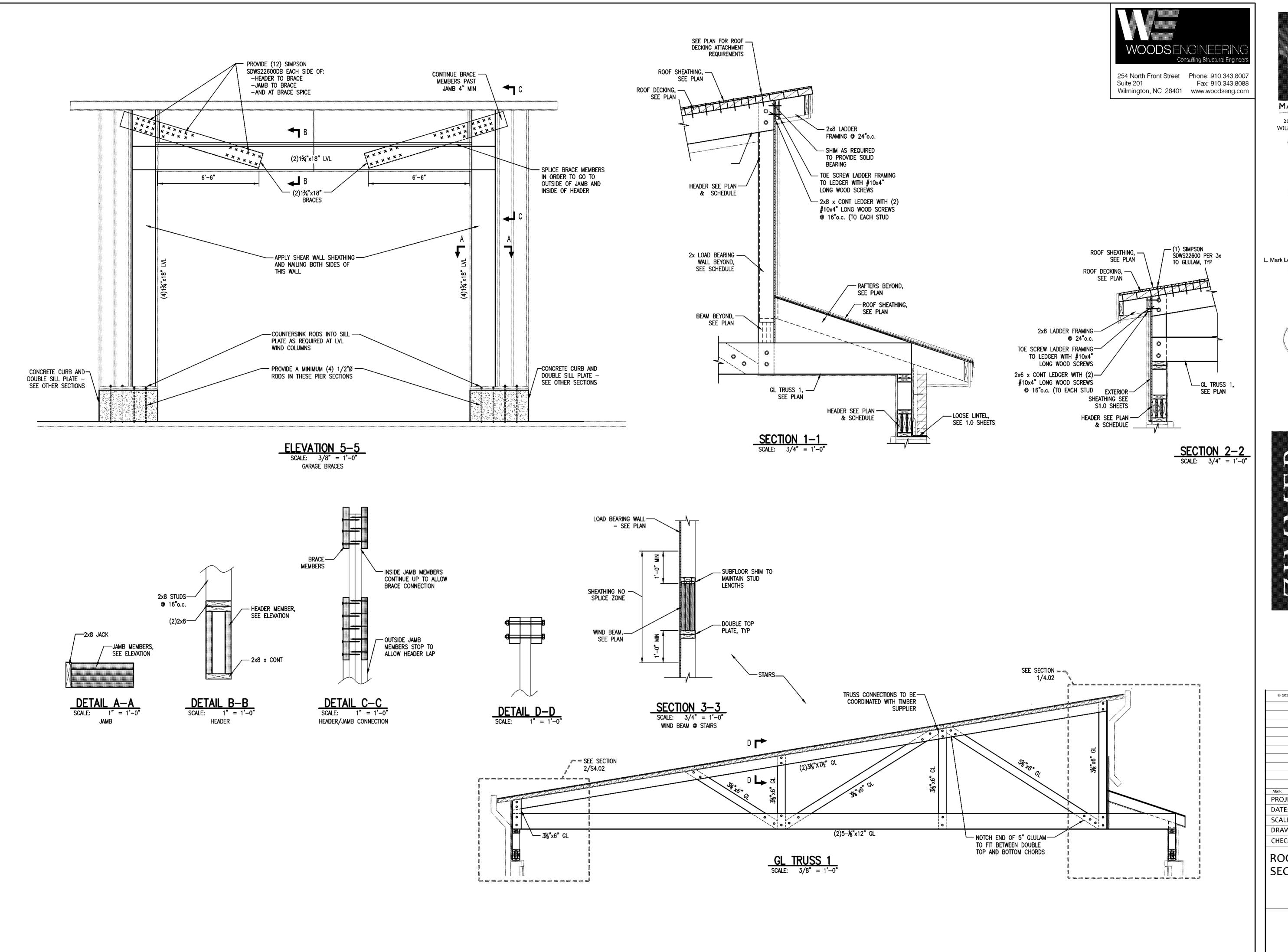


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MARK LOUDERMILK

ARCHITECTURE

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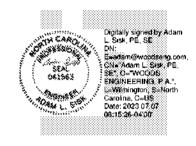
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WALL SHEATHING

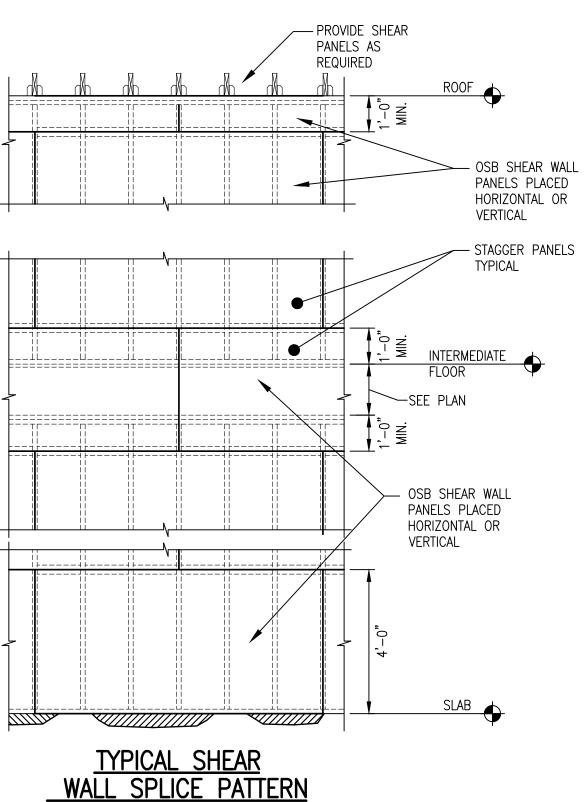
TO ROOF DECK

SHEAR WALL -

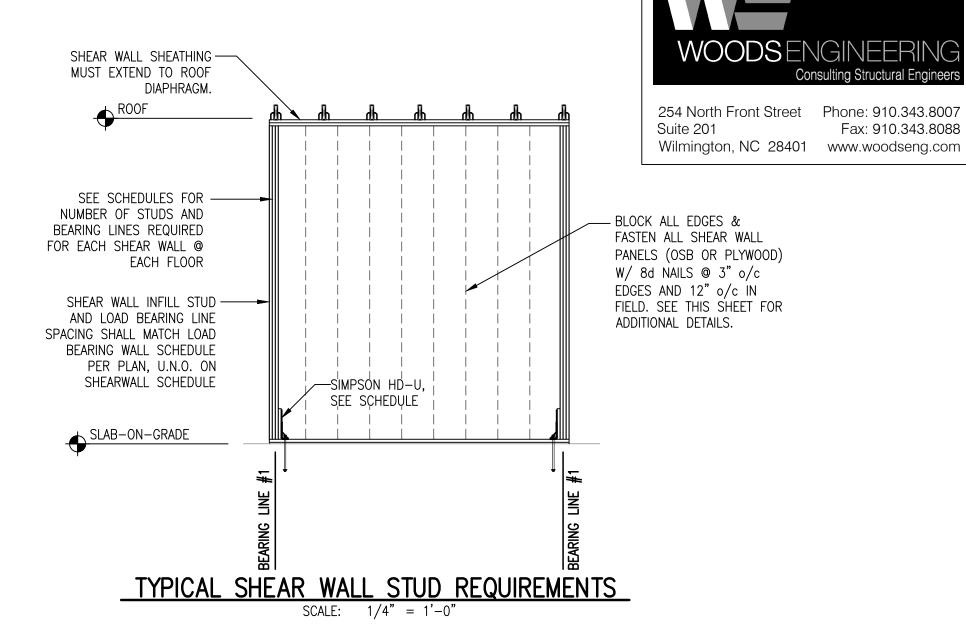
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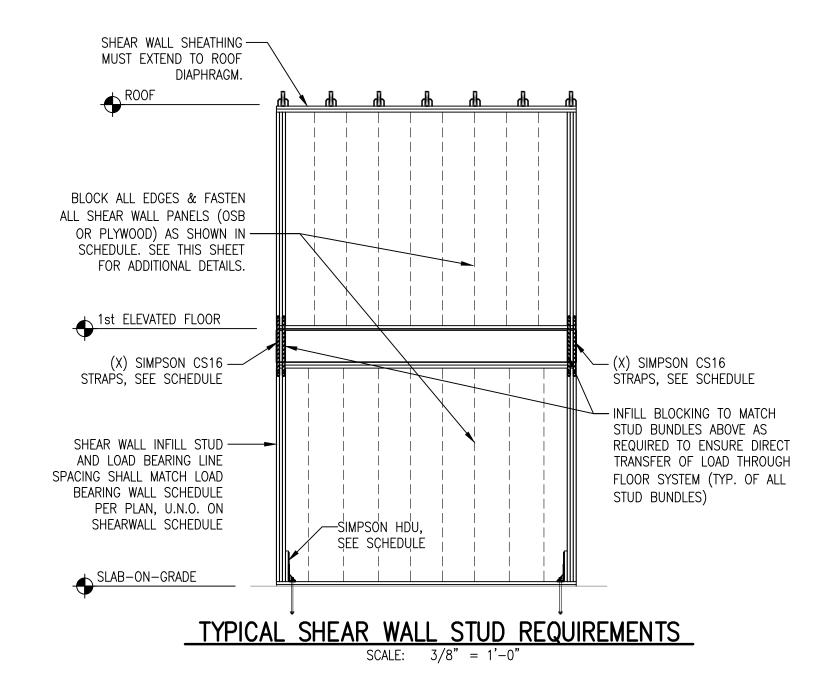
DETAIL 'J'

@ 3x DECKING TO SHEAR WALL



SCALE: 3/8" = 1'-0"





SHEAR WALL NOTES:

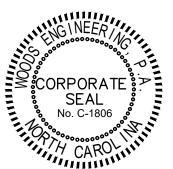
- FOR GENERAL FRAMING INFORMATION, SEE SHEET S1.01
 SEE DETAILS ON THIS SHEET SERIES FOR TYPICAL
- SHEAR WALL DETAILS.

 3. SHEAR WALL SHEATHING SHALL BE 7/6" OSB OR
- PLYWOOD WITH 8d NAILS @ 3"o.c. AT EDGES AND 12"o.c. IN FIELD.
- 4. ALL RODS SHALL BE ASTM A36. (Fu=70Ksi)
- 5. ALL STUDS SHALL MATCH LOAD BEARING WALL SPACING AND SPECIES.
- 6. ALL HOLDOWNS TO BE LOCATED A MAXIMUM DISTANCE OF 6" FROM END OF WALL. (TYP. OF ALL SHEAR WALLS)
- 7. EPOXY SHALL BE HILTI HY-200. SEE TABLE THIS SHEET FOR REQUIRED EMBEDMENT.
- 8. ALL HOLDOWN RODS LOCATED ON EXTERIOR WALL SHALL BE CAST—IN—PLACE.

HOLDOWN AND COMPRESSION STUDS SCHEDULE @ SHEAR WALLS								
MARK	HOLDOWN/STRAPS	# COMPRESSION STUDS @ EACH HOLDOWN	ROD SIZE					
Α	(2) - SIMPSON HDU14-SDS2.5	(4)-1.75 x 5.5 LSL -TOTAL (8)	1"Ø					
В	SIMPSON HDU14-SDS2.5	(5)-1.75 x 5.5 LSL / (4)-1.75 x 7.25 LSL	1"Ø					
С	SIMPSON HDU11-SDS2.5	(4)-1.75 x 7.25 LSL / (5)-2X6	1"Ø					
D	SIMPSON HDU8-SDS2.5	(3)-1.75 x 5.5 LSL	7/8"Ø					
Е	(2) - SIMPSON CSMTC16 STRAP	(4)-2X6	N/A					
F	(2) - SIMPSON CS16 STRAP	(3)-2X6	N/A					



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SHEAR WALL DETAILS

1701 GENERAL

A. CODES, REGULATIONS AND STANDARD INSTALLATION ARE TO COMPLY WITH THE LATEST EDITION OF THE STATE BUILDING CODE, NFPA 90A, AND ALL OTHER APPLICABLE LOCAL AND NATIONAL CODES. IN THE CASE OF CONFLICT BETWEEN VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.

- FEES AND PERMITS: PROVIDE ALL LICENSES, FEES, PERMITS, INSURANCE, ETC., REQUIRED FOR THE EXECUTION OF THIS WORK. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MATERIALS, PERFORM ALL WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE HEATING, AIR CONDITIONING
- AND VENTING SYSTEM OPERABLE AND READY FOR USE BY THE OWNER. GUARANTEE: ALL EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE
- OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. ALL COMPRESSORS SHALL HAVE A FIVE (5) YEAR GUARANTEE STARTING AFTER FINAL ACCEPTANCE OF WORK
- IT IS UNDERSTOOD AND AGREED THAT THESE PLANS AND SPECIFICATIONS SHALL BE FULFILLED IN THEIR TRUE SPIRIT AND INTENT SO THAT ANY MINOR MATERIALS OR DEVICES ESSENTIAL TO PROPER AND CONVENIENT OPERATION. REQUIRED OR IMPLIED, SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR WITHOUT EXTRA CHARGE, EVEN THOUGH NOT SPECIFICALLY CALLED FOR.
- INSTALLATION SHALL COMPLY WITH OSHA STANDARDS. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE SPECIFICATIONS. THEN THE
- MOST RESTRICTIVE SHALL TAKE PRECEDENT. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM THE JOB SITE. THE MECHANICAL CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA.
- DIVISION I SHALL BECOME A PART OF THESE SPECIFICATIONS BY REFERENCE. ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE STATE BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE, CONTACT SEISMIC CONTROL AND ISOLATION, INC. PHONE: 910-799-5204. ALL REQUIRED INSPECTIONS FOR

THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED INSPECTORS AND AGENCIES HIRED BY THE OWNER OR OWNER'S AGENT. K. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY.

1702 SCOPE

WORK SHALL INCLUDE BUT NOT BE LIMITED TO: PROVIDE AND INSTALL SPLIT SYSTEM HEAT PUMP SYSTEMS, DUCT, DIFFUSERS, GRILLES, LOUVERS AND WEATHER CAPS.

PROVIDE AND INSTALL VENT FANS, DUCT AND LOUVERS.

PROVIDE AND INSTALL ALL CONTROLS PROVIDE ALL INCIDENTAL MATERIALS AND EQUIPMENT FOR A COMPLETE AND FUNCTIONING HVAC SYSTEM.

1703 MATERIALS

A. HEATING, VENTILATION AND AIR CONDITIONING DUCT SHALL BE: 1. ALL CONCEALED HEATING AND COOLING MAIN SUPPLY AND RETURN DUCT SHALL BE GALVANIZED SHEET METAL WITH FIBERGLASS WRAP WITH FOIL BACKING, U LABELED FOR CLASS I AIR DUCT MEETING NFPA 90 FLAME SPREAD AND SMOKE GENERATION REQUIREMENTS. DUCT INSULATION SHALL COMPLY WITH ALL STATE ENERGY CODE REQUIREMENTS AND HAVE A MINIMUM R-VALUE AS SHOWN BELOW:

SUPPLY DUCTS INSIDE THERMAL ENVELOPE.. RETURN DUCTS INSIDE THE THERMAL ENVELOPE.. . 1/2" DUCT LINER FOR NOISE SUPPRESSION

FRESH AIR INTAKE DUCTS.. INSULATION SHALL MEET ALL CODE REQUIREMENTS.

2. ALL EXPOSED HEATING AND COOLING MAIN SUPPLY AND RETURN DUCT SHALL BE GALVANIZED SHEET METAL WITH DUCT LINER, UL LABELED FOR CLASS I AIR DUCT MEETING NFPA 90 FLAME SPREAD AND SMOKE GENERATION REQUIREMENTS. DUCT INSULATION SHALL NOT PROMOTE OR SUPPORT THE GROWTH OF MOLD. FUNGI OR BACTERIA (WHEN TESTED IN ACCORDANCE WITH UL 181, ASTM C1338, OR ASTM D3273), SHALL NOT BREAK AWAY, CRACK, PEEL FLAKE OFF, OR SHOW EVIDENCE OF DELAMINATION OR EROSION (WHEN TESTED IN ACCORDANCE WITH UL 181) AND SHALL COMPLY WITH ALL STATE ENERGY CODE REQUIREMENTS AND HAVE A MINIMUM R-VALUE AS SHOWN BELOW:

INSULATION SHALL MEET ALL CODE REQUIREMENTS. 3. FLEX RUNOUTS SHALL BE FLEX DUCT BY ATCO OR EQUAL AND SHALL BE UL LABELED FOR CLASS I AIR DUCT MEETING NFPA 90 FLAME SPREAD AND SMOKE GENERATION

REQUIREMENTS, MINIMUM R-VALUE SHALL BE R=6.0 RIGID RUN OUTS SHALL BE GALVANIZED SHEET METAL WITH FIBERGLASS WRAP WITH FOIL BACKING WHICH MEET REQUIREMENTS OF ITEM 1.

PROVIDE SINGLE THICKNESS TURNING VANES IN MAIN SUPPLY AND RETURN DUCT AT TEES AND 90° ELLS. FRESH AIR MAKE-UP SHALL BE CLASS I DUCT WITH INSULATION WHICH MEET REQUIREMENTS OF ITEMS 1 AND 2.

VENT DUCT: VENT DUCT SHALL BE 26 GA. MINIMUM GALVANIZED SHEET METAL.

THE FIRST 3'-0" OF DUCT FROM THE EXTERIOR WALL SHALL BE INSULATED WITH INSULATION MEETING REQUIREMENTS OF ITEM 1 (MINIMUM R-VALUE 7. 2.

7. 3. VENTILATION DUCT FOR EXHAUST FAN MAY BE UNINSULATED EXCEPT AS REQUIRED BY ITEM 7. 2

THERMOSTAT CABLE SHALL BE UL APPROVED FOR THE APPLICATION. CONDENSATE PIPE SHALL BE A MINIMUM OF ¾ PVC (CPVC FOR PLENUM SPACES) WITH 1/2" ARMAFLEX TYPE INSULATION FOR INTERIOR RUNS.

ALL RUNOUT SUPPLY DUCTS SHALL HAVE BALANCING DAMPERS.

REFRIGERATION TUBING SHALL BE SIZED PER THE EQUIPMENT MANUFACTURERS RECOMMENDATION AND INSULATED WITH A MINIMUM THICKNESS OF 14 AND A INSULATION CONDUCTIVITY NOT TO EXCEED 0. 27 BTU*IN/(HR*FT2**F). DIFFERENT THICKNESSES AND CONDUCTIVITIES ARE ALLOWED THAT COMPLY THE REQUIREMENTS OF THE STATE ENERGY CODE. INSULATION SHALL MEET ALL MANUFACTURER'S RECOMMENDATIONS AND STATE ENERGY CODE REQUIREMENTS. ALL INSULATION EXPOSED TO SUNLIGHT SHALL BE PROVIDED WITH A UV PROTECTIVE COATING/COVERING.

ALL SUPPLY AND RETURN GRILLES SHALL HAVE FULLY INSULATED BACK UNLESS NOTED OTHERWISE.

ALL INTAKE OPENINGS SHALL BE PROTECTED WITH A CORROSION RESISTANT SCREEN WITH OPENINGS GREATER THAN 1/2" AND NOT GREATER THAN 1". H. ALL EXHAUST OPENINGS (EXCEPT DRYER EXHAUST) SHALL BE PROTECTED WITH A CORROSION RESISTANT SCREEN WITH OPENINGS NOT LESS THAN 1/2" AND NOT GREATER THAN

1704 EXECUTION ALL HOLES SHALL BE DRILLED OR CUT, DO NOT BREAK HOLES.

THE MECHANICAL CONTRACTOR SHALL DO ALL CUTTING, PATCHING, AND PAINTING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED UNDER THIS CONTRACT, AND SHALL ESTABLISH ALL FINISHES WHEN CUTTING AND PATCHING OCCUR TO THEIR ORIGINAL CONDITION. QUALIFIED WORKERS SHALL DO ALL CUTTING AND PATCHING WORK (I.E. DRY WALL CUTTING AND PATCHING SHALL BE DONE BY QUALIFIED DRY WALL CRAFTSMEN.)

CONTRACTOR SHALL BALANCE THE AIR CONDITIONING SYSTEM AS SHOWN ON THE PLANS WITHIN 10% OF THE NUMBER SHOWN. CONTRACTOR SHALL SUBMIT A BALANCING REPORT SHOWING THE ACTUAL CFM READINGS OF ALL SUPPLY REGISTERS TO THE ARCHITECT AT THE COMPLETION OF THE PROJECT.

D. UNLESS NOTED OTHERWISE THE DUCT DIMENSIONS SHOWN REFER TO THE DUCTS INSIDE FREE AIR SPACE DIMENSION. ROUND OR RECTANGULAR DUCT MAY BE USED IN PLACE E TYPE OF DUCT SHOWN AS LONG AS THE FOLLOWING REQUIREMENTS ARE MET.

THE REPLACEMENT DUCT SIZE SHALL HAVE A STATIC PRESSURE DROP AND AVERAGE DUCT VELOCITY EQUAL TO OR LESS THAN THE DUCT SIZE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL TAKE RESPONSIBILITY FOR THE NEW DUCT DESIGN, INCLUDING BUT NOT LIMITED TO, FIT, CLEARANCES AND AFFECTS ON OTHER TRADES. CONTRACTOR SHALL SUPPLY ALL HANGERS AND SUPPORTS NECESSARY TO SUSPEND DUCT WORK AND EQUIPMENT AS PER GOOD INSTALLATION PRACTICE AND THE STATE

ALL DUCT SHALL BE CONSTRUCTED, SUPPORTED AND REINFORCED PER SMACNA STANDARDS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL THERMOSTATS, CONTROL, RELAY, STARTERS ETC., FOR A COMPLETE CONTROL SYSTEM FOR THE HEAT PUMP UNITS.

MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR PENETRATIONS AND PATCHING. MECHANICAL CONTRACTOR SHALL PROVIDE CONDENSATE PUMPS WHERE GRAVITY DRAINAGE OF CONDENSATE IS NOT POSSIBLE WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

INSTALLATION SHALL COMPLY WITH ALL STATE ENERGY CODE REQUIREMENTS.

ALL REFRIGERATION PIPING AND CONDENSATE PIPING SHALL BE PROPERLY SUPPORTED AS PER MANUFACTURERS RECOMMENDATIONS. STATE BUILDING CODE. AND GOOD PIPING PRACTICES. PROPER DRAINAGE OF CONDENSATE LINES SHALL BE MAINTAINED.

ALL MATERIALS AND EQUIPMENT SHALL BE PROPERLY INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS AND GOOD PRACTICE.

THERE WILL BE MINIMUM 10' CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL BUILDING EXHAUSTS AND PLUMBING VENTS. HORIZONTAL AIR HANDLER INSTALLATIONS SHALL INCLUDE VIBRATION ISOLATION SUPPORTS. VERTICAL FLOOR MOUNTED AIR HANDLERS SHALL BE SUPPORTED ON CORK PADS.

O. AIR INTAKE AND EXHAUST WEATHER CAPS, GRILLES, AND LOUVERS SHALL BE SIZED TO PRODUCE A STATIC PRESSURE DROP OF O. 05" OR LESS AT DESIGN AIR FLOW. WEATHER CAPS SHALL BE ALUMINUM BY GREENHECK OR EQUAL.

DUCT SYSTEMS SHALL BE SEALED STRICTLY AS PER THE STATE ENERGY CODE. ALL DUCT WORK TRANSITIONS SHALL BE SUPPLIED AS REQUIRED FOR CONNECTION OF ALL DUCTED EQUIPMENT AND SYSTEM COMPONENTS.

ALL OUTSIDE AIR INTAKE DUCTS (ONE FOR EACH AIR HANDLER) SHALL HAVE BACKDRAFT DAMPERS BALANCED TO OPEN AND ALLOW IN OUTSIDE AIR AS INDICATED ON DRAWINGS WHEN AIR HANDLER FAN IS RUNNING. THE USE OF ELECTRONICALLY DRIVEN DAMPERS TIED TO THE AIR HANDLER OPEN WHEN FAN IS ON, CLOSED WHEN FAN IS

OFF, SHALL BE AN ACCEPTABLE ALTERNATE. ALL ELECTRICAL CONNECTIONS SHALL BE COORDINATED WITH ELECTRICIAN. S. PROVIDE OPERATION AND MAINTENANCE MANUALS TO THE BUILDING OWNER.

1705 ELECTRICAL CONNECTIONS

ELECTRICAL CIRCUIT SIZES AND NUMBER ARE BASED ON THE MANUFACTURER OF THE EQUIPMENT SPECIFIED, AND IT SHALL BE THE RESPONSIBILITY OF THE HEATING AND AIR CONDITIONING CONTRACTOR TO CHANGE ANY AND ALL ELECTRICAL WORK IN ORDER TO FIT EQUIPMENT OTHER THAN THAT SPECIFIED. THE HEATING AND AIR CONDITIONING CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR AND THE OWNER TO ASSURE THAT ALL UNITS ARE PROPERLY CONNECTED AND SHALL CHECK THE WIRING PRIOR TO STARTING UNITS. TERMINATION OF ELECTRICAL POWER WILL BE AS FOLLOWS:

ELECTRICAL CONTRACTOR SHALL PROVIDE AND CONNECT ALL POWER TO THE MECHANICAL EQUIPMENT.

MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE CONTROL AND THERMOSTAT SYSTEMS FOR THE HEATING, AIR CONDITIONING SYSTEMS. MECHANICAL CONTRACTOR SHALL PROVIDE THE EMERGENCY SHUTDOWN CONTROLS AND COORDINATE WITH THE ELECTRICAL CONTRACTOR ON DUCT DETECTOR INSTALLATION

AND AIR HANDLING UNIT SHUTDOWN 4. MECHANICAL CONTRACTOR SHALL PROVIDE ANY REQUIRED ELECTRICAL CONNECTIONS FOR CONDENSATE PUMPS WITHOUT ADDITIONAL COST TO THE OWNER.

1706 TESTS

ALL HEATING COOLING AND VENTILATION EQUIPMENT, UPON COMPLETION, SHALL BE TESTED FOR AT LEAST ONE (1) DAY AND SHALL BE SHOWN TO BE IN SATISFACTORY

CONDITION ON BOTH HEATING AND COOLING. B. CONTRACTOR SHALL SUPPLY ALL NECESSARY LABOR AND EQUIPMENT FOR THE TEST.

1707 SUBSTITUTION

ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS SPECIFIED. REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO FULLY IDENTIFY AND APPRAISE THE PRODUCTS. APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS, EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.

1708 VISIT TO SITE

ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.

AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF SHOP DRAWINGS OF HEAT PUMPS, REGISTERS, FANS, ANY SPECIAL EQUIPMENT WHICH HE INTENDS TO USE. FOUR (4) COPIES OF THIS DATA WILL BE RETURNED BY THE ENGINEER WHO WILL INDICATE APPROVAL

1710 FIRE RATED WALLS, FLOORS & CEILINGS

CONTRACTOR SHALL DETERMINE LOCATION OF ALL FIRE AND SMOKE RATED WALLS, FLOORS AND CEILINGS FROM ARCHITECTURAL DRAWINGS. PIPING PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE AS REQUIRED BY THE STATE BUILDING CODE. WITH APPROVED AND APPROPRIATELY RATED UL FIRESTOP SYSTEMS AT ALL PENETRATIONS. ALL DUCT PENETRATIONS SHALL BE PROPERLY PROTECTED WITH RADIATION OR FIRE DAMPERS WITH ALL INSTALLATION STRICTLY AS PER MANUFACTURERS RECOMMENDATIONS.

1711 PLACING IN SERVICE

UPON COMPLETION OF THE ENTIRE SYSTEM, THE MECHANICAL CONTRACTOR SHALL INSTALL NEW AIR FILTERS AND LEAVE ENTIRE SYSTEM CLEAN AND READY FOR OPERATION. THE MECHANICAL CONTRACTOR SHALL DEMONSTRATE THE PROPER FUNCTION OF THE ENTIRE SYSTEM. THE MECHANICAL CONTRACTOR SHALL ACQUAINT THE OWNERS REPRESENTATIVE WITH THE PROPER OPERATION OF THE ENTIRE SYSTEM.

LOUVED SCHEDULE

LOUV	EN SUMEDULE												
SYMBOL	DESCRIPTION	SIZE	FREE AREA (ft²)	CFM	MAX Δ P (w.g.)	RAIN	BACKDRAFT DAMPER	SCREEN	MATERIAL	PAINT	MFG. (NOTE 1)	MODEL	REMARKS
L-1	STATIONARY INTAKE	16\v 16H	0. 5	250	0. 10	YES	YES	YES	ALUMINUM	VERIFY	P0T0RFF	ECV-345	SEE NOTES
L-2	STATIONARY INTAKE	16W×16H	0. 5	325	0. 10	YES	YES	YES	ALUMINUM	VERIFY	POTORFF	ECV-345	SEE NOTES
L-3	STATIONARY EXHAUST	12\vx12H	0. 2	75	0. 10	YES	N0	YES	ALUMINUM	VERIFY	P0T0RFF	ECV-345	SEE NOTES

EQUALS ARE RUSKIN, LOUVERS & DAMPERS AND GREENHECK. GRAVITY BACKDRAFT DAMPERS SHALL BE COUNTER BALANCED.

LOUVERS SHALL COMPLY WITH AMCA 550.

SPLIT SYSTEM HEAT PUMP SCHEDULE - 15 SEER HP'S **GENERAL** COMPRESSOR AIR HANDLING UNIT ELECTRIC ELECTRIC FRESH COOLING AIR CAPACITY SYMBOL MODEL SYMBOL TYPE MODEL INTAKE (IN OF H20) REMARKS CAPACITY INTAKE CFM HSPF STAGES (TONS) VOLT | PHASE | PHASE | MCA | MOCP DUCT VERT/H, R. (CFM) 5 TONS 240 TRANE 4TWR5060 HORIZ. 4.8/9.6 240 60/25 60/25 TRANE GAM5B0C60 1, 900 100 8"ø 0.5 SEE NOTES AHU-1 1,600 4 TONS 240 TRANE 4TWR5049 AHU-2 HORIZ. 7. 68 TRANE GAM5B0C48 150 8"ø 0. 5 SEE NOTES HP-3 4 TONS 240 TRANE 4TWR5049 AHU-3 HORIZ. 7. 68 240 TRANE GAM5B0C48 1,600 150 8"ø 0. 5 SEE NOTES VERT. 7. 68 TRANE 1, 400 175 HP-4 3½ TONS 240 23 TRANE 4TWR5042 AHU-4 240 GAM5A0C42 8"ø 0.5 SEE NOTES

PROVIDE GALVANIZED DRIP PANS AT EACH UNIT WITH PAN DRAINED TO OUTSIDE BUILDING OR PAN WITH FLOAT SWITCHES COMPLYING WITH UL 508. INSTALLATION SHALL BE SUCH THAT ALL INSULATION SHALL BE LOCATED ABOVE THE TOPE EDGE OF THE PAN.

PROVIDE SOLID STATE PROGRAMMABLE THERMOSTAT WITH SET BACK CONTROLS FOR TIME OF DAY AND DAY OF WEEK, AND CAPABLE OF TEMPORARY MANUAL OVERRIDE.

PROVIDE CONCRETE PAD FOR COMPRESSORS AND ANCHOR COMPRESSORS TO PADS. CONTRACTOR SHALL CONSTRUCT FILTER HOUSING AND PROVIDE FILTERS AT EACH AHU. FILTER SHALL BE SIZED PER MANUFACTURERS RECOMMENDATIONS.

PROVIDE FRENCH DRAINS FOR CONDENSATE DISCHARGE.

PROVIDE MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL INDOOR AND OUTDOOR UNITS. CONSULT WITH COMPRESSOR MANUFACTURER FOR THE CORRECT SIZING OF REFRIGERANT LINES. PROVIDE MANUFACTURER RECOMMENDED EQUIPMENT FOR ANY LONG REFRIGERANT LINE LENGTHS.

PROVIDE CONTROLS THAT PREVENT AUXILIARY HEAT STRIPS FROM BEING ACTIVATED WHEN THE HEAT PUMP CAN HANDLE THE HEATING LOAD EXCEPT DURING DEFROST CYCLE.

COMPLIANCE SCHEDULE - MECHANICA

COMPLIANC	E SCHEDULE - MECHANICAL			
METHOD OF COMPLIANCE ENERGY COST BUDGET	PRESCRIPTIVE	DUCTL	ESS SPLIT	SYSTE
THERMAL ZONE	3			COMPRE
EXTERIOR DESIGN CONDITIONS WINTER DRY BULB SUMMER DRY BULB INTERIOR DESIGN CONDITIONS WINTER DRY BULB SUMMER DRY BULB RELATIVE HUMIDITY	24°F 91°F 72°F 75°F 50%	SYMBOL	MFG.	MODEL #
BUILDING HEATING LOAD	154, 253 BTU/HR	DU-1	MITSUBISHI	TRUZH036 KAOONA
BUILDING COOLING LOAD MECHANICAL SPACING CONDITIONI UNITARY DESCRIPTION OF UNIT - HEATING EFFICIENCY - COOLING EFFICIENCY - HEAT OUTPUT OF UNIT - COOLING OUTPUT OF UNIT	SEE EQUIPMENT SCHEDULE	2. PR0' 3. PR0' 4. PR0' 5. BEF MAN' 6. THE	VIDE MANUFACTU VIDE CONCRETE I VIDE FRENCH DR. VIDE MANUFACTU ORE PURCHASING UFACTURER RECOI MECHANICAL COI	PAD AND ANC AINS PER ST RER RECOMME ANY MATERI WMENDED EQU NTRACTOR SH

COOLING OUTPUT OF UNIT -)		
OILER TOTAL BOILER OUTPUT (IF OVERSIZED STATE REASON)	N/A	
OVERSIZED STATE REASON)		

CHILLER TOTAL CHILLER CAPACITY LIST EQUIPMENT EFFICIENCIES SEE EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULES WITH MOTORS (MECHANICAL SYSTEM) MOTOR HORSEPOWER NUMBER OF PHASES MINIMUM EFFICIENCY

OF POLES DESIGNER STATEMENT

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEM, SERVICE SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE ENERGY CODE.

TITLE: <u>ENGINEER</u>

MEC	CHANICAL LEGEND
1	SUPPLY REGISTER - WALL
	SUPPLY REGISTER - CEILING
	RETURN REGISTER - CEILING
A 100	A - DIFFUSER/GRILLE 100 - CFM
•	THERMOSTAT
®	COMBINATION THERMOSTAT/HUMIDISTAT
•	REMOTE TEMPERATURE SENSOR
20x10	RECTANGULAR DUCT - 20" WIDE INSIDE A/C SYSTEM - 10" HIGH INSIDE
720	TURNING VANES
10" ø	RIGID ROUND DUCT - 10" I.D.
~\\(^{10"\phi}_{\phi}	FLEX DUCT - 10" I.D.
Ŧ	BALANCING DAMPER
	REDUCER
	VENT FAN
FA	FRESH AIR DUCT
v	VENTILATION DUCT

		COMPRESSOR	₹					AIR HA	NDLING UNIT				GENERAL	
				ELEC	TRIC						COOLING	HEATING		
SYMBOL	MFG.	MODEL #	VOLT	PHASE	MCA	MOCP	SYMBOL	MFG.	MODEL #	MOUNTING	@95°F (BTU/HR)	@17°F (BTU/HR)	SEER HSPF	REMARKS
DU-1	MITSUBISHI	TRUZH0361 KAOONA	240	1ø	24	35	DAHU-1	MITSUBISHI	TPKA0A0361 KA70A	WALL	36, 000	38, 000	18. 5 10. 0	SEE NOTES

STATE PROGRAMMABLE THERMOSTAT WITH SET BACK CONTROLS FOR TIME OF DAY AND DAY OF WEEK, AND CAPABLE OF TEMPORARY MANUAL OVERRIDE. NCHOR COMPRESSOR TO PAD.

STATE CODE FOR CONDENSATE DISCHARGE. MENDED CLEARANCES AROUND ALL INDOOR AND OUTDOOR UNITS.

TALS OR EQUIPMENT CONSULT WITH MANUFACTURER THAT INSTALLED LINE LENGTHS DO NOT EXCEED MAXIMUM REFRIGERANT LINE LENGTH. PROVIDE

UIPMENT FOR ANY LONG REFRIGERANT LINE LENGTHS.

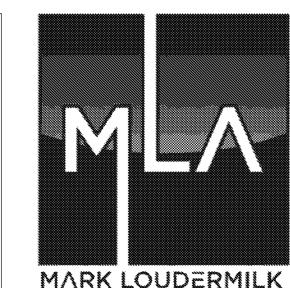
SHALL PROVIDE AND INSTALL ALL WIRING AND CONNECTIONS BETWEEN THE OUTDOOR UNIT AND THE INDOOR UNIT. 7. THE FRESH AIR FOR ALL THE AREAS SERVED BY THIS EQUIPMENT IS BEING PROVIDED BY NATURAL VENTILATION (SECTION 402 OF THE NORTH CAROLINA MECHANICAL CODE).

REGIS	STER SCHEDULE									
SYMBOL	DESCRIPTION	NECK	FACE	RUN OUT	VOLUME DAMPER	MATERIAL	COLOR	MFG. (NOTE 1)	MODEL	REMARKS
Α	DOUBLE DEFLECTION DIFFUSER	8"×4"		6"ø	NO	ALUMINUM	VERIFY	TITUS	300FS	
В	DOUBLE DEFLECTION DIFFUSER	12"×6"	-	8"ø	YES	ALUMINUM	VERIFY	TITUS	300FS	_
С	PENCIL PROOF LINEAR BAR GRILLE	12"×6"	-	8"ø	YES	ALUMINUM	VERIFY	TITUS	CT-PP-0	-
D	DOUBLE DEFLECTION DIFFUSER	18"×10"	-	-	YES	ALUMINU	VERIFY	TITUS	300FS	_
E	DOUBLE DEFLECTION DIFFUSER	24"×12"	-	-	YES	STEEL	VERIFY	TITUS	SPD	_
RA	LOUVER FACED DIFFUSER	24"×14"	-	-	YES	STEEL	VERIFY	TITUS	350RL	-
RB	LOUVER FACED DIFFUSER	36" x 14"	-	-	YES	STEEL	VERIFY	TITUS	350RL	-
RC	LOUVER FACED DIFFUSER	20" x20"			NO	STEEL	VERIFY	TITUS	350RL	
RD	LOUVER FACED DIFFUSER	10"×10"	-	8"ø	NO	STEEL	VERIFY	TITUS	350RL	_

NOTES:
1. EQUALS ARE METAL-AIRE, TITUS AND KRUEGER.

VENTI	LATION FAN SCH	HEDULE	- EXIS	STING	i						
SYMBOL	DESCRIPTION	CFM SETTING	S. P. (w. g.)	VOLT	PHASE	WATTS	MOUNTING	MFG. (NOTE 1)	MODEL	CONTROL	REMARKS
F-1	CABINET FAN	75	¥"	120	1	16	CEILING	GREENHECK	SP-A90	THERMOSTAT	SEE NOTES

EQUALS ARE TWIN CITY. CAPTIVE-AIRE. PENNBARRY AND LOREN COOK.



OT ENGINEERING, PLLC 8208 MASONBORO SOUND RD WILMINGTON, NC 28409

ENGINEERING

NC LICENSE: P-2713

/ www.otmep.com

----- ARCHITECTURE --201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com





© 2023 MARK LOUDERMILK ARCHITECTURE, PLLC Mark Date PROJECT NO: 23038 DATE: 5/19/2023 SCALE: As indicated DRAWN BY: ---PROJ MGR: --

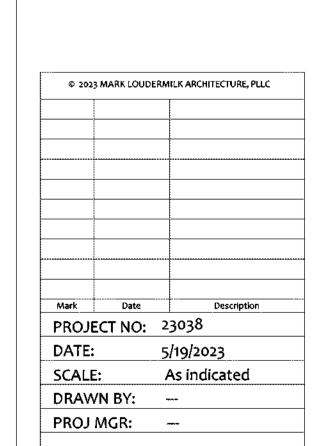
> Mechanical Schedules 8 **Specifications**





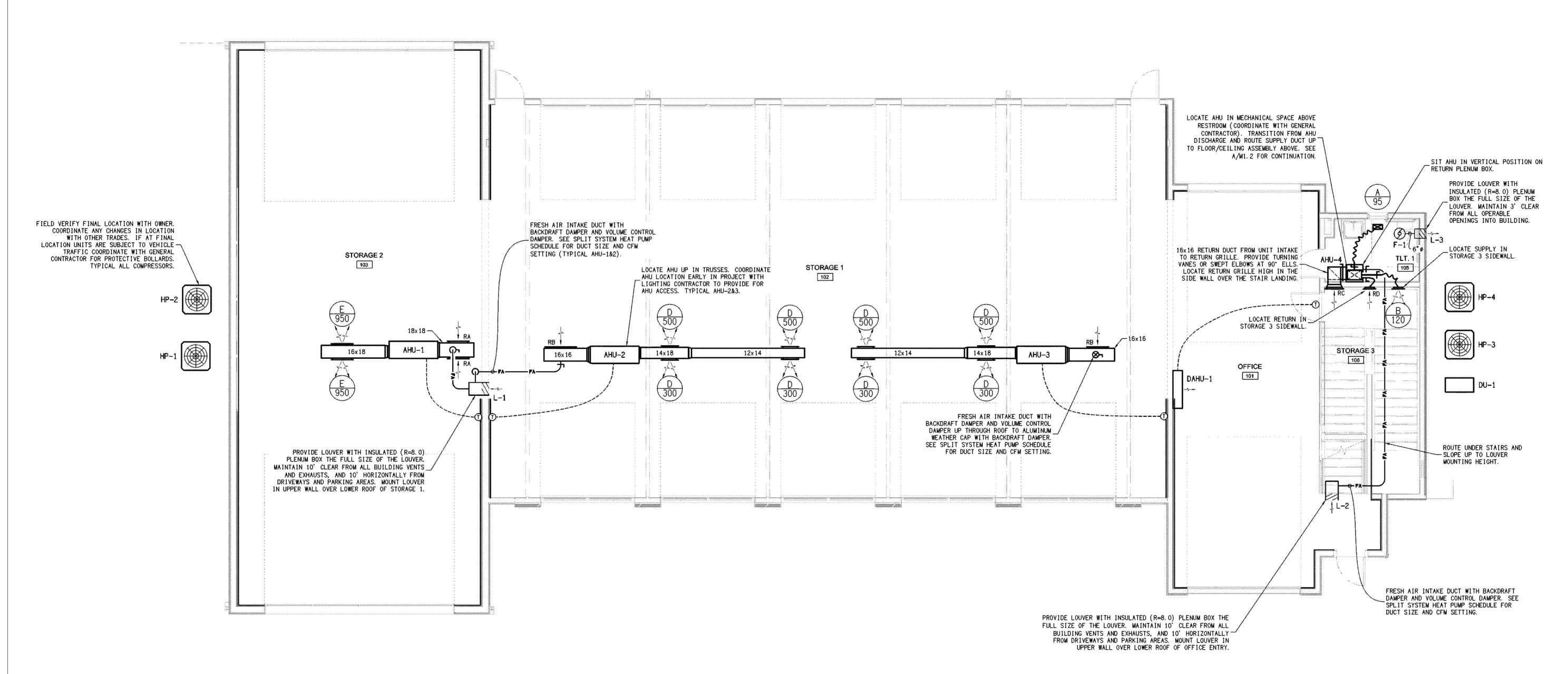
E/OFFICE

TORA



Mechanical Plan 1st Floor

M1.1



A Mechanical Plan - 1st Floor

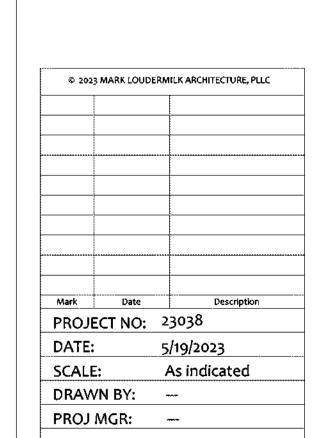
M1.1 Scale: 3/16" = 1-0"

-----ARCHITECTURE-----201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com









Mechanical Plan 2nd Floor

M1.2



Mechanical Plan - 2nd Floor
Scale: 3/16" - 7-0"

PLUMBING SPECIFICATIONS:

1. 1. CODES, REGULATIONS AND STANDARD INSTALLATIONS ARE TO COMPLY WITH THE LATEST EDITION OF THE STATE BUILDING AND PLUMBING CODES AND ALL OTHER APPLICABLE LOCAL AND NATIONAL CODES AND ORDINANCES. IN CASE

OF CONFLICT BETWEEN THE CODE AND THE DRAWINGS AND SPECIFICATIONS DR BETWEEN VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT. 1.2. FEES AND PERMITS: PROVIDE ALL LICENSES, FEES, PERMITS, HEALTH DEPARTMENT FEES, INSURANCE, ETC., REQUIRED FOR EXECUTION OF THIS WORK.

1.3. THE CONTRACT DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY DIMENSIONED. THE

DRAWING AS CLOSELY AS POSSIBLE; HOWEVER, NECESSARY ADJUSTMENTS SHALL BE MADE AS REQUIRED TO CONFORM TO STRUCTURAL CONDITIONS, WORK OF OTHER CONTRACTORS AND THE INTENT OF THE DRAWINGS WITHOUT ADDITIONAL COST TO THE OWNER. THE DRAWINGS SHALL NOT BE SCALED. SECURE DIMENSIONS FROM ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS.

1.4. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL MATERIALS, PERFORM ALL WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE PLUMBING SYSTEM OPERABLE AND READY 1.5. GUARANTEE: ALL NEW EQUIPMENT, NEW MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE

MANUFACTURER'S STANDARD GUARANTEE. IF LONGER. 1.6. PLUMBING CONTRACTORS SHALL BE RESPONSIBLE FOR HIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM JOB SITE. PLUMBING CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK

1.7. IN CASE OF ANY CONFLICT BETWEEN INFORMATION FOUND IN THE PLANS, OR IN THE SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION SHALL TAKE PRECEDENT. 1.8. THE PLUMBING DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE DESIGN FOR ROOF GUTTER SYSTEMS OR ROOF DRAIN SYSTEMS.

1.9. ALL PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE STATE BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE CONTACT SEISMIC CONTROL AND ISOLATIONS, INC.

PHONE: 910 799-5204. ALL REQUIRED INSPECTIONS FOR THESE DESIGNS SHALL BE PERFORMED BY APPROVED INSPECTORS AND AGENCIES PROVIDED BY OWNER OR OWNER'S AGENT. 1.10. ALL ROOF MOUNTED MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE STATE BUILDING CODE REQUIREMENTS FOR WIND DESIGN. IT SHALL

BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE, CONTACT SEISMIC CONTROL AND ISOLATION, INC. PHONE: 910-799-5204. ALL REQUIRED INSPECTIONS FOR THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED INSPECTORS AND AGENCIES HIRED BY THE OWNER OR OWNER'S AGENT AS

REQUIRED BY THE BUILDING CODE. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY.

2.1. WORK SHALL INCLUDE BUT IS NOT LIMITED TO:

PROVIDE FIXTURES AND INSTALL AND CONNECT WASTE AND WATER PIPE AS SHOWN ON DRAWINGS.

CHLORINATE WATER SYSTEM. 2.1.3. COORDINATE WITH LOCAL AUTHORITIES ON PURCHASE AND INSTALLATION OF BACKFLOW PREVENTERS.

MATERIALS 3.1. SITE WATER PIPING SHALL BE SCH 40 CPVC PRESSURE PIPE WITH SOLVENT WELD JOINTS. USE INDUSTRIAL GRADE GLUE ONLY. ALL NSF APPROVED PIPING FROM TAP TO METER AND PIPING INSIDE ROAD RIGHT OF WAYS SHALL BE

AS PER THE REQUIREMENTS OF THE LOCAL WATER AUTHORITY AND THE DEPARTMENT OF TRANSPORTATION. 3.1.1. WATER SERVICE PIPE OR TUBING, INSTALLED UNDERGROUND AND OUTSIDE OF STRUCTURE, SHALL HAVE A MINIMUM WORKING PRESSURE OF 160 PSI AT 73.4 DEG. F. WHERE THE WATER MAIN OR INCOMING WATER SOURCE

PRESSURE EXCEEDS 160 PSI, PIPING MATERIAL SHALL HAVE A WORKING PRESSURE NOT LESS THAN THE HIGHEST AVAILABLE INCOMING WATER PRESSURE.

3. 2. 1. SPACING FOR COPPER PIPE SHALL BE AS FOLLOWS: UP TO 1": 6'-0" 0.C. 1-1/4" & 1-1/2": 8'-0" 0.C.

3" & LARGER: 10'-0" 0. C. 3. 2. 2. SPACING FOR CARBON STEEL AND CAST IRON PIPING SHALL BE AS FOLLOWS:

UP TO 1": 7'-0" O.C. 1-1/2" & 2": 10'-0" 0. C. 2-1/2" TO 4": 12'-0" O.C.

3. 2. 3. SPACING FOR PVC PIPE SHALL BE AS FOLLOWS: UP TO 1-1/2": 2'-0" 0.C.

2": 3' –0" 0. C. 2-1/2" TO 4": 5'-0" O.C.

3. 2. 4. SPACING FOR CPVC PIPE SHALL BE AS FOLLOWS: UP TO 1": 3'-0" O. C. 1-1/4" TO 2": 4'-0" O.C.

3. 2. 5. HANGERS FOR HORIZONTAL PIPING SHALL BE THE CLEVIS TYPE 3. 2. 6. HANGERS FOR BARE COPPER PIPING SHALL BE COPPER PLATED.

3. 2. 7. HANGERS FOR INSULATED PIPING SHALL EXTEND AROUND THE INSULATION. PROVIDE 16 GAUGE GALVANIZED STEEL INSULATION PROTECTION SADDLES 12" LONG AT EACH HANGER ON ALL INSULATED LINES AND HARD INSULATION INSERTS AT SADDLES.

3.2.8. A HANGER SHALL BE FASTENED BY MEANS OF THREADED RODS TO BUILDING STRUCTURE. ALL HANGERS SHALL PERMIT ADEQUATE ADJUSTMENT AFTER ERECTION WHILE STILL

3. 2. 9. A HANGER SHALL BE PROVIDED WITHIN ONE FOOT OF EACH BEND IN HORIZONTAL PIPING. 3. 2. 10. SUPPORT MATERIAL SHALL BE PROPERLY CHOSEN TO AVOID ATMOSPHERIC CORROSION AND TO AVOID GALVANIC CORROSION DUE TO CONTACT OF SUPPORT AND ADJACENT

3.3. HOT AND COLD WATER PIPES BEGINNING 5' FROM BUILDING WALL:

3.3.1. PIPE SHALL BE TYPE L COPPER TUBING ABOVE GRADE AND TYPE K BELOW GRADE.

3.3.2. FITTINGS SHALL BE MADE USING SOLDER AS PER THE STATE PLUMBING CODE FOR POTABLE WATER. 3. 4. HOT AND COLD WATER PIPES INSIDE OF BUILDING:

3.4.1. PIPE AND PIPE FITTINGS SHALL BE MADE OF MATERIALS AND JOINED TOGETHER AS PER THE STATE PLUMBING CODE FOR POTABLE WATER 3.4.1.1. PIPE MATERIAL SHALL BE TYPE L COPPER TUBING ABOVE GRADE AND TYPE K BELOW GRADE PIPE SIZING AS BASED ON THIS MATERIAL

ACCEPTABLE ALTERNATE

3.4.2.1. PEX OR CPVC PIPING IS AN ACCEPTABLE ALTERNATE FOR ALL WATER PIPING IF THESE MATERIALS ARE USED. CONTRACTOR IS RESPONSIBLE FOR RE-SIZING THE PIPE FOR THE MATERIAL CHOSEN.

3. 4. 2. 2. PIPE AND FITTINGS SHALL BE SPECIFICALLY DESIGNED FOR INTENDED SERVICE. 3.4.2.3. FITTINGS SHALL BE MADE AS PER PIPE MANUFACTURER'S RECOMMENDATIONS AND AS PER THE STATE PLUMBING CODE FOR POTABLE WATER.

3.5. VENT AND WASTE PIPE:

3.5.1. WASTE AND VENT PIPE SHALL BE SCH 40 PVC-DWV AS PER ASTM 2665 D WITH SOLVENT WELD JOINTS EXCEPT AS NOTED BELOW. 3.5.2. PVC SHALL NOT BE USED IN A RETURN AIR PLENUM. FOR RETURN AIR PLENUMS CAST IRON SHALL BE USED. TRANSITION FROM PVC TO CAST IRON SHALL BE MADE WITH CODE

APPROVED TRANSITION FITTINGS DESIGNED

EXPRESSLY FOR THAT PURPOSE. 3. 5. 3. ALL FITTINGS SHALL BE SANITARY DRAINAGE PATTERN.

3.5.4. ALL WASTE AND SOIL STACKS SHALL BE PACKED WITH FIBERGLASS INSULATION FOR NOISE SUPPRESSION.

3.6.1. WATER GATE VALVES SHALL BE OF BRASS CONSTRUCTION WITH SOLDER JOINT FITTINGS.

3. 6. 2. ALL VALVES SHALL BE AS PER PLUMBING CODE. 3.7. TEMPERED WATER CONTROL:

3.7.1. TEMPERED WATER SHALL BE SUPPLIED THROUGH A WATER TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 AND SHALL LIMIT THE TEMPERED WATER TO A MAXIMUM TEMPERATURE AS SPECIFIED ON THE DRAWINGS. 3.7.2. A THERMOSTAT CONTROL FOR A WATER HEATER SHALL NOT SERVE AS THE TEMPERATURE LIMITING DEVICE FOR MAXIMUM ALLOWABLE HOT OR TEMPERED WATER DELIVERY AT FIXTURES.

3. 8. INSULATION: 3.8.1. WATER PIPING IN UNCONDITIONED UTILITY ROOM, ATTIC SPACE OR INSTALLED OUTSIDE BUILDING INSULATION SHALL BE INSULATED WITH 2" THICK FIBERGLASS WITH VAPOR BARRIER JACKET. UTILITY ROOM INSULATION

SHALL ALSO HAVE A PVC JACKET, STAPLED AND TAPED. 3.8.2. EXPOSED HOT AND COLD WATER LINES AND WASTE LINES UNDER HANDICAP LAVATORIES AND SINKS SHALL BE INSULATED WITH FULLY MOLDED, TRUEBRO, OR HANDI-LAV GUARD

INSULATION KIT. 3.8.3. UNDERGROUND LINES BELOW FROST LINE SHALL NOT BE INSULATED.

3.8.4. ALL OTHER WATER PIPING SHALL BE INSULATED AS FOLLOWS:

3.8.4.1. COLD WATER PIPING: COVER WITH 1 ARMAFLEX INSULATION. 3.8.4.2. NON-RECIRCULATING SYSTEM HOT WATER PIPING: COVER WITH 1" ARAMAFLEX INSULATION (THE THERMAL CONDUCTIVITY OF THE INSULATION SHALL NOT BE LESS THAN 0.27 BTU*IN/(HR*FT2**F)) FOR FIRST 8' OF PIPE

FROM WATER HEATER AND 🖟 ARAMAFLEX INSULATION EVERYWHERE ELSE. 3.8.4.3. RECIRCULATING SYSTEM HOT WATER SUPPLY, RETURN LINES, AND IN THE LOOP: COVER WITH 1" ARAMAFLEX INSULATION (THE THERMAL CONDUCTIVITY OF THE INSULATION

SHALL NOT BE LESS THAN 0.27 BTU*IN/(HR*FT2**F))

3.8.5. WASTE TRAPS LOCATED WITHIN A CRAWL SPACE SHALL BE INSULATED WITH A MINIMUM 2" THICK FIBERGLASS INSULATION. 3.8.6. ALL ABOVE GROUND STORM DRAIN PIPING SHALL BE INSULATED WITH A FIBERGLASS INSULATION JACKET.

3.9. CLEANOUTS: 3.9.1. INTERIOR CLEANOUTS SHALL BE CAST IRON BODY WITH A BRONZE OR NICKEL ALLOY TOP, JOSAM OR EQUAL.

3.9.2. EXTERIOR CLEANOUTS SHALL BE CAST IRON WITH IRON TOPS. CLEANOUTS IN TRAFFIC AREAS SHALL BE TRAFFIC RATED, ZURN OR EQUAL. INSTALL CLEANOUTS IN 6" THICK 24" DIAMETER CONCRETE COLLARS.

3, 9. 3. WALL CLEANOUTS SHALL BE INSTALLED BEHIND STAINLESS STEEL COVER PLATES.

3. 10. VENTS 3. 10. 1. VENTS SHALL PENETRATE ROOF WITH FLEXIBLE BOOTS WITH FLASHING FLANGE.

EXECUTION: 4.1. ALL HOLES THROUGH WALLS, FLOORS AND CEILINGS ARE TO BE DRILLED, NOT BROKEN. ROUND ALL SHARP EDGES TO DRILLED HOLES.

4.2. LINES ARE NOT TO BE COVERED UNTIL INSPECTED BY THE ARCHITECT. 4. 3. WRAP COPPER PIPE WITH DUCT TAPE WHERE IT PENETRATES THE FLOOR.

4. 4. DO NOT MAKE A WATER LINE JOINT UNDER THE SLAB.

4.5. WATER HAMMER ARRESTORS SHALL COMPLY WITH ASSE 1010. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS. 4.5.1. A WATER HAMMER ARRESTOR SHALL BE INSTALLED AT FIXTURES THAT HAVE QUICK CLOSING VALVES WHEN METALLIC PIPE IS INSTALLED. 4.6. WASTE PIPES PASSING UNDER OR THROUGH FOUNDATIONS OR THROUGH LOAD BEARING SECTIONS OF A WALL SHALL BE ROUTED THROUGH D. I. SLEEVES AT LEAST TWO PIPE SIZES

4.7. SUFFICIENT HANGERS, SUPPORTS, CLAMPS, CLIPS, INSERTS AND MAINTAINING DEVICES SHALL BE PROVIDED TO SUPPORT ALL PIPING AS PER GOOD PIPING PRACTICE AND TO MAINTAIN PROPER DRAINAGE.

4.8. ALL EQUIPMENT SHALL BE INSTALL AS PER THE MANUFACTURER'S INSTRUCTIONS AND PERTINENT INFORMATION.

4.9. UNDERGROUND PIPING SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. 4.9.1. ALL TRENCHES UNDERGROUND PIPING IS INSTALLED IN SHALL BE CLEAR OF ALL ROCKS AND OTHER ABRASIVE MATERIALS.

4.9.2. TRENCH BOTTOMS SHALL BE FULLY COMPACTED AND FULLY SUPPORT THE PIPE. 4.9.3. FILL DIRT TO 6" ABOVE TOP OF PIPE TO BE CLEAN AND FREE OF ABRASIVE MATERIALS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR PIPE BEDDING GIVEN SOIL

CONDITIONS. 4.10. PLUMBING CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO ASSURE THAT ALL PIPE INTERFERENCES (FOUNDATIONS, CABLES, OTHER PIPING, ETC.) ARE AVOIDED BY UNDERGROUND PLUMBING.

4.11. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT PLUMBING WALLS ARE CONSTRUCTED TO ALLOW INSTALLATION OF FIXTURE CARRIERS. PLUMBING CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR PRIOR TO WALL CONSTRUCTION.

CONTRACTOR SHALL SUPPLY AND INSTALL FIXTURE HANGER AS REQUIRED FOR PROPER INSTALLATION. WATER PIPE ROUTED THROUGH STUDS SHALL BE PROTECTED BY METAL STUD GUARDS.

INSTALL ALL WATER PIPING INSIDE OF BUILDING INSULATION IF POSSIBLE. WATER PIPING INSTALLED IN ATTIC SPACE MUST BE UNDER BATT INSULATION. IF BLOWN INSULATION IS USED IN ATTIC SPACE WATER PIPE

SHALL BE INSULATED AS IF WERE IN AND UNCONDITIONED SPACE.

4.15. VENT TERMINALS SHALL NOT BE LOCATED WITHIN 10' OF ANY AIR INTAKE OPENING.

4.16. INSTALLATION OF PEX WATER PIPE SHALL BE STRICTLY AS PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. ALL PIPE EXPANSION PROVISIONS SHALL BE ADDED TO WATER PIPING LAYOUT AS RECOMMENDED BY

MANUFACTURER.

LARGER THAN THE WASTE PIPE.

4.17. ALL PIPING SHALL BE LABELED WITH PLASTIC LABELS INDICATING PIPE TYPE (I.E. GAS, COLD WATER, HOT WATER, ETC.) AND DIRECTION OF FLOW. PLACE LABELS ON 25' CENTERS. 4.17.1. WHERE WATER DISTRIBUTION PIPING IS BUNDLED AT INSTALLATION, EACH PIPE IN THE BUNDLE SHALL BE IDENTIFIED USING COMMERCIAL PIPE LABELS. THE IDENTIFICATION SHALL INDICATE THE PIPE CONTENTS AND DIRECTION OF FLOW WITHIN THE PIPE. THE INTERVAL OF IDENTIFICATION MARKINGS SHALL BE AS DIRECTED IN 4.17 ABOVE. THERE SHALL NOT BE LESS THAN ONE IDENTIFICATION

. ELECTRICAL CONTRACTOR SHALL DIRECT WIRE ALL EQUIPMENT REQUIRING POWER.

5. 2. CONTROL WIRING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR.

LABEL ON EACH PIPE IN EACH ROOM, SPACE, OR

TESTING:

6. 1. HOT AND COLD WATER PIPING: 6.1.1. THE HOT AND COLD WATER PIPING SHALL HOLD A HYDROSTATIC TEST PRESSURE OF 100 PSI FOR A PERIOD OF AT LEAST 1-1/2 HOURS. ANY JOINT TO LEAK UNDER TEST

SHALL BE BROKEN. REMADE AND RETESTED.

6.1.2. ANY EXISTING WATER LINES WHICH ARE TIED TO NEW WATER LINES SHALL MEET THE FOLLOWING: VERIFY EXISTING LINES TIE PROPERLY TO EXISTING WATER SYSTEM.

6. 1. 2. 2. VERIFY EXISTING WATER LINES ARE IN GOOD CONDITION AND FREE FROM LEAKS. 6. 1. 2. 3. ANY REUSED EXISTING PIPE SHALL BE REPLACED AS NEEDED TO PROVIDE A PROPERLY OPERATING WATER SYSTEM.

6. 2. WASTE PIPING: 6.2.1. ALL WASTE PIPING SHALL BE TESTED BY FILLING THE LINES TO OVERFLOWING. ANY JOINT FOUND TO LEAK UNDER TEST SHALL BE BROKEN, REMADE AND RETESTED.

ANY EXISTING WASTE LINES WHICH ARE TIED TO NEW LINES SHALL BE VERIFIED THAT: 6. 2. 2. 1. EXISTING LINES TIE PROPERLY TO EXISTING WASTE SYSTEM.

6. 2. 2. 2. EXISTING LINES ARE IN GOOD CONDITION AND FREE FROM LEAKS. 6. 2. 2. 3. ANY REUSED EXISTING PIPE SHALL BE REPLACED AS NEEDED TO PROVIDE A PROPERLY OPERATING WASTE SYSTEM.

7.1. ALL WATER PIPING SHALL BE CHLORINATED TO 50 PPM RESIDUAL CHLORINE AFTER TWENTY-FOUR HOURS AND TO THE SATISFACTION OF THE LOCAL HEALTH DEPARTMENT OR BUILDING INSPECTION DEPARTMENT.

SUBSTITUTION: 8. 1. ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS SPECIFIED. 8.2. REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING

DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO FULLY IDENTIFY AND APPRAISE THE PRODUCTS.

8.2.1. APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE

ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.

9. PLACING IN SERVICE: 9. 1. UPON COMPLETION OF THE ENTIRE SYSTEM, THE PLUMBING CONTRACTOR SHALL FLUSH ALL LINES TO INSURE PROPER FLOWS. ALL FIXTURES SHALL BE LEFT CLEAN.

9.2. THE PLUMBING CONTRACTOR SHALL DEMONSTRATE THE PROPER FUNCTION OF THE ENTIRE SYSTEM. 9.3. THE PLUMBING CONTRACTOR SHALL ACQUAINT THE OWNER'S REPRESENTATIVE WITH THE PROPER OPERATION OF THE PLUMBING SYSTEM.

10. VISIT TO THE SITE: ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.

11. SHOP DRAWINGS 11. 1. AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF THE SHOP DRAWINGS COVERING FIXTURES, AND ANY SPECIAL EQUIPMENT WHICH

HE INTENDS TO USE. FOUR (4) COPIES OF THIS DATA WILL BE RETURNED BY THE ENGINEER WHO WILL INDICATE APPROVAL OR OTHERWISE. 12. FIRE RATED WALLS, FLOORS, & CEILINGS:

CONTRACTOR SHALL DETERMINE LOCATION OF ALL FIRE AND SMOKE RATED WALLS, FLOORS AND CEILINGS FROM ARCHITECTURAL DRAWINGS. PIPING PENETRATIONS OF FIRE

RATED ASSEMBLIES SHALL BE AS REQUIRED BY STATE BUILDING CODE. WITH APPROVED AND APPROPRIATELY RATED UL FIRESTOP SYSTEMS AT ALL PENETRATIONS.

12.1.1. ALL FIRESTOP SYSTEMS SHALL BE APPROVED FOR THEIR APPLICATION BY LOCAL INSPECTION AUTHORITIES PRIOR TO FIELD INSTALLATION.

PLUMBING FIXTURE SCHEDULE

SYM.	F1XTURE	CW	HW	DRAIN	STOPS & VALVES	MFR.	MODEL	REMARKS
P-1	WATER CLOSET TANK HANDICAP	1/2"	1	3"	1/2" x 3/8" ANGLE	AMERICAN STANDARD	204AA. 104	INCLUDE SUPPLY VALVE WITH CHROME PLATED RISER AND WALL FLANGE; ADA GRAB BARS; BEMIS CHURCH MODEL 9500SSCT SEAT. SEE NOTES 1, 2, 7, 11
P-2	LAVATORY HANDICAP	1/2"	1/2"	1-1/4"	1/2" X 3/8" ANGLE	AMERICAN STANDARD	0545. 000	INCLUDE SUPPLY VALVE WITH CHROME PLATED RISER AND WALL FLANGE & AMERICAN STANDARD FAUCET 7018.201 & 1-1/4" X 1-1/4" TUBULAR P-TRAP CP. PROVIDE MIX VALVE CONFORMING TO ASSE 1070. SEE NOTE 1, 3, 7
P-3	KITCHEN SINK	1/2"	1/2"	1-1/2"	-	AMERICAN STANDARD	18SB6252211. 075	INCLUDE SUPPLY VALVE WITH CHROME PLATED RISER AND WALL FLANGE; AMERICAN STANDARD 4932.350 FAUCET; 1-1/4X1-1/4 TUBULAR P-TRAP CP. SEE NOTE 3,7
P-4	REFRIGERATOR CONNECTION	3/8"	-	-	-	_	-	INCLUDE SHUTOFF VALVE AND RECESSED WALL BOX
P-5	HOSEBIBB EXTERIOR	1/2"	-	-	BALL	WOODFORD	25	SHALL BE FREEZE PROOF; INCLUDE A VACUUM BREAKER AND A SHUT OFF VALVE AS PER THE IPC CODE
P-6	EXTERIOR CLEANOUT	~	A	ana.	~~	ZURN	Z-1449	WITH CAST IRON TOP; SEE EXTERIOR CLEANOUT DETAIL.
P-7	FINISHED FLOOR CLEANOUT	•••	••		••	ZURN	ZS-1400	~
P-8	WALL CLEANOUT COVER PLATE	and a	**	~	***	ZURN	Z-1469	STAINLESS STEEL
P-9	WATER HEATER	-	-	-	-	STATE WATER HEATER	PCE-10-10MSA-4	10 GALLONS; 18 GPH @ 100°F RECOVERY RISE; 4.5KW @ 240V; INCLUDE WATER HEATER PAN; PRESSURE RELIEF VALVE; INSULATED BLANKET IF NOT SUPPLIED WITH WATER HEATER. SEE NOTE 7,10,& WATER HEATER DETAIL.
P-10	DIAPHRAGM TANK	3/4"	_	-	-	STATE WATER HEATER	ETC-2X	VERIFY TANK SELECTION FOR ACTUAL WATER HEATER CAPACITY; PROVIDE PRESSURE CHARGE AS PER MANUFACTURER INSTRUCTIONS

PLUMBING FIXTURE SCHEDULE NOTES;

MATERIAL AND INSTALLATION SHALL BE PER STATE HANDICAP CODE REQUIREMENTS AND ADA REQUIREMENTS. TOILETS SHALL FLUSH ON A MAXIMUM OF 1.6 GALLONS PER FLUSH. THE USE OF OFFSET WATER IS PROHIBITED MISALIGNED WATER CLOSET FLANGES MUST BE PIPED,

LAVATORIES SHALL HAVE . 5 GPM FLOW AERATORS.

BOTH FIXED HEAD AND HAND HELD SHOWER HEAD SHALL HAVE FLOW RESTRICTOR TO PASS A MAXIMUM OF 2.5 GPM.

NOT USED.

NOT USED. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING FIXTURE INSTALLATION. PROVIDE WASTE AND WATER TRIM AND ACCESSORIES. IF SLIP JOINTS ARE USED FOR WASTE CONNECTION, AN ACCESS PANEL WITH STAINLESS STEEL COVER SHALL BE SUPPLIED TO ACCESS JOINTS. PROVIDE A ADA COMPLIANT FOLDING SHOWER SEAT.

SHOWER VALVES MUST CONFORM TO THE REQUIREMENTS OF ASSE 1016 OR CSA 8125.

10. PLUMBING CONTRACTOR SHALL PROVIDE MATERIAL AND FIELD INSULATE HOT WATER TANK P26 WITH SYSTEM OF JOHNS MANVILLE MICROFLEX LARGE DIAMETER TANK AND PIPE WRAP. 3"THICK, R=12.5 WITH ASJ WHITE KRAFT PAPER JACKET. ALL INSTALLED AS PER MANUFACTURERS

INSTRUCTIONS AND INDUSTRY STANDARDS AS SET BY MIDWEST INSULATION CONTRACTORS ASSOCIATION. INSULATION SHALL BE STAPLED AND BANDED. 11. WATER CLOSET SPECIFIED IS LEFT SIDE FLUSH. PLUMBER SHALL INSTALL COMPARABLE MODEL WITH RIGHT SIDE FLUSH AS REQUIRED SO FLUSH HANDLE IS LOCATED ON OPEN SIDE OF WATER CLOSET IN CONFORMANCE WITH HANDICAP REQUIREMENTS.

13. NOT USED.

OT ENGINEERING, PLLC 8208 MASONBORO SOUND RD WILMINGTON, NC 28409 / NC LICENSE: P-2713 / www.otmep.com ENGINEERING



-----ARCHITECTURE --201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com



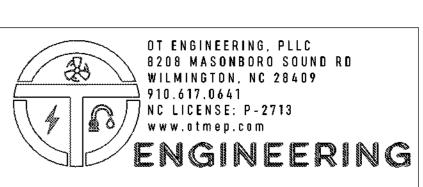
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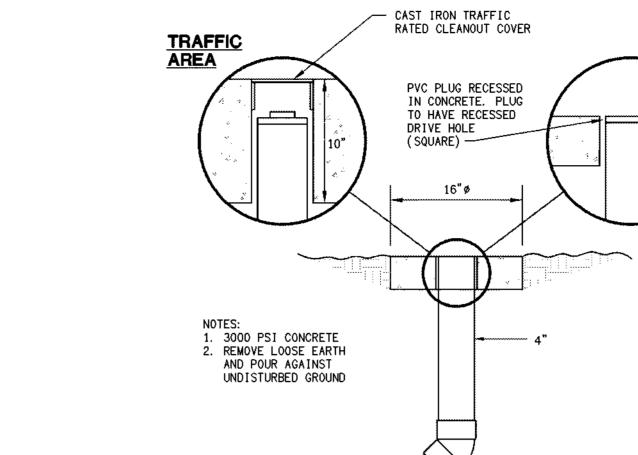
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Plumbing Schedule & Specifications

DRAWN BY: ---

PROJ MGR: --





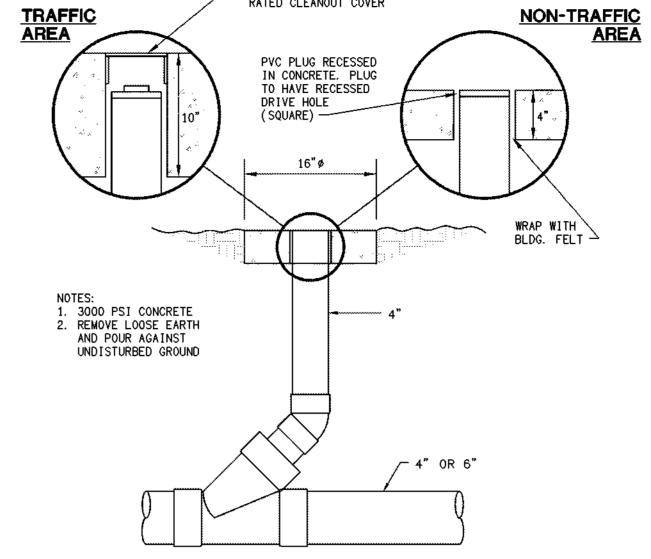
PIPING AT WATER HEATER P0.2 Scale: NO SCALE

(P9)

AIR GAP ----TO PAN

- PROVIDE HEAT TRAPS IF NOT INTEGRAL TO WATER HEATER.

- PIPE TO OUTSIDE OF BLDG



B EXTERIOR CLEANOUT PO.2 Scale: NO SCALE



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07/11/2023

,	
	COLD WATER PIPE- BELOW GRADE
***************************************	HOT WATER PIPE- ABOVE GRADE
	HOT WATER PIPE- BELOW GRADE
	WASTE PIPE- SOIL
	VENT PIPE
\rightarrow	BRANCH BOTTOM CONNECTION
$\dot{\leftarrow}$	BRANCH TOP CONNECTION
С	ELBOW DOWN
O	ELBOW UP
X	EXTERIOR CLEANOUT
	INTERIOR CLEANOUT
$\circ \!\! \dashv \!\! \vdash$	WALL CLEANOUT
\mathbb{O}^{HD}	HUB DRAIN
+	HOSE BIBB
<u> </u>	VENT TO ROOF
\triangleright	PIPE REDUCER
Ķ	PIPE STRAINER
	UNION
\boxtimes	BALL VALVE
7	CHECK VALVE
\boxtimes	GATE VALVE
#	RELIEF VALVE
VTR	VENT THROUGH ROOF
AAV	AIR ADMITTANCE VALVE
CO	CLEAN OUT
F/A	FROM ABOVE
F/B	FROM BELOW
T/A	TO ABOVE

PLUMBING LEGEND

COLD WATER PIPE- ABOVE GRADE

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Mark Date	Description
PROJECT NO:	23038
DATE:	5/19/2023
SCALE:	As indicated
DRAWN BY:	TOT
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Po.2

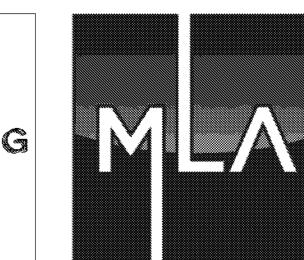
1/2" HOT AND COLD WATER FROM BELOW. SEE B/P1.1 FOR CONTINUATION.

- 2" WASTE PIPE DOWN, VENT WITH AAV. SEE A/P1.1 FOR CONTINUATION.

VERIFY IF REFRIGERATOR IN ARE REQUIRES WATER. IF SO PROVIDE ITEM P4 AND ASSOCIATED WATER LINE FROM SINK WATER SERVICE.

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

WATER & DRAIN PIPING AT 2ND FLOOR SINK



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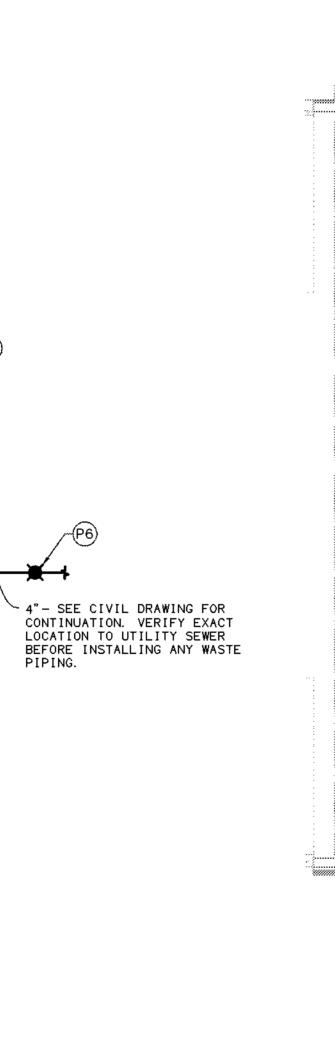
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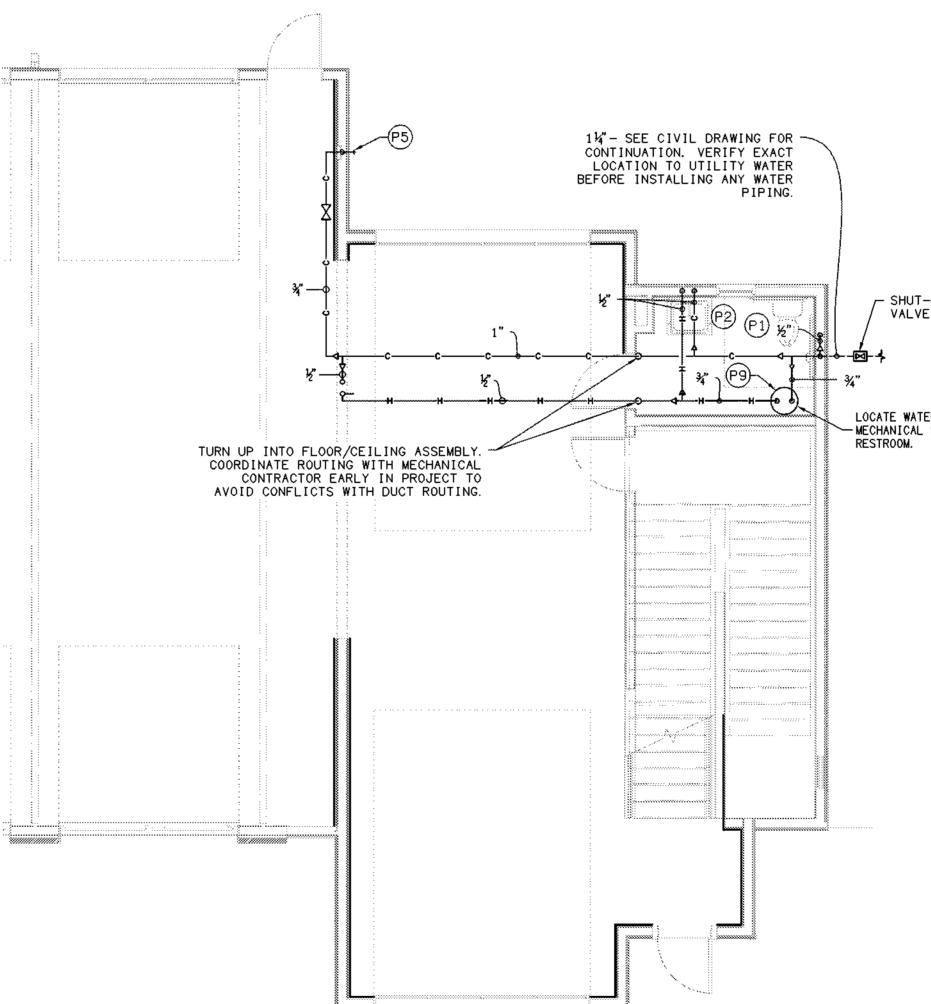
Plumbing Plan

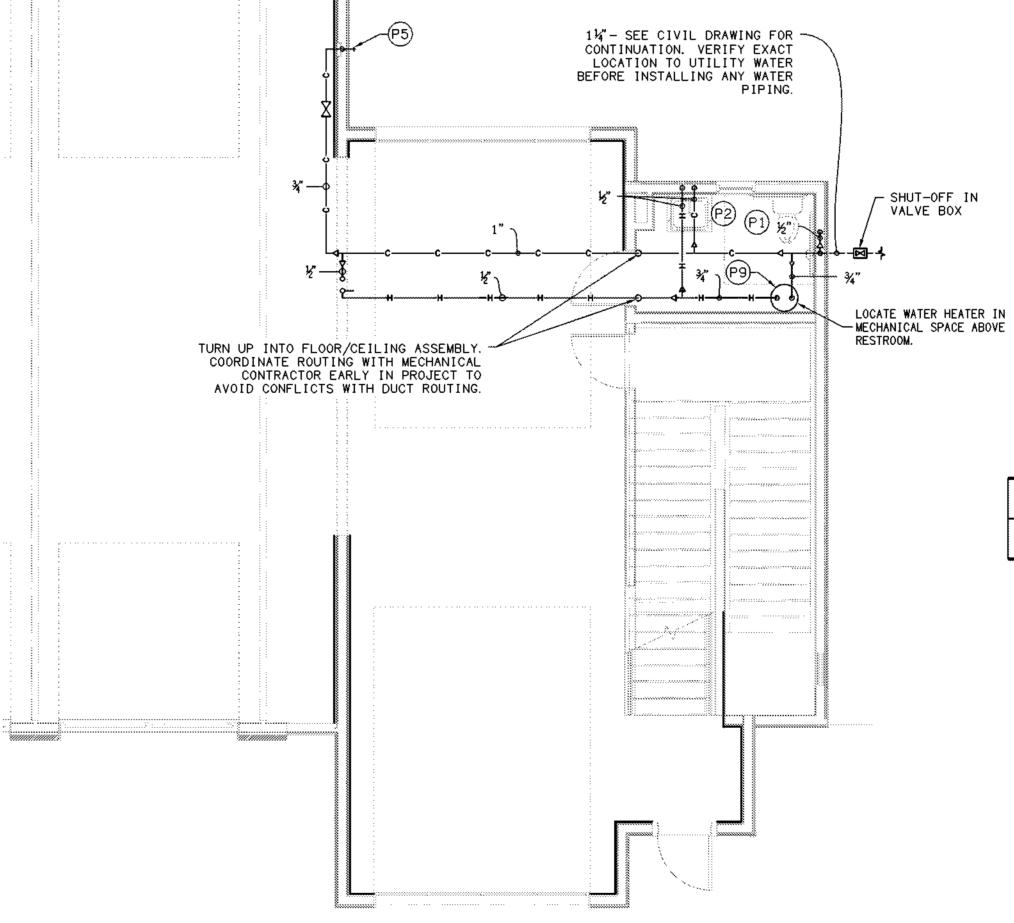
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P1.1

WATER PIPING DESIGN ASSUMES: 55 PSI RESIDUAL PRESSURE AT WATER UTILITY CONNECTION ELEVATION RISE FROM UTILITY TAP TO TOP OF 2ND FLOOR ROOF IS NO GREATER THAN 38' WATER METER IS A BADGER MODEL 35-3/4 IN. BACKFLOW PREVENTER IS A WATTS LF909-FS WITH Ø114" CONNECTIONS • PIPING FROM UTILITY TAP TO MAIN WATER SERVICE VALVE IS \$11/4" COPPER K PIPE ALL WATER PIPING WITHIN BUILDING IS COPPER L PIPING







WASTE PIPING DETAIL- 1ST FLOOR Scale: 3/16" = 1'-0"

DROP DOWN WALL -

2" FROM SINK ON SECOND FLOOR, OFFSET ABOVE CASED OPENING.

WATER PIPING DETAIL- 1ST FLOOR Scale: 3/16" = 1'-0"

- A. INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NORTH CAROLINA STATE BUILDING CODE, VOLUME I AND VOLUME X, NATIONAL ELECTRIC CODE, LOCAL BUILDING CODES AND ORDINANCES AND OTHER NATIONAL CODES AND ORDINANCES. IN THE CASE OF CONFLICT BETWEEN THE CODE AND THE DRAWINGS AND SPECIFICATIONS OR BETWEEN THE VARIOUS CODES. THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- B. PROVIDE AND PAY ALL LICENSES, FEES, PERMITS, POWER COMPANY CONNECTION CHARGES, IF ANY, INSURANCE, ETC., REQUIRED FOR EXECUTION OF THIS WORK. C. ELECTRICAL CONTRACTOR SHALL PROVIDE THE MATERIALS, PERFORM THE WORK AND TEST AND PAY ALL FEES NECESSARY
- TO MAKE THE ELECTRICAL SYSTEM OPERABLE AND READY FOR USE BY THE OWNER. GUARANTEE: EQUIPMENT, MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD
- GUARANTÈE. IF LONGER. E. IT IS UNDERSTOOD AND AGREED THAT THESE PLANS AND SPECIFICATIONS SHALL BE FULFILLED IN THEIR TRUE SPIRIT AND INTENT SO THAT ANY MINOR MATERIALS OR DEVICES ESSENTIAL TO PROPER AND CONVENIENT OPERATION, REQUIRED OR IMPLIED, SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR WITHOUT EXTRA CHARGE, EVEN THOUGH NOT SPECIFICALLY CALLED OUT.
- INSTALLATION SHALL COMPLY WITH OSHA STANDARDS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM THE JOB
- SITE. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA. THE ENGINEER IS NOT RESPONSIBLE FOR JOB SITE SAFETY. H. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE
- PLANS OR IN THE SPECIFICATIONS. THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT. DIVISION I SHALL BECOME APART OF THESE SPECIFICATIONS BY REFERENCE.
- ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED, SUPPORTED, AND RESTRAINED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE REQUIREMENTS FOR SEISMIC DESIGN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RETAIN A PROFESSIONAL ENGINEER COMPETENT IN THIS FIELD FOR THIS DESIGN. FOR ONE POSSIBLE SOURCE FOR THIS SERVICE CONTACT SEISMIC CONTROL AND ISOLATIONS, INC. PHONE: 910 799-5204. ALL REQUIRED INSPECTIONS FOR THESE DESIGNS SHALL BE PERFORMED BY APPROVED INSPECTORS AND AGENCIES PROVIDED BY OWNER AND OWNER'S

- WORK SHALL INCLUDE BUT IS NOT LIMITED TO: PROVIDE 120/240V-10-3W SERVICE TO THE BUILDING.
- PROVIDE AND INSTALL FIXTURES AS SHOWN ON THE PLANS. PROVIDE AND INSTALL WIRING DEVICES, PANELS, AND CONDUIT.
- PROVIDE AND INSTALL TELEPHONE PANEL, CONDUIT TO TELEPHONE COMPANY POINT OF DELIVERY, TELEPHONE BOXES. PROVIDE CONNECTIONS TO MECHANICAL, AND PLUMBING EQUIPMENT. PROVIDE REQUIRED DEMOLITION.

1603 MATERIALS

- CONDUCTORS ALL WIRE SHALL BE COPPER. WIRE #8 AND LARGER SHALL BE STRANDED.
 - USE WIRE WITH THHN/THWN INSULATION FOR ALL WIRE. POWER CONDUCTORS SHALL BE #12 AWG MINIMUM. PILOT AND CONTROL CIRCUITS MAY BE #14 AWG.
- UNDERGROUND CONDUIT SHALL BE PVC. CHANGE TO RIGID GALVANIZED BELOW CONCRETE FLOOR AND STUB UP THROUGH FLOOR WITH RIGID GALVANIZED.
- ARMOR CLAD CABLE SHALL BE ALLOWED IN CONCEALED AREAS. OTHER ABOVE GRADE CONDUIT SHALL BE EMT WITH STEEL COMPRESSION FITTINGS. IF EXPOSED TO MECHANICAL DAMAGE CONDUIT SHALL BE RIGID GALVANIZED.
- 4. CONNECTIONS TO EQUIPMENT AND FIXTURES SHALL BE MADE WITH SEAL TIGHT FLEX CONDUIT FOR EXTERIOR CONNECTIONS AND GREENFIELD FOR INTERIOR CONNECTION.
- WIRING DEVICES SHALL BE ONE MAKE, UNDERWRITERS APPROVED, MANUFACTURED BY PASS & SEYMOUR, HUBBELL OR EQUAL. DEVICE COVERS SHALL BE WEATHERPROOF FOR EXTERIOR COVERS. WIRING DEVICES SHALL BE STANDARD GRADE. COLOR SHALL BE DETERMINED BY THE ARCHITECT.
- DISTRIBUTION EQUIPMENT SHALL BE THE LATEST PRODUCTS, MANUFACTURER SHALL BE G.E., SQUARE D, WESTINGHOUSE, OR ITE. INTERIOR EQUIPMENT SHALL BE NEMA 1 AND EXTERIOR EQUIPMENT SHALL BE NEMA 3R MINIMUM.
- COORDINATE WITH POWER COMPANY TO OBTAIN BREAKER KAIC RATINGS. DRAWINGS SHALL INDICATE MINIMUM RATING. ALL BREAKERS SHALL BE BOLT ON TYPE. MAIN PANEL SHALL BE SERVICE ENTRY RATED AND LABELED. BREAKERS SHALL BE SERIES AND CURRENT LIMITING RATED.
- PROVIDE MOTOR RATED SWITCHES FOR SWITCHES SERVING MOTORS AS REQUIRED.
- G. FUSES SHALL BE CURRENT LIMITING TIME DELAY FUSES "CLASS RK5".
- ALL EQUIPMENT AND FIXTURES SHALL BE UL APPROVED PROVIDE LAMPS FOR ALL FIXTURES. LAMPS SHALL BE G.E., OR SYLVANIA.

- A. UNLESS OTHERWISE NOTED, SET ALL RECEPTACLES SET ALL RECEPTACLES AT 16" AFF TO CENTER OF OUTLET BOX, AND SET ALL SWITCHES AT 48" AFF TO TOP OF OUTLET BOX. ALL OTHER HEIGHTS ARE TO CENTER OF BOX UNLESS NOTED
- HOLES SHALL BE DRILLED OR CUT. DO NOT BREAK HOLES. THE ELECTRICAL CONTRACTOR SHALL DO ALL CUTTING, PATCHING AND PAINTING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED UNDER THIS CONTRACT, AND SHALL ESTABLISH ALL FINISHES WHEN CUTTING AND PATCHING OCCUR TO THEIR ORIGINAL CONDITION. QUALIFIED WORKERS SHALL DO ALL CUTTING AND PATCHING WORK (I.E. DRY WALL CUTTING AND PATCHING SHALL BE DONE BY QUALIFIED DRY WALL CRAFTSMEN).
- PATCHING SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. ALL PATCHING SHALL BE DONE BY A CRAFTSMAN SKILLED IN
- THE WORK BEING PERFORMED. E. WIRE SHALL BE COLOR CODED AS FOLLOWS:

BLACK PHASE A PHASE B RED NEUTRAL WHITE GROUND GREEN

- F. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EQUIPMENT AND POWER REQUIREMENTS FOR ALL EQUIPMENT BEFORE
- RUNNING SERVICE. CONDUIT AND WIRING IN FINISHED AREAS SHALL BE CONCEALED. ANY EXPOSED CONDUIT SHALL BE RUN IN A NEAT FASHION AND SHALL BE RUN PERPENDICULAR AND PARALLEL TO THE BUILDING LINES.
- TELEPHONE AND COMPUTER OUTLETS SHALL BE DUPLEX RECEPTACLE BOXES WITH 3/4" EMT STUBBED INTO THE CEILING WITH PULL STRINGS INSTALLED.
- CONTRACTOR SHALL PRESERVE ALL FIRE RATED WALLS AND CEILINGS. VERIFY RATING WAS OFF THE ARCHITECTURAL PLAN. THIS SHALL INCLUDE USING CAULKING THAT IS UL APPROVED FOR THE APPLICATIONS, OFFSETTING BOXES AS REQUIRED AND PROVIDING RATED CAPS OR COVERS FOR LIGHTS, AS REQUIRED.
- 1605 DIRECTORY CARDS, NAME PLATES & EQUIPMENT LABELS PROVIDE A TYPED DIRECTORY CARD IN EACH PANELBOARD INDICATING ELECTRICAL DEVICES OR EQUIPMENT SERVED BY
 - FACH CIRCUIT BREAKER. FURNISH BLANK COVERPLATE. B. PROVIDE NAMEPLATES FOR PANELS AND DISCONNECTS. NAMEPLATES SHALL BE LAMINATED PLASTIC. EACH NAMEPLATE SHALL IDENTIFY THE PANEL AND THE VOLTAGE. NAMEPLATES SHALL BE MELAMINE PLASTIC, 0.125 INCH THICK, BLACK WITH WHITE CENTER CORE. SURFACE SHALL BE MATTE FINISH. CORNERS SHALL BE SQUARE. ACCURATELY ALIGN LETTERING AND ENGRAVE INTO CORE. MINIMUM SIZE OF NAMEPLATES SHALL BE 1X2.5 INCHES. LETTERING SHALL BE A MINIMUM OF 0.25 INCHES HIGH, NORMAL BLOCK STYLE.

1606 TEST & ADJUSTMENTS

TEST AND ADJUST THE ELECTRICAL SYSTEM AND RELATED WORK PROVIDED UNDER THIS DIVISION OF THE SPECIFICATIONS. TEST ALL CIRCUITS WITH A "MEGGER" TEST TO DETERMINE THAT THE SYSTEM IS FREE OF SHORT CIRCUITS AND THAT PHASE CONDUCTORS ARE NOT GROUNDED. CHECK ALL ELECTRICAL EQUIPMENT FOR PROPER OPERATIONS.

THE SERVICE EQUIPMENT, CONDUIT SYSTEM SUPPORT CABINETS, EQUIPMENT AND NEUTRAL CONDUCTOR SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. GROUNDING CONDUCTORS SHALL BE SO ROUTED AS TO PERMIT, AS FAR AS PRACTICAL, THE SHORTEST AND MOST DIRECT PATH TO THE GROUND ELECTRODE SYSTEM. ALL GROUND CONNECTIONS SHALL HAVE A CLEAN CONTACT SURFACE.

RUN A SEPARATE EQUIPMENT GROUND IN ALL FEEDS.

- 1608 SUBSTITUTION A. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS
- REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO
- FULLY IDENTIFY AND APPRAISE THE PRODUCTS. APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.

ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS BEFORE SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITION.

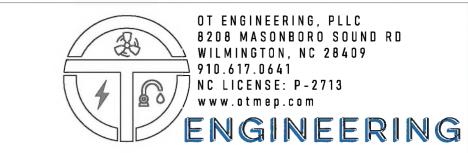
AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF THE SHOP DRAWINGS COVERING LIGHTING FIXTURES. PANELS. CIRCUIT. BREAKERS. AND WIRING DEVICES. AND ANY SPECIAL EQUIPMENT WHICH HE INTENDS TO USE. SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER FOR HIS APPROVAL.

	ING FIXTURE				LAMD						
SYMB0L	DESCRIPTION	NO.	WATT	LUMENS	TEMP ('K)	TYPE	VOLT	MANUF.	MODEL	MOUNTING	REMARKS
A1	WALL PACK	2	25	3, 970	3, 000	LED	120	LIGMAN LIGHTING	UGN-30051-2x25- ₩30-XX-120/277v	₩ALL ABOVE DOOR	VERIFY COLOR AND MOUNTING HEIGHT WITH ARCHITECT.
A 2	WALL PACK	2	12	1, 984	3, 000	LED	120	LIGMAN LIGHTING	UGN-30031-2x12- W30-XX-120/277v	WALL ABOVE DOOR	VERIFY COLOR AND MOUNTING HEIGHT WITH ARCHITECT.
A2-EM	WALL PACK WITH EMERGENCY	2	12	1, 984	3, 000	LED	120	LIGMAN LIGHTING	UGN-30031-2x12- ₩30-XX-120/277v	₩ALL ABOVE DOOR	VERIFY COLOR AND MOUNTING HEIGHT WITH ARCHITECT. SEE LIGHTING FIXTURE NOTE 2.
В	20' LINEAR	-	118	15, 000	4, 000	LED	120	PINNACLE ARCHITECTURAL LIGHTING	CU3D-A-N-840M0- 20'-S-U-FSD-1-0	CEILING SURFACE	VERIFY COLOR AND ENDCAPS WITH ARCHITECT.
C1	14' LINEAR SCONCE	-	67	7, 000	4, 000	LED	120	PINNACLE ARCHITECTURAL LIGHTING	EV2D-A-840-14' - SF-U-FSD-1-0	WALL RECESSED	BOTTOM OF FIXTURE 12"AFF. VERIFY COLOR AND FLANGE WITH ARCHITECT.
C2	10' LINEAR SCONCE	-	48	5, 000	4, 000	LED	120	PINNACLE ARCHITECTURAL LIGHTING	EV2D-A-840-10' - SF-U-FSD-1-0	WALL RECESSED	BOTTOM OF FIXTURE 12"AFF. VERIFY COLOR AND FLANGE WITH ARCHITECT.
D1	2' LINEAR DOWNLIGHT	-	18	1, 372	4, 000	LED	120	ALW	RPD07-3500- 0/10V/S-UNV	CEILING SUSPENDED	VERIFY MOUNTING HEIGHT AND COLOR WITH ARCHITECT.
D2	2' LINEAR UPLIGHT	-	18	1, 372	4, 000	LED	120	ALW	RPD07-3500- 0/10V/S-UNV	CEILING SUSPENDED	VERIFY MOUNTING HEIGHT AND COLOR WITH ARCHITECT.
E	12' LINEAR	-	56	6, 000	4, 000	LED	120	PINNACLE ARCHITECTURAL LIGHTING	EV2D-A-840-12' - SF-U-FSD-1-0	CEILING RECESSED	VERIFY COLOR AND FLANGE WITH ARCHITECT.
F	4' STRIP	-	31	3, 100	4, 000	LED	120	LUMAX LIGHTING	CNLED31L4K48- 9FAF	CEILING SURFACE	-
G	VANITY	-	25	2, 192	3, 500	LED	120	MODERN FORMS	WS-34119-35-BN	WALL ABOVE MIRROR	-
H1	6" CAN	-	13	1, 500	3, 500	LED	120	ATLANTIC LIGHTING	LED6-SYL15-35K- U/6LED10-CL	CEILING RECESSED	-
H1-EM	6" CAN WITH BATTERY BACK-UP	-	13	1, 500	3, 500	LED	120	ATLANTIC LIGHTING	LED6-SYL15-35K- U-LEM/6LED10-CL	CEILING RECESSED	PROVIDE BATTERY BACK-UP. SE LIGHTING FIXTURE NOTE 3.
H2	6" CAN	-	17	2, 000	3, 500	LED	120	ATLANTIC LIGHTING	LED6-SYL20-35K- U/6LED10-CL	CEILING RECESSED	-
J	TAPE	-	4. 9/ FT	131/FT	-	LED	120	JESCO LIGHTING	DL-FLEX2-NPX WET-RGB	SURFACE	SEE SHEET E1.2 FOR CONFIGURATION.
К	SCONCE	1	20	2, 000	3, 500	LED	120	SELECTION BY OWNER	SELECTION BY OWNER	WALL SURFACE	PROVIDE \$750/EACH ALLOWANC VERIFY MOUNTING HEIGHT WITH ARCHITECT.
L	AREA OF REFUGE ILLUMINATED SIGN	-	-	-	-	LED	120	ISOLITE	LPDCCG-EM-BL-1- BA-BA-MB	WALL	-
8	EXIT	-	-	-	-	-	120	MAXILUME ARCHITECTURAL LIGHTING	ELX-604R-XX-1- CLEAR ACRYLIC	WALL OR CEILING SURFACE	VERIFY HOUSING COLOR WITH ARCHITECT.
4_	EMERGENCY	-	-	-	-	-	120	MAXILUME ARCHITECTURAL LIGHTING	ELM-LED-804-W	WALL AT 7'-6" AFF	-

LIGHTING FIXTURE NOTES:

POWER LOSS TO THE BUILDING. PROVIDE TWO POWER FEEDS AS REQUIRED.

- 1. CONTRACTOR SHALL PROVIDE ALL LAMPS. PROVIDE ASSURANCE EMERGENCY LIGHTING INVERTER MODEL #Si-200-PST. FIXTURE SHALL BE WIRED TO OPERATE AS A PHOTOCELL CLOCK CONTROLLED LIGHT WHEN BUILDING IS UNDER NORMAL POWER AND AN EMERGENCY LIGHT IN THE EVENT OF A
- 3. FIXTURE SHALL BE WIRED TO OPERATE AS A SWITCH CONTROLLED LIGHT AS SHOWN ON PLANS WHEN BUILDING IS UNDER NORMAL POWER AND AN EMERGENCY LIGHT IN THE EVENT OF A POWER LOSS TO THE BUILDING. PROVIDE TWO POWER FEEDS AS REQUIRED.



SYMBOL	DECODIDITION	HP	 ĸ₩	AMP	VOLT	PHASE	BKR	FEEDER		CONNECTION	REMARKS
SIMBOL	DESCRIPTION	HP	NW	AMP	VOLI	PHASE	BKK	COND	WIRE	CONNECTION	KEMAKKS
HP-1	5 TON HEAT PUMP	-	-	29	240	1	60	1"	2#6, 1#10G	FUSED DISC NEMA 3R	-
HP-2 & 3	4 TON HEAT PUMP	-	-	22	240	1	50	¾"	2#8, 1#10G	FUSED DISC NEMA 3R	-
HP-4	3½ TON HEAT PUMP	-	-	18	240	1	40	34"	2#8, 1#10G	FUSED DISC NEMA 3R	-
AHU-1	AIR HANDLING UNIT	-	4. 8/ 9. 6	68	240	1	90	1	-	FUSED DISC NEMA 1	SEE DETAIL A/EO.
AHU-2 & 3	AIR HANDLING UNIT	-	7. 68	38	240	1	50	34"	2#8, 1#10G	FUSED DISC NEMA 1	-
AHU-4	AIR HANDLING UNIT	-	7. 68	36	240	1	45	¾"	2#8, 1#10G	FUSED DISC NEMA 1	-
DU-1/DAHU-1	DUCTLESS SPLIT SYSTEM	-	-	19	240	1	35	34"	2#8, 1#10G	FUSED DISC NEMA 3R	-
Н W Т	HOT WATER HEATER	-	4. 5	19	240	1	25	<i>γ</i> ,	2#10, 1#10G	250V 25A RECPT	PROVIDE CORD AN PLUG.
EV	ELECTRIC VEHICLE CHARGER	-	-	2×30	240	1	2×40	2x ½"	2x2#8, 1#10G	DIRECT	SEE EQUIPMENT CONNECTION NOTE

EQUI	PMENT CONNECTION	NOTES:						
1.	CONTRACTOR SHALL	. VERIFY ALL	CONNECTIONS	BEFORE	RUNNING S	ERVICE OR (ORDERING E	QUIPMENT
2.	DESIGN IS BASED	UPON CHARGEP	OINT CT4000	SERIES	DUAL PORT	COMMERCIAL	_ CHARGING	STATION
	COORDINATE EXACT	REQUIREMENT	S WITH OWNER	R AND SU	IPPLIER.			

ELECTR	CAL ABBREVIATIONS
AFF	ABOVE FINISHED FLOOR
GF I	GROUND FAULT INTERRUPTING
GFIA	GROUND FAULT INTERRUPTING WITH AUDIBLE ALARM
3R	WEATHERPROOF ENCLOSURE
UNO	UNLESS NOTED OTHERWISE
RGS	RIGID GALVANIZED STEEL
WP	WEATHERPROOF
HP	HEAT PUMP
AHU	AIR HANDLING UNIT

1. FOR 20A - 1ø - 120 VOLT SERVICE WIRE SIZE SHALL BE AS FOLLOWS:
DIST TO 1st CONNECTION

OCCUPANCY SENSOR NOTES: 1. CONTRACTOR SHALL PROVIDE ALL REQUIRED ACCESSORIES INCLUDING WALL PLATES AND LOW VOLTAGE WIRING. 2. CONTRACTOR SHALL COORDINATE EXACT QUANTITIES OF POWER PACKS AND CEILING SENSORS WITH MANUFACTURER. 3. CONTRACTOR SHALL PROVIDE MULTI-SWITCH

OPTION WHERE REQUIRED. COORDINATE

WITH MANUFACTURER.

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0	CEILING OUTLET WITH LED OR FLUORESCENT FIXTURE
오	WALL OUTLET WITH LED OR FLUORESCENT FIXTURE
0	CEILING OUTLET WITH LED OR FLUORESCENT FIXTURE
S	SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
S3	SWITCH, THREE WAY, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
S30	30A SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP

DUAL TECH OCCUPANCY SENSOR WITH ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX. SENSORWORX SWX-121-1

MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-121

DUAL TECH OCCUPANCY SENSOR WITH DIMMER AND ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-121-D OR EQUAL

DUAL TECH OCCUPANCY SENSOR WITH ON/OFF SWITCH, 120VAC,

- DUAL TECH OCCUPANCY SENSOR WITH DIMMER AND ON/OFF SWITCH, LOW VOLTAGE, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-121-1-D-MS OR EQUAL
- TIMER SWITCH WITH 2 HOUR MAX TIME LIMIT, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
- 250V TWO POLE SWITCH, MATCH AMP RATING OF EQUIPMENT BREAKER
- SLIDE DIMMER WITH ON/OFF SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
- DUAL TECH OCCUPANCY SENSOR, LOW VOLTAGE, CEILING MOUNT, SENSORWORX SWX-222-1 OR EQUAL
- POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS, SENSORWORX SWX-900-AX OR EQUAL
- DUPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
- 25A RECEPTACLE, 250V, MOUNTED AT EQUIPMENT, COORDINATE WITH EQUIPMENT SUPPLIER FOR RECEPTACLE TYPE
- DUPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT CEILING FOR GARAGE DOOR OPENER, COORDINATE WITH EQUIPMENT PROVIDER
- QUAD CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
- RECEPTACLE, 600V, THREE PHASE, MOUNTED PER PLANS, COORDINATE RECEPTACLE TYPE WITH EQUIPMENT SUPPLIER
- EQUIPMENT CONNECTION, COORDINATE CONNECTION WITH EQUIPMENT CONNECTION SCHEDULE
- CONVENIENCE RECEPTACLE, 120V, FLOOR MOUNT, COVER FLUSH W/ FINISHED FLOOR
- FLOOR MOUNT PHONE/DATA OUTLET, COVER FLUSH W/ FINISH FLOOR
- PHONE OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
- PHONE/DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
- JUNCTION BOX
 - TV CONNECTION, VERIFY REQUIREMENTS, MOUNT AT +18" AFF UNO
- ELECTRICAL PANEL, SURFACE
- ELECTRICAL PANEL, FLUSH
- DISCONNECT SWITCH, FUSIBLE
- FAN BY MECHANICAL CONTRACTOR

PHONE/CATY PANEL, 4x8x34 PLYWOOD WITH #6 INSUL. GROUND IN 34" CONDUIT TO ELEC. SYSTEM GROUND





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© 2023 MARK LOUDERMILK ARCHITECTURE, PLLC Date Description PROJECT NO: 23038 DATE: 5/19/2023 SCALE: As indicated DRAWN BY: ---PROJ MGR: --

Electrical Schedules, Legend, Notes and **Specifications**

E0.1

LOAD	DESCRIPTION	NOTES	BREAL	(ER	CKT.		CKT.	BREAK	ER	NOTES	DESCRIPTION	LOAD
AMPS.			POLE	AMP.	#		#	AMP.	POLE			AMPS.
6.0	LTS - EXTERIOR		1	20	1	Α	2	20	1		GARAGE DOOR - STORAGE 2	10.0
9.0	LTS - 1ST FLOOR		1	20	3	В	4	20	1		GARAGE DOOR - STORAGE 2	10.0
12.0	LTS - STORAGE 1		1	20	5	Α	6	20	1		GARAGE DOOR - STORAGE 1	10.0
12.0	LTS - STORAGE 1		1	20	7	В	8	20	1		GARAGE DOOR - STORAGE 1	10.0
12.0	LTS - STORAGE 1		1	20	9	Α	10	20	1		GARAGE DOOR - STORAGE 1	10.0
12.0	LTS - STORAGE 1		1	20	11	В	12	20	1		GARAGE DOOR - STORAGE 1	10.0
12.0	LTS - STORAGE 1		1	20	13	Α	14	20	1		GARAGE DOOR - STORAGE 1	10.0
8.0	LTS - STORAGE 2		1	20	15	В	16	20	1		GARAGE DOOR - STORAGE 1	10.0
4.0	LTS - 1ST FLOOR		1	20	17	Α	18	20	1		GARAGE DOOR - STORAGE 1	10.0
6.0	LTS - 1ST FLOOR		1	20	19	В	20	20	1		GARAGE DOOR - STORAGE 1	10.0
4.0	LTS - 2ND FLOOR		1	20	21	Α	22	20	1		GARAGE DOOR - STORAGE 1	10.0
0.0	SPARE		1	20	23	В	24	20	1		GARAGE DOOR - STORAGE 1	10.0
5.0	SIGN		1	20	25	Α	26	20	1		GARAGE DOOR - OFFICE	10.0
10.0	AREA OF REFUGE SYSTEM		1	20	27	В	28	20	1		GARAGE DOOR - OFFICE	10.0
30.0	EV		2	40	29	Α	30	20	1		RECPT - 1ST FLOOR	14.0
30.0					31	В	32	20	1		RECPT - 1ST FLOOR	12.0
30.0	EV		2	40	33	Α	34	20	1		RECPT - PHONE/DATA	3.0
30.0					35	В	36	20	1		RECPT - 1ST FLOOR	14.0
30.0	EV		2	40	37	Α	38	20	1		RECPT - @HP'S/AHU'S	9.0
30.0					39	В	40	20	1		RECPT - TLT. 1	2.0
0.0	SPARE		1	20	41	A	42	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	6.48	code	6.48
MISC	39.6	100%	39.6
LIGHTING	12.24	125%	15.3
HVAC	0	100%	0
HEAT STRIP	0	100%	0
REFRIGERATION	0	65%	0
KITCHEN	0	65%	0
COOKING	0	65%	0
WATER HEATING	0	100%	0
-	0	0%	0
TOTAL KVA	58 KVA		61 KVA
TOTAL AMPS	243 AMPS		256 AMPS

PANEL NOTES:

- PROVIDE GROUND BUS
- 2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE 3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
- 4 . GFI INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)

NEMA 3R

23013

- 5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
- 6 . IG INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
- 7 . AFCI INDICATES COMBINATION TYPE AFCI C.B.

PANEL TYPE:

PROJECT NO.:

ENGINEER:

FED FROM:

С	PROJECT:	ZIMMER OFFICE ANNE)
LIGHTING AND APPLIANCE	CLIENT:	-
OFFICE	MOUNTING:	SURFACE

L-L VOLTS 240V L-G VOLTS 120V BUS AMPS: 225A MAIN CB AMPS: 225A

PANEL NO.: C

LOCATION:

PHASES:

MAIN CB AMPS: 400A

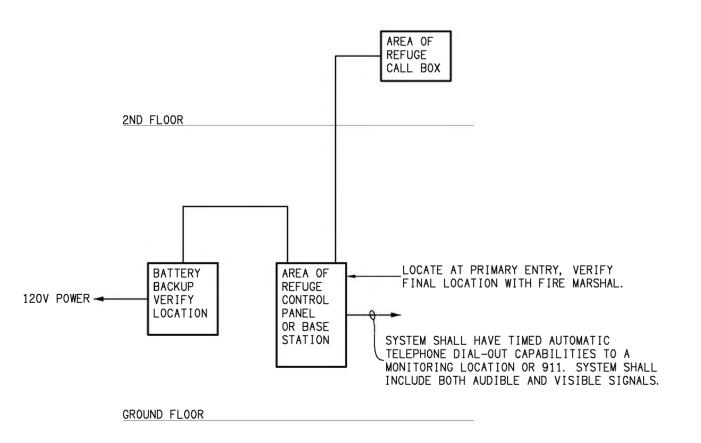
AIC RATING: 10,000 MINIMUM

OAD	DESCRIPTION	NOTES	BREAKER		CKT.		т. скт. [ER	NOTES	DESCRIPTION	LOAD
MPS.			POLE	AMP.	#		#	AMP.	POLE			AMPS.
38.0	AHU-2		2	50	1	Α	2	20	1		RECPT - 2ND FLOOR	14.0
38.0					3	В	4	20	1		UNDER COUNTER REFRIGERATOR	6.0
38.0	AHU-3		2	50	5	Α	6	20	1		RECPT - 2ND FLOOR	2.0
38.0					7	В	8	20	1		RECPT - 2ND FLOOR	2.0
36.0	AHU-4		2	45	9	Α	10	20	1		SPARE	0.0
36.0					11	В	12	20	1		SPARE	0.0
18.0	HP-4		2	40	13	Α	14	40	2		EV	30.0
18.0					15	В	16					30.0
0.0	SPARE		1	20	17	A	18	20	1		SPARE	0.0
0.0	SPARE		1	20	19	В	20	20	1		SPARE	0.0
0.0	SPARE		1	20	21	A	22	20	1		SPARE	0.0
0.0	SPARE		1	20	23	В	24	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	2.16	code	2.16
MISC	7.92	100%	7.92
LIGHTING	0	125%	0
HVAC	18.24	100%	18.24
HEAT STRIP	12.96	100%	12.96
REFRIGERATION	0	65%	
KITCHEN	0	65%	0
COOKING	0	65%	0
WATER HEATING	0	100%	0
-	0	0%	0
TOTAL KVA	41 KVA		41 KVA
TOTAL AMPS	172 AMPS		172 AMPS

PANEL NOTES:

- PROVIDE GROUND BUS
- 2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE 3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
- 4 . GFI INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL) 5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
- 6 . IG INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
- 7 . AFCI INDICATES COMBINATION TYPE AFCI C.B.



EO.2 Scale: NTS

	2
В	Area of Refuge Detail

AREA OF REFUGE NOTES: 1. SEE PLANS FOR LOCATION AND QUANTITY OF ALL

- EQUIPMENT. 2. ALL WIRING SHALL BE PER MANUFACTURER'S
- SPECIFICATIONS. 3. THE SYSTEM SHALL COMPLY WITH SECTIONS 4. 3. 11. 4 AND 4. 3. 11. 5 OF THE ADA AND STATE
- 4. ALL WIRING SHALL BE IN CONDUIT.
- 5. SYSTEM INSTALLATION SHALL BE BY A LICENSED
- CONTRACTOR. 6. SYSTEM WIRING SHALL COMPLY WITH ALL REQUIREMENTS OF NEC. WIRING SHALL MEET ALL STATE AND LOCAL ELECTRICAL CODES. ALL WIRING SHALL TEST FREE FROM SHORTS AND GROUNDED AS SPECIFIED.
- 7. CONTROL PANEL AND CALL BOX MOUNTING SHALL COMPLY WITH ADA REQUIREMENTS AND SPECIFICATIONS.
- 8. PROVIDE ILLUMINATED SIGN ABOVE AREA OF REFUGE AND INSTRUCTIONS ON THE USE OF THE AREA UNDER EMERGENCY CONDITIONS PER STATE FIRE CODE AND

ZIMMER OFFICE ANNEX PANEL NO.: B PROJECT: LIGHTING AND APPLIANCE CLIENT:

USAGE: LOCATION: OFFICE MOUNTING: SURFACE PHASES: PANEL TYPE: NEMA 3R L-L VOLTS ENGINEER: L-G VOLTS 120V PROJECT NO.: 23013 BUS AMPS: 225A FED FROM: CT

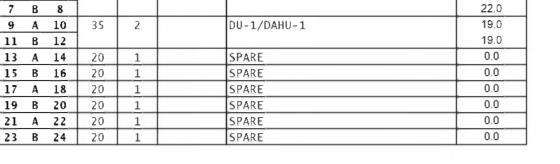
MAIN CB AMPS: 225A 10,000 MINIMUM AIC RATING:

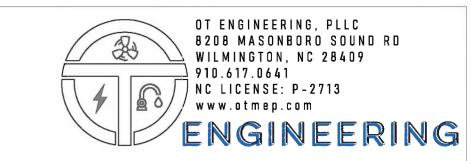
LOAD	DESCRIPTION	NOTES	BREAK	ER	CKT.	CKT	. BREA	(ER	NOTES	DESCRIPTION	LOAD
AMPS.			POLE	AMP.	#	#	AMP.	POLE	1		AMPS.
22.0	HP-2		2	50	1	A 2	25	2		HWT	19.0
22.0					3	B 4					19.0
29.0	HP-1		2	60	5	A 6	50	2		HP-3	22.0
29.0					7	B 8					22.0
68.0	AHU-1		2	90	9	A 10	35	2		DU-1/DAHU-1	19.0
68.0					11	B 12	7				19.0
0.0	SPARE		1	20	13	A 14	20	1		SPARE	0.0
0.0	SPARE		1	20	15	B 16	20	1		SPARE	0.0
0.0	SPARE		1	20	17	A 18	20	1		SPARE	0.0
0.0	SPARE		1	20	19	B 20	20	1		SPARE	0.0
0.0	SPARE		1	20	21	A 22	20	1		SPARE	0.0
0.0	SPARE		1	20	23	B 24	20	1		SPARE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	0	code	(
MISC	0	100%	(
LIGHTING	0	125%	(
HVAC	22.08	100%	22.08
HEAT STRIP	16.32	100%	16.33
REFRIGERATION	0	65%	(
KITCHEN	0	65%	(
COOKING	0	65%	(
WATER HEATING	4.56	100%	4.50
-	0	0%	
TOTAL KVA	43 KVA		43 KV
TOTAL AMPS	179 AMPS		179 AMPS

PANEL NOTES:

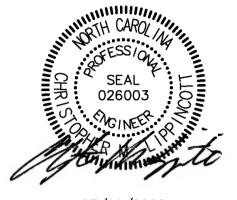
- 1 . PROVIDE GROUND BUS
- 2 . PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE 3 . LO - INDICATES C.B. EQUIPPED WITH "LOCK-OUT" DEVICE
- 4 . GFI INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
- 5 . ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE 6 . IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR
- 7 . AFCI INDICATES COMBINATION TYPE AFCI C.B.

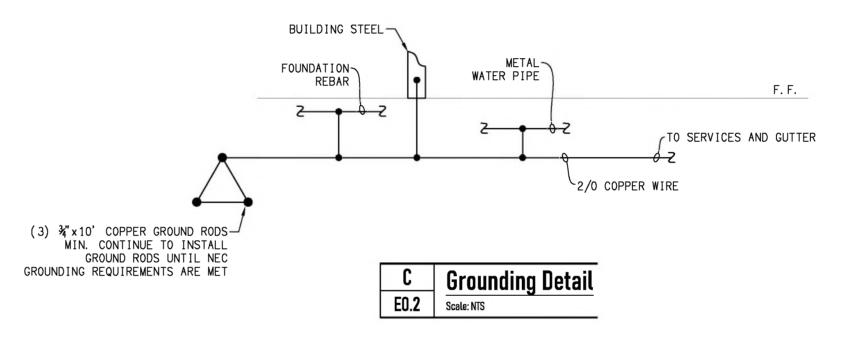






201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com





WIRE SIZE LEGEND

- ① 3-4/0, 1#1G IN 2½"C
- ② 3-500, 1#1G IN 3½°C

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3)	TWO SETS 3	–500 IN 3½°C	

RISER L	OAD	
PANEL	Αø	Bø
A	241	245
В	179	179
С	176	168
TOTAL	596	592
MAX. CONNECTED LOAD SIZE GUTTER AND SERV		800A

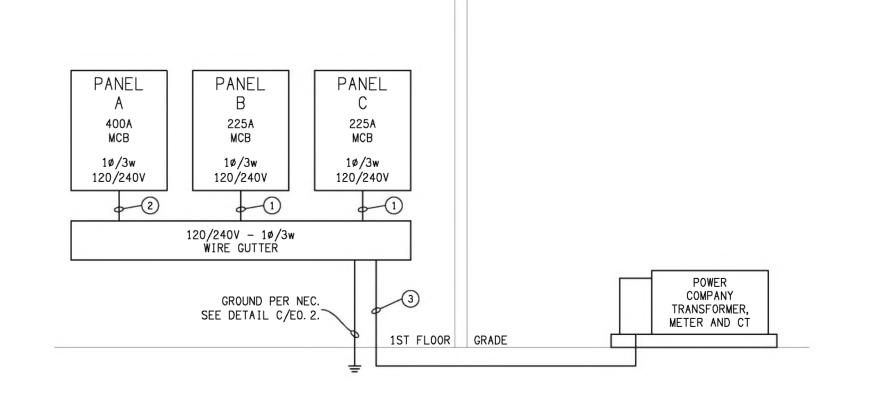


COMPANY CONNECTION FEES TO PROVIDE A COMPLETE AND OPERATING SYSTEM FOR THE OWNER. 2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A PLAQUE STATING THE FAULT CURRENT AT THE MAIN SERVICE DISCONNECT. THE CONTRACTOR SHALL PROVIDE VERIFICATION FROM THE POWER COMPANY BEFORE PLAQUE IS PLACED. THIS

DESIGN ASSUMES A ??, ??? FAULT CURRENT AT

THE POWER COMPANY TRANSFORMER. IF FAULT

- CURRENT IS LARGER THAN SHOWN THEN CONTRACTOR SHALL CONTACT THIS ENGINEER. 3. MAIN SERVICE DISCONNECT(S) SHALL BE SERIES RATED TO ALLOW SECONDARY BREAKERS TO BE AS FOLLOWS:
- 300A 400A 22,000AIC 225A & SMALLER 10,000AIC 4. CONNECT ALL AVAILABLE GROUNDING MEANS PER NEC 250. 50.



Α	Electrical Riser
E0.2	Scale: NTS



Panel Schedules, Electrical Riser and Details

5/19/2023

As indicated

DATE:

SCALE:

DRAWN BY: --

PROJ MGR: --

E0.2

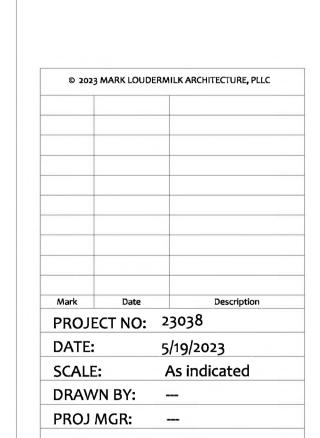






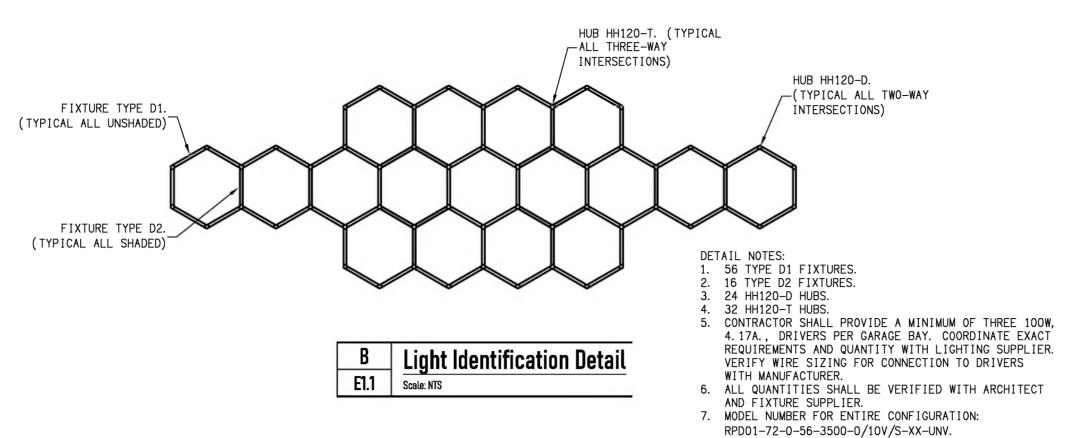
07/11/2023

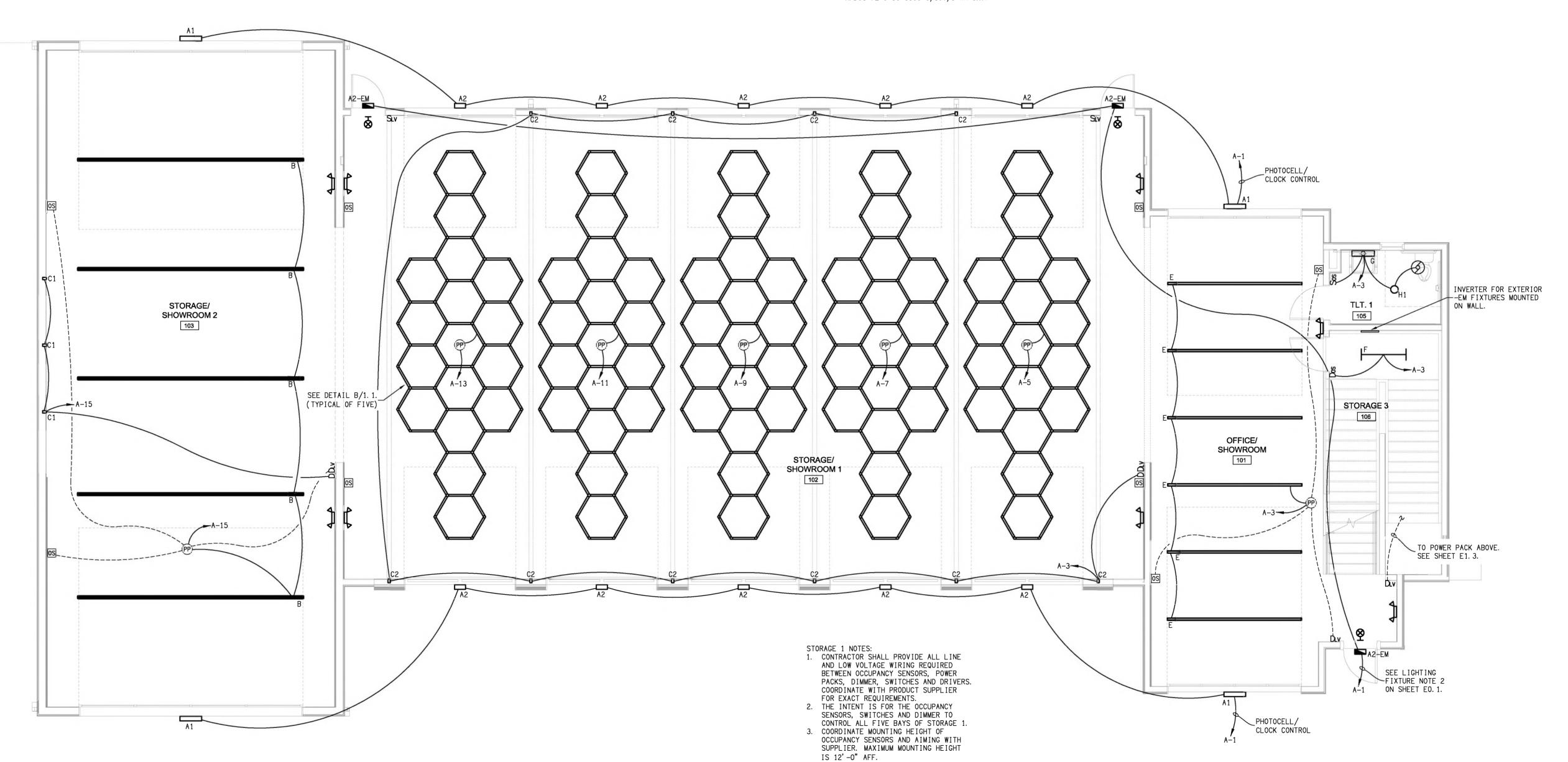




Partial Lighting Plan - 1st Floor

E1.1





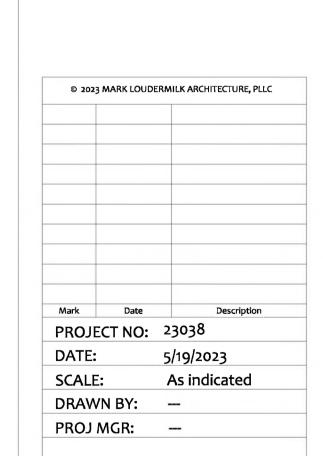
A Partial Lighting Plan - 1st Floor E1.1 Scale: 3/16" = 1'-0"





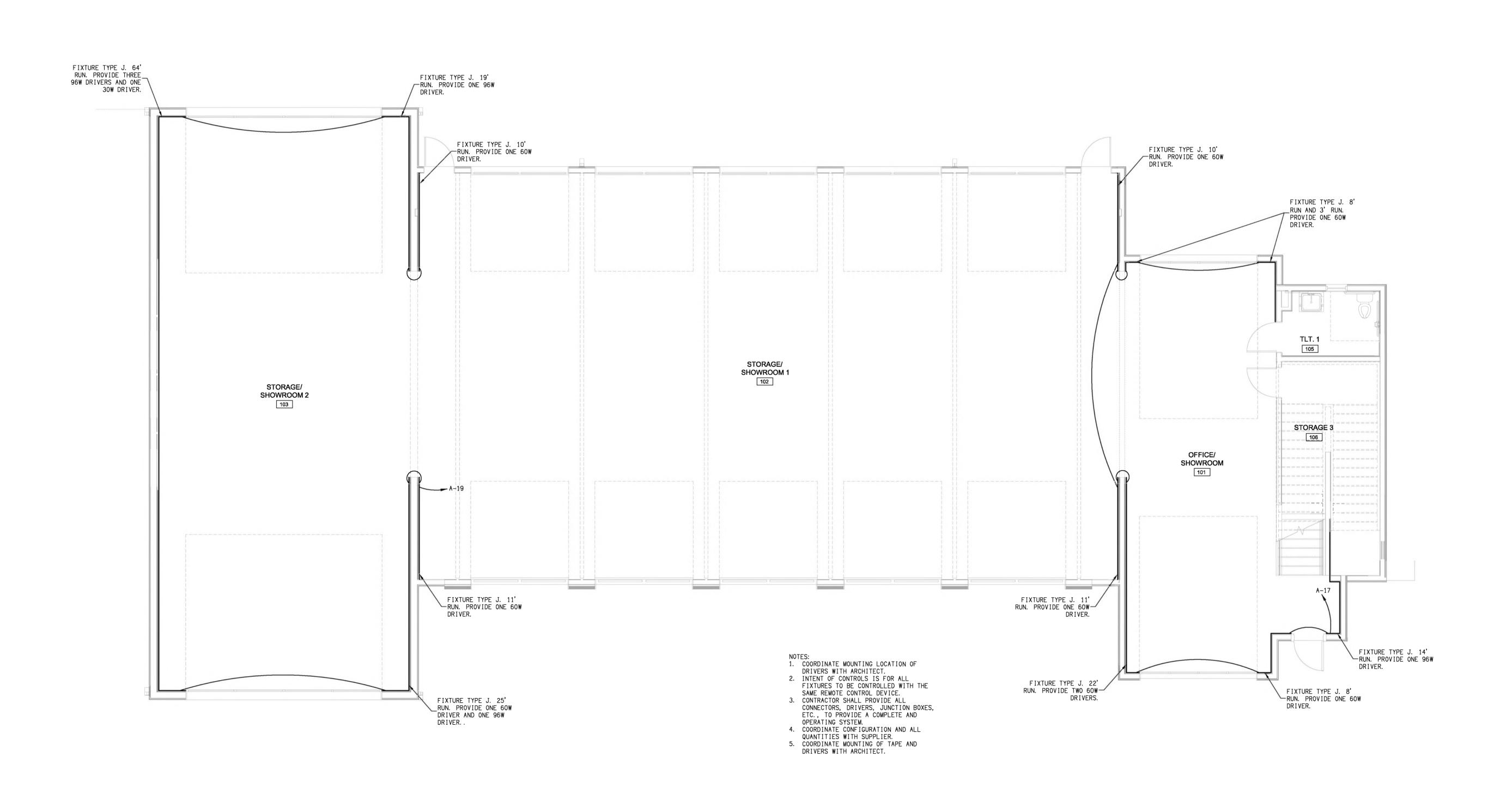
07/11/2023





Partial Lighting Plan - 1st Floor

E1.2



A Partial Lighting Plan - 1st Floor

E1.2 Scale: 3/16" = 7'-0"







07/11/2023





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PROJECT NO: 23038 DATE: SCALE: 5/19/2023 As indicated DRAWN BY: --PROJ MGR: --

Lighting Plan - 2nd Floor

E1.3



A Lighting Plan - 2nd Floor
Scale: 3/16" = 7-0"

KEY NOTES

JUNCTION BOX AND SWITCH FOR BUILDING SIGN. IF A SWITCH IS PROVIDED WITH THE SIGN THEN THE ONE SHOWN CAN BE REMOVED. VERIFY LOCATION AND CONNECTION. PHOTOCELL/ CLOCK CONTROLLED.

PROVIDE 2"C WITH PULL STRING TO PHONE CO. POINT OF DELIVERY AND 2"C WITH PULL STRING TO CATV POINT OF DELIVERY. VERIFY CONDUIT SIZE, LOCATION AND ROUTING.

PROVIDE ALL REQUIRED CONDUIT AND WIRING BETWEEN DU AND DAHU. COORDINATE WITH MECHANICAL CONTRACTOR FOR

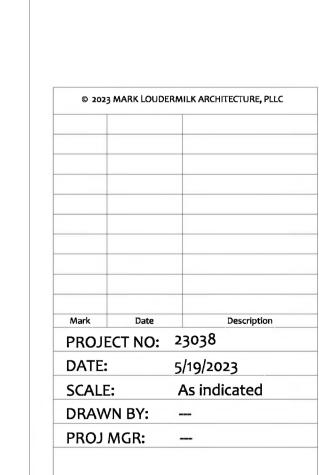
EXACT REQUIREMENTS.

201 N. FRONT ST. SUITE 1004 WILMINGTON, NORTH CAROLINA 910.769.3583 www.loudermilkarch.com



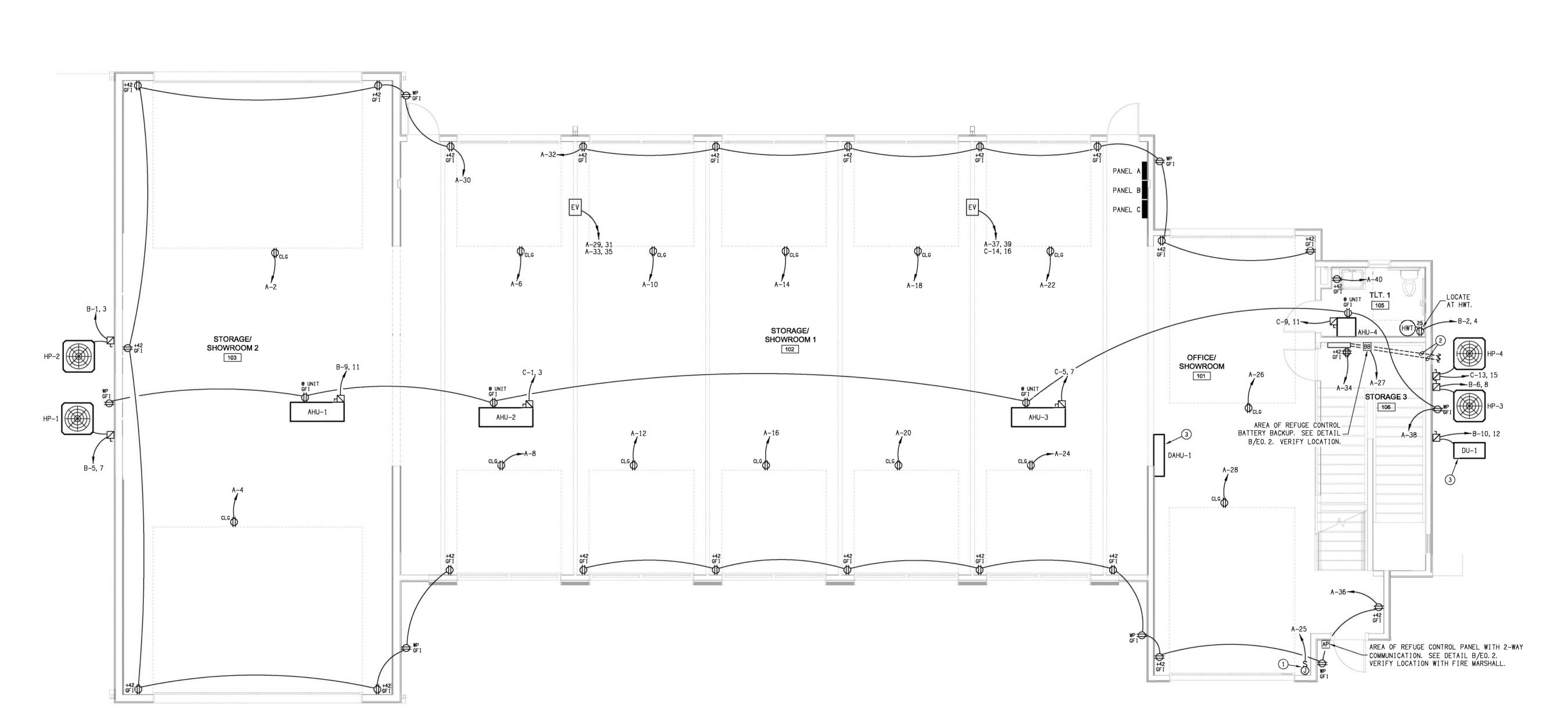
07/11/2023



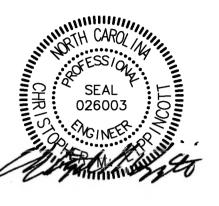


Power Plan -1st Floor

E2.1

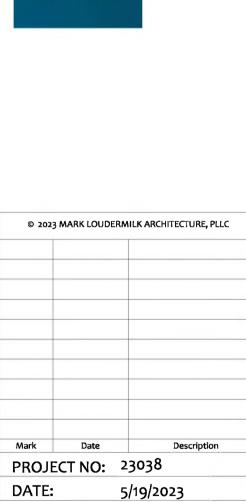


A Power Plan - 1st Floor
Scale: 3/16" = 7-0"



07/11/2023





Power Plan -2nd Floor

As indicated

SCALE:

DRAWN BY: --PROJ MGR: ---

E2.2

