HIGHWAY 86 PUBLIC WORKS

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GENERAL SYMBOLS

LIFE SAFETY: LOBBY — ROOM NAME; B | ### | # — OCCUPANCY LOAD, SQUARE FOOTAGE, FUNCTION OF SPACE

FLOOR PLAN: LOBBY — ROOM NAME; ### SF — SQUARE FOOTAGE; CPT RB01 PT01 — WALL FINISH, BASE FINISH, FLOOR FINISH

RCP: LOBBY — ROOM NAME; ### SF — ROOM NUMBER; ACT #'-#" — CEILING HEIGHT, CEILING FINISH

A### — DETAIL NUMBER, SHEET NUMBER

2-HEAD EMERGENCY EXIT SIGN

2-HEAD EMERGENCY LIGHT

2-HR. OCCUPANCY SEPARATION/FIRE BARRIER

2X4 LIGHT FIXTURE (SEE ELEC.)

3-HR. FIRE BARRIER

ACTUAL EXIT DOOR OCCUPANT LOAD

CLEAR EXIT WIDTH (INCHES)

DIRECTION OF DISCHARGE

DOOR TAG

ELEVATION TAG

EMERGENCY EXIT SIGN

EXIT ACCESS

EXIT DOOR CAPACITY

FIRE ALARM HORN/STROBE DEVICE

P — FIRE ALARM PULL STATION

FE — FIRE EXTINGUISHER

HVAC EXHAUST GRILLE

HVAC RETURN GRILLE

HVAC SUPPLY GRILLE

D# — KEYED DEMOLITION NOTE

F# — KEYED RENOVATION NOTE

MAX. TRAVEL DISTANCE

REMOTE POINT

TRANSITION STRIP

A R-# — WALL TYPES TAG; RATING (HR)

HATCH PATTERNS

CMU

CONCRETE

DRAINAGE FILL

EARTH

INSULATION - FIBER GLASS

INSULATION - RIGID

PLYWOOD

STEEL

PROJECT SCOPE

BUILDING:	FLEET MAINTENANCE BUILDING
LOCATION:	890 NC HWY 86 N, HILLSBOROUGH, NC
BUILDING CODE:	2018 EXISTING NC BUILDING CODE
CONSTRUCTION TYPE:	VB
STORIES:	LEVEL 1 (OFFICE, MAINTENANCE GARAGES, WASH BAY, & OIL STORAGE) + LEVEL 2 (OFFICE)
TOTAL BUILDING AREA:	9,573 SF
BUILDING OCCUPANCY:	S-1 & B

THE PROJECT SCOPE CONSISTS OF:
- ADD AN ADA UNISEX RESTROOM W/ SHOWER ON THE 1ST FLOOR
- REPLACING THE BREAK ROOM CABINETS & SINK ON THE 1ST FLOOR
- ADD BREAK ROOM CABINETS, SINK, & FRIDGE ON THE 2ND FLOOR
- ADD 2 WORK SURFACES ON THE 2ND FLOOR

BUILDING:	BUILDING A & B
LOCATION:	890 NC HWY 86 N, HILLSBOROUGH, NC
BUILDING CODE:	2018 NC BUILDING CODE
CONSTRUCTION TYPE:	VB
STORIES:	1 STORY
TOTAL BUILDING AREA:	A: 4,333 SF, B: 2,501 SF
BUILDING OCCUPANCY:	S-1

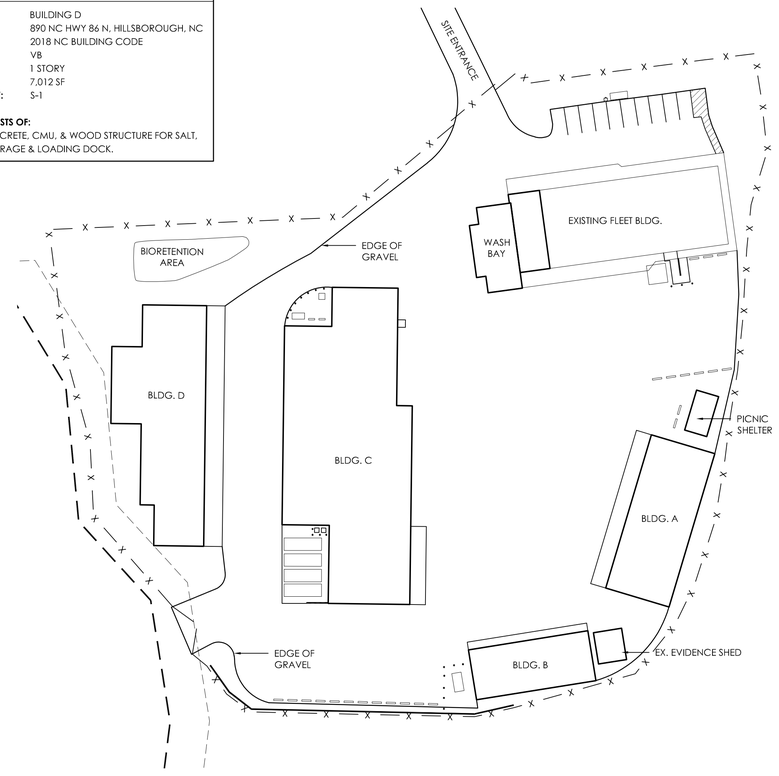
PROJECT SCOPE CONSISTS OF:
- CONSTRUCT 2 METAL BUILDINGS FOR UNCONDITIONED STORAGE.

BUILDING:	BUILDING C
LOCATION:	890 NC HWY 86 N, HILLSBOROUGH, NC
BUILDING CODE:	2018 NC BUILDING CODE
CONSTRUCTION TYPE:	VB
STORIES:	1 STORY
TOTAL BUILDING AREA:	12,491 SF
BUILDING OCCUPANCY:	S-1

PROJECT SCOPE CONSISTS OF:
- CONSTRUCT A METAL BUILDING FOR COVERED VEHICLE & TIRE STORAGE.

BUILDING:	BUILDING D
LOCATION:	890 NC HWY 86 N, HILLSBOROUGH, NC
BUILDING CODE:	2018 NC BUILDING CODE
CONSTRUCTION TYPE:	VB
STORIES:	1 STORY
TOTAL BUILDING AREA:	7,012 SF
BUILDING OCCUPANCY:	S-1

PROJECT SCOPE CONSISTS OF:
- CONSTRUCT A CONCRETE, CMU, & WOOD STRUCTURE FOR SALT, GRAVEL, & DIRT STORAGE & LOADING DOCK.



SITE PLAN MAP NTS 1

SEE AS001 FOR ARCHITECTURAL SITE PLAN

N

THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONJUNCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT. ©MHAworks 2024

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BARRY FRANKLIN HILL REGISTERED ARCHITECT 5124 NORTH CAROLINA 11.11.24 DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N. HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
DRAWING SHEET INDEX & PROJECT DESCRIPTION

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G000

ARCHITECTURAL ABBREVIATIONS

#	NUMBER	DEMO	DEMOLITION	HVAC	HEATING, VENTILATION, & AIR CONDITIONING	REFL	REFLECTIVE
&	AND	DIAM	DIAMETER	HDPE	HIGH-DENSITY POLYETHYLENE	RCP	REFLECTED CEILING PLAN
@	AT	DIM(S)	DIMENSION(S)	HM	HOLLOW METAL	REQD	REQUIRED
ACT	ACOUSTIC CEILING TILE	DN	DOWN	HR	HOUR	REQS	REQUIREMENTS
ADA	AMERICAN DISABILITIES ACT	DS	DOWNSPOUT	INSUL	INSULATION	RF	RESILIENT SHEET FLOORING
ADJ	ADJACENT	DWG	DRAWING	INT	INTERIOR	RR	RESTROOM
AFF	ABOVE FINISH FLOOR	EA	EACH	J	JAMB	RM	ROOM
ALUM	ALUMINUM	ELEC	ELECTRICAL	JAN CL	JANITOR'S CLOSET	RB	RUBBER BASE
ANOD	ANODIZED	EC	ELECTRICAL CONTRACTOR	LS	LINEAR SYSTEM	RF	RUBBER FLOORING OR RESILIENT FLOORING
ARA	AREA OF RESCUE ASSISTANCE	EP	ELECTRICAL PANEL	MO	MASONRY OPENING	SCHED	SCHEDULED
BSMT	BASEMENT	EL	ELEVATION	MAX	MAXIMUM	SC	SEALED CONCRETE
BD	BOARD	ELEV	ELEVATOR	MECH	MECHANICAL	SV	SHEET VINYL
BR	BRICK	EQ	EQUAL	MC	MECHANICAL CONTRACTOR	S	SILL
BLDG	BUILDING	EX	EXISTING	MTL	METAL	SIM	SIMILAR
BLKHD	BULKHEAD	EJ	EXPANSION JOINT	MIN	MINIMUM	SS	SOLID SURFACE OR STAINLESS STEEL
BO	BOTTOM OF	EXP	EXPOSED	MT	MOSAIC TILE	SWC	SOLID WOOD CORE
CB	CALL BOX	EXT	EXTERIOR	NSF	NET SQUARE FEET	SPEC	SPECIFICATION
CPT	CARPET TILE	FEC	FIRE EXTINGUISHER CABINET	NIC	NOT IN CONTRACT	SF	SQUARE FOOT OR SAFETY FLOORING
CLG	CEILING	FRP	FIBER REINFORCED PANEL	NTS	NOT TO SCALE	STL	STEEL
CLG HT	CEILING HEIGHT	FF	FINISHED FLOOR	NO	NUMBER	STRUCT	STRUCTURAL
℄	CENTERLINE	FFE	FINISHED FLOOR ELEVATION	OCCUP	OCCUPANT(S)	TELE	TELEPHONE
CT	CERAMIC TILE	FACP	FIRE ALARM CONTROL PANEL	OC	ON CENTER	T	THRESHOLD
CLR	CLEAR	FSA	FIRE ALARM SYSTEM ANNUNCIATOR	OPNG	OPENING	T&G	TONGUE & GROOVE
C	CLOSER	FATC	FIRE ALARMS TERMINAL CABINET	PT	PAINT	TO	TOP OF
CL	CLOSET	FD	FLOOR DRAIN	PT	PRESSURE TREATED	TS	TRANSITION STRIP
COL	COLUMN	FS	FLOOR SINK	PH	PANIC HARDWARE	TYP	TYPICAL
COMPT	COMPARTMENT	FO	FRAMED OPENING	PLAM	PLASTIC LAMINATE	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	FURN	FURNITURE	PLUMB	PLUMBING	VIN	VINYL
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	PLY	PLYWOOD	VB	VINYL BASE
CONT	CONTINUOUS	GC	GENERAL CONTRACTOR	PWR	POWER	VCT	VINYL COMPOSITION TILE
CI	CONTINUOUS INSULATION	GSF	GENERAL SQUARE FEET	PF	PREFINISHED	WD	WOOD
CJ	CONTROL JOINT	GL	GLASS	PREP	PREPARATION	WDB	WOOD BASE
CTOP	COUNTERTOP	GWB	GYPSUM WALL BOARD	PT	PRESSURE TREATED OR PAINT	WH	WATER HEATER
CG	CORNER GUARD	HDW	HARDWARE	PC	PROXY CARD READER	WHT	WHITE
CORR	CORRIDOR	H	HEAD	QT	QUARRY TILE	W/	WITH
CS	CROSS SLOPE	HT	HEIGHT	R-X RECEPT	RATED WALL - HRS. RECEPTIONIST	WO	WINDOW OPENING

GENERAL NOTES & SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

THROUGHOUT THE DOCUMENTS HEREIN, THE TERM "OWNER" SHALL MEAN THE TOWN OF HILLSBOROUGH. THE OWNER'S REPRESENTATIVES SHALL BE STEPHANIE TRUEBLOOD.

G.C. SHALL OBTAIN OWNER SHOP DRAWING APPROVAL PRIOR TO CONSTRUCTION OR FABRICATION. THE G.C. SHALL NOTIFY THE ARCHITECT & OWNER IN WRITING REGARDING ANY DISCREPANCIES ON THE PLANS. IF REQUIRED, G.C. IS RESPONSIBLE FOR PERMITS, INSPECTIONS, & FEES.

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE 2018 NORTH CAROLINA BUILDING CODE & LOCAL AUTHORITY HAVING JURISDICTION.

FINAL CLEANING OF THE BUILDING & SITE SHALL BE BY THE G.C. PRIOR TO ARCHITECT FINAL WALK THROUGH, PUNCH LIST, & OCCUPANCY.

UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE FROM FACE OF STUD OR FACE OF MASONRY.

G.C. SHALL COORDINATE THE USE OF THE PREMISES UNDER THE DIRECTION OF THE OWNER.

G.C. SHALL BE RESPONSIBLE FOR THE PROTECTION & STORAGE OF ALL PRODUCTS REQUIRED TO PERFORM THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS.

G.C. SHALL BE RESPONSIBLE FOR PROVIDING A SCHEDULE SHOWING REQUIRED DATE FOR RECEIVING OWNER SUPPLIED EQUIPMENT ON SITE. SHOULD SUCH ITEMS ARRIVE ONSITE AHEAD OF SAID DATE, THE G.C. SHALL BEAR SOLE RESPONSIBILITY FOR RECEIVING, STORING, & HANDLING SUCH EQUIPMENT.

G.C. SHALL CONFIRM/COORDINATE ALL SCHEDULE REQUIREMENTS, GENERAL CONDITIONS, ETC. WITH OWNER PRIOR TO SUBMITTING FINAL PRICING.

BASIS OF DESIGN PRODUCTS OR OWNER/ARCHITECT APPROVED EQUALS SHALL BE INSTALLED AS PER THE CONTRACT DOCUMENTS &/OR THE MANUFACTURER'S REQUIREMENTS. IF THESE CONFLICT, THE G.C. SHALL PRICE THE MORE EXPENSIVE METHOD & CONFIRM WITH THE DESIGNER OF RECORD PRIOR TO PROCEEDING.

DIVISION 2 - EXISTING CONDITIONS

G.C. SHALL COORDINATE SITE WORK, DEMOLITION, UTILITY TIE-INS, SITE PERMITS, ETC. WITH OWNER, DESIGNERS, & AHU. SHOULD ANY CONDITIONS BE REVEALED THAT DO NOT MATCH THE CONTRACT DOCUMENTS, THE G.C. SHALL NOTIFY THE DESIGNERS OF RECORD PRIOR TO PROCEEDING.

DIVISION 03 - CONCRETE

THE FOLLOWING NOTES SHALL APPLY TO EXTERIOR CONCRETE WALKWAYS UNLESS SPECIFICALLY NOTED OTHERWISE BY THE CIVIL OR STRUCTURAL ENGINEER. ALL WALKS SHALL SLOPE AWAY FROM THE BUILDING WHILE COMPLYING WITH ADA SLOPES & CROSS-SLOPES. ALL CURB CUTS & CONNECTIONS TO EXISTING WALKWAYS SHALL BE PER CIVIL OR STRUCTURAL & SHALL MEET ALL ADA REQUIREMENTS.

DIVISION 04 - MASONRY

PROVIDE CONCRETE MASONRY UNITS (CMU), MORTAR, GROUT, & REINFORCING, ETC. AS SHOWN ON THE PLANS, INCLUDING ANY APPLICABLE UL DETAILS.

DIVISION 05 - METALS

DIVISION 06 - WOOD, PLASTICS, & COMPOSITES

PROVIDE PRESSURE TREATED DIMENSIONAL LUMBER, SIZE AS INDICATED ON PLANS PER DOC PS 20 GRADING RULES WITH 19 PERCENT MAXIMUM MOISTURE CONTENT.

PROVIDE SHEATHING OF THICKNESS AS INDICATED ON PLANS PER DOC PS 1 GRADING RULES. PROVIDE EXTERIOR GRADE SHEATHING FOR LOCATIONS AS REQUIRED ON DRAWINGS.

PROVIDE METAL HANGERS & FASTENERS AS INDICATED ON PLANS & REQUIRED TO SUIT APPLICATION. HOT DIP GALVANIZE U.N.O.

MISCELLANEOUS MATERIALS: FURRING, BLOCKING, SHIMS, & HANGING STRIPS AS REQUIRED. PROVIDE SOFTWOOD OR HARDWOOD LUMBER, KILN-DRIED TO LESS THAN 15%.

DIVISION 07 - THERMAL & MOISTURE PROTECTION

SIDING & EXTERIOR TRIM - JAMES HARDIE (OR EQUAL) FIBER CEMENT BOARD SIDING. INSTALL PER MANUFACTURER REQUIREMENTS.

DIVISION 08 - OPENINGS

PROVIDE FULLY WELDED HOLLOW METAL FRAMES AT EXTERIOR DOOR LOCATIONS AS INDICATED ON PLANS. PROVIDE FULLY WELDED HOLLOW METAL FRAMES OR KNOCK DOWN METAL FRAMES AT INTERIOR DOOR LOCATIONS AS INDICATED ON PLANS. FRAMES SHALL BE SHOP PRIMED & FIELD PAINTED AS INDICATED.

- EXTERIOR FRAMES SHALL BE 14 GA THICK MINIMUM.
- INTERIOR FRAMES SHALL BE 16 GA THICK MINIMUM.

PROVIDE 1-3/4" THICK, INSULATED HOLLOW METAL EXTERIOR DOORS AS INDICATED ON PLANS. EXTERIOR DOORS SHALL BE CONSTRUCTED WITH MINIMUM 16 GA FACES & STEEL REINFORCED EDGES. EXTERIOR DOORS SHALL BE FACTORY PRIMED & FIELD PAINTED PER THE FINISH SCHEDULE.

PROVIDE 1-3/4" THICK SOLID WOOD CORE INTERIOR DOORS.

- BASIS-OF-DESIGN: VT INDUSTRIES: SELECT WHITE MAPLE PLAIN SLICED CLEAR FINISH.

EACH DOOR TO BE PREPPED FOR HARDWARE AS SCHEDULED.

DIVISION 09 - FINISHES

REFER TO PLANS FOR FINISH REQUIREMENTS IN EACH SPACE.

INTERIOR WALL SHEATHING SHALL BE 5/8" GYPSUM BOARD U.N.O.

PROVIDE FLOORING MATERIALS AS INDICATED ON FINISH SCHEDULE. CONTRACTOR SHALL PROVIDE ALL MATERIALS & ACCESSORIES FOR COMPLETE INSTALLATION PER MANUFACTURER'S REQUIREMENTS.

- G.C. SHALL PROVIDE MATERIAL SAMPLES & PRODUCT DATA FOR ALL FINISHES & ACCESSORIES TO ARCHITECT FOR VERIFICATION.

G.C. SHALL PROVIDE WATERPROOFING MEMBRANE IN RESTROOMS. MEMBRANE SHALL EXTEND ACROSS THE FLOOR, TERMINATING 5 INCHES UP STANDARD LOCATIONS.

PRIME & PAINT ALL WALLS WITHIN THE PROJECT AREA U.N.O. ON FINISH SCHEDULE. WALLS SHALL RECEIVE TWO FINISH COATS OF PAINT WITH EGGSHELL/SATIN FINISH. FRAMES & TRIM SHALL RECEIVE TWO FINISH COATS OF PAINT WITH SEMI-GLOSS FINISH. PROVIDE LOW VOC CONTENT PRIMER & PAINT FROM MANUFACTURE AS LISTED ON FINISH SCHEDULE.

DIVISION 10 - SPECIALTIES

PROVIDE BLOCKING AS NECESSARY FOR PROPER MOUNTING OF ALL TOILET ROOM ACCESSORIES.

FIRE EXTINGUISHER CABINETS: PROVIDE TYPE ABC EXTINGUISHERS IN CABINETS MOUNTED NOT HIGHER THAN 48" TO TOP OF HANDLE. BASIS-OF-DESIGN: J.L. INDUSTRIES 24X9.5X4.75.

DIVISION 11 & 12 - EQUIPMENT & FURNISHINGS

G.C. SHALL COORDINATE ALL OWNER FURNISHED ITEMS WITH DESIGNED SPACE CONSTRAINTS.

CONTRACTOR SHALL CONFIRM ITEMS THAT ARE TO BE SUPPLIED BY OWNER & INSTALLED BY CONTRACTOR.

DIVISION 22, 23, & 26 - PLUMBING, HVAC, & ELECTRICAL

REFER TO PLUMBING, MECHANICAL, & ELECTRICAL (PME) SHEETS FOR ADDITIONAL NOTES, REQUIREMENTS, SPECIFICATIONS FOR THOSE SYSTEMS. SHOULD DISCREPANCIES EXIST BETWEEN ARCHITECTURAL & PME SHEETS, OR OTHERWISE, THE G.C. SHALL PRICE THE MOST EXPENSIVE OPTION & CONTACT OWNER & ARCHITECT FOR FURTHER CLARIFICATION.

SYSTEM/ASSEMBLIES INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE. CONTRACTOR TO PROVIDE ALL NECESSARY HANGERS, FASTENERS, ETC. TO PROVIDE A COMPLETE & WORKING ASSEMBLY.

SEE PLUMBING, MECHANICAL, & ELECTRICAL DRAWINGS FOR ALL OTHER RELATED INFORMATION.

GENERAL NOTES

PROTECT AREA OF WORK & ADJACENT AREAS FROM DAMAGE.

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. IN CASE OF CONFLICT, CONSULT THE ARCHITECT FOR DIRECTION.

PLUMBING & ELECTRICAL UTILITY SERVICES SHOWN IN THE P & E SERIES ONLY EXTENDS 5'-0" OUTSIDE OF THE BUILDING. G.C. RESPONSIBLE FOR FINAL COORDINATION OF THESE ELEMENTS IF SITE CONDITIONS VARY FROM THE CIVIL / LANDSCAPE DESIGN DOCUMENTS. NOTIFY ARCHITECT WITH ANY DISCREPANCIES OR ALTERATIONS TO THE DESIGN DOCUMENTS THAT RESULT FROM SITE CONDITIONS.

REFER TO CIVIL / LANDSCAPE DRAWINGS FOR FINAL GRADE ELEVATIONS AROUND BUILDING. FINISH GRADE TO BE A MINIMUM OF 6" BELOW FINISH FLOOR LEVEL, U.N.O.

THE CONTRACT DOCUMENTS ARE COMPLEMENTARY & WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.

ELEMENTS THAT ARE IDENTIFIED BY OTHER DISCIPLINES (E.G. CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION) ELSEWHERE WITHIN THE ARCHITECTURAL SERIES OF DRAWINGS &/OR SPECIFICATIONS, OR IDENTIFIED OR COVERED BY DEFAULT (E.G. SIZES, THICKNESS, SPACING, MATERIALS) IN THE SPECIFICATIONS MAY NOT BE ANNOTATED (NOTE OR KEYNOTED) ON THESE DRAWINGS.

ELEMENTS IDENTIFIED IN "LEGENDS" &/OR "GENERAL NOTES" MAY NOT BE NOTED IN DETAILS, OR SECTIONS, AS THESE ELEMENTS ARE IDENTIFIED IN THE LEGEND (E.G. FACE BRICK, CMU, WINDOWS).

REFER TO "ASSEMBLIES" FOR MATERIALS & COMPONENTS THAT MAKE UP THAT PARTICULAR ASSEMBLY (E.G. EXTERIOR WALL ASSEMBLIES, ROOF ASSEMBLIES, & FIRE-RATED ASSEMBLIES). ONCE A PARTICULAR ASSEMBLY HAS BEEN IDENTIFIED ON ONE DRAWING, THAT SAME ASSEMBLY GRAPHIC SHALL APPLY TO ALL OTHER SIMILAR LOCATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE. PROVIDE THAT SAME ASSEMBLY AT THE SIMILAR LOCATIONS WHETHER THE ASSEMBLY GRAPHIC SYMBOL IS SHOWN OR NOT.

VERIFY ALL DIMENSIONS, INCLUDING DIMENSIONS ON STRUCTURAL DRAWINGS & OTHER ARCHITECTURAL DRAWINGS. IMMEDIATELY NOTIFY ARCHITECT OF ANY DISCREPANCIES.

PROVIDE CONCRETE HOUSEKEEPING PADS FOR ALL EQUIPMENT INDICATED TO BE MOUNTED OR OTHERWISE REQUIRE TO BE MOUNTED TO THE FLOOR. WHERE PADS ARE NOT SHOWN, PROVIDE 6" THICK CONCRETE PADS WITH 3/4" CHAMFERED EDGES (ALL SIDES). REINFORCE WITH MESH EQUIVALENT TO FLOOR SLAB REINFORCING REQUIREMENTS.

PWR & COMM GENERAL NOTES

PRIOR TO CORING FLOOR SLAB FOR POWER/ COMMUNICATION POKE-THROUGH DEVICES, COORDINATE LOCATIONS WITH OWNER &/OR OWNERS FURNISHINGS CONTRACTOR & REVIEW WITH ARCHITECT.

INDICATED DIMENSIONS ARE TO THE CENTER LINE OF OUTLETS OR SWITCHES, OR CLUSTERS OF OUTLETS OR SWITCHES, U.N.O.

INSTALL OUTLETS ON OPPOSITE SIDE OF PARTITIONS IN SEPARATE STUD CAVITIES. DO NOT INSTALL BACK-TO-BACK.

PROVIDE MATCHING COVER PLATES & DEVICES, U.N.O.

G.C. TO COORDINATE FINAL LAYOUT OF ELECTRICAL & DATA OUTLETS WITH FINAL SELECTION OF FURNITURE & CASEWORK PRIOR TO INSTALLATION OF FLOOR BOXES & RECEPTACLES.

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BARRY FRANKLIN HILL REGISTERED PROFESSIONAL 5124 NORTH CAROLINA 11.11.24 DURHAM, NC

HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
ABBREVIATIONS, SPECIFICATIONS, & GENERAL SYMBOLS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G001

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OF 2)

NAME OF PROJECT: **HILLSBOROUGH NORTH CAROLINA HIGHWAY 86 PUBLIC WORKS FLEET OFFICE RENOVATION**
ADDRESS: **890 NC-86, HILLSBOROUGH, NC** ZIP CODE: **27278**
PROPOSED USE: **BUSINESS**
OWNER OR AUTHORIZED AGENT: **TOWN OF HILLSBOROUGH - STEPHANIE TRUEBLOOD** PHONE #: **919.296.9481** EMAIL: **stephanie.trueblood@hillsboroughnc.gov**
OWNED BY: ☐ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ■ CITY: **HILLSBOROUGH** ☐ COUNTY: **ORANGE COUNTY** ☐ STATE: **NORTH CAROLINA**

LEAD DESIGN PROFESSIONAL **ARCHITECTURAL**

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
ARCHITECTURAL:	MHAworks, PA	BARRY F. HILL	5124	919.682.2870	bhill@mhaworks.com
CIVIL:	THOMAS & HUTTON	ANDREW M. OAKLEY	25505	919.682.0368	oakley.a@tandh.com
ELECTRICAL:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
FIRE ALARM:					
PLUMBING:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
MECHANICAL:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	NEIL KUPLIC	NEIL KUPLIC	20295	919.597.1080	kuplicn@gmail.com
RETAINING WALLS >5' HIGH:					
OTHER:					

2018 NC BUILDING CODE: ☐ NEW BUILDING ☐ SHELL/CORE ☐ 1ST TIME INTERIOR COMPLETIONS ■ ADDITION ☐ PHASE CONSTRUCTION - SHELL CORE

2018 NC EXISTING BUILDING CODE: (CHECK ALL THAT APPLY) ☐ PRESCRIPTIVE ☐ ALTERATION LEVEL I ☐ HISTORICAL PROPERTY ☐ REPAIR ■ ALTERATION LEVEL II ☐ CHANGE OF USE ☐ CHAPTER 14 ☐ ALTERATION LEVEL III

CONSTRUCTED *(DATE)*: **2008** **CURRENT OCCUPANCY(S)** *(CH. 3)*: **BUSINESS**
RENOVATED *(DATE)*: _____ **PROPOSED OCCUPANCY(S)** *(CH. 3)*: **BUSINESS**
RISK CATEGORY (TABLE 1604.5): **CURRENT:** **II** **PROPOSED:** **II**

BASIC BUILDING DATA:
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B (CHECK ALL THAT APPLY)
SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS: ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☐ NO ■ YES (PRIMARY) **FLOOD HAZARD AREA:** ■ NO ☐ YES
SPECIAL INSPECTIONS REQUIRED: ■ NO ☐ YES

GROSS BUILDING AREA TABLE:

FLOOR	OFFICE (SQ. FT.)	EXISTING MAINTENANCE (SQ. FT.)	NEW MAINTENANCE (SQ. FT.)	SUB-TOTAL
LEVEL 2	1,492	-	-	1,491
LEVEL 1	2,318	4,374	1,387	8,079
TOTAL	3,810	4,374	1,387	9,571

ALLOWABLE AREA:

PRIMARY OCCUPANCY CLASSIFICATION: **SELECT ONE**

ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☐
EDUCATIONAL ☐
FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 CONDITION ☐ 1 ☐ 2
I-2 CONDITION ☐ 1 ☐ 2
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ■ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ■ REPAIR GARAGE
UTILITY & MISC. ☐

ACCESSORY OCCUPANCY CLASSIFICATION(S): **BUSINESS**
INCIDENTAL USES: *(TABLE 509)*: _____
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): _____
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTIONS): _____
MIXED OCCUPANCY: ■ YES ☐ NO SEPARATION: **2** HR. EXCEPTION: _____
☐ NON-SEPARATED USE (508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
■ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B = ≤1.00

2,318 / 9,000 + 5,764 / 9,000 = **0.898**

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2[2] AREA	(C) AREA FOR FRONTAGE INCREASE [1]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2,3]
1	LEVEL 1 - BUSINESS OFFICE	2,318	9,000	-	-
1	LEVEL 1 - MAINTENANCE	5,761	9,000	-	-
2	LEVEL 2 - BUSINESS OFFICE	1,492	1,910	-	-

[1] FRONTAGE AREA INCREASE FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH =_____(F)
B. TOTAL BUILDING PERIMETER =_____(P)
C. RATIO (F/P)=_____(F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY=_____(W)
E. PERCENT OF FRONTAGE INCREASE I= 100 (F/P - 0.25) x W/30 =_____(%)
[2] UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
[3] MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2).
[4] THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.
[5] FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)		SHOWN ON PLANS		CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	FEET:	40	FEET:	25	504.3
BUILDING HEIGHT IN STORIES (TABLE 504.4)	STORIES:	2	STORIES:	2	504.4

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING (HOURS) REQ'D	RATING (HOURS) PROVIDED (W/ REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
FLOOR CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
ROOF CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING ROOF		N/A					
SHAFT ENCLOSURES - EXIT		N/A					
SHAFT ENCLOSURES - OTHER		N/A					
CORRIDOR SEPARATION		N/A					
OCCUPANCY/FIRE BARRIER SEPARATION		2 (EX.) & 2 (NEW)		G500	U905		
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION		N/A					
INCIDENTAL USE SEPARATION		N/A					

* INDICATED SECTION NUMBER PERMITTING REDUCTION.

PERCENTAGE OF WALL OPENING CALCULATIONS: **NO CHANGE**

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLAN (%)

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: ☐ NO ■ YES
EXIT SIGNS: ☐ NO ■ YES
FIRE ALARM: ☐ NO ■ YES
SMOKE DETECTION SYSTEM: ☐ NO ■ YES ☐ PARTIAL
CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: **G110**

■ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
■ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) **AS001**
☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
■ OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
■ OCCUPANT LOADS FOR EACH AREA
■ EXIT ACCESS TRAVEL DISTANCES (1017)
■ COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
☐ DEAD END LENGTHS (1020.4)
■ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
■ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
■ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
■ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATE FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
☐ LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
■ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION (407.5)
☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*: **N/A**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING *(SECTION 1106)*: **NO CHANGE**

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # OF ACCESSIBLE SPACES PROVIDED
TOTAL:						

PLUMBING FIXTURE REQUIREMENTS *(TABLE 2902.1)*:

USE: **BUSINESS (B)**		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	3		1	3		-	0	0
	NEW	1		0	1		1	1	1
	REQUIRED	1		0	1		-	1	1

USE: **STORAGE (S-1)** **TABLE 2902.1 *m & n***		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	N/A							
	NEW								
	REQUIRED								

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)
_____
_____
_____

ENERGY SUMMARY: **NO CHANGE**

ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: NO YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)
EXEMPT BUILDING: NO YES (PROVIDE CODE OR STATUTORY REFERENCE): _____
CLIMATE ZONE: ☐ 3A ■ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ■ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ■ PRESCRIPTIVE
(IF "OTHER" SPECIFY SOURCE HERE) _____

THERMAL ENVELOPE:

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY: **A CONTINUOUS MEMBRANE IS INSTALLED BELOW THE PURLINS & UNINTERRUPTED BY FRAMING MEMBERS. R-19 UNCOMPRESSED, UNFACED INSULATION RESTS ON TOP OF THE MEMBRANE BETWEEN THE PURLINS. R-11 UNFACED INSULATION DRAPED OVER PURLINS & THEN COMPRESSED WHEN THE METAL ROOF PANELS ARE ATTACHED. A R-3 MIN. THERMAL SPACE BLOCK IS BETWEEN THE PURLINS & THE METAL ROOF PANELS.**
U-VALUE OF TOTAL ASSEMBLY: **U-0.037**
R-VALUE OF TOTAL INSULATION: **R-19 + R-11 LS**
SKYLIGHT IN EACH ASSEMBLY: **N/A**
U-VALUE OF SKYLIGHT:
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY: **N/A**

EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY: **CMU WALL: 2X2 WD STUD FURRING W/ R-9.5 CI MIN. & 1/2" SHEATHING TO ROOF DECK W/ METAL LINER PANEL TO 8'-0" A.F.F.; METAL BUILDING: GIRT, 2X2 WD STUD FURRING W/ R-15.8 CI MIN., & 1/2" SHEATHING, TO ROOF DECK W/ METAL PANEL LINER TO 8'-0" A.F.F.**
U-VALUE OF TOTAL ASSEMBLY: **CMU WALL: U-0.104; METAL BUILDING: U-0.060**
R-VALUE OF INSULATION: **CMU WALL: R-9.5 CI; METAL BUILDING: R-0 + R-15.8 CI**
OPENING (WINDOWS OR DOORS WITH GLAZING): **N/A**
U-VALUE OF ASSEMBLY:
SOLAR HEAT GAIN COEFFICIENT:
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: 4"
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
FLOORS SLAB ON GRADE:
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
HORIZONTAL / VERTICAL REQUIREMENTS:
SLAB HEATED? (Y/N):

STRUCTURAL DESIGN:

DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (I/S) _____ SEISMIC (I/E) _____
LIVE LOADS: ROOF _____ PSF MEZZANINE _____ PSF FLOOR _____ PSF
GROUND SNOW LOAD: _____ PSF
WIND LOAD: ULTIMATE WIND SPEED _____ MPH (ASCE-7) EXPOSURE CATEGORY _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION S_s: _____ %g S_1: _____ %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE):
☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT): _____ PSF
PRESUMPTIVE BEARING CAPACITY: _____ PSF
PILE SIZE, TYPE, AND CAPACITY: _____

MECHANICAL SUMMARY:

MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

THERMAL ZONE: **4A**
WINTER DRY BULB: **16°F**
SUMMER DRY BULB: **90°F**
INTERIOR DESIGN CONDITIONS:
WINTER DRY BULB: **70°F**
SUMMER DRY BULB: **75°F**
RELATIVE HUMIDITY: **50%**
BUILDING HEATING LOAD: **TENANT SPACE - 85,900 BTU/HR**
BUILDING COOLING LOAD: **TENANT SPACE - 186,400 BTU/HR**

MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT: **GARAGE IS SERVED BY ONE EXISTING GAS UNIT HEATER. TWO EXISTING GAS RADIANT HEATERS, ONE NEW GAS UNIT HEATER & ONE NEW GAS RADIANT HEATER.**
HEATING EFFICIENCY:
COOLING EFFICIENCY:
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: **N/A**
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: **N/A**
LIST EQUIPMENT EFFICIENCIES: **EFFICIENCIES ARE LISTED ON EQUIPMENT SCHEDULES - SEE DRAWINGS**

ELECTRICAL SUMMARY: **NO CHANGE**

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE: ENERGY CODE: ■ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ■ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE:
NUMBER OF LAMPS IN FIXTURE:
BALLAST TYPE USED IN THE FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
SEE LIGHTING FIXTURE SCHEDULE
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED (WHOLE BUILDING OF SPACE BY SPACE:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:

ADDITIONAL EFFICIENCY PACKAGE OPTIONS
(WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)
☐ C406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
■ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

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BARRY FRANKLIN HILL SEAL 5124 REGISTERED 11.11.24 NORTH CAROLINA ARCHITECT DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N. HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING: 2018 APPENDIX B - BUILDING CODE SUMMARY

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G100

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OR 2)

NAME OF PROJECT: **HILLSBOROUGH NORTH CAROLINA HIGHWAY 86 PUBLIC WORKS BUILDING A**
ADDRESS: **890 NC-86, HILLSBOROUGH, NC** ZIP CODE: **27278**
PROPOSED USE: **BUSINESS**
OWNER OR AUTHORIZED AGENT: **TOWN OF HILLSBOROUGH - STEPHANIE TRUEBLOOD** PHONE #: **919.296.9481** EMAIL: **stephanie.trueblood@hillsboroughnc.gov**
OWNED BY: ☐ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ■ CITY: **HILLSBOROUGH** ☐ COUNTY: **ORANGE COUNTY** ☐ STATE: **NORTH CAROLINA**

LEAD DESIGN PROFESSIONAL **ARCHITECTURAL**

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
ARCHITECTURAL:	MHAworks, PA	BARRY F. HILL	5124	919.682.2870	bhill@mhaworks.com
CIVIL:	THOMAS & HUTTON	ANDREW M. OAKLEY	25505	919.682.0368	oakley.a@tandh.com
ELECTRICAL:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
FIRE ALARM:					
PLUMBING:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
MECHANICAL:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	NEIL KUPLIC	NEIL KUPLIC	20295	919.597.1080	kuplicn@gmail.com
RETAINING WALLS >5' HIGH:					
OTHER:					

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ ADDITION ☐ SHELL/CORE ☐ PHASE CONSTRUCTION - SHELL CORE ☐ 1ST TIME INTERIOR COMPLETIONS

2018 NC EXISTING BUILDING CODE: (CHECK ALL THAT APPLY)
☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14 ☐ ALTERATION LEVEL I ☐ ALTERATION LEVEL II ☐ ALTERATION LEVEL III ☐ HISTORICAL PROPERTY ☐ CHANGE OF USE

CONSTRUCTED *(DATE)*: _____ **CURRENT OCCUPANCY(S)** *(CH. 3)*: _____
RENOVATED *(DATE)*: _____ **PROPOSED OCCUPANCY(S)** *(CH. 3)*: **STORAGE**
RISK CATEGORY (TABLE 1604.5): **CURRENT:** _____ **PROPOSED:** **II**

BASIC BUILDING DATA:
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B (CHECK ALL THAT APPLY)
SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS: ☐ I ☐ II ☐ III
FIRE DISTRICT: ☐ NO ■ YES (PRIMARY) **FLOOD HAZARD AREA:** ■ NO ☐ YES ☐ WET ☐ DRY
SPECIAL INSPECTIONS REQUIRED: ■ NO ☐ YES

GROSS BUILDING AREA TABLE:

FLOOR	STORAGE (SQ. FT.)	PICNIC SHELTER (SQ. FT.)	SUB-TOTAL
1ST LEVEL	4,333	392	4,725
TOTAL	4,333	392	4,725

ALLOWABLE AREA:
PRIMARY OCCUPANCY CLASSIFICATION: **SELECT ONE**
ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☐
EDUCATIONAL ☐
FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 CONDITION ☐ 1 ☐ 2
I-2 CONDITION ☐ 1 ☐ 2
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ■ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ■ ENCLOSED ☐ REPAIR GARAGE
UTILITY & MISC. ☐
ACCESSORY OCCUPANCY CLASSIFICATION(S): _____
INCIDENTAL USES: *(TABLE 509)*: _____
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): _____
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTIONS): _____
MIXED OCCUPANCY: ☐ YES ■ NO SEPARATION: _____ HR. EXCEPTION: _____
☐ NON-SEPARATED USE (508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B = ≤1.00
ALLOWABLE AREA OF OCCUPANCY A + ALLOWABLE AREA OF OCCUPANCY B = ≤1.00
_____ + _____ =

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2* AREA	(C) AREA FOR FRONTAGE INCREASE †,	(D) ALLOWABLE AREA PER STORY OR UNLIMITED †††
1	STORAGE - S-1	4,333	9,000	-	9,000
1	PICNIC SHELTER - S-1	392	9,000	-	9,000

†FRONTAGE AREA INCREASE FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH =_____(F)
B. TOTAL BUILDING PERIMETER =_____(P)
C. RATIO (F/P)=_____(F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY=_____(W)
E. PERCENT OF FRONTAGE INCREASE I_f = 100 [F/P - 0.25] x W/30 =_____(%)
††UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
†††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.
†FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	FEET: 40	FEET: 14'-10"	504.3
BUILDING HEIGHT IN STORIES (TABLE 504.4)	STORIES: 2	STORIES: 1	504.4

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING (HOURS) REQ'D	RATING (HOURS) PROVIDED (W/_ REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
FLOOR CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
ROOF CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING ROOF		N/A					
SHAFT ENCLOSURES - EXIT		N/A					
SHAFT ENCLOSURES - OTHER		N/A					
CORRIDOR SEPARATION		N/A					
OCCUPANCY/FIRE BARRIER SEPARATION		N/A					
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION		N/A					
INCIDENTAL USE SEPARATION		N/A					

* INDICATED SECTION NUMBER PERMITTING REDUCTION.

PERCENTAGE OF WALL OPENING CALCULATIONS: NO CHANGE

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLAN (%)

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: ■ NO ☐ YES
EXIT SIGNS: ■ NO ☐ YES
FIRE ALARM: ■ NO ☐ YES
SMOKE DETECTION SYSTEM: ■ NO ☐ YES ☐ PARTIAL
CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: G111
☐ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
■ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) **AS001**
☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
■ OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
■ OCCUPANT LOADS FOR EACH AREA
■ EXIT ACCESS TRAVEL DISTANCES (1017)
☐ COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
☐ DEAD END LENGTHS (1020.4)
■ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
■ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
■ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
☐ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATE FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
☐ LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
☐ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION (407.5)
☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*: **N/A**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING *(SECTION 1106)*:

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # OF ACCESSIBLE SPACES PROVIDED
TOTAL:						

PLUMBING FIXTURE REQUIREMENTS *(TABLE 2902.1)*: **N/A** *(SEE TABLE 2902.1 m & n)*
USE: **STORAGE (S-1)**

		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	0	0	0	0	0	-	0	0
	NEW	0	0	0	0	0	-	0	0
	REQUIRED	0	0	0	0	0	-	0	0

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)
_____
_____
_____

ENERGY SUMMARY: N/A

ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.
EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: NO YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)
EXEMPT BUILDING: NO YES (PROVIDE CODE OR STATUTORY REFERENCE): _____
CLIMATE ZONE: ☐ 3A ☐ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ☐ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE
(IF "OTHER" SPECIFY SOURCE HERE) _____

THERMAL ENVELOPE:
ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
SKYLIGHT IN EACH ASSEMBLY:
U-VALUE OF SKYLIGHT:
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY:
EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (WINDOWS OR DOORS WITH GLAZING):
U-VALUE OF ASSEMBLY:
SOLAR HEAT GAIN COEFFICIENT:
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:
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
HORIZONTAL / VERTICAL REQUIREMENTS:
SLAB HEATED? (Y/N):

STRUCTURAL DESIGN:
DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (IS) _____ SEISMIC (IE) _____
LIVE LOADS: ROOF _____ PSF MEZZANINE _____ PSF FLOOR _____ PSF
GROUND SNOW LOAD: _____ PSF
WIND LOAD: ULTIMATE WIND SPEED _____ MPH (ASCE-7) EXPOSURE CATEGORY _____
SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION S_s: _____ %g S_1: _____ %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM (CHECK ONE):
☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO
LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND
SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT): _____ PSF
PRESUMPTIVE BEARING CAPACITY: _____ PSF
PILE SIZE, TYPE, AND CAPACITY: _____

MECHANICAL SUMMARY: N/A
MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT
THERMAL ZONE:
WINTER DRY BULB:
SUMMER DRY BULB:
INTERIOR DESIGN CONDITIONS:
WINTER DRY BULB:
SUMMER DRY BULB:
RELATIVE HUMIDITY:
BUILDING HEATING LOAD:
BUILDING COOLING LOAD:
MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT:
HEATING EFFICIENCY:
COOLING EFFICIENCY:
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
LIST EQUIPMENT EFFICIENCIES:

ELECTRICAL SUMMARY:
ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE: ENERGY CODE: ■ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ■ PRESCRIPTIVE ☐ PERFORMANCE
LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE:
NUMBER OF LAMPS IN FIXTURE:
BALLAST TYPE USED IN THE FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
SEE LIGHTING FIXTURE SCHEDULE
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED (WHOLE BUILDING OF SPACE BY SPACE:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:
ADDITIONAL EFFICIENCY PACKAGE OPTIONS
(WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)
☐ C406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
■ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

MHA WORKS
Together, we create.

THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONJUNCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT. ©MHAworks 2024

MHAworks, P.A. Registered Architectural Corporation 50455 North Carolina DURHAM, NC

BARRY FRANKLIN HILL REGISTERED 5124 PROFESSIONAL ENGINEER NORTH CAROLINA 11.11.24 DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING A: 2018 APPENDIX B - BUILDING CODE SUMMARY

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G101

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OR 2)

NAME OF PROJECT: **HILLSBOROUGH NORTH CAROLINA HIGHWAY 86 PUBLIC WORKS BUILDING B**
ADDRESS: **890 NC-86, HILLSBOROUGH, NC** ZIP CODE: **27278**
PROPOSED USE: **BUSINESS**
OWNER OR AUTHORIZED AGENT: **TOWN OF HILLSBOROUGH - STEPHANIE TRUEBLOOD** PHONE #: **919.296.9481** EMAIL: **stephanie.trueblood@hillsboroughnc.gov**
OWNED BY: ■ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ■ CITY: **HILLSBOROUGH** ☐ COUNTY: **ORANGE COUNTY** ☐ STATE: **NORTH CAROLINA**

LEAD DESIGN PROFESSIONAL **ARCHITECTURAL**

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
ARCHITECTURAL:	MHAworks, PA	BARRY F. HILL	5124	919.682.2870	bhill@mhaworks.com
CIVIL:	THOMAS & HUTTON	ANDREW M. OAKLEY	25505	919.682.0368	oakley.a@tandh.com
ELECTRICAL:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
FIRE ALARM:					
PLUMBING:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
MECHANICAL:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	NEIL KUPLIC	NEIL KUPLIC	20295	919.597.1080	kuplicn@gmail.com
RETAINING WALLS >5' HIGH:					
OTHER:					

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ SHELL/CORE ☐ 1ST TIME INTERIOR COMPLETIONS ☐ ADDITION ☐ PHASE CONSTRUCTION - SHELL CORE

2018 NC EXISTING BUILDING CODE: (CHECK ALL THAT APPLY) ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14 ☐ ALTERATION LEVEL I ☐ ALTERATION LEVEL II ☐ ALTERATION LEVEL III ☐ HISTORICAL PROPERTY ☐ CHANGE OF USE

CONSTRUCTED *(DATE)*: _____ **CURRENT OCCUPANCY(S)** *(CH. 3)*: _____
RENOVATED *(DATE)*: _____ **PROPOSED OCCUPANCY(S)** *(CH. 3)*: **STORAGE**
RISK CATEGORY (TABLE 1604.5): **CURRENT:** _____ **PROPOSED:** **II**

BASIC BUILDING DATA:
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B (CHECK ALL THAT APPLY)
SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS: ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☐ NO ■ YES (PRIMARY) **FLOOD HAZARD AREA:** ■ NO ☐ YES
SPECIAL INSPECTIONS REQUIRED: ■ NO ☐ YES

GROSS BUILDING AREA TABLE:

FLOOR	STORAGE (SQ. FT.)	EVIDENCE SHED (SQ. FT.)	SUB-TOTAL
1ST LEVEL	2,501	360	2,861
TOTAL	2,501	360	2,861

ALLOWABLE AREA:
PRIMARY OCCUPANCY CLASSIFICATION: SELECT ONE

ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☐
EDUCATIONAL ☐
FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 CONDITION ☐ 1 ☐ 2
I-2 CONDITION ☐ 1 ☐ 2
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ■ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ■ ENCLOSED ☐ REPAIR GARAGE
UTILITY & MISC. ☐

ACCESSORY OCCUPANCY CLASSIFICATION(S): _____
INCIDENTAL USES: *(TABLE 509)*: _____
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): _____
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTIONS): _____
MIXED OCCUPANCY: ☐ YES ■ NO SEPARATION: _____ HR. EXCEPTION: _____

☐ NON-SEPARATED USE (508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.

☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B = ≤1.00

_____ + _____ =

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2[2] AREA	(C) AREA FOR FRONTAGE INCREASE [1]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2,3]
1	STORAGE - S-1	2,501	9,000	-	9,000
1	EVIDENCE SHED - S-1	360	9,000	-	9,000

[1] FRONTAGE AREA INCREASE FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH =_____(F)
B. TOTAL BUILDING PERIMETER = _____(P)
C. RATIO (F/P)= _____ (F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY= _____(W)
E. PERCENT OF FRONTAGE INCREASE I_f = 100 (F/P - 0.25) x W/30 = _____(%)
[2] UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
[3] MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2).
[4] THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.
[5] FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)		SHOWN ON PLANS		CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	FEET:	40	FEET:	14'-10"	504.3
BUILDING HEIGHT IN STORIES (TABLE 504.4)	STORIES:	2	STORIES:	1	504.4

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING (HOURS) REQ'D	RATING (HOURS) PROVIDED (W/_____* REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
FLOOR CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
ROOF CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING ROOF		N/A					
SHAFT ENCLOSURES - EXIT		N/A					
SHAFT ENCLOSURES - OTHER		N/A					
CORRIDOR SEPARATION		N/A					
OCCUPANCY/FIRE BARRIER SEPARATION		N/A					
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION		N/A					
INCIDENTAL USE SEPARATION		N/A					

* INDICATED SECTION NUMBER PERMITTING REDUCTION

PERCENTAGE OF WALL OPENING CALCULATIONS: **NO CHANGE**

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLAN (%)

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: ■ NO ☐ YES
EXIT SIGNS: ■ NO ☐ YES
FIRE ALARM: ■ NO ☐ YES
SMOKE DETECTION SYSTEM: ■ NO ☐ YES ☐ PARTIAL
CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: **G111**

☐ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
■ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) **AS001**
☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
■ OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
■ OCCUPANT LOADS FOR EACH AREA
■ EXIT ACCESS TRAVEL DISTANCES (1017)
☐ COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
☐ DEAD END LENGTHS (1020.4)
■ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
■ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
■ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
☐ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATE FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
☐ LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
☐ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION (407.5)
☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*: **N/A**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING *(SECTION 1106)*:

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # OF ACCESSIBLE SPACES PROVIDED
TOTAL:						

PLUMBING FIXTURE REQUIREMENTS *(TABLE 2902.1)*: **N/A** *(SEE TABLE 2902.1 m & n)*
USE: **STORAGE (S-1)**

		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	0			0		-	0	0
	NEW	0		0	0		-	0	0
	REQUIRED	0		0	0		-	0	0

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

ENERGY SUMMARY: **N/A**

ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.
EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: NO YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)
EXEMPT BUILDING: NO YES (PROVIDE CODE OR STATUTORY REFERENCE): _____
CLIMATE ZONE: ☐ 3A ☐ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ☐ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE
(IF "OTHER" SPECIFY SOURCE HERE) _____

THERMAL ENVELOPE:
ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
SKYLIGHT IN EACH ASSEMBLY:
U-VALUE OF SKYLIGHT:
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY:
EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (WINDOWS OR DOORS WITH GLAZING):
U-VALUE OF ASSEMBLY:
SOLAR HEAT GAIN COEFFICIENT:
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:
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
HORIZONTAL / VERTICAL REQUIREMENTS:
SLAB HEATED? (Y/N):

STRUCTURAL DESIGN:
DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (LS) _____ SEISMIC (LE) _____
LIVE LOADS: ROOF _____ PSF MEZZANINE _____ PSF FLOOR _____ PSF
GROUND SNOW LOAD: _____ PSF
WIND LOAD: ULTIMATE WIND SPEED _____ MPH (ASCE-7) EXPOSURE CATEGORY _____

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION S_s: _____ %g S₁: _____ %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE):
☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT): _____ PSF
PRESUMPTIVE BEARING CAPACITY: _____ PSF
PILE SIZE, TYPE, AND CAPACITY: _____

MECHANICAL SUMMARY: **N/A**
MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT
THERMAL ZONE:
WINTER DRY BULB:
SUMMER DRY BULB:
INTERIOR DESIGN CONDITIONS:
WINTER DRY BULB:
SUMMER DRY BULB:
RELATIVE HUMIDITY:
BUILDING HEATING LOAD:
BUILDING COOLING LOAD:
MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT:
HEATING EFFICIENCY:
COOLING EFFICIENCY:
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
LIST EQUIPMENT EFFICIENCIES:

ELECTRICAL SUMMARY:
ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE: ENERGY CODE: ■ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ■ PRESCRIPTIVE ☐ PERFORMANCE
LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE:
NUMBER OF LAMPS IN FIXTURE:
BALLAST TYPE USED IN THE FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
SEE LIGHTING FIXTURE SCHEDULE
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED (WHOLE BUILDING OF SPACE BY SPACE:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:
ADDITIONAL EFFICIENCY PACKAGE OPTIONS
(WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)
☐ C406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
■ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

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BARRY FRANKLIN HILL REGISTERED 5124 PROFESSIONAL ENGINEER NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N. HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING B: 2018 APPENDIX B - BUILDING CODE SUMMARY

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G102

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OR 2)

NAME OF PROJECT: **HILLSBOROUGH NORTH CAROLINA HIGHWAY 86 PUBLIC WORKS BUILDING C**
ADDRESS: **890 NC-86, HILLSBOROUGH, NC** ZIP CODE: **27278**
PROPOSED USE: **BUSINESS**
OWNER OR AUTHORIZED AGENT: **TOWN OF HILLSBOROUGH - STEPHANIE TRUEBLOOD** PHONE #: **919.296.9481** EMAIL: **stephanie.trueblood@hillsboroughnc.gov**
OWNED BY: ■ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ■ CITY: **HILLSBOROUGH** ☐ COUNTY: **ORANGE COUNTY** ☐ STATE: **NORTH CAROLINA**

LEAD DESIGN PROFESSIONAL **ARCHITECTURAL**

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
ARCHITECTURAL:	MHAworks, PA	BARRY F. HILL	5124	919.682.2870	bhill@mhaworks.com
CIVIL:	THOMAS & HUTTON	ANDREW M. OAKLEY	25505	919.682.0368	oakley.a@tandh.com
ELECTRICAL:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
FIRE ALARM:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
PLUMBING:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
MECHANICAL:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	NEIL KUPLIC	NEIL KUPLIC	20295	919.597.1080	kuplicn@gmail.com
RETAINING WALLS >5' HIGH:					
OTHER:					

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ ADDITION ☐ SHELL/CORE ☐ PHASE CONSTRUCTION - SHELL CORE ☐ 1ST TIME INTERIOR COMPLETIONS

2018 NC EXISTING BUILDING CODE: (CHECK ALL THAT APPLY)
☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14 ☐ ALTERATION LEVEL I ☐ ALTERATION LEVEL II ☐ ALTERATION LEVEL III ☐ HISTORICAL PROPERTY ☐ CHANGE OF USE

CONSTRUCTED *(DATE)*: _____ **CURRENT OCCUPANCY(S)** *(CH. 3)*: **STORAGE**
RENOVATED *(DATE)*: _____ **PROPOSED OCCUPANCY(S)** *(CH. 3)*:
RISK CATEGORY (TABLE 1604.5): **CURRENT:** _____ **PROPOSED:** **II**

BASIC BUILDING DATA:
CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B (CHECK ALL THAT APPLY)
SPRINKLERS: ☐ NO ☐ PARTIAL ■ YES ■ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS: ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☐ NO ■ YES (PRIMARY) **FLOOD HAZARD AREA:** ■ NO ☐ YES
SPECIAL INSPECTIONS REQUIRED: ■ NO ☐ YES

GROSS BUILDING AREA TABLE:

FLOOR	STORAGE (SQ. FT.)	SUB-TOTAL
1ST LEVEL	13,642	13,642
TOTAL	13,642	13,642

ALLOWABLE AREA:
PRIMARY OCCUPANCY CLASSIFICATION: SELECT ONE

ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☐
EDUCATIONAL ☐
FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 CONDITION ☐ 1 ☐ 2
I-2 CONDITION ☐ 1 ☐ 2
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ■ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED
☐ PARKING GARAGE ■ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
UTILITY & MISC. ☐

ACCESSORY OCCUPANCY CLASSIFICATION(S): _____
INCIDENTAL USES: *(TABLE 509)*: _____
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): _____
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTIONS): **903.2.9.2** (REFERENCE 1/G112)
MIXED OCCUPANCY: ☐ YES ■ NO SEPARATION: _____HR. EXCEPTION: _____
☐ NON-SEPARATED USE (508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.
☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B = ≤1.00
ALLOWABLE AREA OF OCCUPANCY A + ALLOWABLE AREA OF OCCUPANCY B = ≤1.00
_____ + _____ =

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 504.2[1] AREA	(C) AREA FOR FRONTAGE INCREASE [1,2]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [3,5]
1	STORAGE - S-1	13,642	9,000	6,750	15,750

[1]FRONTAGE AREA INCREASE FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = **569** (F)
B. TOTAL BUILDING PERIMETER = **569** (P)
C. RATIO (F/P)= 1 (F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY= **30** (W)
E. PERCENT OF FRONTAGE INCREASE I_f = 100 (F/P - 0.25) x W/30 = **75** (%)
[2]UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
[3]MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2).
[4]THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.
[5]FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	FEET: **40**	FEET: **23'-2"**	504.3
BUILDING HEIGHT IN STORIES (TABLE 504.4)	STORIES: **2**	STORIES: **1**	504.4

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING (HOURS) REQ'D	RATING (HOURS) PROVIDED (W/_____* REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
FLOOR CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
ROOF CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING ROOF		N/A					
SHAFT ENCLOSURES - EXIT		N/A					
SHAFT ENCLOSURES - OTHER		N/A					
CORRIDOR SEPARATION		N/A					
OCCUPANCY/FIRE BARRIER SEPARATION		3	3	G500	U904		
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION		N/A					
INCIDENTAL USE SEPARATION		N/A					

* INDICATED SECTION NUMBER PERMITTING REDUCTION.

PERCENTAGE OF WALL OPENING CALCULATIONS: **NO CHANGE**

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLAN (%)

LIFE SAFETY SYSTEM REQUIREMENTS:
EMERGENCY LIGHTING: ■ NO ☐ YES
EXIT SIGNS: ☐ NO ■ YES
FIRE ALARM: ■ NO ☐ YES
SMOKE DETECTION SYSTEM: ■ NO ☐ YES ☐ PARTIAL
CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS:
LIFE SAFETY PLAN SHEET#: G112

■ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
■ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) **AS001**
☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
■ OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
■ OCCUPANT LOADS FOR EACH AREA
■ EXIT ACCESS TRAVEL DISTANCES (1017)
☐ COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
☐ DEAD END LENGTHS (1020.4)
■ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
■ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
■ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
☐ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATE FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
☐ LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
■ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION (407.5)
☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*: **N/A**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING *(SECTION 1106)*:

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE	# OF ACCESSIBLE SPACES PROVIDED VAN SPACES WITH 132" ACCESS AISLE	# OF ACCESSIBLE SPACES PROVIDED VAN SPACES WITH 8' ACCESS AISLE	TOTAL # OF ACCESSIBLE SPACES PROVIDED
TOTAL:						

PLUMBING FIXTURE REQUIREMENTS *(TABLE 2902.1)*: **N/A** (*SEE TABLE 2902.1 m & n*)

USE: **STORAGE (S-1)**		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	0			0		-	0	0
	NEW	0		0	0		-	0	0
	REQUIRED	0		0	0		-	0	0

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)
_____
_____
_____

ENERGY SUMMARY: ***ENCLOSED STORAGE C - NOT REQUIRED TO MEET ENERGY CODE***

ENERGY REQUIREMENTS:
THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: NO YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)
EXEMPT BUILDING: NO YES (PROVIDE CODE OR STATUTORY REFERENCE): _____
CLIMATE ZONE: ☐ 3A ■ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ■ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE
(IF "OTHER" SPECIFY SOURCE HERE) _____

THERMAL ENVELOPE:
ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
SKYLIGHT IN EACH ASSEMBLY:
U-VALUE OF SKYLIGHT:
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY:
EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (WINDOWS OR DOORS WITH GLAZING):
U-VALUE OF ASSEMBLY:
SOLAR HEAT GAIN COEFFICIENT:
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:
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
HORIZONTAL / VERTICAL REQUIREMENTS:
SLAB HEATED? (Y/N):

STRUCTURAL DESIGN:
DESIGN LOADS:
IMPORTANCE FACTORS: SNOW (LS) _____ SEISMIC (LE) _____
LIVE LOADS: ROOF _____ PSF MEZZANINE _____ PSF FLOOR _____ PSF
GROUND SNOW LOAD: _____ PSF
WIND LOAD: ULTIMATE WIND SPEED _____ MPH (ASCE-7) EXPOSURE CATEGORY _____
SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION S_s: _____ %g S_1: _____ %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM (CHECK ONE):
☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO
LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND
SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT): _____ PSF
PRESUMPTIVE BEARING CAPACITY: _____ PSF
PILE SIZE, TYPE, AND CAPACITY: _____

MECHANICAL SUMMARY: ***ENCLOSED STORAGE C***

MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT
THERMAL ZONE: 4A
WINTER DRY BULB: **16°F**
SUMMER DRY BULB: **90°F**
INTERIOR DESIGN CONDITIONS:
WINTER DRY BULB: **70°F**
SUMMER DRY BULB: **75°F**
RELATIVE HUMIDITY: **50%**
BUILDING HEATING LOAD: TENANT SPACE - 85,900 BTU/HR
BUILDING COOLING LOAD: TENANT SPACE - 186,400 BTU/HR
MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT: **ENCLOSED STORAGE C IS SERVED**
HEATING EFFICIENCY: **BY TWO NEW SPLIT SYSTEMS HEAT**
COOLING EFFICIENCY: **PUMP UNITS WITH ELECTRIC STRIP**
SIZE CATEGORY OF UNIT: AUXILIARY HEATING.
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: **N/A**
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: **N/A**
LIST EQUIPMENT EFFICIENCIES: EFFICIENCIES ARE LISTED ON EQUIPMENT SCHEDULES - SEE DRAWINGS

ELECTRICAL SUMMARY:
ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE: ENERGY CODE: ■ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ■ PRESCRIPTIVE ☐ PERFORMANCE
LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE:
NUMBER OF LAMPS IN FIXTURE:
BALLAST TYPE USED IN THE FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
SEE LIGHTING FIXTURE SCHEDULE
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED (WHOLE BUILDING OF SPACE BY SPACE:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:
ADDITIONAL EFFICIENCY PACKAGE OPTIONS
(WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)
☐ C406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
■ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONJUNCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT. ©-MHAworks 2024

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BARRY FRANKLIN HILL REGISTERED 5124 11.11.24 NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C: 2018 APPENDIX B - BUILDING CODE SUMMARY

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G103

2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 - FAMILY DWELLINGS AND TOWNHOUSES)
(REPRODUCE THE FOLLOWING DATA ON THE BUILDING PLAN SHEET 1 OR 2)

NAME OF PROJECT: HILLSBOROUGH NORTH CAROLINA HIGHWAY 86 PUBLIC WORKS BUILDING D
ADDRESS: 890 NC-86, HILLSBOROUGH, NC ZIP CODE: 27278
PROPOSED USE: BUSINESS
OWNER OR AUTHORIZED AGENT: TOWN OF HILLSBOROUGH - STEPHANIE TRUEBLOOD PHONE #: 919.296.9481 EMAIL: stephanie.trueblood@hillsboroughnc.gov
OWNED BY: ■ CITY/COUNTY ☐ PRIVATE ☐ STATE
CODE ENFORCEMENT JURISDICTION: ■ CITY: HILLSBOROUGH ☐ COUNTY: ORANGE COUNTY ☐ STATE: NORTH CAROLINA

LEAD DESIGN PROFESSIONAL ARCHITECTURAL

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE	EMAIL
ARCHITECTURAL:	MHAworks, PA	BARRY F. HILL	5124	919.682.2870	bhill@mhaworks.com
CIVIL:	THOMAS & HUTTON	ANDREW M. OAKLEY	25505	919.682.0368	oakley.a@tandh.com
ELECTRICAL:	ANGUS CLARK ENGINEERING	ANGUS CLARK	13719	919.859.2674	angus@angusclarkengineering.com
FIRE ALARM:					
PLUMBING:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
MECHANICAL:	WEST KEY CONSULTING	JASON RIVENBARK	31987	919.881.8020	jasonr@westconsulting.com
SPRINKLER/STANDPIPE:					
STRUCTURAL:	NEIL KUPLIC	NEIL KUPLIC	20295	919.597.1080	kuplicn@gmail.com
RETAINING WALLS >5' HIGH:					
OTHER:					

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ ADDITION ☐ SHELL/CORE ☐ PHASE CONSTRUCTION - SHELL CORE ☐ 1ST TIME INTERIOR COMPLETIONS

2018 NC EXISTING BUILDING CODE: (CHECK ALL THAT APPLY) ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14 ☐ ALTERATION LEVEL I ☐ ALTERATION LEVEL II ☐ ALTERATION LEVEL III ☐ HISTORICAL PROPERTY ☐ CHANGE OF USE

CONSTRUCTED *(DATE)*: _____ **CURRENT OCCUPANCY(S)** *(CH. 3)*: _____
RENOVATED *(DATE)*: _____ **PROPOSED OCCUPANCY(S)** *(CH. 3)*: STORAGE
RISK CATEGORY (TABLE 1604.5): **CURRENT:** _____ **PROPOSED:** II

BASIC BUILDING DATA:

CONSTRUCTION TYPE: (CHECK ALL THAT APPLY) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ■ V-B
SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS: ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ☐ NO ■ YES (PRIMARY) **FLOOD HAZARD AREA:** ■ NO ☐ YES
SPECIAL INSPECTIONS REQUIRED: ■ NO ☐ YES

GROSS BUILDING AREA TABLE:

FLOOR	STORAGE (SQ. FT.)	SUB-TOTAL
1ST LEVEL	7,014	7,014
TOTAL	7,014	7,014

ALLOWABLE AREA:

PRIMARY OCCUPANCY CLASSIFICATION: SELECT ONE

ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
BUSINESS ☐
EDUCATIONAL ☐
FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
INSTITUTIONAL ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-1 CONDITION ☐ 1 ☐ 2
I-2 CONDITION ☐ 1 ☐ 2
I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
MERCANTILE ☐
RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
STORAGE ■ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
UTILITY & MISC. ☐

ACCESSORY OCCUPANCY CLASSIFICATION(S): _____
INCIDENTAL USES: *(TABLE 509)*: _____
SPECIAL USES (CHAPTER 4 - LIST CODE SECTION): _____
SPECIAL PROVISIONS (CHAPTER 5 - LIST CODE SECTIONS): _____
MIXED OCCUPANCY: ☐ YES ■ NO SEPARATION: _____ HR. EXCEPTION: _____

☐ NON-SEPARATED USE (508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.

☐ SEPARATED USE (508.4) - SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY. THE AREA OF THE OCCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

ACTUAL AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B = ≤1.00
ALLOWABLE AREA OF OCCUPANCY A + ALLOWABLE AREA OF OCCUPANCY B = ≤1.00
_____ + _____ =

STORY NUMBER	DESCRIPTION AND USE	(A) BUILDING AREA PER STORY (ACTUAL)	(B) TABLE 506.2[1] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	STORAGE - S-1	7,014	9,000		9,000

[1] FRONTAGE AREA INCREASE FROM SECTION 506.2 ARE COMPUTED THUS:
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH =_____(F)
B. TOTAL BUILDING PERIMETER =_____(P)
C. RATIO (F/P)=_____ (F/P)
D. W= MINIMUM WIDTH OF PUBLIC WAY=_____(W)
E. PERCENT OF FRONTAGE INCREASE I_ = 100 [F/P - 0.25] x W/30 =_____(%)
[2] UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
[3] 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.
*FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

ALLOWABLE HEIGHT:

	ALLOWABLE (TABLE 503)		SHOWN ON PLANS		CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	FEET:	40	FEET:	28'-6"	504.3
BUILDING HEIGHT IN STORIES (TABLE 504.4)	STORIES:	2	STORIES:	1	504.4

FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING (HOURS) REQ'D	RATING (HOURS) PROVIDED (W/__ REDUCTION)	DETAIL # & SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES		0					
BEARING WALLS							
EXTERIOR							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR		0					
NON-BEARING WALLS & PARTITIONS							
EXTERIOR WALLS							
NORTH		0					
EAST		0					
WEST		0					
SOUTH		0					
INTERIOR WALLS AND PARTITIONS		0					
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
FLOOR CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING FLOORS		N/A					
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS							
ROOF CEILING ASSEMBLY		N/A					
COLUMNS SUPPORTING ROOF		N/A					
SHAFT ENCLOSURES - EXIT		N/A					
SHAFT ENCLOSURES - OTHER		N/A					
CORRIDOR SEPARATION		N/A					
OCCUPANCY/FIRE BARRIER SEPARATION		N/A					
PARTY/FIRE WALL SEPARATION		N/A					
SMOKE BARRIER SEPARATION		N/A					
SMOKE PARTITION		N/A					
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION		N/A					
INCIDENTAL USE SEPARATION		N/A					

* INDICATED SECTION NUMBER PERMITTING REDUCTION.

PERCENTAGE OF WALL OPENING CALCULATIONS: NO CHANGE

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLAN (%)

LIFE SAFETY SYSTEM REQUIREMENTS:

EMERGENCY LIGHTING: ■ NO ☐ YES
EXIT SIGNS: ■ NO ☐ YES
FIRE ALARM: ■ NO ☐ YES
SMOKE DETECTION SYSTEM: ■ NO ☐ YES ☐ PARTIAL
CARBON MONOXIDE DETECTION: ■ NO ☐ YES

LIFE SAFETY PLAN REQUIREMENTS: LIFE SAFETY PLAN SHEET#: G113

☐ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7)
■ ASSUMED AND REAL PROPERTY LINE LOCATIONS (IF NOT ON THE SITE PLAN) AS001
☐ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
■ OCCUPANCY USE FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
■ OCCUPANT LOADS FOR EACH AREA
■ EXIT ACCESS TRAVEL DISTANCES (1017)
☐ COMMON PATH OF TRAVEL DISTANCES (TABLES 1006.2.1 & 1006.3.2(1))
☐ DEAD END LENGTHS (1020.4)
■ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
■ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
■ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
☐ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATE FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
☐ LOCATION OF DOORS WITH PANIC HARDWARE (1010.1.10)
☐ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
☐ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
☐ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
☐ LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
☐ THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
☐ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION (407.5)
☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

ACCESSIBLE DWELLING UNITS *(SECTION 1107)*: **N/A**

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING *(SECTION 1106)*:

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED REGULAR WITH 5' ACCESS AISLE	# OF ACCESSIBLE SPACES PROVIDED VAN SPACES WITH 132' ACCESS AISLE	# OF ACCESSIBLE SPACES PROVIDED VAN SPACES WITH 8' ACCESS AISLE	TOTAL # OF ACCESSIBLE SPACES PROVIDED
TOTAL:						

PLUMBING FIXTURE REQUIREMENTS *(TABLE 2902.1)*: **N/A** *(SEE TABLE 2902.1 m & n)*

USE: STORAGE (S-1)

		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
SPACE	EXISTING	0			0		-	0	0
	NEW	0		0	0		-	0	0
	REQUIRED	0		0	0		-	0	0

SPECIAL APPROVALS: SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

ENERGY SUMMARY: N/A

ENERGY REQUIREMENTS:

THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE NORTH CAROLINA ENERGY CONSERVATION CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: NO YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)
EXEMPT BUILDING: NO YES (PROVIDE CODE OR STATUTORY REFERENCE): _____
CLIMATE ZONE: ☐ 3A ☐ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ☐ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE
(IF "OTHER" SPECIFY SOURCE HERE) _____

THERMAL ENVELOPE:

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF TOTAL INSULATION:
SKYLIGHT IN EACH ASSEMBLY:
U-VALUE OF SKYLIGHT:
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY:

EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
OPENING (WINDOWS OR DOORS WITH GLAZING):
U-VALUE OF ASSEMBLY:
SOLAR HEAT GAIN COEFFICIENT:
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:
DESCRIPTION OF ASSEMBLY:
U-VALUE OF TOTAL ASSEMBLY:
R-VALUE OF INSULATION:
HORIZONTAL / VERTICAL REQUIREMENTS:
SLAB HEATED? (Y/N):

STRUCTURAL DESIGN:

DESIGN LOADS:

IMPORTANCE FACTORS: SNOW (LS) 10 PSF; SEISMIC (LE) _____
LIVE LOADS: ROOF 20 PSF; MEZZANINE 100 PSF; FLOOR _____ PSF
GROUND SNOW LOAD: 10 PSF
WIND LOAD: ULTIMATE WIND SPEED 110 MPH (ASCE-7); EXPOSURE CATEGORY C

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV
SPECTRAL RESPONSE ACCELERATION S_s _____ %g S_1 _____ %g
SITE CLASSIFICATION (ASCE 7) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE):
☐ BEARING WALL ☐ DUAL WITH SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL WITH INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITIES:
FIELD TEST (PROVIDE COPY OF TEST REPORT): _____ PSF
PRESUMPTIVE BEARING CAPACITY: _____ PSF
PILE SIZE, TYPE, AND CAPACITY: _____

MECHANICAL SUMMARY: N/A

MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

THERMAL ZONE:
WINTER DRY BULB:
SUMMER DRY BULB:
INTERIOR DESIGN CONDITIONS:
WINTER DRY BULB:
SUMMER DRY BULB:
RELATIVE HUMIDITY:
BUILDING HEATING LOAD:
BUILDING COOLING LOAD:

MECHANICAL SPACING CONDITIONING SYSTEM
UNITARY
DESCRIPTION OF UNIT:
HEATING EFFICIENCY:
COOLING EFFICIENCY:
SIZE CATEGORY OF UNIT:
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON:
LIST EQUIPMENT EFFICIENCIES:

ELECTRICAL SUMMARY:

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE: ENERGY CODE: ■ PRESCRIPTIVE ☐ PERFORMANCE
ASHRAE 90.1: ■ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE:
NUMBER OF LAMPS IN FIXTURE:
BALLAST TYPE USED IN THE FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
→ **SEE LIGHTING FIXTURE SCHEDULE**
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED (WHOLE BUILDING OF SPACE BY SPACE:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:

ADDITIONAL EFFICIENCY PACKAGE OPTIONS
(WHEN USING THE 2018 NCECC; NOT REQUIRED FOR ASHRAE 90.1)
☐ C406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
■ C406.3 REDUCED LIGHTING POWER DENSITY
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON-SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

MHA WORKS
Together, we create.

THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONJUNCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT. ©MHAworks 2024

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BARRY FRANKLIN HILL REGISTERED 5124 PROFESSIONAL ENGINEER 11.11.24 NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING D: 2018 APPENDIX B - BUILDING CODE SUMMARY

PHASE:
BID SET

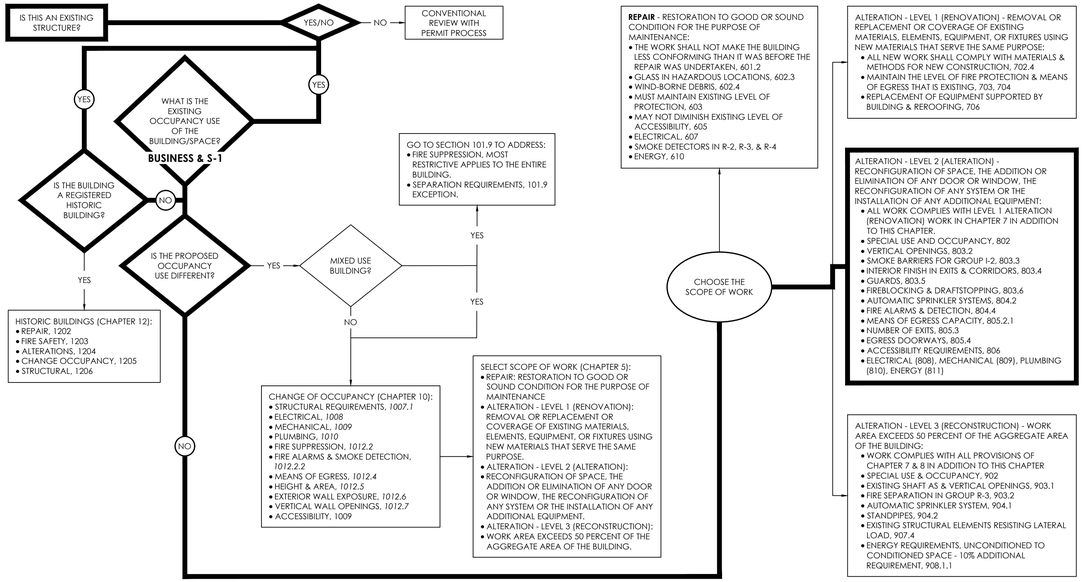
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G104

NC EXISTING BUILDING CODE DECISION DIAGRAM

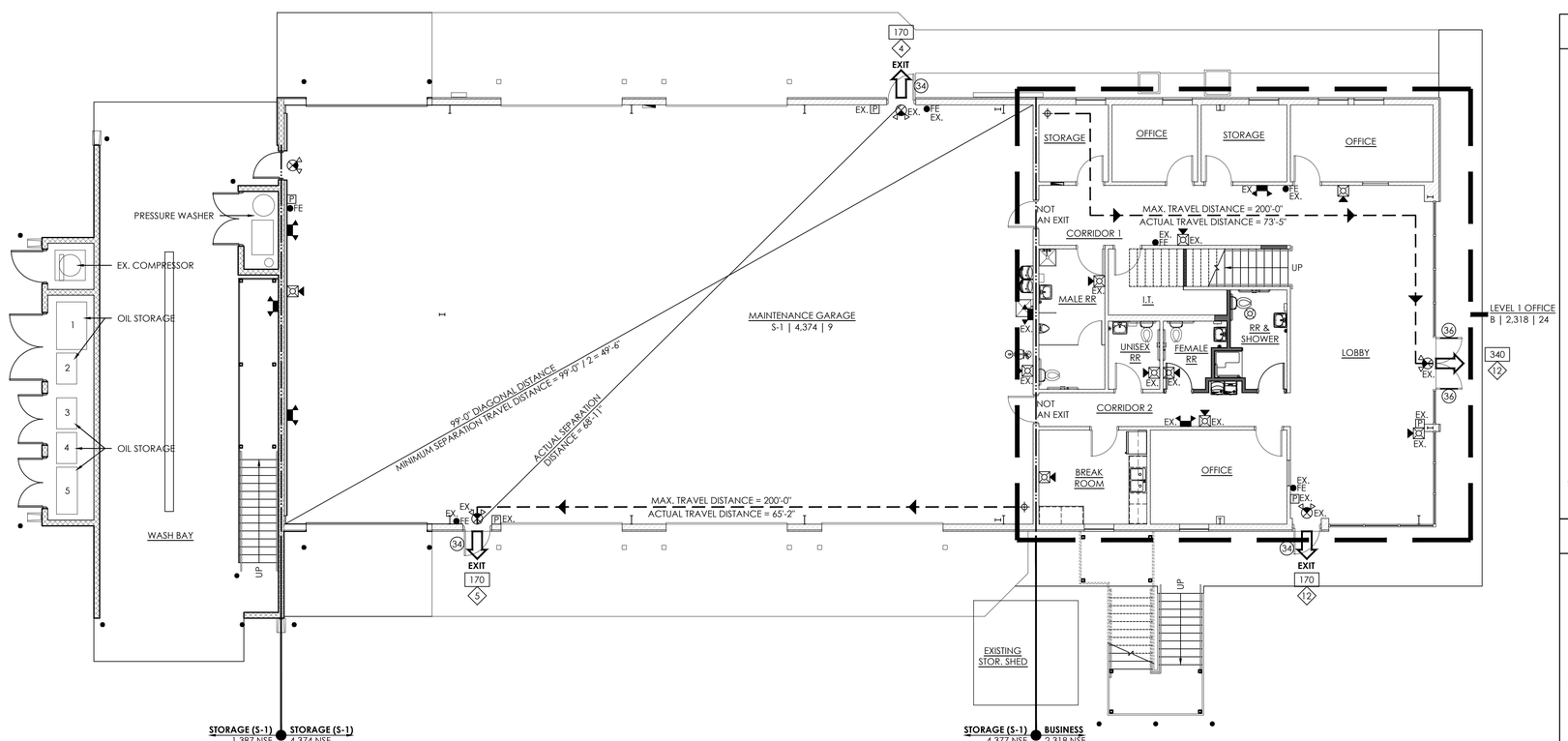
(WORK AREA COMPLIANCE METHOD)

3/11/15



LEVEL 2 LIFE SAFETY PLAN (2)

1/8" = 1'-0"



LEVEL 1 - LIFE SAFETY PLAN (1)

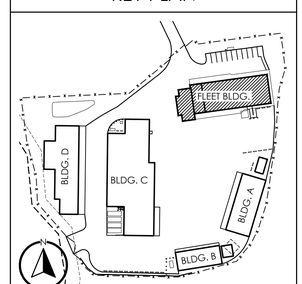
1/8" = 1'-0"

SYMBOLS - LIFE SAFETY PLAN

LIFE SAFETY
LOBBY — ROOM NAME
B | ### | # — OCCUPANCY LOAD
SQUARE FOOTAGE
FUNCTION OF SPACE

- 2-HEAD EMERGENCY EXIT SIGN
- 2-HEAD EMERGENCY LIGHT
- 2-HR. OCCUPANCY SEPARATION/FIRE BARRIER
- 3-HR. FIRE BARRIER
- ACTUAL EXIT DOOR OCCUPANT LOAD
- CLEAR EXIT WIDTH (INCHES)
- DIRECTION OF DISCHARGE
- EMERGENCY EXIT SIGN
- EXIT ACCESS
- EXIT DOOR CAPACITY
- FIRE ALARM HORN/STROBE DEVICE
- FIRE ALARM PULL STATION
- FIRE EXTINGUISHER
- MAX. TRAVEL DISTANCE
- REMOTE POINT

KEY PLAN



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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

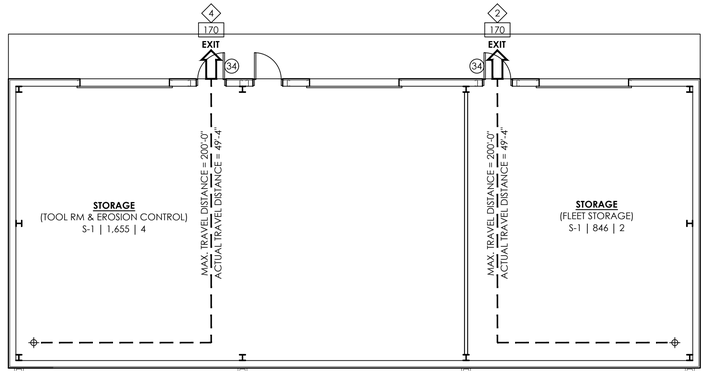
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SHEET NAME:
LEVEL 1 & LEVEL 2 LIFE SAFETY PLANS & NC EXISTING BUILDING CODE DECISION DIAGRAM

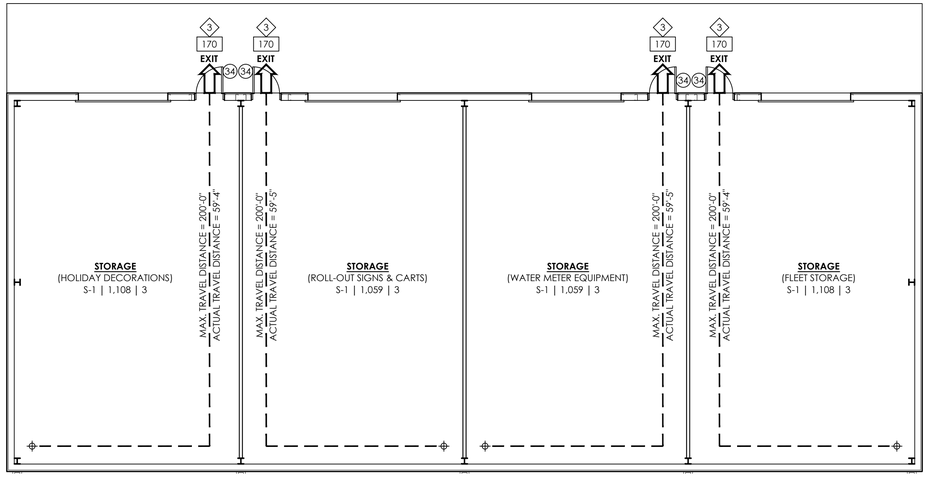
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G110



2,501 SF **LIFE SAFETY PLAN - BUILDING B** (2)
1/8" = 1'-0"

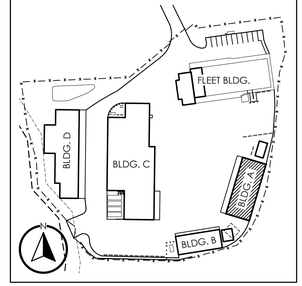


4,333 NSF **LIFE SAFETY PLAN - BUILDING A** (1)
1/8" = 1'-0"

SYMBOLS - LIFE SAFETY PLAN

- LOBBY — ROOM NAME
- B | ### | # — OCCUPANTS
- NET SQUARE FOOTAGE
- FUNCTION OF SPACE
- 2-HEAD EMERGENCY EXIT SIGN
- 2-HEAD EMERGENCY LIGHT
- 2-HR OCCUPANCY SEPARATION/FIRE BARRIER
- 3-HR OCCUPANCY SEPARATION
- ## — ACTUAL EXIT DOOR OCCUPANT LOAD
- (##) — CLEAR EXIT WIDTH (INCHES)
- DIRECTION OF DISCHARGE
- EXIT ACCESS
- ### — EXIT DOOR CAPACITY
- FIRE ALARM HORN/STROBE
- FE — FIRE EXTINGUISHER
- MAX. TRAVEL DISTANCE
- REMOTE POINT

KEY PLAN



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890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

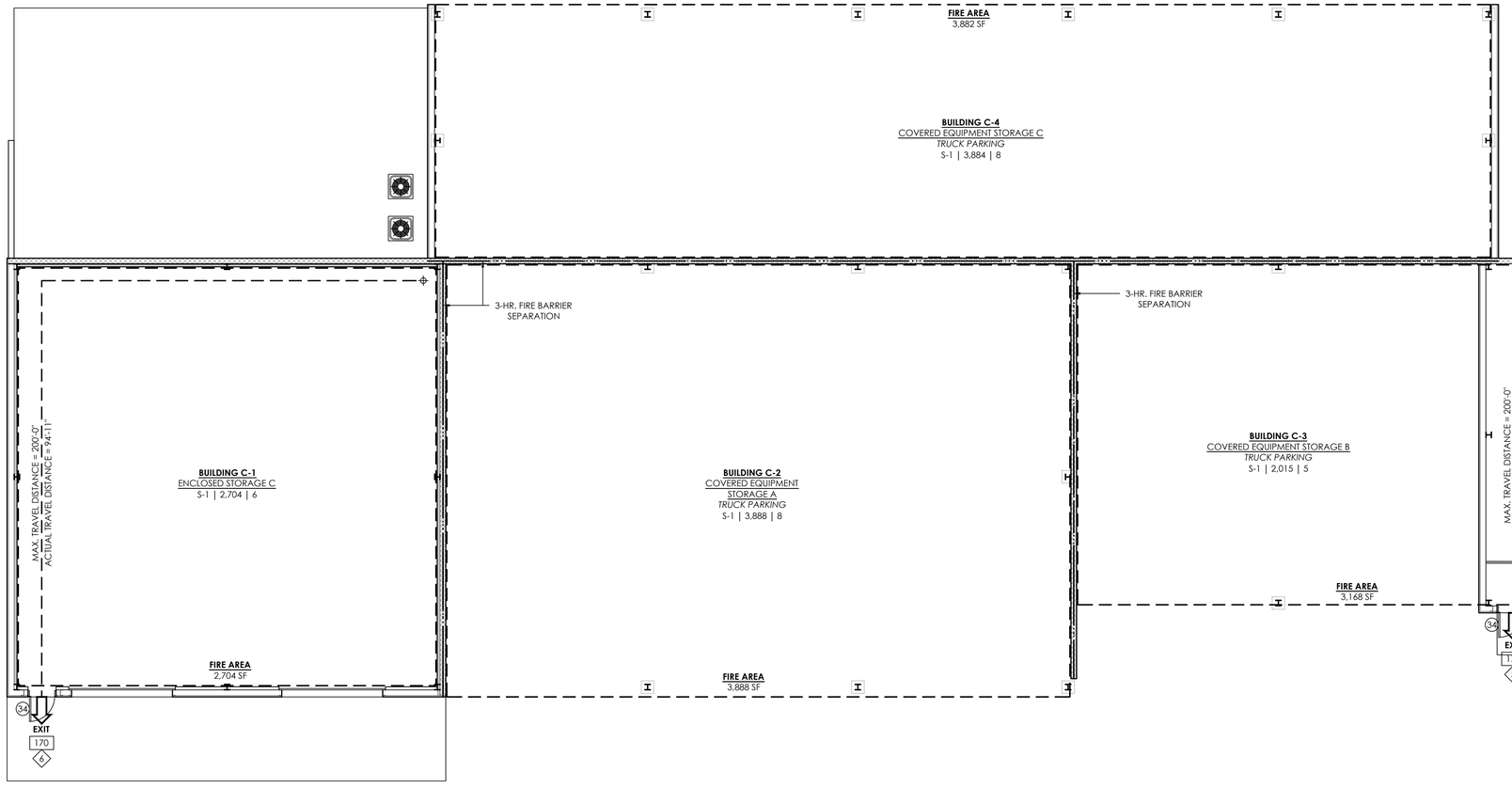
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING A & BUILDING B LIFE SAFETY PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G111



13,642 SF

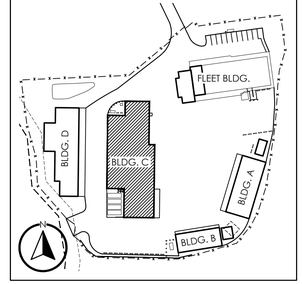
LIFE SAFETY PLAN - BUILDING C

1/8" = 1'-0" (1)

SYMBOLS - LIFE SAFETY PLAN

- LOBBY — ROOM NAME
- B | ### | # — OCCUPANTS / NET SQUARE FOOTAGE / FUNCTION OF SPACE
- 2-HEAD EMERGENCY EXIT SIGN
- 2-HEAD EMERGENCY LIGHT
- 2-HR OCCUPANCY SEPARATION/FIRE BARRIER
- 3-HR OCCUPANCY SEPARATION
- ## — ACTUAL EXIT DOOR OCCUPANT LOAD
- (##) — CLEAR EXIT WIDTH (INCHES)
- DIRECTION OF DISCHARGE
- EXIT ACCESS
- ### — EXIT DOOR CAPACITY
- FIRE ALARM HORN/STROBE
- FE — FIRE EXTINGUISHER
- MAX. TRAVEL DISTANCE
- REMOTE POINT

KEY PLAN



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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

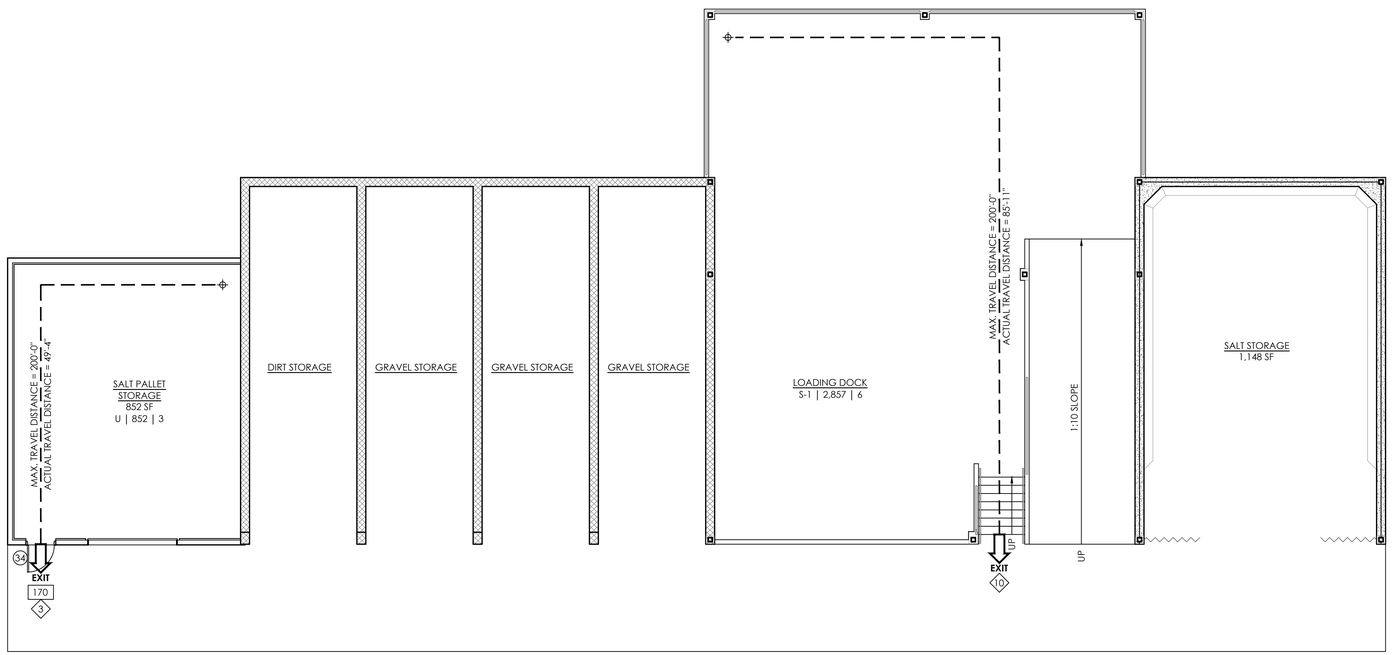
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C LIFE SAFETY PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G112



7,014 SF

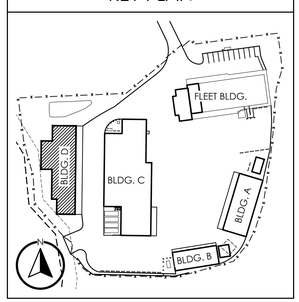
LIFE SAFETY PLAN - BUILDING D (1)

1/8" = 1'-0"

SYMBOLS - LIFE SAFETY PLAN

- LOBBY — ROOM NAME
- B | #### | # — OCCUPANTS / NET SQUARE FOOTAGE / FUNCTION OF SPACE
- 2-HEAD EMERGENCY EXIT SIGN
- 2-HEAD EMERGENCY LIGHT
- 2-HR OCCUPANCY SEPARATION/FIRE BARRIER
- 3-HR OCCUPANCY SEPARATION
- ## — ACTUAL EXIT DOOR OCCUPANT LOAD
- (##) — CLEAR EXIT WIDTH (INCHES)
- DIRECTION OF DISCHARGE
- EXIT ACCESS
- ### — EXIT DOOR CAPACITY
- FIRE ALARM HORN/STROBE
- FE — FIRE EXTINGUISHER
- MAX. TRAVEL DISTANCE
- REMOTE POINT

KEY PLAN



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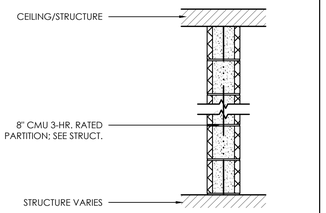
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SHEET NAME:
BUILDING D LIFE SAFETY PLAN

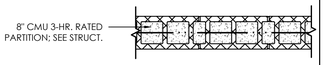
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G113



SECTION

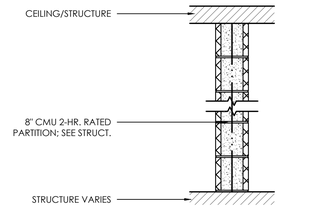


PLAN

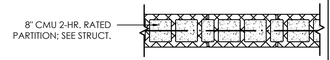
TYPE H: 8" CMU - 3-HR. RATED PARTITION

RATING: 3-HR.
NOTES: SEE G500 FOR UL DESIGN NO U904

H



SECTION

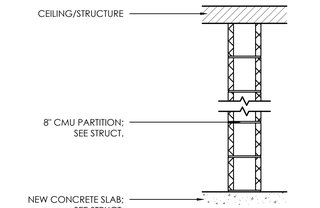


PLAN

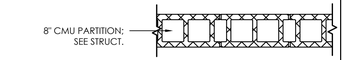
TYPE G: 8" CMU - 2-HR. RATED PARTITION

RATING: 2-HR.
NOTES: SEE G500 FOR UL DESIGN NO U905

G



SECTION

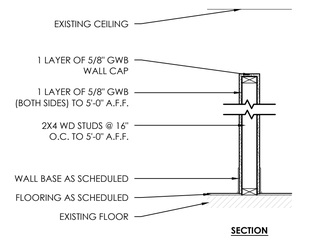


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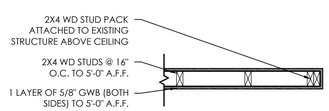
TYPE F: 8" CMU

RATING: 0
NOTES:

F



SECTION

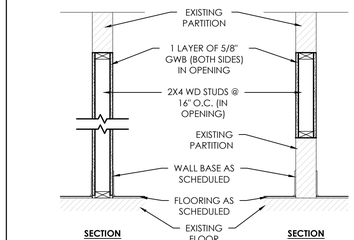


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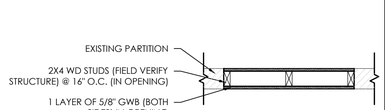
TYPE E: 2X4 WOOD STUDS @ 16" O.C. W/ 1 LAYER OF 5/8" GWB (BOTH SIDES) TO 5'-0" A.F.F.

RATING: 0
NOTES: FLEET BUILDING, 2ND LEVEL

E



SECTION SECTION

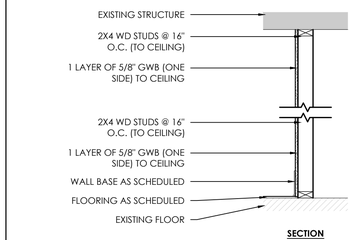


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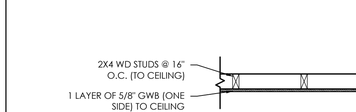
TYPE D: 2X4 WOOD STUDS @ 16" O.C. W/ 1 LAYER OF 5/8" GWB (BOTH SIDES) IN OPENING.

RATING: 0
NOTES: FLEET BUILDING

D



SECTION

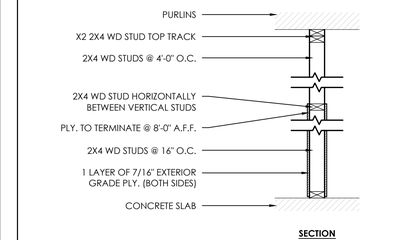


PLAN

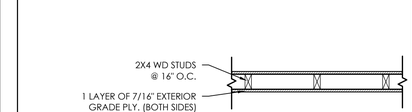
TYPE C: 3-5/8" WOOD STUDS @ 16" O.C. TO CEILING W/ 1 LAYER OF 5/8" GWB (ONE SIDE) TO CEILING.

RATING: 0
NOTES: FLEET BUILDING

C



SECTION

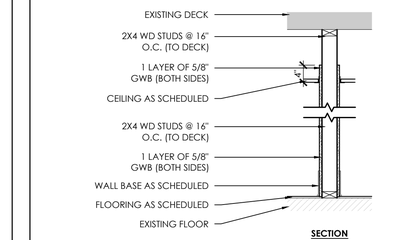


PLAN

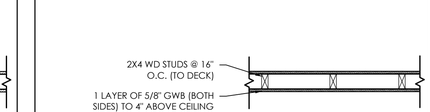
TYPE B: 2X4 WOOD STUDS @ 16" O.C. (TO PURLINS) W/ 1 LAYER OF 7/16" EXTERIOR GRADE PLY. (BOTH SIDES) TO 8'-0" A.F.F.

RATING: 0
NOTES: BUILDING A & BULDING B

B



SECTION



PLAN

TYPE A: 2X4 WOOD STUDS @ 16" O.C. TO DECK ABOVE W/ 1 LAYER OF 5/8" GWB (BOTH SIDES) TO 4" ABOVE CEILING (@ APC01).

RATING: 0
NOTES: FLEET BUILDING. PROVIDE WATER RESISTANT GWB IN ALL AREAS ADJ. TO PLUMBING FIXTURES TO 5'-0" (OR GREATER) A.F.F.

A

* FIELD VERIFY EXISTING METAL STUDS OR WOOD STUDS PRIOR TO SUBMITTING A BID.

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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
WALL TYPES

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

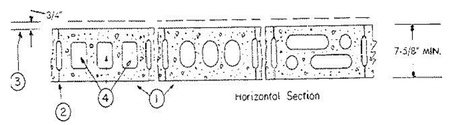
SHEET NUMBER
G200

Design No. **U905**

April 14, 2023

Bearing Wall Rating — 2 HR.
Nonbearing Wall Rating — 2 HR
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Concrete Blocks*** — Various designs. Classification D-2 (2 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).
4. **Loose Masonry Fill** — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.
5. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — EnergyShield Pro Wall Insulation, EnergyShield Pro 2 Wall Insulation, EnergyShield CGF Pro, EnergyShield Ply Pro, EnergyShield® CGF, EnergyShield® PanelCast, EnergyShield® and "EnergyShield® XR

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

Holcim Solutions and Products US, LLC — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath"

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units*** — As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
ATLAS ROOFING CORP — EnergyShield® Ply

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

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

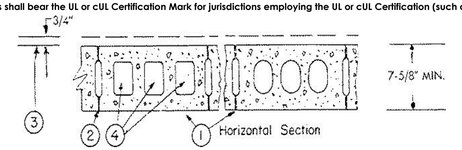
Last Updated on 2023-04-14

Design No. **U904**

April 14, 2023

Bearing Wall Rating — 3 HR.
Nonbearing Wall Rating — 3 HR.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Concrete Blocks*** — Various designs. Classification C-3 (3 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to Classification if used. Attached to concrete blocks (Item 1).
4. **Loose Masonry Fill** — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 1 hr to Classification.
5. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — EnergyShield Pro Wall Insulation, EnergyShield Pro 2 Wall Insulation, EnergyShield CGF Pro, EnergyShield Ply Pro, EnergyShield® CGF, EnergyShield® PanelCast, EnergyShield® and "EnergyShield® XR

DUPONT DE NEMOURS, INC. — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

Holcim Solutions and Products US, LLC — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Type "Xci-Class A", "Xci 286", "Xci Foil (Class A)"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath"

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units*** — As an alternate to Item 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
ATLAS ROOFING CORP — EnergyShield® Ply

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

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

Last Updated on 2023-04-14

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THESE DRAWINGS AND THE ACCOMPANYING SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN THE PROPERTY OF THE ARCHITECT. THEY HAVE BEEN PREPARED FOR A SPECIFIC PROJECT AND SHALL NOT BE USED IN CONJUNCTION WITH ANY OTHER PROJECTS WITHOUT PRIOR WRITTEN PERMISSION OF THE ARCHITECT. ©-MHAworks 2024

MHAworks, P.A. Registered Architectural Corporation North Carolina 50455 DURHAM, NC

BARRY FRANKLIN HILL REGISTERED PROFESSIONAL 5124 NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
UL DETAIL: DESIGN NO. U904 & U905

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
G500

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J:\30897.0000 CONSTRUCTION DRAWINGS\CONSTRUCTION PLANS\30897.0000 CS.DWG

TOWN OF HILLSBOROUGH

CONSTRUCTION PLANS
OF
NC 86 N / FLEET RENOVATION

890 NC 86 N
HILLSBOROUGH, NC

PREPARED FOR:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
MATT EFRID, ASST MGR / STEPHANIE TRUEBLOOD, PROJ MGR
(919)296-9423 / (919) 296-9481
STEPHANIE.TRUEBLOOD@HILLSBOROUGHNC.GOV

PIN: 9865831888

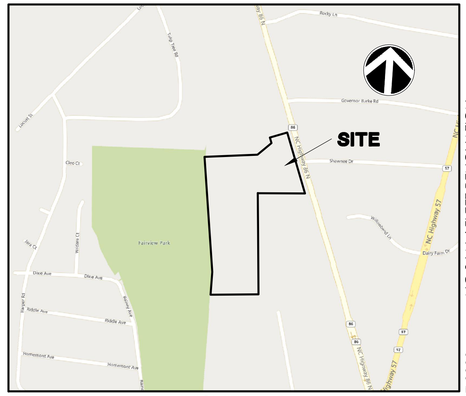
NOVEMBER 11, 2024

J-30897.0000

BID SET

PREPARED BY:

THOMAS & HUTTON



VICINITY MAP
SCALE: 1" = 600'

NC 86 N / FLEET RENOVATION

J-30897.0000

Sheet List Table	
Sheet Number	Sheet Title
C0	COVER SHEET
G0.1	GENERAL NOTES AND INDEX
CD0.1	EXISTING CONDITIONS AND DEMO
C1.1	SITE PLAN
C3.1	PAVING GRADING AND DRAINAGE
C3.2	BIORETENTION DETAILS
C3.3	BIORETENTION DETAILS
C4.1	EROSION CONTROL
C4.2	EROSION CONTROL
C4.3	DRAINAGE AREAS
C4.4	EROSION CONTROL DETAILS
C4.5	EROSION CONTROL DETAILS
C4.6	EROSION CONTROL DETAILS
C5.1	DETAILS

REVISION HISTORY

REV. NO.	REVISION	BY	DATE

SUBMITTAL HISTORY

SUBMITTED TO	DATE

811 Know what's below. Call before you dig.

THOMAS & HUTTON
2510 Meridian Parkway • Suite 100
Durham, NC 27713 • 919.682.0368
www.thomasandhutton.com

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ABBREVIATIONS

DBL	DOUBLE		FM	FORCE MAIN (SANITARY SEWER)		PC	POINT OF CURVE			TC	TOP OF CURB
BOT	BOTTOM		FP	FINISH PAD		PH	POST HYDRANT			TH	THROAT ELEVATION
CB	CATCH BASIN		FR	FRAME		PT	POINT OF TANGENT			TG	TOP OF GUTTER
CI	CURB INLET		GI	GRATE INLET		PVC	POLYVINYL CHLORIDE			TP	TOP OF PAVEMENT
CO	CLEAN OUT		GV	GATE VALVE		RCP	REINFORCED CONCRETE PIPE			TW	TOP OF WALK
CPP	CORRUGATED PLASTIC PIPE		HDPE	HIGH DENSITY POLYETHYLENE		RC	ROLL CURB INLET			TYP	TYPICAL
DBL	DOUBLE		HI	HOODED INLET		RCP	REINFORCED CONCRETE PIPE			VI	VALLEY INLET
DI	DITCH INLET		INV	INVERT ELEVATION		RI	ROOF INLET			W	WATER
DIP	DUCTILE IRON PIPE		JB	JUNCTION BOX		RJP	RESTRAINED JOINT PIPE			W/	WITH
EL	ELEVATION		LF	LINEAR FEET		R/W	RIGHT-OF-WAY			WV	WATER VALVE
ES	END SECTION		MAX	MAXIMUM		SD	STORM DRAINAGE			YI	YARD INLET
FES	FLARED END SECTION		MIN	MINIMUM		SDMH	STORM DRAINAGE MANHOLE			YI	YARD INLET
FG	FINISH GRADE		MH	MANHOLE		SF	SQUARE FEET				
FH	FIRE HYDRANT		OC	ON CENTER		SS	SANITARY SEWER				

DRAINAGE LEGEND

DESCRIPTION	EXISTING	PROPOSED
PIPE		
DITCH		
CURB INLET (CI) CATCH BASIN (CB)		
CURB INLET – RIGHT (CI) OR CATCH BASIN – RIGHT (CB)	OR	OR
CURB INLET – LEFT (CI) OR CATCH BASIN – LEFT (CB)	OR	OR
CURB INLET – BOTH (CI) OR CATCH BASIN – LEFT (CB)	OR	OR
CONTROL STRUCTURE (CS)		
DITCH INLET (DI)		
GRATE INLET (GI)		
HOODED INLET (HI)	OR	OR
JUNCTION BOX (JB)		
MANHOLE (SDMH)		
ROLL CURB INLET (RC)		
ROOF INLET (RI)		
YARD INLET (YI)		
FLARED END SECTION (FES)		

WATER LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	10"W	10"W
VALVE AND BOX		
FIRE HYDRANT W/VALVE & BOX		
POST HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND – HORIZONTAL		
45° BEND – HORIZONTAL		
22-½° BEND – HORIZONTAL		
11-¼° BEND – HORIZONTAL		
BEND – VERTICAL		
CAP		

SEWER LEGEND

DESCRIPTION	EXISTING	PROPOSED
GRAVITY PIPE	SS	
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
MANHOLE		
CLEANOUT		
FORCEMAIN	10"FM 10"FM	10"FM 10"FM
VALVE AND BOX		
FLUSH HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND – HORIZONTAL		
45° BEND – HORIZONTAL		
22-½° BEND – HORIZONTAL		
11-¼° BEND – HORIZONTAL		
BEND – VERTICAL		
PLUG \ CAP		

OTHER UTILITIES LEGEND

DESCRIPTION	EXISTING
NATURAL GAS	UGG UGG
TELEPHONE	OHT OHT
UNDERGROUND TELEPHONE	UTL UTL
ELECTRICITY	OHP OHP
UNDERGROUND ELECTRICITY	UGP UGP

PROJECT DATA

PARCEL
PIN: 9865831888
ACREAGE: 625,957 SF / 14.37 AC

LAND USE
EXISTING: GOVERNMENT MAINTENANCE YARD
PROPOSED: GOVERNMENT MAINTENANCE YARD

ZONING
EXISTING: LIGHT INDUSTRIAL
PROPOSED: NO CHANGE

OVERLAYS: N/A

RIVER BASIN: NEUSE

SITE AREA IN 100 YEAR FLOOD PLAIN: 0 AC; FEMA MAP# 3710986500J (EFFETIVE DATE 2/2/2007)
TOTAL SITE AREA: 625,957 SF / 14.37 AC

DISTURBED AREA
ONSITE DISTURBANCE: 132,232 SF / 3.04 AC
OFFSITE DISTURBANCE: 0 SF / 0.0 AC
TOTAL DISTURBED AREA: 132,232 SF / 3.04 AC

ONSITE UNDISTURBED AREA 493,725 SF / 11.33 AC

IMPERVIOUS SURFACE
EXISTING: 71,452 SF / 1.64 AC (11.41%)
PROPOSED: 113,559 SF / 2.61 AC (18.14%)

BUILDING DATA
FLEET BUILDING: 9,595 SF (NEW TOTAL) INCLUDING 5,843 SF (EXISTING)
BUILDING A: 4,333 SF
BUILDING B: 2,501 SF
BUILDING C: 13,642 SF
BUILDING D: 7,035 SF
TOTAL: 37,106 SF (NEW TOTAL) INCLUDING 5,843 SF (EXISTING)

BUILDING SETBACKS: FRONT - 35' MIN.
SIDE YARD - 50' MIN. (ADJACENT TO OI) SIDE YARD - 0 (ADJACENT TO LI)
REAR YARD - 50' MIN. (ADJACENT TO OI) REAR YARD - 0 (ADJACENT TO LI)

BUILDING HEIGHT
REQUIRED: 65' MAX.
PROPOSED: FLEET = 24'
BLDG A = 16'
BLDG B = 16'
BLDG C = 20'
BLDG D = 29'

VEHICULAR PARKING
REQUIRED: 1 SPACE / 375 SQ FT GROSS FLOOR AREA
REQUIRED ADA = 1 PER 25 SPACES

FLEET BUILDING: GROUND FLOOR HEATED AND COOLED 2,318 SF
GROUND FLOOR HEATED AND VENTILATED
MAINTENANCE GARAGES 4,391 SF
OIL STORAGE 171 SF
4,562 SF
MEZZANINE HEATED AND COOLED 1,492 SF
FLEET TOTAL (THE ABOVE + COVERED
WASH BAY & PRESSURE
WASHER STORAGE) 9,595 SF

BUILDING C: HEATED AND COOLED 2,704 SF

GRAND TOTAL **12,299 SF**

EXISTING BUILDING SF: 5,843 SF / 375 SF = 15.6

NEW BUILDINGS SF: FLEET 3,752 SF
BUILDING C 2,704 SF
TOTAL 6,456 SF / 375 SF = 17.2

TOTAL **33 SPACES** (2 ADA COMPLIANT)

PROPOSED: 17 NEW SPACES INCLUDING 1 ADA COMPLIANT
(FOR A TOTAL OF 33 SPACES INCLUDING 2 ADA COMPLIANT)

PROJECT NOTES

- BOUNDARY AND TOPOGRAPHIC INFORMATION BASED ON SURVEY PROVIDED BY THOMAS & HUTTON DATED MAY 8, 2023.
- PUBLIC WATER IS AVAILABLE TO THIS PROJECT
- ANY NEW UTILITIES ARE TO BE INSTALLED UNDERGROUND.

RESOURCE ORDINANCE COMPLIANCE

FLOODPLAIN PROTECTION: NO FLOOD PLAIN PER FEMA MAP # 3710986500J, EFFECTIVE FEBRUARY 2, 2007.
STEEP SLOPE PROTECTION: THERE ARE NO STEEP SLOPES ON THIS SITE.
WETLANDS PROTECTION: THERE ARE NO WETLANDS ON THIS SITE.
STREAM BUFFERS: 50' RIPARIAN BUFFER.

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NO.	REVISIONS	BY	DATE

BID SET

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2510 Meridian Parkway • Suite 100
Durham, NC 27713 • 919.682.0368
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GENERAL NOTES AND INDEX

NC 86 N / FLEET RENOVATION

PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
MATT EFRID, ASST MGR / STEPHANIE TRUEBLOOD, PROJ
(919)296-9423 / (919) 296-9481
STEPHANIE.TRUEBLOOD@HILLSBOROUGHNC.GOV

DATUM: HORIZ.: VERT.:

JOB NO:	30897.0000
DATE:	11/11/24
DRAWN:	
DESIGNED:	AO
REVIEWED:	AO
APPROVED:	
SCALE:	

G0.1

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DB 6073 PG 211
PB 105 PG 163

WILLETTS POINT HOLDINGS, LLC
DB 6073 PG 211

WILLETTS PO HOLDINGS, LI
DB 6073 PG 211
PB 105 PG 163

NGE COUNTY
4647 PG 76
108 PG 157

TOP OF BANK
EXISTING PROPERTY LINE (TYP)
EXISTING 20' SANITARY SEWER EASEMENT (REFERENCE PB 100 PG 148 AND PB 105 PG 163)
EXISTING SIGN
EXISTING ASPHALT DRIVE TO REMAIN
EX FH
EX SSMH
EX BFP
EX WM
EXISTING ASPHALT DRIVE TO BE REMOVED (TYP)
EXISTING FENCE AND GATE TO BE REMOVED
EXISTING POND TO BE REBUILT
EX 8" SS LINE
EXISTING TREELINE (TYP)
EXISTING TREES TO BE REMOVED (TYP)
EX SSMH
EX SSMH
EX 8" WL
EX 8" SS LINE
EX 4" SS LINE
EX HVAC UNITS
EX GAS
EX WATER VALVE
EXISTING SIGN
PARKING TO REMAIN
EX OIL/WATER SEPARATOR
EXISTING INLET TO REMAIN (TYP)
EX ROLL-OUT CARTS
EX BUILDING TO REMAIN
GOVERNMENT MAINTENANCE
5,843 SF TO REMAIN
EX LIGHT POLE
EXISTING STORAGE STRUCTURE TO BE REMOVED/RELOCATED
OVERHEAD LIGHTS TO BE REMOVED
EX LIGHT POLE
TREE PROTECTION FENCE RE:I/C5.I
EXISTING STORAGE 400 SF TO RELOCATED
EXISTING FENCE TO REMAIN
EXISTING FENCE TO BE REMOVED
EXISTING PROPERTY LINE (TYP)
LIMITS OF DISTURBANCE (TYP)
OLD LANDFILL BOUNDARY
MONITORING WELLS TO BE ABANDONED
TREES TO BE REMOVED (TYP)
EX OHP
EX UTILITY POLE
EX WATER HYDRANT
EX WATER VALVE
STREAM BUFFER
TOP OF BANK
LIMITS OF DISTURBANCE (TYP)
EXISTING FENCE TO REMAIN
NC 86 N (VARIABLE WIDTH PUBLIC R/W)

1. ENSURE ALL EROSION CONTROL MEASURES ARE IN WORKING ORDER PRIOR TO THE START OF ANY DEMOLITIONS AND CONSTRUCTION.
2. PAVED AREAS NOT INDICATED TO BE DEMOLISHED ARE TO REMAIN. ALL CONCRETE SAW CUTS ARE TO BE CLEAN, STRAIGHT, AND NEAT.
3. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES FOR LOCATION, REMOVAL, AND RELOCATION OF ANY UTILITIES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXTENT AND LOCATION OF UTILITIES. THIS MAY INCLUDE CONTACTING "NO-CUTS" TO HELP LOCATE SOME UTILITIES.
4. ANY DAMAGED INFRASTRUCTURE CAUSED BY CONSTRUCTION ACTIVITIES MUST BE REPAIRED TO TOWN OF HILLSBOROUGH AND/OR NCDOT STANDARDS AS APPLICABLE AT NO ADDITIONAL EXPENSE TO THE OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, UTILITIES, SIDEWALKS, CURB AND GUTTER, AND ASPHALT.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING IMPROVEMENTS WITHIN THE LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO USE CAUTION WORKING AROUND AND NEAR EXISTING STORM, WATER, AND SEWER. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO EXISTING UTILITIES.
7. ALL PAVEMENT PATCHING SHALL BE PERFORMED PER TOWN OF HILLSBOROUGH AND/OR NCDOT SPECIFICATIONS AND STANDARDS AS APPLICABLE.
8. ALL OVERHEAD UTILITY RELOCATIONS ARE TO BE COORDINATED BY CONTRACTOR WITH APPLICABLE UTILITY PROVIDER.
9. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES TO SITE FEATURES AND UTILITIES NOT SHOWN TO BE REMOVED. ANY DAMAGE SHALL BE REPAIRED TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

1/CD0.2
DEMOLITION NOTES

NO	REVISIONS	BY	DATE

BID SET

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Durham, NC 27713 • 919.682.0368
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EXISTING CONDITIONS AND DEMO

NC 86 N / FLEET RENOVATION

PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
MATT EFRID, ASST MGR / STEPHANIE TRUEBLOOD, PROJ MGR
(919)296-9423 / (919) 296-9481
STEPHANIE.TRUEBLOOD@HILLSBOROUGHNC.GOV

40 0 20 40
GRAPHIC SCALE:
1 INCH = 40 FEET

DATUM: HORIZ.: VERT.:

JOB NO:	30897.0000
DATE:	11/11/24
DRAWN:	
DESIGNED:	AO
REVIEWED:	AO
APPROVED:	
SCALE:	1" = 40'

CD0.1

VEHICULAR PARKING

REQUIRED: 1 SPACE / 375 SQ FT GROSS FLOOR AREA
REQUIRED ADA = 1 PER 25 SPACES

FLEET BUILDING:	GROUND FLOOR HEATED AND COOLED		2,318 SF
	GROUND FLOOR HEATED AND VENTILATED MAINTENANCE GARAGES	4,391 SF	
	OIL STORAGE	171 SF	
			4,562 SF
	MEZZANINE HEATED AND COOLED		1,492 SF
	FLEET TOTAL (THE ABOVE + COVERED WASH BAY & PRESSURE WASHER STORAGE)		9,595 SF
BUILDING C:	HEATED AND COOLED		2,704 SF
GRAND TOTAL			**12,299 SF**

EXISTING BUILDING SF: 5,843 SF / 375 SF = 15.6

NEW BUILDINGS SF:	FLEET	3,752 SF
	BUILDING C	2,704 SF
	TOTAL	6,456 SF / 375 SF = 17.2

TOTAL **33 SPACES** (2 ADA COMPLIANT)

PROPOSED: 17 NEW SPACES INCLUDING 1 ADA COMPLIANT
(FOR A TOTAL OF 33 SPACES INCLUDING 2 ADA COMPLIANT)

DB 6075 PG 211
PB 105 PG 163

WILLETTS POINT HOLDINGS, LLC
DB 6073 PG 2
PB 105 PG 16

NC 86N (VARIABLE WIDTH PUBLIC R/W)

FLEET BLDG

TOP OF BANK
EX GENERATOR TO REMAIN
EX FH
EX WATER VALVES
36' AUTOMATIC SLIDE GATE
TIE TO EXISTING EDGE OF ASPHALT
EXISTING SANITARY SEWER
EXISTING 20' SANITARY SEWER EASEMENT (REFERENCE PB 100 PG 148 AND PB 105 PG 163)
EX 8" WL
EX SIGN
EX LP
CONCRETE DRIVE RE: 5/C5.1
CHAIN-LINK FENCE
EXISTING SANITARY SEWER
EX BFP
EX WM
STREAM BUFFER
EX OHP
MINIMUM 8'
ADA PARKING SPACES
MINIMUM 18'
35'
EX SIGN
FRONT SETBACK
EXISTING MONITORING WELLS (TYP)
TREE LINE (TYP.)
EXISTING SANITARY SEWER
BIORETENTION AREA
EX 4" SEWER SERVICE
EX GAS
EX HVAC UNITS
EX FH
EX WATER VALVE
PROPOSED ADDITION
TRANSFORMER
GENERATOR
2" WL TIE
COORDINATE WITH ARCH
EX BUILDING TO REMAIN
NEW EXTERIOR STAIRS TO REPLACE EXISTING
WHEEL STOPS
RETAINING WALL (BY OTHERS)
ELECTRICAL PANELS
TIE TO EXISTING EDGE OF GRAVEL
PICNIC SHELTER
EX LP
2" ABS PIPE FOR YARD HYDRANT
STREAM BUFFER
TOP OF BANK
SETBACK
50'
TREE PROTECTION FENCE RE: 1/C5.1
CHAIN-LINK FENCE
LANDSCAPE BUFFER
125'
ROLL-OFF DUMPSTER STORAGE AREA
PROPOSED GRAVEL PARKING AND DRIVE RE: 3/C5.1
EXISTING BUILDING TO RELOCATED
EXISTING FENCE TO REMAIN
24' DOUBLE GATE
YARD HYDRANT
TIE TO EXISTING FENCE
LIMITS OF DISTURBANCE
WHEEL STOP (TYP) RE: 2/C5.1
NEW FUEL TANK
RETAINING WALL (BY OTHERS)
LANDFILL BOUNDARY
LANDSCAPE BUFFER
SETBACK
LANDFILL BUFFER
25'

NGE COUNTY
4647 PG 76
108 PG 157

1/C1.2
SITE PLAN NOTES

1. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
2. DIMENSIONS TO BUILDING WALL ARE TO FACE OF WALL AT FINISH GRADE. DIMENSIONS TO CURB ARE TO FACE OF CURB.
3. LAY OUT IMPROVEMENTS FOR THE CIVIL ENGINEER'S OR LANDSCAPE ARCHITECT'S REVIEW PRIOR TO BEGINNING CONSTRUCTION.
4. ADA PARKING SPACES SHALL BE SIGNED WITH TYPE R7-8 OR R7-8A RESERVED PARKING SIGN AND R7-8D MAXIMUM FINE SIGN PER GS 20-37.6 OF THE NORTH CAROLINA HANDICAP CODE. ADA RAMPS SHALL HAVE RAMP SURFACES COVERED WITH DETECTABLE WARNING PATTERN PER ADA STANDARDS.
5. REFERENCE DEMOLITION PLAN SHEETS CD0.1 AND CD0.2 FOR EXTENT OF DEMOLITION AND REMOVAL OF CURB AND GUTTER, DRIVEWAYS, PAVEMENT, BOLLARDS, WALKWAYS, UTILITIES, AND VEGETATION.
6. THE SITE WILL BE FULLY COMPLIANT WITH THE NORTH CAROLINA ACCESSIBILITY CODES (ANSI 117.1-2009 AND CHAPTER 11 OF THE NCBC) UNLESS AND EXCEPT IN AREAS WHERE AN APPROVED STATEMENT FROM A SITE ENGINEER, SURVEYOR OR ARCHITECT VERIFIES THAT SITE CONDITIONS EXIST WHERE THE TOPOGRAPHY OF THE SITE IS EXTREME AND ONLY ALTERNATE METHODS OF COMPLIANCE ARE POSSIBLE.
7. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF HILLSBOROUGH AND NCDOT STANDARDS AND SPECIFICATIONS.
9. SEE ARCHITECTURAL PLANS FOR BUILDING PLANS AND DETAILS.

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NO	REVISIONS	BY	DATE

BID SET

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SITE PLAN

NC 86 N / FLEET RENOVATION

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STEPHANIE.TRUEBLOOD@HILLSBOROUGHNC.GOV

GRAPHIC SCALE: 1 INCH = 40 FEET (40 0 20 40)

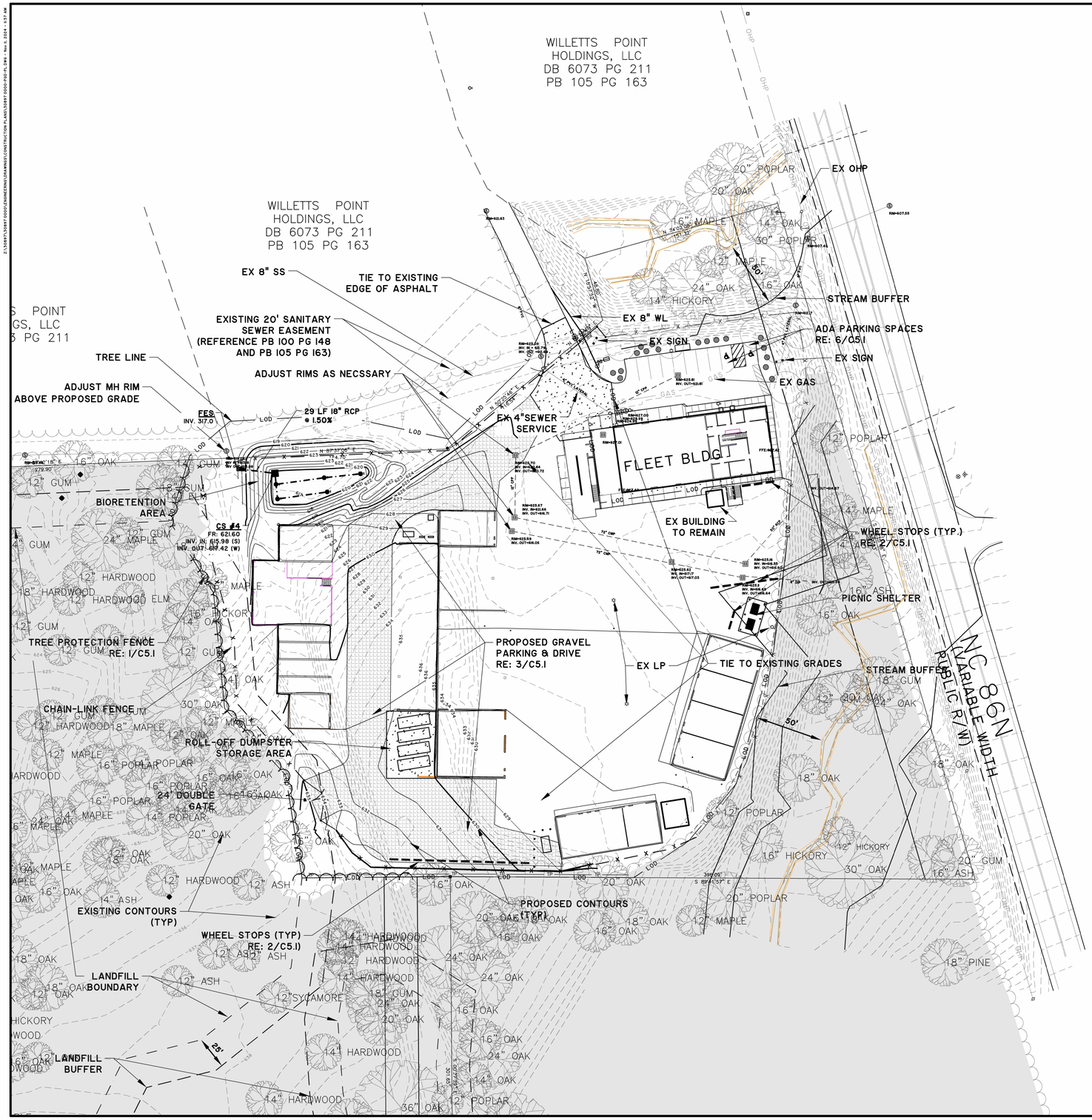
DATUM: HORIZ.: VERT.:

JOB NO:	30897.0000
DATE:	11/11/24
DRAWN:	
DESIGNED:	AO
REVIEWED:	AO
APPROVED:	
SCALE:	1" = 40'

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GRADING NOTES:

1. *ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.*
2. *ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF HILLSBOROUGH STANDARDS AND SPECIFICATIONS.*
3. *CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (1-800-632-4949) AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR TO CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL".*
4. *PRIOR TO BEGINNING ANY DISTURBANCE, THE GENERAL CONTRACTOR SHALL SCHEDULE AND ATTEND A PRECONSTRUCTION CONFERENCE WITH THE TOWN OF HILLSBOROUGH PLANNING DEPARTMENT (919) 296-9475, ORANGE COUNTY EROSION CONTROL(919) 245-2584 AND A REPRESENTATIVE OF THE OWNER.*
5. *CONSTRUCTION, MAINTENANCE AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.*
6. *EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.*
7. *SOIL UNDER BUILDING PAD, PAVED AREAS AND WITHIN SLOPES GREATER THAN 3:1 (H:V) SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THESE SOILS SHALL BE COMPACTED AS SPECIFIED UNLESS OTHERWISE RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ANY UNDERCUT OF SOILS IN THESE AREAS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER & OWNER. THE UNDERCUT SOILS SHALL ALSO QUANTIFIED BY THE GEOTECHNICAL ENGINEER.*
8. *ALL BANKS, SWALES AND FILL SLOPES SHALL BE NO STEEPER THAN 2.5:1 MAXIMUM. CUT SLOPES SHALL BE NO STEEPER THAN 2:1.*
9. *ALL GRADING MUST PRODUCE SURFACE DRAINAGE ADEQUATE TO PREVENT STANDING WATER OR WET LAWN AREAS, AND TO ENSURE THAT ALL STORM WATER FLOWS TO INLETS OR OTHER POINTS OF DISCHARGE.*
10. *ALL SIDEWALKS SHALL BE CONSTRUCTED WITH A MAXIMUM 1.8% CROSS SLOPE IN THE DIRECTION SHOWN ON THE PLAN.*
11. CONNECT ALL ROOF LEADERS AND DOWNSPOUTS TO STORM DRAINAGE SYSTEM WITH PVC PIPE. SEE ARCHITECTURAL PLANS FOR LOCATIONS.
12. ALL PERMANENT SLOPES INCLUDING MAIN POND OF SCM WILL BE CONSTRUCTED AT NO STEEPER THAN 3:1. SLOPES OF SCM FORBAY SHALL BE 2:1

STORM DRAINAGE NOTES:

1. ALL STORM DRAINAGE PIPES SHOWN ARE TO BE CLASS III REINFORCED CONCRETE (RCP) UNLESS NOTED OTHERWISE.
2. ALL STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF HILLSBOROUGH STANDARDS.
3. ALL CONCRETE SHALL MEET A MINIMUM 3000 PSI COMPRESSIVE STRENGTH.
4. ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
5. ALL PIPE JOINTS SHALL BE MADE WITH PREFORMED JOINT SEALER, WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE B FLEXIBLE PLASTIC GASKETS UNLESS OTHERWISE NOTED.
6. THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
7. ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBJECTIONABLE MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR PROOF ROLLING.
8. MATERIALS DEEMED BY THE OWNER'S REPRESENTATIVE AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
9. BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE THOROUGHLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROCTOR TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100% STANDARD PROCTOR.
10. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO RISE IN UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
11. SEE THE COVER SHEET FOR NOTES REGARDING IMPERVIOUS SURFACE.

1/C3.2
GRADING NOTES

MHA WORKS
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PAVING GRADING AND DRAINAGE

NC 86 N / FLEET RENOVATION

PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

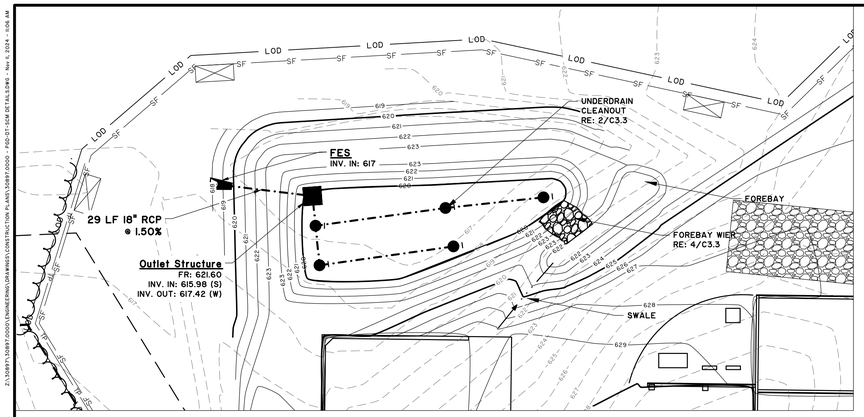
CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
MATT EFIRD, ASST MGR / STEPHANIE TRUEBLOOD, PROJ MGR
(919)296-9423 / (919) 296-9481
STEPHANIE TRUEBLOOD@HILLSBOROUGHNC GOV

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GRAPHIC SCALE:
1 INCH = 40 FEET

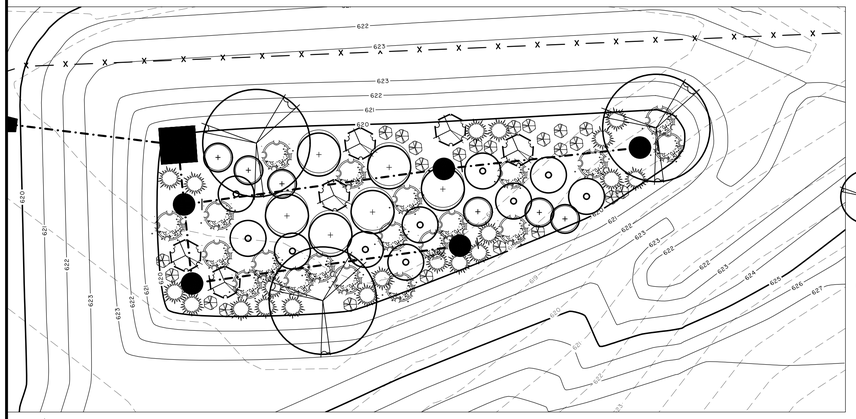
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APPROVED:	
SCALE:	1" = 40'

C3.1



1 C3.2 BIORETENTION -PLAN VIEW
SCALE: 1" = 20'

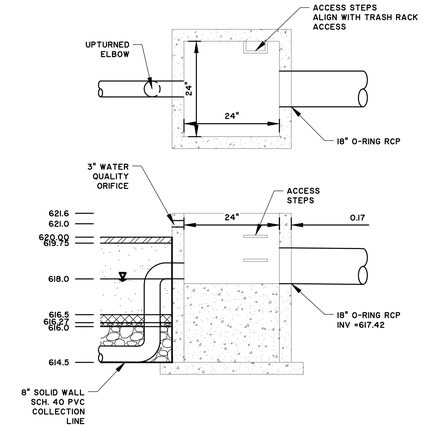


5 C3.2 BIORETENTION -PLANTING PLAN
SCALE: 1" = 10'

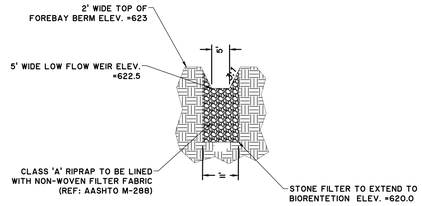
TOTAL BIO-RETENTION PLANTING AREA: 1,497 SF
PROPOSED COVERAGE: 1,133 SF (76%)
TREE / SHRUBS = 666.7 SF (45%)
HERBACEOUS = 466.4 SF (31%)

LANDSCAPE NOTES:
1. CONTRACTOR IS TO PROVIDE ONE YEAR (1YR.) MINIMUM WARRANTY FOR BIORETENTION PLANTS.

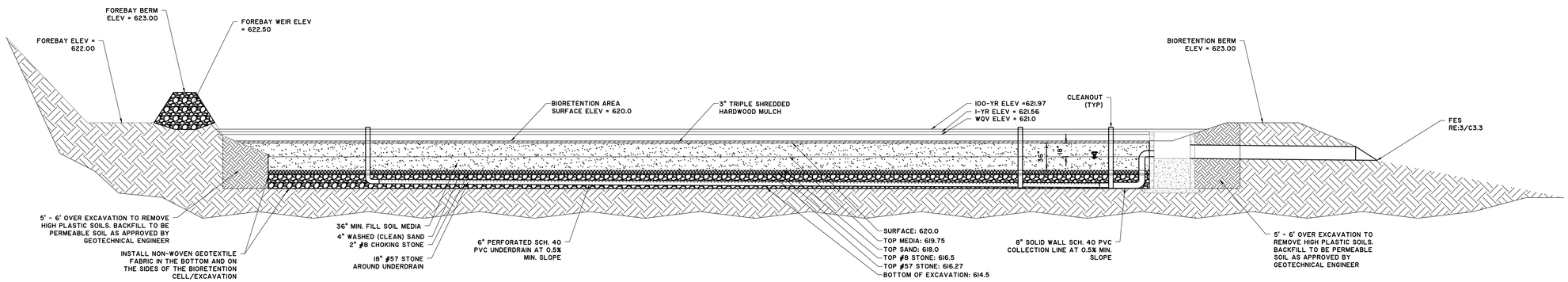
Qty	Sym	Botanic Name	Common Name	Installation Size	Spacing	Coverage (@ 5 years)	Total Coverage
3	AM	Amelanchier arborea	Common Serviceberry multi-stem	6' ht	as shown	8' dia (50.3 sf)	150.9 sf
10	AS	Callicarpa americana	American Beautyberry	3 gal.	4-5' o.c.	5' dia (19.6 sf)	196 sf
6	IG	Ilex glabra 'Compacta'	Dwarf Inkberry Holly	18" ht	3'-4' o.c.	4' dia (12.5 sf)	75.0 sf
6	IL	Ilex verticillata	Winterberry	3 gal.	4'-5' o.c.	6' dia (28.3 sf)	169.8 sf
6	IV	Itea virginica	Virginia Sweetspire	18" ht	4'-5' o.c.	4' dia (12.5 sf)	75.0 sf
20	MO	Monarda sp.	Beebalm	1 gal.	2'-3' o.c.	3' dia (7.1 sf)	142 sf
20	PV	Panicum virgatum	Switch Grass	3 gal.	3' o.c.	4' dia (12.5 sf)	250 sf
24	SC	Solidago rugosa	Goldenrod	1 gal.	2' o.c.	2' dia (3.1 sf)	74.4 sf



3 C3.2 BIORETENTION - OUTLET STRUCTURE
SCALE: NTS



4 C3.2 FOREBAY WEIR
SCALE: NTS



2 C3.2 BIORETENTION - PROFILE SECTION
SCALE: NTS

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BIORETENTION DETAILS

NC 86 N / FLEET RENOVATION

PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
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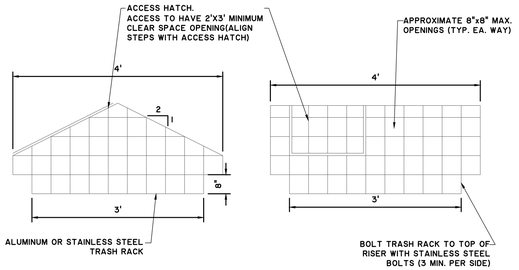
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SCALE:	SEE SCALE BAR

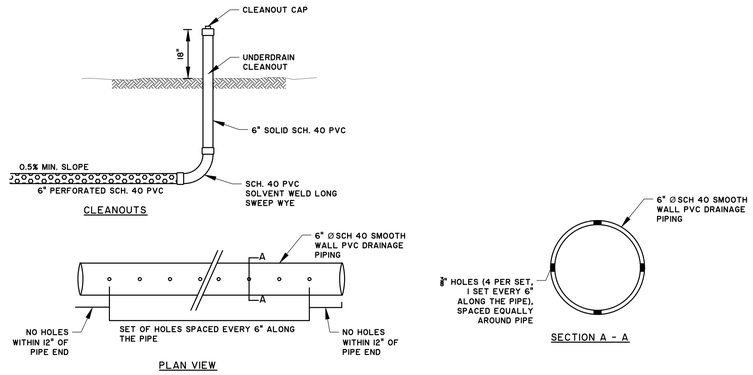
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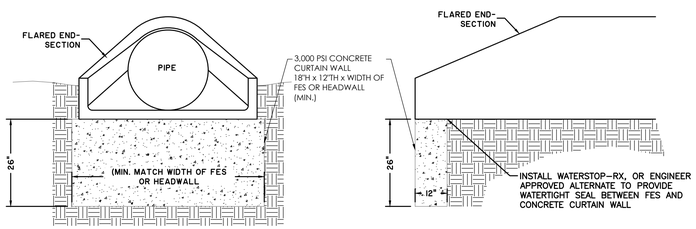
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1 / C3.3 TRASH RACK
SCALE: NTS



2 / C3.3 UNDERDRAINS
SCALE: NTS



3 / C3.3 CURTAIN HEADWALL
SCALE: NTS

NOTES:
1. ALL SEDIMENT AND EROSION CONTROL PRACTICES SHALL BE IN PLACE AND THE SLOPES DRAINING TO THE BIORETENTION AREA SHALL BE STABILIZED BEFORE CONSTRUCTION OF THE BIORETENTION AREA BEGINS. ALL UPHILL AREAS DRAINING TO THE BIORETENTION AREA INCLUDING PARKING AND BUILDINGS MUST BE STABILIZED AND PAVED PRIOR TO BEGINNING CONSTRUCTION OF THE BIORETENTION AREA.
2. THE BIORETENTION SOIL MIX SHALL BE AT LEAST 36" DEEP AND SHALL BE A MIX THAT MEETS THE FOLLOWING SPECIFICATIONS:
   - 85% - 88% (BY VOLUME) ASTM C-33 SAND
   - 8% - 12% (BY VOLUME) FINES (INCLUDES BOTH SILTS AND CLAYS)
   - 3% - 5% (BY VOLUME) ORGANIC/PEAT MOSS (NOTE: THE ORGANIC MATERIAL SHALL BE WELL MIXED OR LAYERED IN THE UPPER 18" OF THE SOIL MIX.)
   - THE IN-PLACE HYDRAULIC CONDUCTIVITY RANGE OF THE SOIL MIX SHALL BE BETWEEN 1.0-2.0 INCHES/HOUR. THE MEDIA SHOULD BE TESTED TO DETERMINE THE ACTUAL DRAINAGE RATE AFTER PLACEMENT
   - THE SOIL MIX SHALL HAVE A P-INDEX RANGE BETWEEN 10 AND 25
   - SOIL MEDIA SHOULD BE SENT TO NC DEPARTMENT OF AGRICULTURE LABS TO BE ANALYZED
3. SOD THAT IS INSTALLED MUST NOT BE GROWN IN SOIL THAT HAS AN IMPERMEABLE LAYER, SUCH AS CLAY.
4. THE FILL SOIL MEDIA SHALL BE FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS LARGER THAN 1". SOIL SHALL BE PLACED IN LAYERS LESS THAN 18".
5. ALL SLOPES DRAINING TO THE BIORETENTION AREA SHALL BE STABILIZED PRIOR TO INSTALLATION OF THE UNDERDRAIN SYSTEM.
6. THE BIORETENTION AREA MUST BE COMPLETE PRIOR TO OBTAINING C.O.
7. CONTRACTOR TO PROVIDE ELEVATIONS AT THE TOP OF THE MULCH, TOP OF PLANTING SOIL MEDIA, TOP OF THE SAND LAYER, TOP OF GRAVEL, AND BOTTOM OF BIORETENTION AREA TO THE ENGINEER. CONTRACTOR SHALL PROVIDE SPACING OF UNDERDRAIN PIPING TO THE ENGINEER. IF THIS INFORMATION IS NOT PROVIDED, CONTRACTOR SHALL VERIFY ELEVATIONS BY EXCAVATING DOWN TO EACH LAYER AND REPAIR BIORETENTION AREA AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR TO CONDUCT IN-PLACE INFILTRATION TESTING ON THE SOIL MEDIA. THE INFILTRATION RATE MUST BE BETWEEN 1-2 IN/HR. DOUBLE RING INFILTRATION TESTS (MINIMUM OF 2 TESTS OR 1 TEST/1000 SF OF FILTER MEDIA SURFACE AREA, WHICHEVER IS GREATER) SHALL BE PERFORMED AT THE COMPLETION OF THE BIORETENTION AREA CONSTRUCTION. IF THE IN-PLACE INFILTRATION RATE IS OUTSIDE OF THE ALLOWABLE RANGE, THE CONTRACTOR SHALL CORRECT THE RATE BY WHATEVER MEANS ARE NECESSARY AT NO ADDITIONAL COST TO THE OWNER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER.
9. CONTRACTOR SHALL PROVIDE A COPY OF THE PURCHASE RECEIPTS FOR ALL PIPE INSTALLED AS PART OF THE BIORETENTION AREA. THE RECEIPTS SHOULD IDENTIFY THE ASTM SPECIFICATION GOVERNING THE MANUFACTURE OF THE PIPE.
10. AVOID OVER-COMPACTION BY ALLOWING TIME FOR NATURAL COMPACTION AND SETTLEMENT. NO ADDITIONAL MANUAL COMPACTION OF SOIL IS NECESSARY. RAKE SOIL MATERIAL AS NEEDED TO LEVEL OUT. OVERFILL ABOVE THE PROPOSED SURFACE INVERT TO ACCOMMODATE NATURAL SETTLEMENT TO PROPER GRADE. DEPENDING UPON THE SOIL MATERIAL, UP TO 20% NATURAL COMPACTION MAY OCCUR. CONSULT WITH SOIL PROVIDER FOR NATURAL COMPACTION.
11. A COPY OF THE USDA SOIL ANALYSIS MUST BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLING THE FILTER MEDIA.

4 / C3.3 BIORETENTION NOTES
SCALE: NTS

NO.	REVISIONS	BY	DATE

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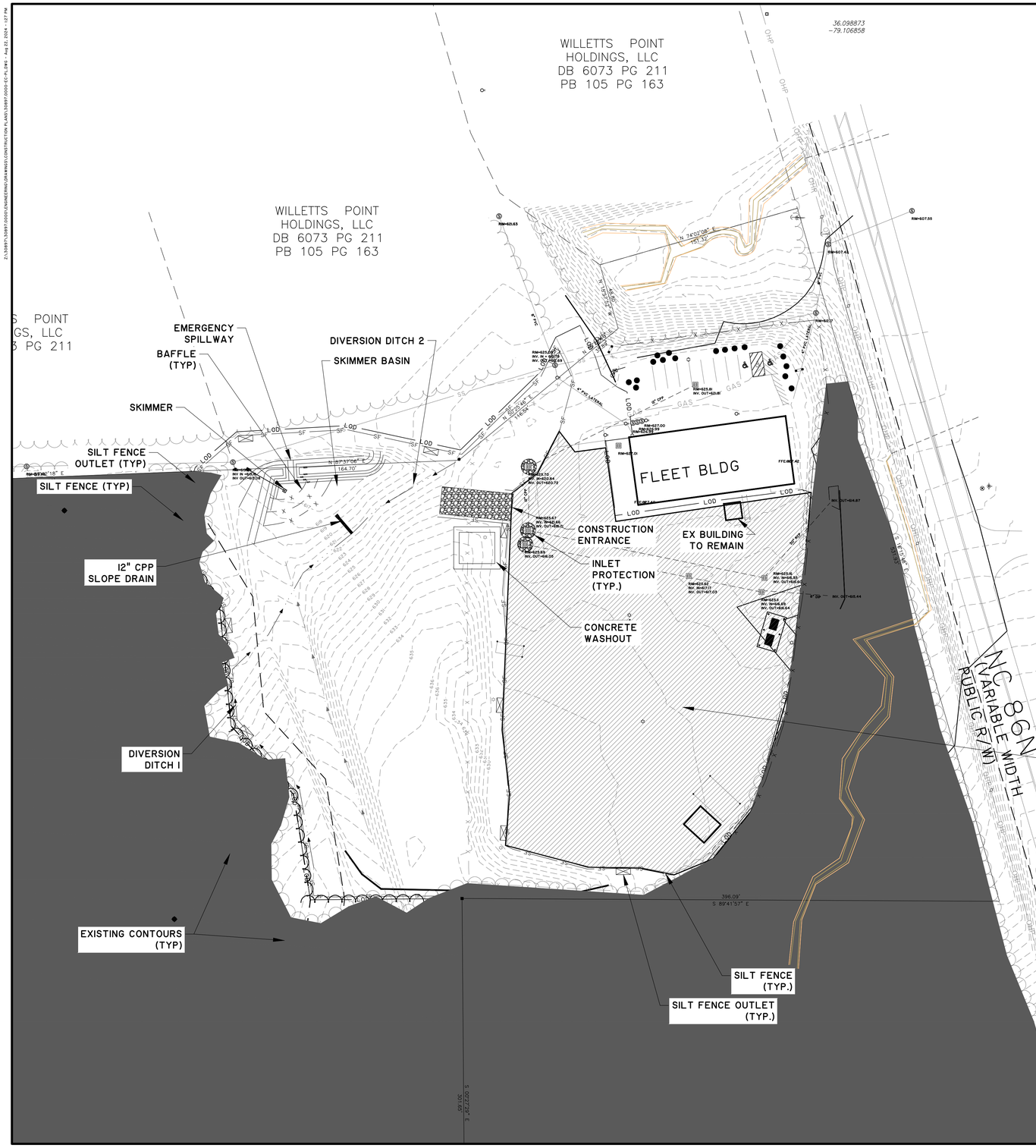
CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
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EROSION CONTROL LEGEND

- ARCHED STONE FILTER
- TEMPORARY DIVERSION DITCH
- SF — SILT FENCE
- TP — TREE PROTECTION FENCE
- CONSTRUCTION ENTRANCE
- SILT FENCE OUTLET
- CONCRETE WASHOUT
- INLET PROTECTION
- RIP RAP
- INLET SEDIMENT BAG
- WATTLE INLET PROTECTION
- CHECK DAM

DISTURBED AREA = 132,232 SF (3.04 AC)

NOTE: ALL DISTURBED AREAS MUST BE STABILIZED PER THE SEEDING SCHEDULE LOCATED ON SHEET C4.2

EROSION CONTROL PERMIT BY NCDEMLR REQUIRED

MHA WORKS
Together, we create.

NO.	REVISIONS	BY	DATE

NORTH CAROLINA PROFESSIONAL SEAL 25505 ENGINEER ANDREW M OAKLEY

THOMAS & HUTTON
2510 Meridian Parkway • Suite 100
Durham, NC 27713 • 919.682.0368
www.thomasandhutton.com

EROSION CONTROL

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GRAPHIC SCALE:
1 INCH = 40 FEET

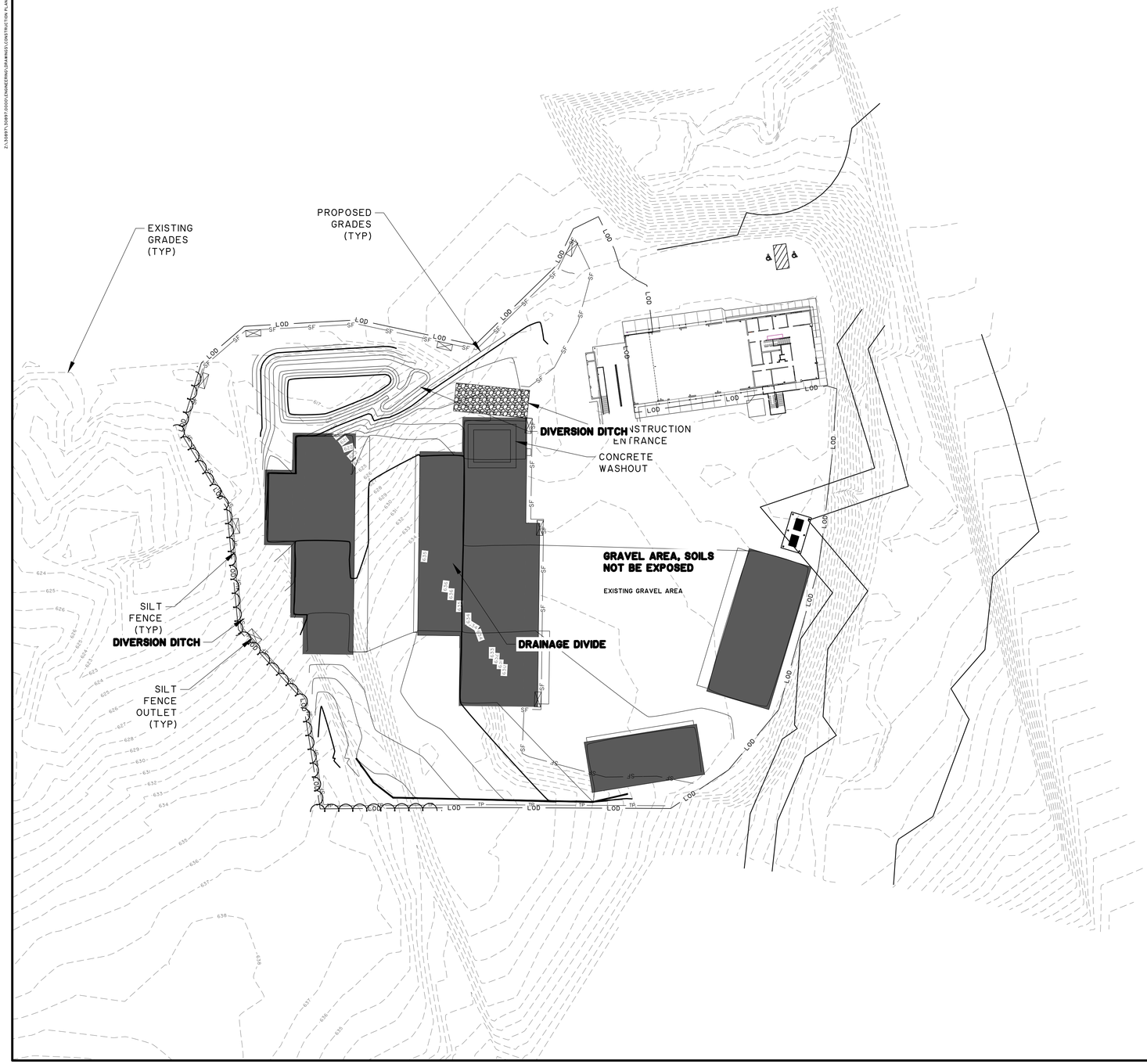
DATUM: HORIZ.: VERT.:

JOB NO:	30897.0000
DATE:	08/23/23
DRAWN:	
DESIGNED:	A. OAKLEY
REVIEWED:	
APPROVED:	
SCALE:	1" = 40'

C4.1

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EROSION CONTROL LEGEND

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25505 ANDREW M OAKLEY
09/04/2024

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www.thomasandhutton.com

EROSION CONTROL

NC 86 N / FLEET RENOVATION

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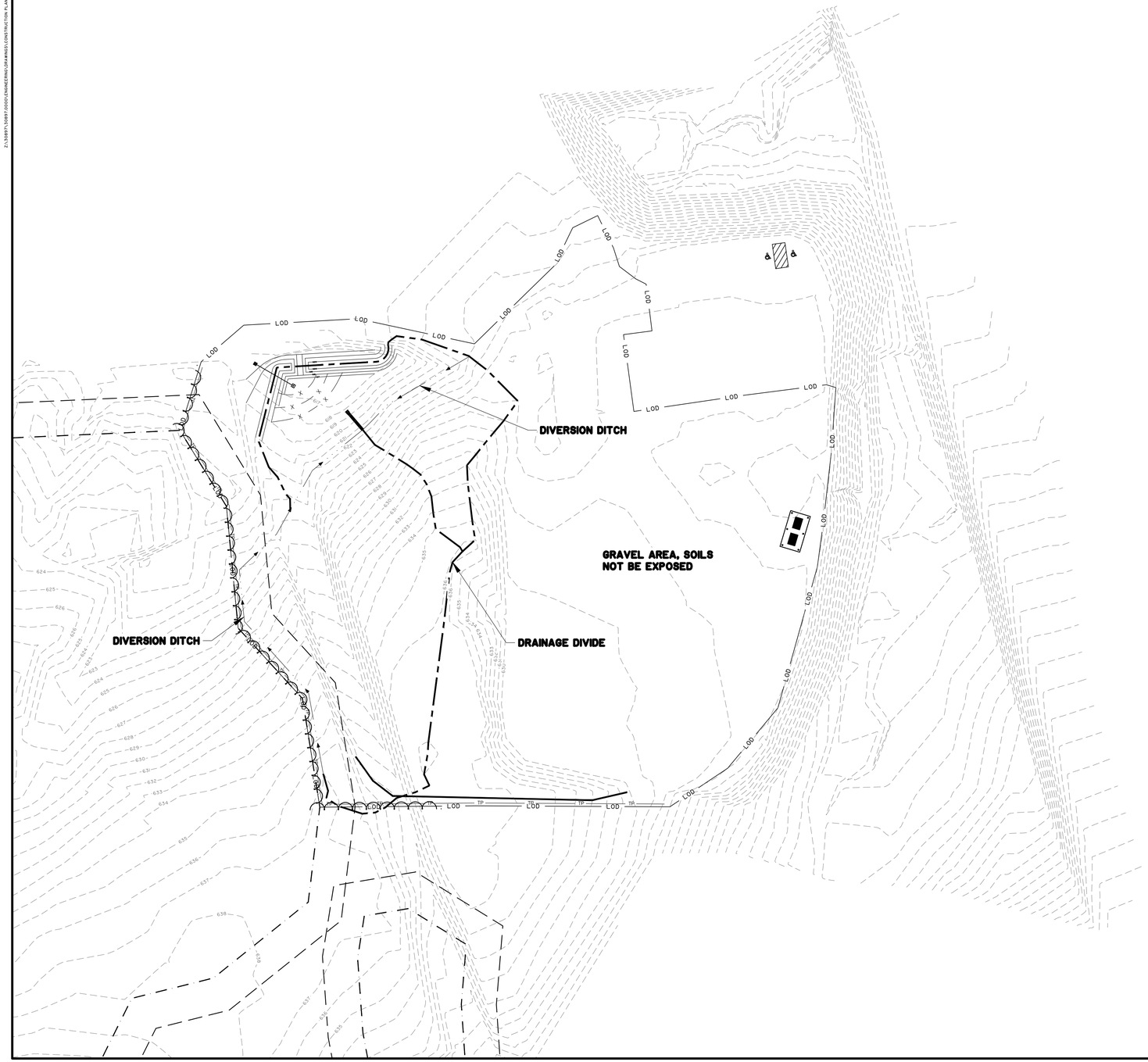
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EROSION CONTROL LEGEND

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DRAINAGE AREAS

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C4.3

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

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.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes			
	Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a)	Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b)	High Quality Water (HQW) Zones	7	None
(c)	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
(d)	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
(e)	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

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable 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.

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • 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

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

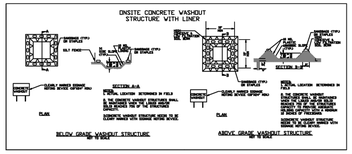
PORTABLE TOILETS

1. 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.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. 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.

EARTHEN STOCKPILE MANAGEMENT

1. 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 available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. 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.

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CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. 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.
4. 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.
5. 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.
6. 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 spills or overflow.
7. 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.
8. 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.
9. 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.
10. 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.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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 accidental poisoning.
3. 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.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

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.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC 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 (SDOs)	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 discoloration, 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 record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands 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 wetland has increased visible sedimentation or a 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, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. 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.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. 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 kept on site and available for inspection at all times during normal business hours.

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 to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for 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 twelve months. 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.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
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:
- 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).

(c) 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.

(d) Anticipated bypasses and unanticipated bypasses.

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

2. 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 Department's Environmental Emergency Center personnel at (800) 858-0368.

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(d) 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 compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release 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 possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***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.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours,*** an oral or electronic notification. • ***Within 7 calendar days,*** a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

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NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED FROM NCDENR LAND QUALITY SECTION BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR.

2. POST LAND DISTURBING PERMIT AT THE SITE. NOTIFY LAND QUALITY SECTION AT 919-791-4200 OF INTENT TO BEGIN CONSTRUCTION PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES.

3. OBTAIN ALL OTHER REQUIRED FEDERAL, STATE, AND LOCAL APPROVALS AND PERMITS NECESSARY TO BEGIN AND COMPLETE THE PROJECT. OBTAIN ALL PERMITS PRIOR TO BEGINNING ANY DISTURBANCE ON THE SITE SO WORK WILL NOT BE INTERRUPTED.

4. SCHEDULE AND HOLD A PRE-CONSTRUCTION MEETING PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES. THIS MEETING SHOULD BE ATTENDED BY A REPRESENTATIVE OF THE FINANCIALLY RESPONSIBLE PARTY, ALL INVOLVED CONTRACTORS, THE DESIGN TEAM, AND AN NCDENR LAND QUALITY SECTION REPRESENTATIVE.

5. CONTACT THE DEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND DISTURBING ACTIVITY AT 919-791-4200.

6. CLEAR THE AREAS NECESSARY TO INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE, SILT FENCE, AND SILT FENCE OUTLETS PER THE APPROVED EROSION CONTROL PLANS. REMOVE ONLY TREES AND GROUND COVER NECESSARY TO INSTALL THESE DEVICES. INSTALL ALL PERIMETER EROSION CONTROL MEASURES. NOTIFY LAND QUALITY SECTION AFTER ALL PERIMETER MEASURES ARE INSTALLED AND PRIOR TO PROCEEDING WITH FURTHER CONSTRUCTION OR DISTURBANCE.

7. BEGIN CLEARING, GRUBBING, AND GRADING OF THE SITE.

8. SILT FENCE SHALL BE LOCATED AS NECESSARY TO ENSURE THAT NO SEDIMENT LEAVES THE SITE. STOCKPILES, LAYDOWN AREAS, WASTE AREAS, CONCRETE WASHOUTS, PORTABLE TOILETS, AND FUEL STORAGE CONTAINERS MUST BE LOCATED AT LEAST 50' AWAY FROM ANY OPEN WATER CONVEYANCES, SUCH AS BASINS, DITCHES, STORM DRAIN INLETS, ETC. THE LOCATION OF THESE ACTIVITIES MAY BE FIELD ADJUSTED IF THE DISTANCE REQUIREMENTS ARE MET.

9. CONSTRUCT THE PERMANENT BASIN INCLUDING BAFFLES AND SKIMMER.

10. PER THE NPDES PERMIT, GROUND STABILIZATION WILL BE APPLIED WITHIN 14 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY. FOR STEEP SLOPES, THAT AREA MUST BE STABILIZED WITHIN 7 CALENDAR DAYS. (RE:3/C4.1)

11. PERMANENT GROUNDCOVER SHALL BE ESTABLISHED WITHIN 90 CALENDAR DAYS. HOWEVER, NPDES GROUNDCOVER REQUIREMENTS TAKE PRECEDENT.

12. INSPECT AND MAINTAIN THE EROSION CONTROL DEVICES SO THEY CONTINUE TO FUNCTION PROPERLY. THE PERSON RESPONSIBLE FOR EROSION CONTROL WILL OVERSEE THE INSPECTION AND MAINTENANCE OF THESE DEVICES. MEASURES SHOULD BE INSPECTED WEEKLY AND AFTER ALL RAIN EVENTS. SEDIMENT SHALL BE REMOVED FROM DEVICES WHEN SEDIMENT DEPTH IS ONE HALF OF THE TOTAL DEPTH OF THE CAPACITY OF THE DEVICE. EROSION CONTROL DEVICES SHALL BE REPLACED WHEN DAMAGED OR DO NOT APPEAR TO BE WORKING PROPERLY. ANY WATER PUMPED FROM THE SITE MUST BE PUMPED INTO A SILT BAG WHICH MUST BE CONTINUOUSLY MONITORED. SEE DETAIL 7/C4.4 FOR INSTALLATION AND MAINTENANCE REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WRITTEN RECORDS AND REPORTS OF WEATHER, RAINFALL, EROSION CONTROL MAINTENANCE, ETC. IN ACCORDANCE WITH THE NPDES PROGRAM AND PERMIT.

13. IN ADDITION TO THE INSPECTIONS BY THE CONTRACTOR, THE OWNER, THE FINANCIALLY RESPONSIBLE PARTY, OR THEIR AGENT MUST CONDUCT INSPECTIONS IN ACCORDANCE WITH NCDENR'S SELF-INSPECTION PROGRAM FOR EROSION AND SEDIMENT CONTROL (http://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms). PER NPDES REQUIREMENTS, A RAIN GAUGE, SELF-INSPECTION RECORDS, PERMIT, AND S&E PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTION. IT IS RECOMMENDED THAT THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF PROJECT.

14. IN ADDITION TO INSPECTIONS MADE BY THE CONTRACTOR, THE OWNER, THE FINANCIALLY RESPONSIBLE PARTY, OR THEIR AGENT MUST CONDUCT INSPECTIONS IN ACCORDANCE WITH NCDENR'S SELF-INSPECTION PROGRAM FOR EROSION AND SEDIMENT CONTROL. STORMWATER INSPECTIONS PER GRANVILLE COUNTY'S AND ANY STATE REQUIREMENTS SHALL BE CONDUCTED AS NECESSARY.

15. IF IT IS DETERMINED DURING THE COURSE OF CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE PROJECT SITE DESPITE PROPER IMPLEMENTATION AND MAINTENANCE OF THE EROSION CONTROL PLAN, THE PERSON RESPONSIBLE FOR THE LAND DISTURBING ACTIVITY IS OBLIGATED TO TAKE ADDITIONAL PROTECTIVE ACTION.

16. KEEP MUD AND DEBRIS OFF THE PUBLIC ROAD AT ALL TIMES. IF MUD OR DEBRIS ARE TRACKED FROM THE SITE, USE A SHOVEL AND BROOM TO REMOVE IT IMMEDIATELY. IF MUD AND DEBRIS ARE NOT KEPT OFF THE STREET, ENFORCEMENT ACTION (REVOKING THE LAND DISTURBANCE PERMIT AND/OR A STOP WORK ORDER) MAY BE TAKEN.

17. SEEDING AND RESTABILIZATION OF DISTURBED AREAS MUST BE ACCOMPLISHED PER THE PLANS AND SPECIFICATIONS WITHIN THE TIME FRAMES GIVEN IN THE STABILIZATION TIME TABLE PROVIDED IN THE SEEDING SCHEDULE. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL TEMPORARY SEEDING REQUIRED DURING THE PROJECT AT NO ADDITIONAL COST.

18. WHEN CONSTRUCTION IS COMPLETE OR A PHASE OF CONSTRUCTION IS COMPLETE, DISTURBED AREAS ARE STABILIZED, AND ALL EROSION CONTROL MEASURES ARE STILL IN PLACE, CONTACT EROSION CONTROL PERSONNEL (LAND QUALITY SECTION) FOR AN INSPECTION. IF A PERMIT WAS ISSUED BY LAND QUALITY SECTION, THE OWNER OR ENGINEER CAN NOT PERFORM THE FINAL INSPECTION.

19. WHEN CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, AND LAND QUALITY SECTION HAS GIVEN APPROVAL, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES. REMOVE AND PROPERLY DISPOSE OF ACCUMULATED SEDIMENT AND DEBRIS FROM THE DEVICES AND STABILIZE AREAS DISTURBED BY THEIR REMOVAL. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMANENT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. NC DEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO REMOVAL OF A BASIN.

20. WHEN THE PROJECT IS COMPLETE, ALL EROSION CONTROL MEASURES HAVE BEEN REMOVED, AND THE SITE IS PERMANENTLY STABILIZED, THE PERMITTEE SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN.

SEEDING SCHEDULE

STABILIZATION TIME TABLE
1. All permanent dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3:1 shall be provided with temporary or permanent stabilization with groundcover as soon as practicable but within 7 calendar days from last land-disturbing activity.
2. All other disturbed areas shall be provided with temporary or permanent stabilization with groundcover as soon as practicable and in any event within 14 calendar days from last land-disturbing activity.

"EXPOSED" AREAS INCLUDE, BUT ARE NOT LIMITED TO:
- AREAS CLEARED FOR ROADWAY CONSTRUCTION,
- AREAS CLEARED ON RESIDENTIAL BUILDING LOTS.
- DRAINAGE EASEMENTS AND OPEN DRAINAGE CHANNELS.
- SEDIMENT AND EROSION CONTROL MEASURES (SEDIMENT TRAPS, DIVERSION DITCHES, ETC.) AND THE AREAS ADJECENT TO SUCH MEASURES.

IMPERVIOUS TO PERVIOUS SURFACE CONVERSION
1. Remove all impervious surface and/or compacted soil from the area to be converted.
2. Till the area to a depth of 12 inches below the top of the compacted subgrade.
3. Provide soil amendments and install topsoil as necessary. If lime and/or fertilizer are to be used, it shall be applied uniformly during seedbed preparation and mixed well in the top 4-6 inches of soil or applied as recommended in the planting specifications for any proposed landscaping.

Ground Agricultural Limestone	2000 lbs/acre
10-10-10 Fertilizer	750 lbs/acre
Rye Grain Seed	20 lbs/acre
Kobe Lespedeza Seed(if temporary cover goes beyond June 1)	20 lbs/acre
Straw Mulch(anchored with asphalt, netting, or anchoring tool)	4000 lbs/acre

SUMMER TEMPORARY COVER — MAY 1 – AUGUST 15

Ground Agricultural Limestone	2000 lbs/acre
10-10-10 Fertilizer	750 lbs/acre
German Millet Seed	40 lbs/acre
Straw Mulch(anchored with asphalt, netting, or anchoring tool)	4000 lbs/acre

FALL TEMPORARY COVER — AUGUST 15 – DECEMBER 30

Ground Agricultural Limestone	2000 lbs/acre
10-10-10 Fertilizer	1000 lbs/acre
Rye Grain Seed	120 lbs/acre
Kobe Lespedeza Seed(if temporary cover goes beyond June 15)	50 lbs/acre
To be seeded in late February or early March	
Straw Mulch(anchored with asphalt, netting, or anchoring tool)	4000 lbs/acre

SUMMER PERMANENT COVER — APRIL1 – AUGUST 15

GRASS	PLANTING DATE [1]	SEEDS [2]	SPRIGS [3]
BERMUDAGRASS	APRL-JULY	1-2	.75
BERMUDAGRASS(HYBRID)	APRL-JULY	-	.75
CENTIPEDEGRASS	MARCH-JULY	.25-.50	.75

1. OPTIMUM DATE OF PLANTING. SEEDING BEYOND THESE DATES INCREASES THE CHANCE OF FAILURE.
2. POUNDS PER 1000 SQ.FT.
3. BUSHELS PER 1000 SQ.FT.

Seedbed Preparation: Remove rocks, stumps, roots, etc. Apply lime and fertilizer then rip the soil 4 to 6 inches to mix the nutrients into the soil and to loosen and roughen it to recieve seed.

Seed Temporary cover to stabilize temporary sedimentation control measures and other accomplished. If planting season is not suitable for installation of permanent cover. Contractor shall install temporary cover suitable for that season and reseed with permanent grass at earliest possible date. Overseed areas with poor to no seed germination. Soil tests may be necessary to determine the cause of a failed

Ground Stabilization*

Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
Perimeter dikes, swales, ditches, and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length, and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None (except for perimeters and HQW Zones)

* "Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable" (Section 11.B(2)(b))

MHA WORKS
Together, we create.

NO.	REVISIONS	BY	DATE

NORTH CAROLINA PROFESSIONAL SEAL 25505 ENGINEER DREW M OAKLEY

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EROSION CONTROL DETAILS

NC 86 N / FLEET RENOVATION

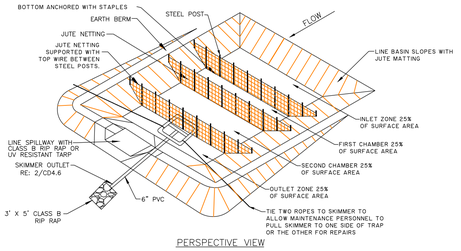
PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
MATT EFIRD, ASST MGR / STEPHANIE TRUEBLOOD, PROJ MGR
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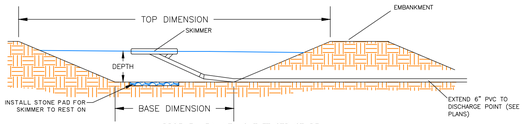
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JOB NO:	30897.0000
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DESIGNED:	AO
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APPROVED:	
SCALE:	#######

C4.4



PERSPECTIVE VIEW



PROFILE VIEW WITH OUTLET STRUCTURE

DEWATERING NOTES:

ANY DEWATERING OF THE SEDIMENT CONTAINMENT DEVICE FOR MAINTENANCE OR REMOVAL IS TO BE DONE THROUGH A SILT BAG.

SEDIMENT BASIN NOTES:

I. REMOVE SEDIMENT FROM BASIN WHEN APPROXIMATELY ONE-HALF OF STORAGE VOLUME HAS BEEN FILLED. CONTRACTOR TO DETERMINE ELEVATION AT WHICH THE INVERT WOULD BE HALF FULL AND MARK IN FIELD WITH PERMANENT STAKE.

2. USE FOR DRAINAGE AREAS NOT EXCEEDING 100 ACRES.

3. USE CLEAN COMPACTOR FILL MATERIAL FOR EARTH BERM.

4. INSPECT TEMPORARY SEDIMENT BASIN AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN A DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

5. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FT. BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE.

6. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION WITH SEEDING.

MAINTENANCE

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.

REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE.

PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED.

EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL.

MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.

IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE PLATE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY.

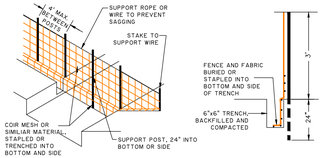
CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY.

REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

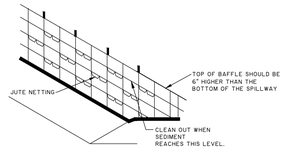
FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

Basin Side Slope (X:1) =	2.0 :1
Storage Depth =	2.00 ft
Storage Volume Required =	1,692 cu ft
Storage Volume Provided =	2,787 cu ft
Surface Area Required =	1,103 cu ft
Surface Area Provided =	1,884 cu ft
Bottom of Basin Elevation =	617.00 ft
Emergency spillway elevation =	618.00 ft
Emergency spillway Length =	4.00 ft
Skimmer size =	1.50 in
Skimmer Orifice Diameter =	0.75 in
Skimmer Drawdown Time =	3.68 days
Max. 25 year WSEL Across Spillway =	0.40 ft
Freeboard =	1.50 ft
Top of Berm Elevation =	620.00 ft

1 /C4.3
SEDIMENT BASIN
NTS



BAFFLE INSTALLATION – STEP 1



BAFFLE INSTALLATION – STEP 2

BAFFLE NOTES:
I. DRIVE 5' STEEL POST AT LEAST 24" INTO SOLID GROUND.
2. USE STAPLES 1' APART HORIZONTALLY AND VERTICALLY TO ATTACH THE FABRIC TO THE HOG WIRE.
3. SPACE THE BAFFLES EVENLY ACROSS THE BASIN FOR REDUCED FLOW AND TURBULENCE.
4. THE FLOOR OF THE BASIN IN THE OUTLET ZONE AND BERMS SHOULD BE SEEDED IMMEDIATELY AFTER THE BASIN IS CONSTRUCTED.
5. INLET ZONE WILL BE ACCESSIBLE FOR MAINTENANCE.

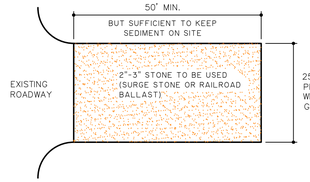
BAFFLE MAINTENANCE

INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.



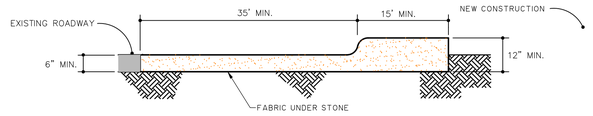
PLAN

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.

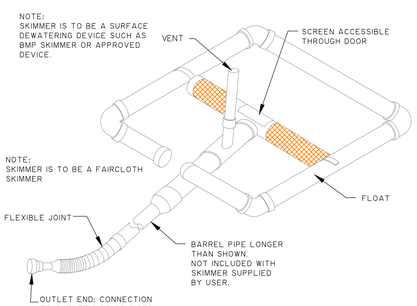
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.

3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.

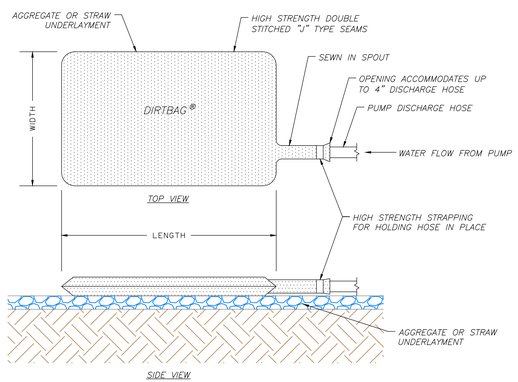


CROSS SECTION

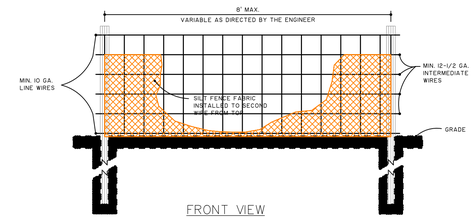
3 / C4.3
CONSTRUCTION ENTRANCE
NTS



2 / C4.2
SKIMMER
NTS



7/ C4.4
SILT BAG
NTS

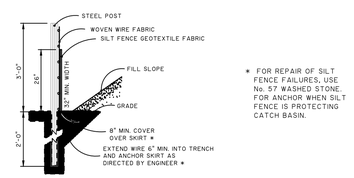


FRONT VIEW

NOTE:

-USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW

-END OF SILT FENCE NEEDS TO BE TURNED UPHILL.



SIDE VIEW

* FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

4/ C4.3
SILT FENCE
NTS

MHA WORKS
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NO.	REVISIONS	BY	DATE

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EROSION CONTROL DETAILS

NC 86 N / FLEET RENOVATION

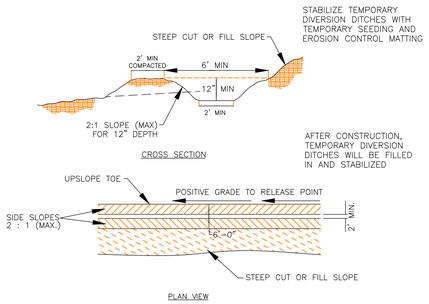
PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

CLIENT/OWNER:
TOWN OF HILLSBOROUGH
PO BOX 429
HILLSBOROUGH, NC 27278
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STEPHANIE.TRUEBLOOD@HILLSBOROUGHNC.GOV

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APPROVED:	
SCALE:	########

C4.5



1 / C4.4
DIVERSION DITCH
NTS

DITCH	LOCATION	DRAINAGE AREA (ACRES)	RUNOFF COEFF.	INTENSITY (IN/HR)	Q(25) FLOW (CFS)	SLOPE (%)	BOTTOM WIDTH (FT)	FLOW DEPTH (FT)	VELOCITY (FPS)	SHEAR STRESS (PSF)	TEMPORARY LINING
1	SEDIMENT BASIN #1 - WEST	0.61	0.50	7.22	2.20	5.17%	2.00	0.19	4.92	0.61	NAG S75BN
2	SEDIMENT BASIN #1 - EAST	0.16	0.50	7.22	0.58	2.69%	2.00	0.10	2.51	0.17	NAG S75BN
Note: NAG = North American Green											
NAG S75BN - Permissible Shear Stress = 1.60 psf, Permissible Velocity = 5 FPS											
NAG S150BN - Permissible Shear Stress = 1.9 psf, Permissible Velocity = 6 FPS											
NAG C125BN - Permissible Shear Stress = 2.5, Permissible Velocity = 9.0 FPS											
NAG P550 - Permissible Shear Stress = 3.3 PSF, Permissible Velocity = 12.0 FPS											

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EROSION CONTROL DETAILS

NC 86 N / FLEET RENOVATION

PROJECT LOCATION:
890 NC 86 N
HILLSBOROUGH, NC

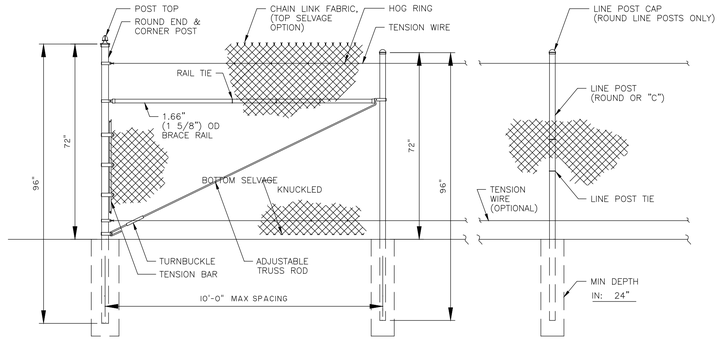
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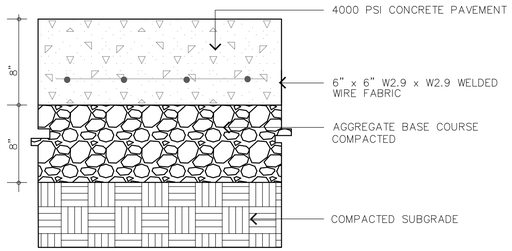
C4.6

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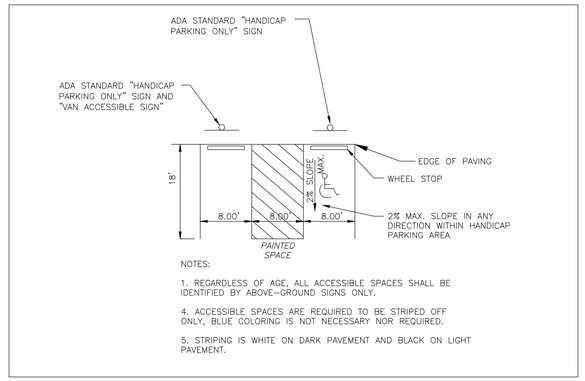


NOTES:
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
2. SPECIFICATIONS SHOWN CAN BE CHANGED BY THE MANUFACTURER ONLY.
3. FOOTING WIDTH TO BE (4)X POST WIDTH.

4/C5.1
CHAIN-LINK FENCE



5/C5.1
CONCRETE PAVING



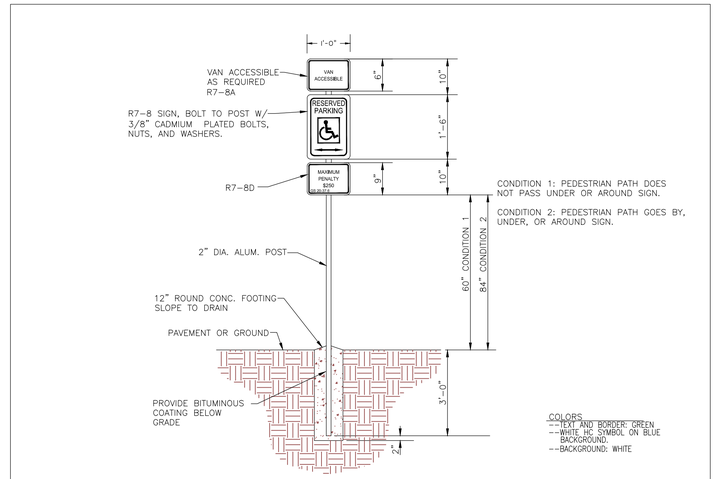
NOTES:

1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE-GROUND SIGNS ONLY.

4. ACCESSIBLE SPACES ARE REQUIRED TO BE STRIPED OFF ONLY, BLUE COLORING IS NOT NECESSARY NOR REQUIRED.

5. STRIPING IS WHITE ON DARK PAVEMENT AND BLACK ON LIGHT PAVEMENT.

6/C5.1
ADA PARKING LAYOUT



GENERAL NOTES:

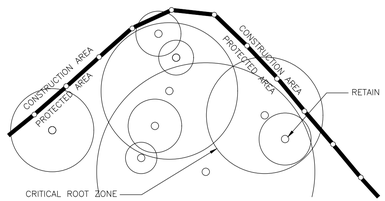
1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE-GROUND SIGNS ONLY.

2. NEW SPACES SHALL NOT USE GROUND-PAINTED SYMBOLS.

3. ACCESSIBLE SPACES ARE REQUIRED TO BE STRIPED OFF ONLY; BLUE COLORING IS NOT NECESSARY NOR REQUIRED.

4. STRIPING IS WHITE ON DARK PAVEMENT; BLACK ON LIGHT PAVEMENT. (N.C.D.O.T.)

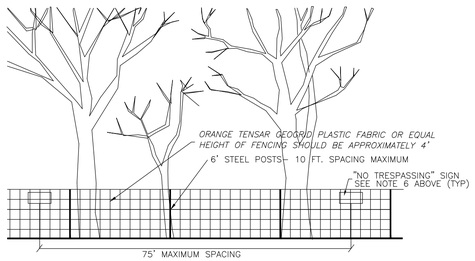
7/C5.1
ADA PARKING SIGN



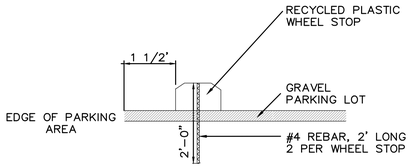
NOTES:

1. MOVE FENCE TO A LOCATION NECESSARY TO PREVENT DAMAGE TO ANY PORTION OF THE TREE'S CRITICAL ROOT SYSTEM PRIOR TO LAND DISTURBANCE.
2. ROOT PRUNE TREES TO REMAIN WHERE CONSTRUCTION ACTIVITIES WILL SEVER ROOTS.
3. ANY TREE ROOTS EXPOSED BY CONSTRUCTION SHALL BE SEVERED CLEANLY WITH A PRUNING TOOL.
4. DO NOT DISPOSE OF ANY CHEMICALS OR REMOVE SOIL OUTSIDE THE LIMITS OF WORK.
5. WHEN INSTALLING NEW LANDSCAPE PLANTS, DO NOT DRIVE EQUIPMENT UPON OR DISTURB THE SOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.
6. *SIGNAGE IN BOTH ENGLISH AND SPANISH MUST BE PLACED ON TREE PROTECTION FENCING WITH A MINIMUM SPACING OF 75' O.C. SIGNAGE IS TO READ :*

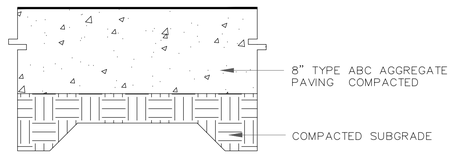
TREE PROTECTION AREA – NO TRESPASSING WITHIN THE FENCE
PROHIBIDO ENTRAR / ZONA PROTECTORA PARA LOS ARBOLES



1/C5.1
TREE PROTECTION FENCE



2/C5.1
WHEEL STOPS



3/C5.1
GRAVEL PARKING

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BID SET

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DETAILS

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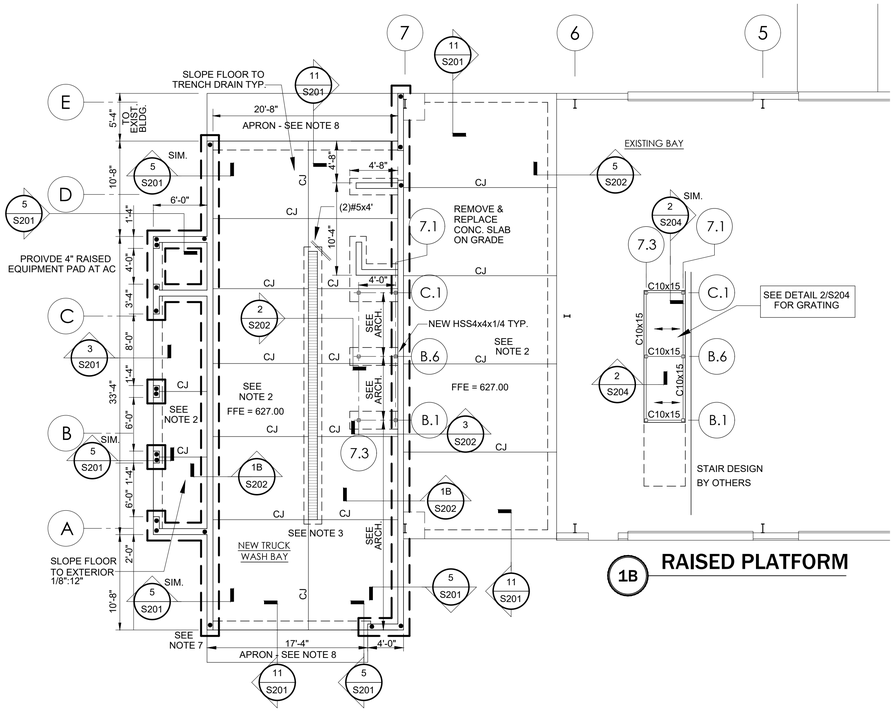
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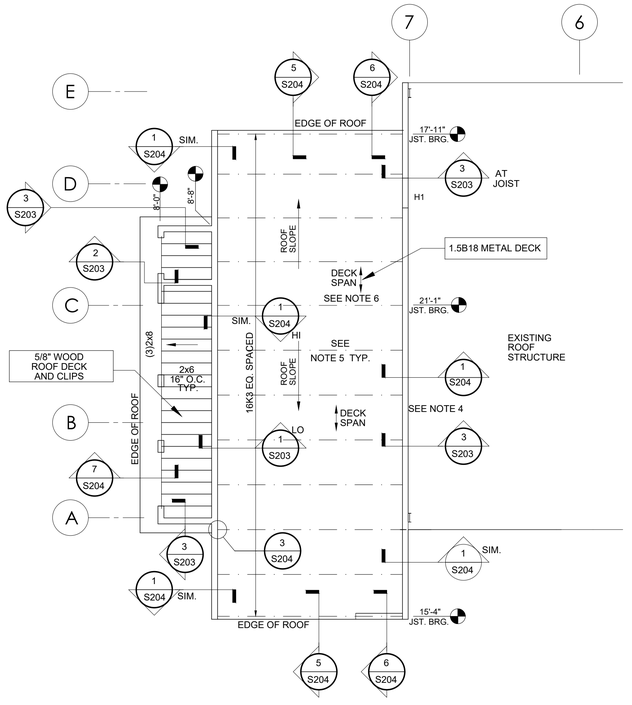
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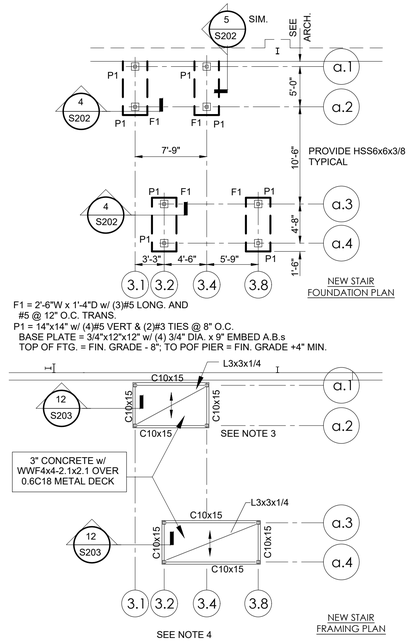
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DRAWN:	
DESIGNED:	AO
REVIEWED:	AO
APPROVED:	
SCALE:	#######

C5.1







1 FLEET BUILDING FOUNDATION PLAN

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE 5" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB w/ 5" GRAVEL BASE COURSE
3. SEE 4/A220 FOR TRENCH DRAIN DETAILS - CONFIRM SIZE PRIOR TO CONSTRUCTION
4. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
5. SEE 9/S201 FOR FOUNDATION STEPS AS REQUIRED - CONFIRM ALL GRADES WITH FINAL CIVIL DRAWINGS
6. CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION
7. PROVIDE ADDITIONAL VERTICAL REBAR IN CMU WALL WHERE SHOWN IF SPACING DOES NOT PLACE A REBAR - SEE PLAN •
8. PROVIDE 6" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB w/ 5" GRAVEL BASE COURSE

2 FLEET BUILDING ROOF FRAMING PLAN

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION
3. TOP OF STEEL ELEVATION = SEE PLAN
4. ATTACH EXISTING METAL BUILDING FRAMING TO NEW CMU WALL w/ 1/2" DIA. x 4" EMBED WEDGE ANCHORS @ 16" O.C.
5. PROVIDE SLOPED JOIST SEATS AS REQUIRED.
6. PROVIDE SLOPED TOP CHORD BENT METAL PLATE FOR DECK SUPPORT - MIN. 4" DECK SUPPORT LENGTH EACH SIDE
7. BAR JOIST DESIGN PER LATEST SJI STANDARDS - PROVIDE BRACING FOR WIND UPLOAD IN THIS AREA

3 FLEET BLDG. NEW STAIRS

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. CONFIRM EXISTING CONDITIONS PRIOR TO CONSTRUCTION
3. TOP OF STEEL = SEE ARCH. - CONFIRM WITH STAIR DRAWINGS
4. TOP OF STEEL = SEE ARCH. - CONFIRM WITH STAIR DRAWINGS
5. STAIR DESIGN BY OTHERS
6. SEE ARCH. DWGS. FOR LOCATION OF NEW STAIRS

DESIGN AND CODE INFORMATION:

1. ALL CONSTRUCTION SHALL CONFORM TO THE 2018 NC BUILDING CODE.
2. VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY CONDITIONS WHICH DO NOT COMPLY WITH THE PLANS.
3. THE DESIGN ADEQUACY, SAFETY OF BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR
4. FOR LOCATIONS OF MISCELLANEOUS ITEMS SUCH AS INSERTS, ETC. AFFECTING STRUCTURAL WORK, SEE TRADE RELATED DRAWINGS

DESIGN DATA:

5. ROOF DEAD LOAD = 20 PSF
2. ROOF LIVE LOAD = 20 PSF
3. RAISED PLATFORM LIVE LOAD = 100 PSF
4. WIND LOAD = 110 MPH, EXP. CATEGORY C
5. SNOW LOAD = 10 PSF

GENERAL NOTES:

1. SEE ARCHITECTURAL OR OTHER TRADE DRAWINGS FOR COORDINATION ITEMS.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL FINAL DIMENSIONS.
3. VERIFY LOCATION OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT TO BE LOCATED UNDER RAISED PLATFORM
4. VERIFY LOCATION OF ELECTRICAL EQUIPMENT PRIOR TO FABRICATION AND INSTALLATION OF PLATFORM
5. PROVIDE WWF 6x6-W1.4xW1.4 STEEL WIRE REINFORCING AT ALL 4" CONCRETE SLABS ON GRADE U.O.N. PROVIDE WWF 4x4-W2.9xW2.9 STEEL WIRE REINFORCING AT ALL 5" OR 6" CONCRETE SLABS ON GRADE U.O.N. PROVIDE 15 MIL POLY VAPOR BARRIER TYPICAL - REFER TO SPECIFICATIONS FOR ALL INTERIOR CONCRETE SLABS ON GRADE

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC STEEL CONSTRUCTION MANUAL, LATEST EDITION
2. STRUCTURAL STEEL SHALL BE ASTM A-992
3. STRUCTURAL TUBES SHALL BE ASTM A500, GRADE B
4. STEEL ANGLES AND CHANNELS SHALL BE ASTM A36
5. STEEL FRAMING CONNECTIONS SHALL BE BOLTED OR WELDE. BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL BE ASTM A-490-N UNO. SNUG TIGHT ALL CONNECTIONS UNO
6. WELDS SHOWN ON THE STRUCTURAL DRAWINGS ARE THE MINIMUM REQ'D BY DESIGN, THE FABRICATOR'S DRAWINGS SHALL SHOW WELDS AND THEY SHALL CONFORM TO AWS SPECIFICATIONS. ALL WELDS SHALL BE DONE WITH E-70 SERIES ELECTRODES
7. PAINT ALL STRUCTURAL STEEL WITH ONE COAT OF RUST INHIBITVE PRIMER 2.5 MILS IN THICKNESS. THE FINISH COAT OF PAINT SHALL BE COMPATIBLE WITH PRIMER AND VERIFIED PRIOR TO CONSTRUCTION. TOUCH UP ALL EXPOSED STEEL AFTER FIELD INSTALLATION. ALL STRUCTURE STEEL WHICH IS EXPOSED TO THE ELEMENTS SHALL RECEIVE TWO COATS OF EXTERIOR ENAMEL WHICH IS COMPATIBLE TO THE PRIMED SURFACE. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHES
8. SHOP DRAWINGS SHALL INCLUDE COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS. SUBMIT FOUR COPIES OF EACH DRAWING. CONTRACTOR MUST REVIEW AND STAMP SHOP DRAWINGS ACCORDINGLY PRIOR TO SUBMITTAL FOR ARCH. AND ENGINEERING REVIEW. REPRODUCTION OF STRUCTURAL DRAWINGS IS NOT PERMITTED.

REINFORCED CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE - ACI 318 LATEST EDITION
2. REINFORCING STEEL SHALL BE DEFORMED BARS ASTM A-615 GRADE 60
3. ALL CONCRETE SHALL BE 4000 PSI MINIMUM
4. PROVIDE 3" CLEAR COVER IN FOOTINGS AND LOCATE SLAB ON GRADE REINFORCING IN MIDDLE OF SLAB
5. LONGITUDINAL REINFORCING STEEL IN TURNED DOWN SHALL BE CONTINUOUS AROUND CORNERS.
6. SLUMP LIMIT IS 5 INCHES OR 2 TO 4 INCHES BEFORE ADDING HIGH RANGE WATER REDUCING ADMIXTURES OR PLASTICIZERS
7. AIR CONTENT SHALL BE 6 PERCENT PLUS OR MINUS 1.5 PERCENT
8. MAXIMUM COARSE AGGREGATE SHALL BE 3/4" NOMINAL
9. PORTLAND CEMENT SHALL BE ASTM C 150
10. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1
11. HOT WEATHER CONCRETE SHALL COMPLY WITH ACI 301

FOUNDATION NOTES:

1. FOUNDATION DESIGN IS BASED UPON ASSUMED SOIL VALUES.
2. FOOTINGS ARE DESIGNED TO BEAR ON UNIFORM SUITABLE SOIL CAPABLE OF SUPPORTING 2000 PSF
3. WHERE FOOTING EXCAVATIONS ARE TO REMAIN OPEN AND MAY BE EXPOSED TO RAINFALL THE EXCAVATIONS SHALL BE UNDERCUT AND A 3" THICK MUD MAT OF 2000 PSI CONCRETE SHALL BE PLACED OR CLEAN GRAVEL SHALL BE PLACED IN THE BOTTOM TO PROTECT THE BEARING SOILS
4. WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL UNLESS OTHERWISE APPROVED - SEE 9/S201

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890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

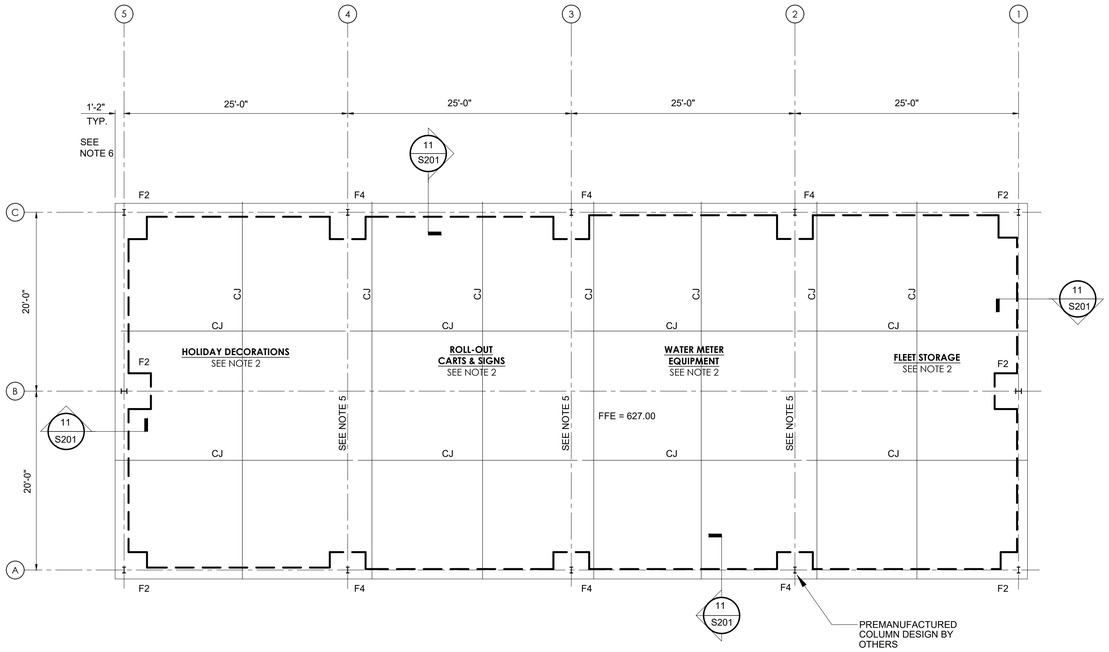
NORTH CAROLINA PROFESSIONAL SEAL 20295 ENGINEER NEIL J. KUPLIC
11/14/24

SHEET NAME:
FLEET BUILDING

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

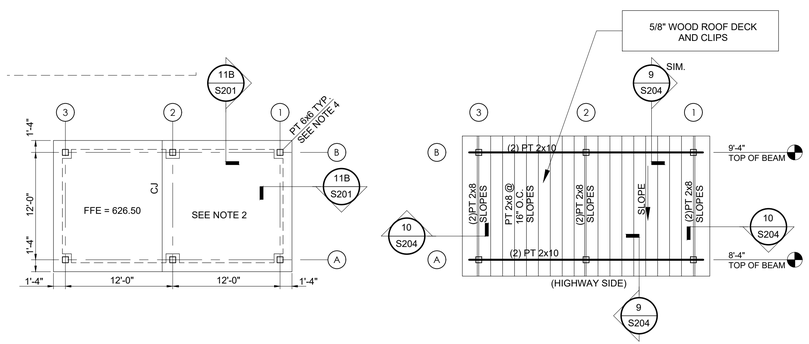
SHEET NUMBER
S100
1 OF 8



1 BUILDING A FOUNDATION PLAN

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

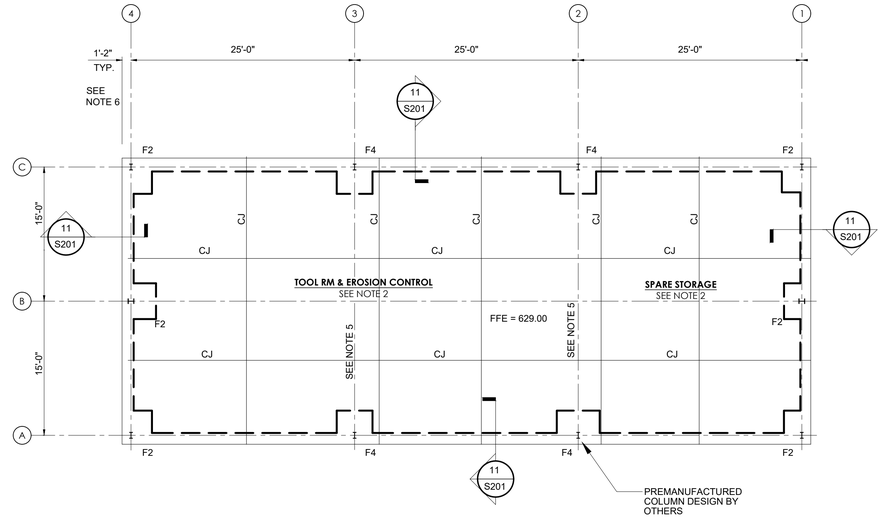
NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE 5" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB F.F.E. = 627.00 OVER 5" GRAVEL BASE COURSE
3. FOUNDATION SIZE TO BE CONFIRMED WHEN FINAL REACTIONS ARE PROVIDED (BUILDING FRAMING DESIGN BY OTHERS)
4. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
5. PROVIDE 2x4 INTERIOR STUDS @ 16" O.C., EXTEND A DOUBLE STUD TO DECK @ 4' O.C. (SEE ARCH.)
6. CONFIRM DIMENSIONS WITH PREMANUFACTURED BUILDING DRAWINGS



3 PICNIC FOUNDATION AND FRAMING PLANS

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

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROIVDE 4" CONCRETE SLAB ON GRADE w/ WWF 6x6 - W1.4xW1.4 CENTER OF SLAB w/ 4" GRAVEL BASE COURSE
3. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
4. PROVIDE SIMPSON CBS66 POST BASE OR AN APPROVED EQUAL



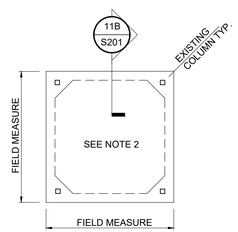
2 BUILDING B FOUNDATION PLAN

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

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE 5" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB F.F.E. = 628.00 OVER 5" GRAVEL BASE COURSE
3. FOUNDATION SIZE TO BE CONFIRMED WHEN FINAL REACTIONS ARE PROVIDED (BUILDING FRAMING DESIGN BY OTHERS)
4. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
5. PROVIDE 2x4 INTERIOR STUDS @ 16" O.C., EXTEND A DOUBLE STUD TO DECK @ 4' O.C. (SEE ARCH.)
6. CONFIRM DIMENSIONS WITH PREMANUFACTURED BUILDING DRAWINGS

FOOTING SCHEDULE

F2 4'-0"x4'-0"x1'-2" w/ (5) #5 EACH WAY THICKENED SLAB
F4 5'-0"x5'-0"x1'-4" w/ (6) #5 EACH WAY THICKENED SLAB



4 EVIDENCE STORAGE PLAN

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

NOTES:
1. FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION
2. PROIVDE 5" CONCRETE SLAB ON GRADE w/ WWF 6x6 - W1.4xW1.4 CENTER OF SLAB w/ 5" GRAVEL BASE COURSE

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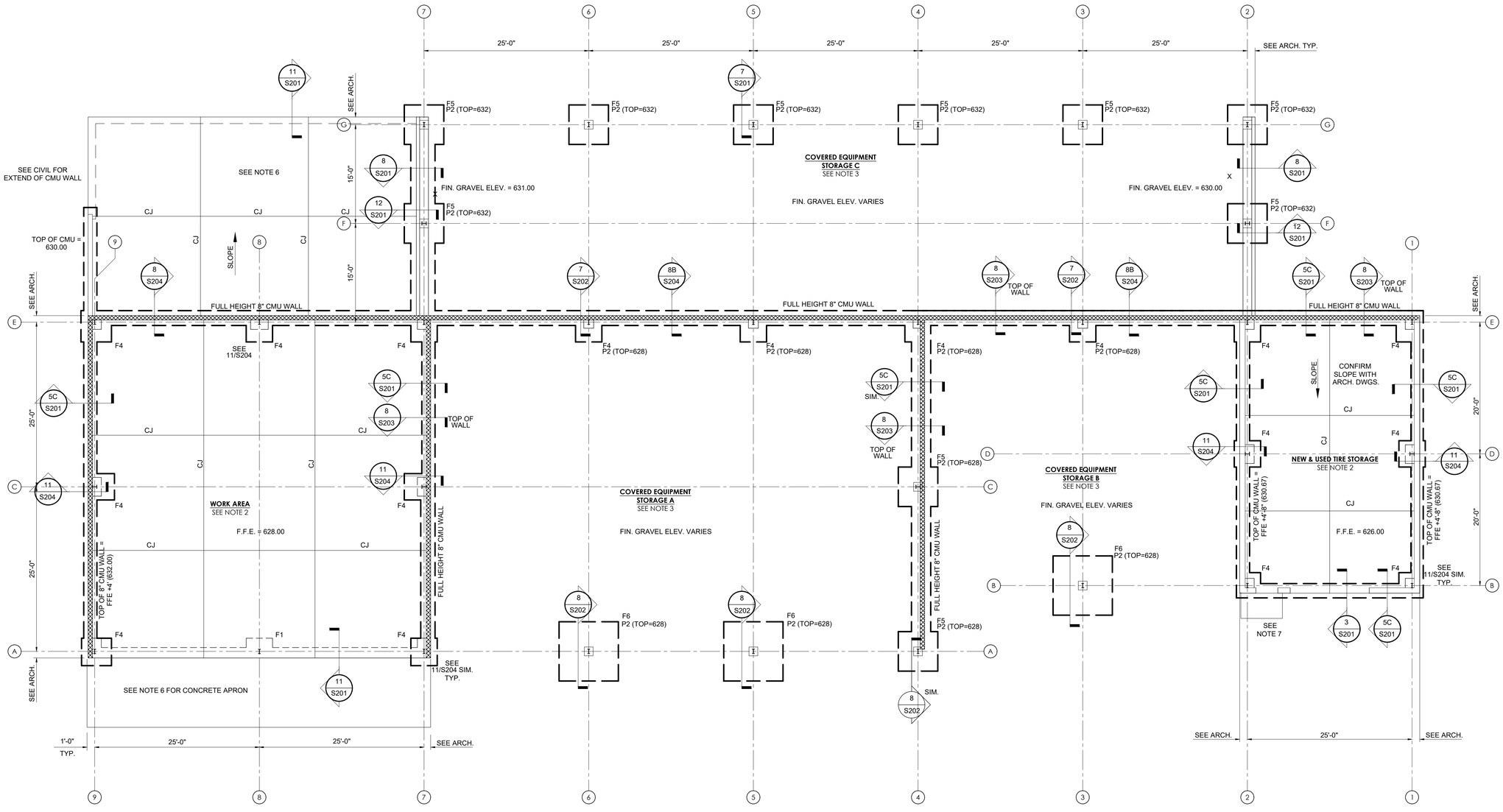
NORTH CAROLINA PROFESSIONAL SEAL 20295 ENGINEER NEIL J. KUPLIC

SHEET NAME:
BUILDINGS A, B AND PICNIC

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

SHEET NUMBER
S101
2 OF 8



1 BUILDING C FOUNDATION PLAN

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE 5" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB OVER 5" GRAVEL BASE COURSE
3. PROVIDE 5" GRAVEL BASE
4. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
5. SEE CIVIL DRAWINGS FOR FINAL GRADING AND COORDINATE FOR FOOTING STEPS - SEE 9/S201
6. PROVIDE 6" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB OVER 5" GRAVEL BASE COURSE
7. PROVIDE 4" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB OVER 4" GRAVEL BASE COURSE

FOOTING AND PIER SCHEDULE

F2	4'-0"x4'-0"x1'-2" w/ (5) #5 EACH WAY THICKENED SLAB
F3	3'-0"x3'-0"x1'-2" w/ (4) #5 EACH WAY THICKENED SLAB
F4	5'-0"x5'-0"x1'-4" w/ (6) #5 EACH WAY FOOTING
F5	6'-0"x6'-0"x1'-6" w/ (7) #6 EACH WAY FOOTING
F6	7'-0"x7'-0"x1'-9" w/ (8) #7 EACH WAY FOOTING
P2	SEE 7/S201 AND 12/S201

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

NORTH CAROLINA PROFESSIONAL SEAL 20295 ENGINEER NEIL J. KUPLIC 11/04/24

SHEET NAME:
BULDING C FOUNDATION PLAN

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

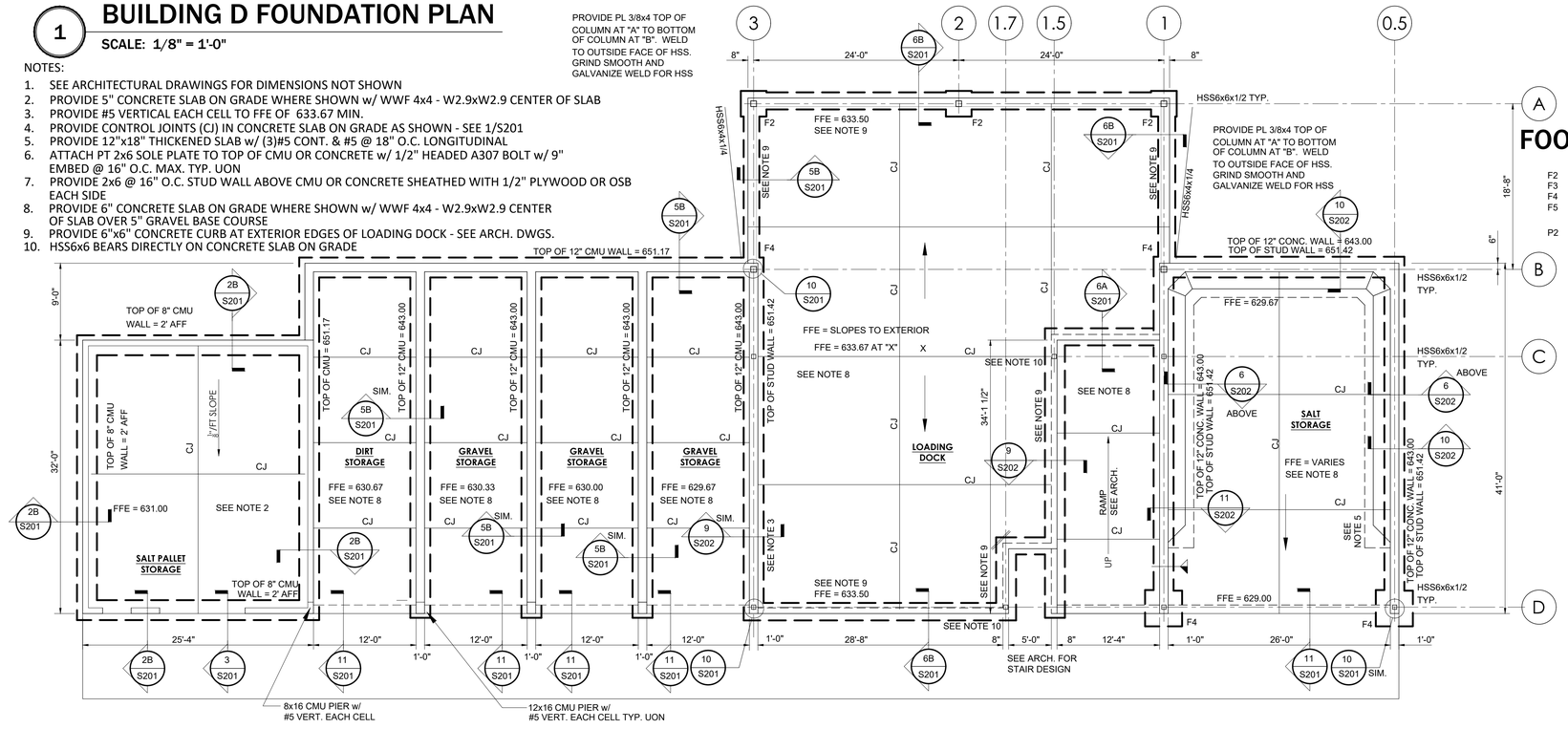
SHEET NUMBER
S102
3 OF 8

1 BUILDING D FOUNDATION PLAN

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE 5" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB
3. PROVIDE #5 VERTICAL EACH CELL TO FFE OF 633.67 MIN.
4. PROVIDE CONTROL JOINTS (CJ) IN CONCRETE SLAB ON GRADE AS SHOWN - SEE 1/S201
5. PROVIDE 12"x18" THICKENED SLAB w/ (3)#5 CONT. & #5 @ 18" O.C. LONGITUDINAL
6. ATTACH PT 2x6 SOLE PLATE TO TOP OF CMU OR CONCRETE w/ 1/2" HEADED A307 BOLT w/ 9" EMBED @ 16" O.C. MAX. TYP. UON
7. PROVIDE 2x6 @ 16" O.C. STUD WALL ABOVE CMU OR CONCRETE SHEATHED WITH 1/2" PLYWOOD OR OSB EACH SIDE
8. PROVIDE 6" CONCRETE SLAB ON GRADE WHERE SHOWN w/ WWF 4x4 - W2.9xW2.9 CENTER OF SLAB OVER 5" GRAVEL BASE COURSE
9. PROVIDE 6"x6" CONCRETE CURB AT EXTERIOR EDGES OF LOADING DOCK - SEE ARCH. DWGS.
10. HSS6x6 BEARS DIRECTLY ON CONCRETE SLAB ON GRADE



FOOTING AND PIER SCHEDULE

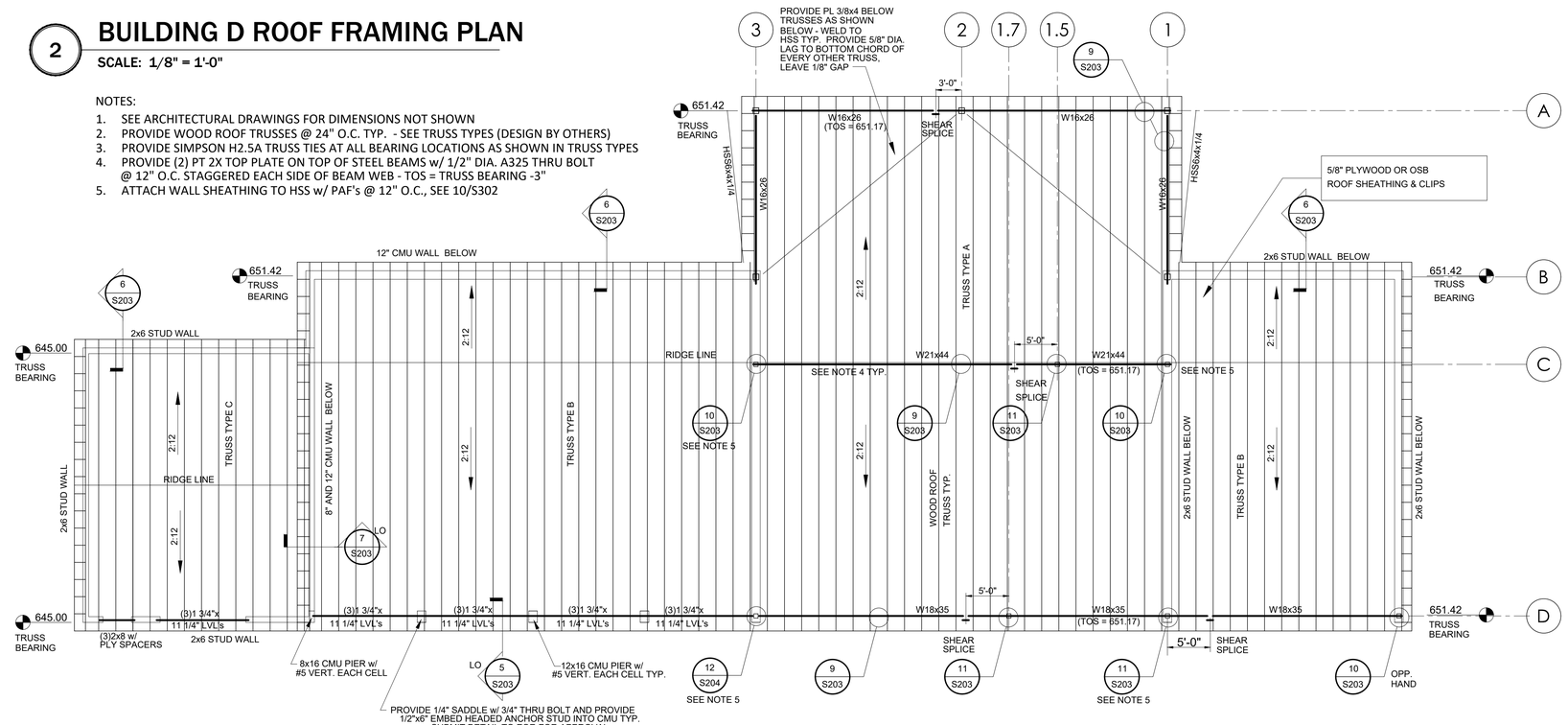
F2	4'-0"x4'-0"x1'-2" w/ (5) #5 EACH WAY THICKENED SLAB
F3	3'-0"x3'-0"x1'-2" w/ (4) #5 EACH WAY THICKENED SLAB
F4	5'-0"x5'-0"x1'-4" w/ (6) #5 EACH WAY FOOTING
F5	6'-0"x6'-0"x1'-6" w/ (7) #6 EACH WAY FOOTING
P2	SEE 7/S201 AND 12/S201

2 BUILDING D ROOF FRAMING PLAN

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

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN
2. PROVIDE WOOD ROOF TRUSSES @ 24" O.C. TYP. - SEE TRUSS TYPES (DESIGN BY OTHERS)
3. PROVIDE SIMPSON H2.5A TRUSS TIES AT ALL BEARING LOCATIONS AS SHOWN IN TRUSS TYPES
4. PROVIDE (2) PT 2X TOP PLATE ON TOP OF STEEL BEAMS w/ 1/2" DIA. A325 THRU BOLT @ 12" O.C. STAGGERED EACH SIDE OF BEAM WEB - TOS = TRUSS BEARING -3"
5. ATTACH WALL SHEATHING TO HSS w/ PAF's @ 12" O.C., SEE 10/S302



TRUSS TYPES

NOTE: NOT ALL TRUSS TYPES ARE SHOWN

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20295 NEIL J. KUPLIC 11/4/24

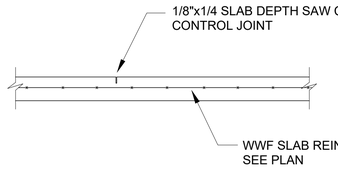
SHEET NAME:
BUILDING D FOUNDATION PL

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

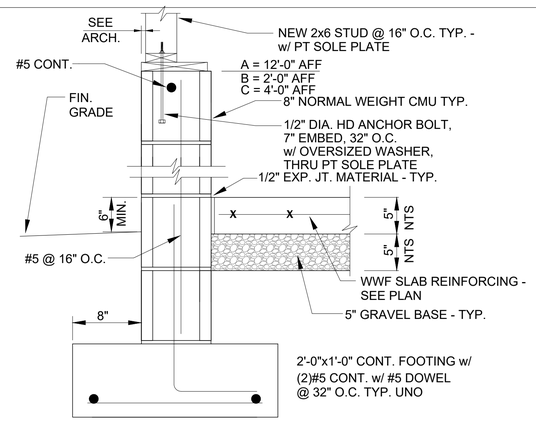
SHEET NUMBER
S103
4 OF 8

NOTE: SEE PLAN FOR CONTROL JOINT (CJ) LOCATIONS



NOTE: SOME AREAS HAVE A GRAVEL SURFACE IN LIEU
OF A CONCRETE SLAB ON GRADE - SEE PLANS

1 SLAB CONTROL JOINT
NTS

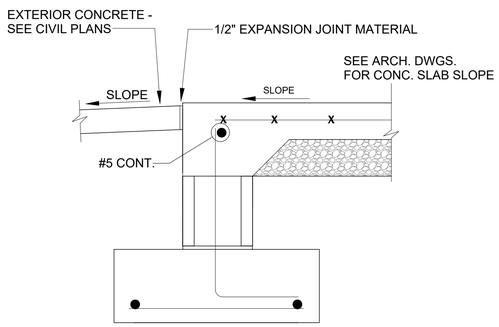


2 EXT. WALL SECTION
NTS

FILL ALL CELLS AT OR BELOW FFE AND
AT REINFORCING SOLID WITH GROUT

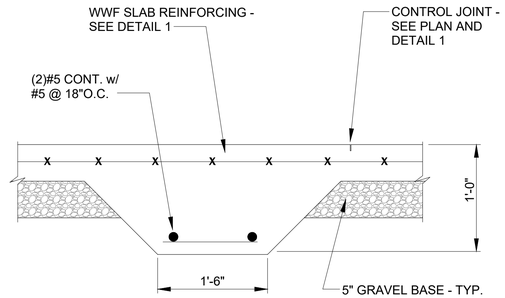
OPTION TO USE 5/8" DIA. WEDGE ANCHORS, 6" EMBED, IN LIEU OF EMBEDDED
ANCHOR BOLTS - SUBMIT TO ENGINEER FOR APPROVAL

SEE ARCH. DWGS. FOR OFFSET TO TOP
OF EXTERIOR SLAB FROM F.F.E.

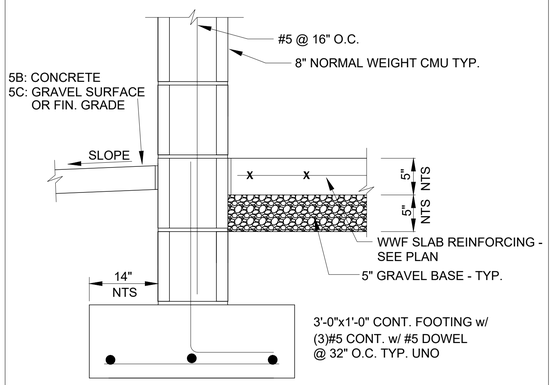


3 EXT. SECTION @ OPENING
NTS

SEE DETAIL 2 FOR INFORMATION
NOT SHOWN

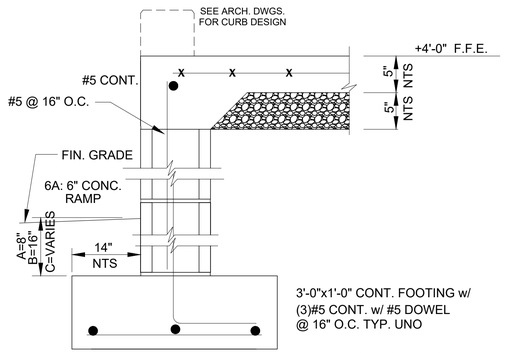


4 THICKENED SLAB SECTION
NTS



5 EXT. WALL SECTION
NTS

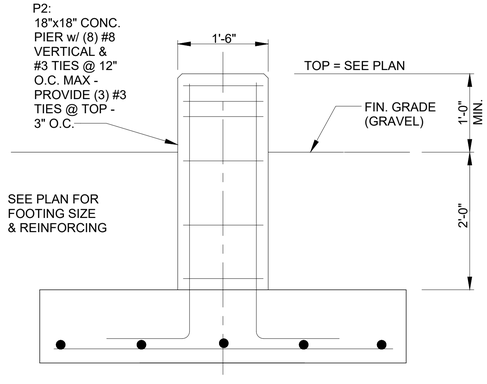
FILL ALL CELLS AT OR BELOW FFE OR FIN. GRADE AND
AT REINFORCING SOLID WITH GROUT



6 EXT. WALL SECTION
NTS

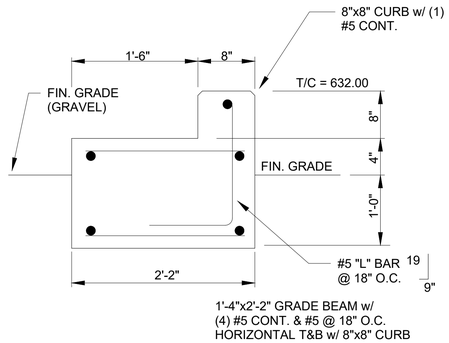
FILL ALL CELLS AT OR BELOW FFE AND
AT REINFORCING SOLID WITH GROUT

SEE DETAIL 2 FOR INFO.
NOT SHOWN

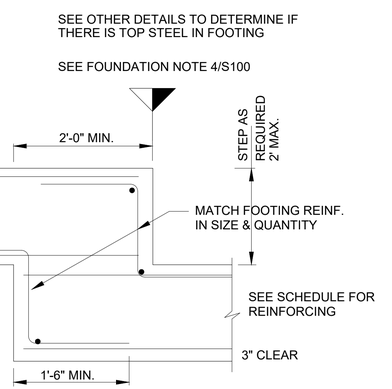


7 COLUMN FTG. & PIER
NTS

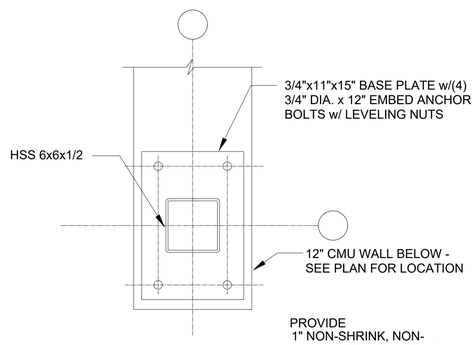
CONFIRM PIER SIZE WITH PREMANUF.
BUILDING COLUMN SIZES



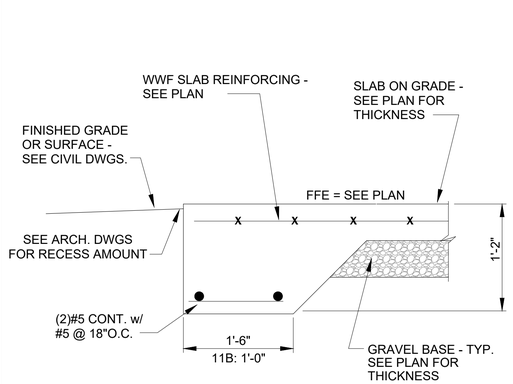
8 WALL CURB
NTS



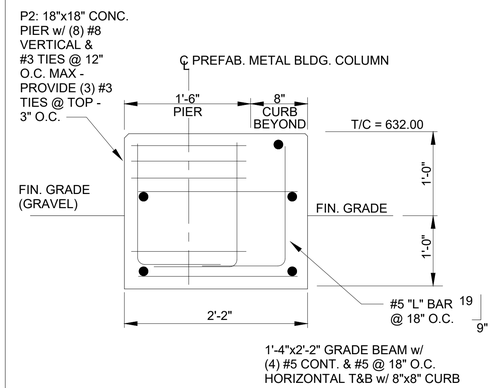
9 FTG OR THICK SLAB STEP AS REQ'D
NTS



10 HSS COLUMN BASE PLATE
NTS



11 DETAIL @ SLAB EDGE
NTS



12 WALL CURB AT COLUMN
NTS

CONFIRM SIZE WITH PREMANUF.
BUILDING COLUMN SIZES

MHA WORKS
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kuplicn@gmail.com

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PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DA

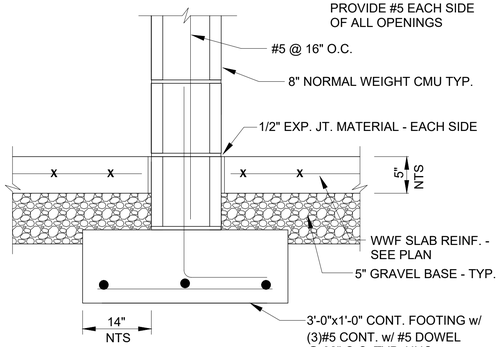
NORTH CAROLINA PROFESSIONAL SEAL 20255 ENGINEER NEIL J. KUPLIC

SHEET NAME:
DETAILS

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

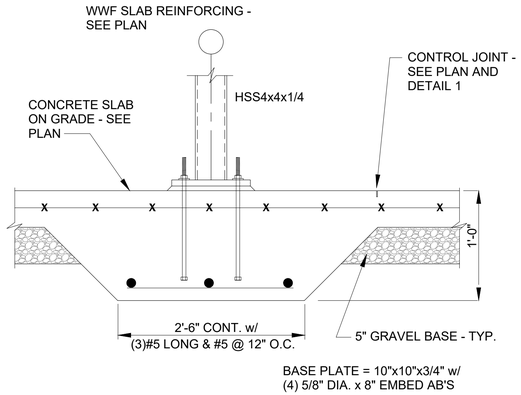
SHEET NUMBER
S201
5 OF 8



1 INTERIOR WALL

NTS

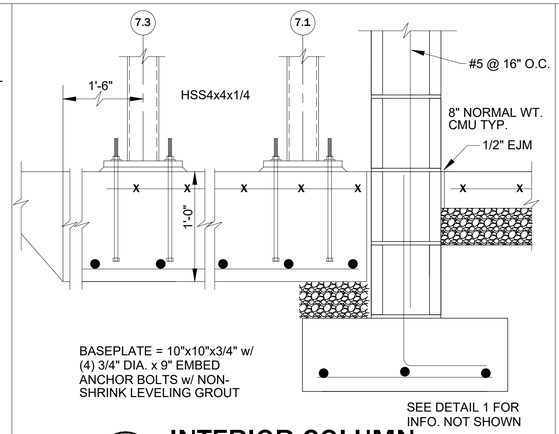
FILL ALL CMU CELLS SOLID WITH GROUT AT OR BELOW FFE AND AT ALL REINFORCING



2 INTERIOR COLUMN

NTS

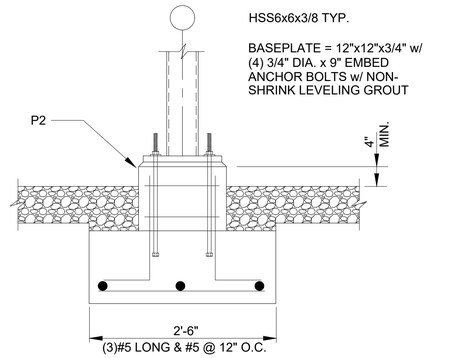
OPTION TO USE 5/8" DIA. WEDGE ANCHORS, 6" EMBED, IN LIEU OF EMBEDDED ANCHOR BOLTS - SUBMIT TO ENGINEER FOR APPROVAL



3 INTERIOR COLUMN

NTS

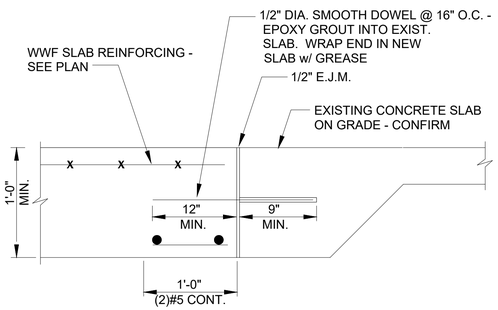
OPTION TO USE 5/8" DIA. WEDGE ANCHORS, 6" EMBED, IN LIEU OF EMBEDDED ANCHOR BOLTS - SUBMIT TO ENGINEER FOR APPROVAL



4 SECTION

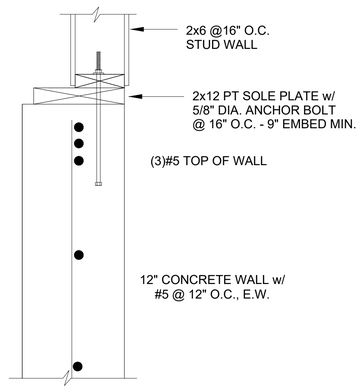
NTS

OPTION TO USE 5/8" DIA. WEDGE ANCHORS, 6" EMBED, IN LIEU OF EMBEDDED ANCHOR BOLTS - SUBMIT TO ENGINEER FOR APPROVAL



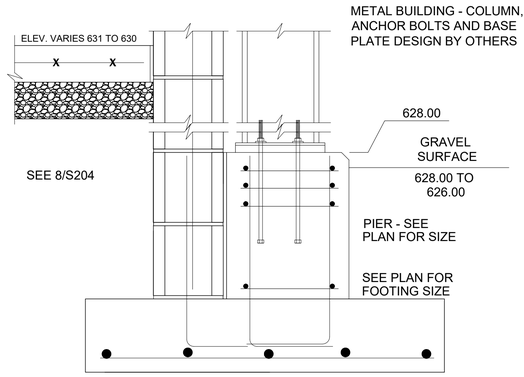
5 SECTION

NTS



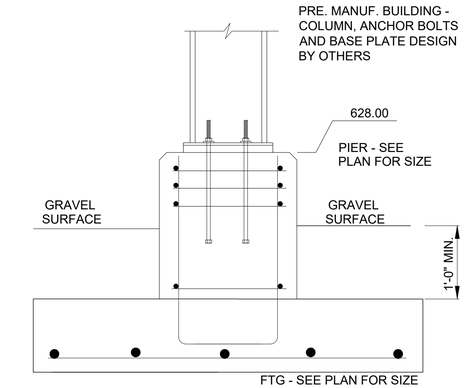
6 SECTION

NTS



7 SECTION @ PIER

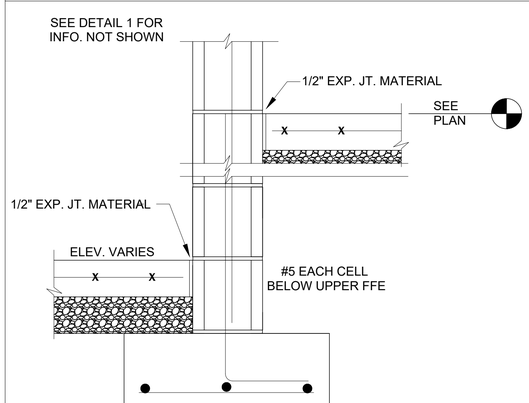
NTS



8 SECTION @ PIER

NTS

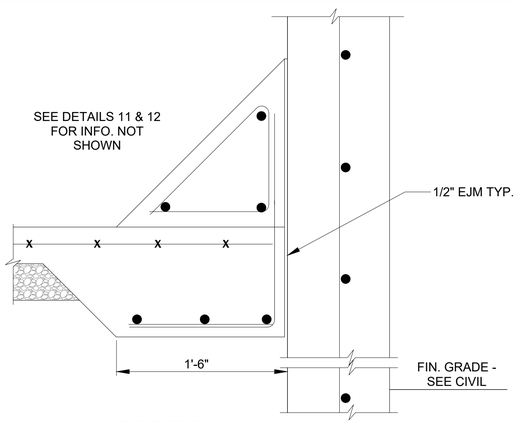
CONFIRM SIZE OF PREMANUFACTURED BUILDING COLUMNS



9 SECTION

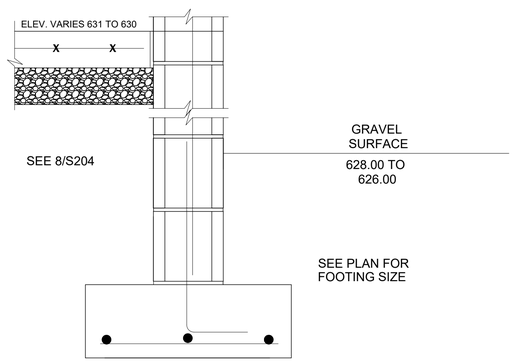
NTS

FILL ALL CMU CELLS SOLID WITH GROUT AT OR BELOW FFE AND AT ALL REINFORCING



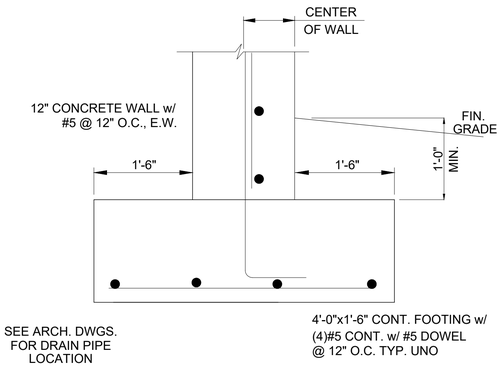
10 SECTION

NTS



11 SECTION

NTS



12 SECTION

NTS

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REVISIONS:

#	DESCRIPTION:	DATE

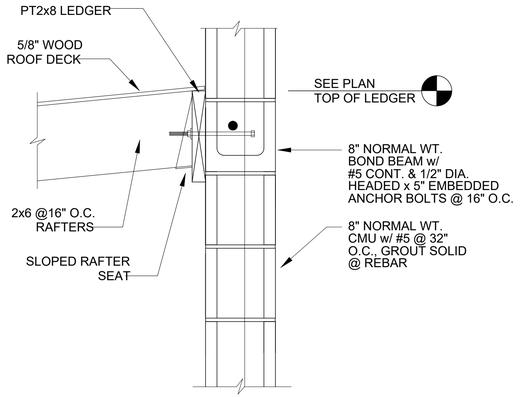
NORTH CAROLINA PROFESSIONAL SEAL 20295 ENGINEER NEIL J. KUPLIC 11/4/24

SHEET NAME:
DETAILS

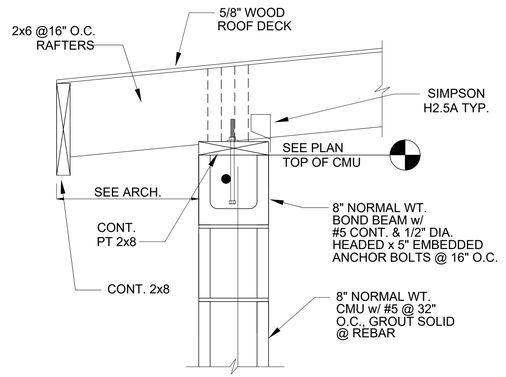
PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

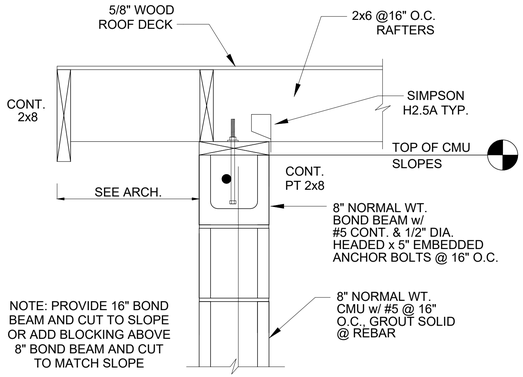
SHEET NUMBER
S202
6 OF 8



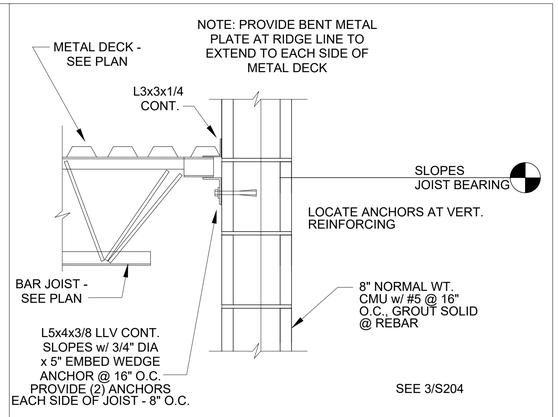
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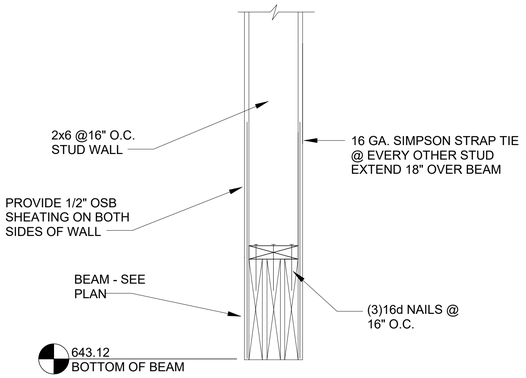
2 SECTION
NTS



3 SECTION
NTS

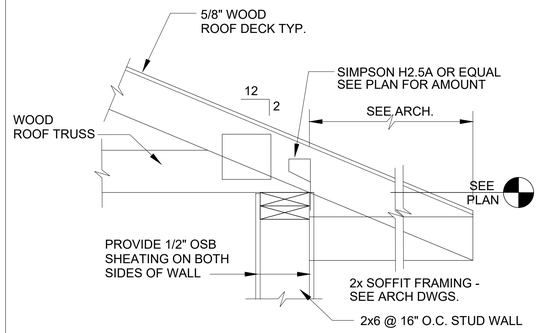


4 SECTION
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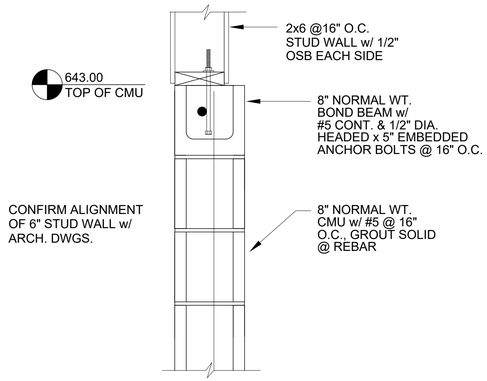


5 ROOF SECTION
NTS

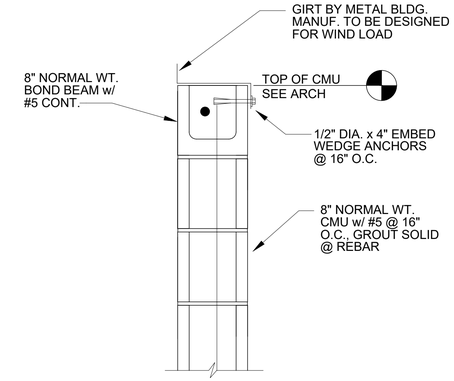
NOTE: PROVIDE 8d NAILS @ 6" O.C. AT WALL SHEATHING PERIMETER AND AT 12" O.C. INTERIOR - BOTH SIDES, BLOCK ALL EDGES



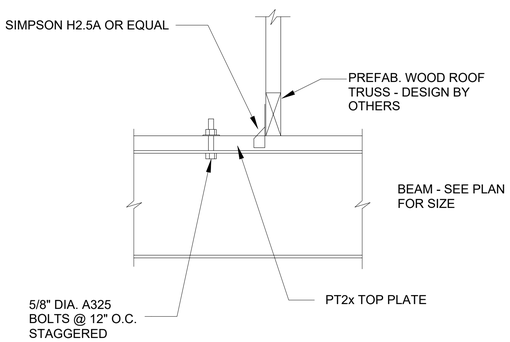
6 ROOF SECTION
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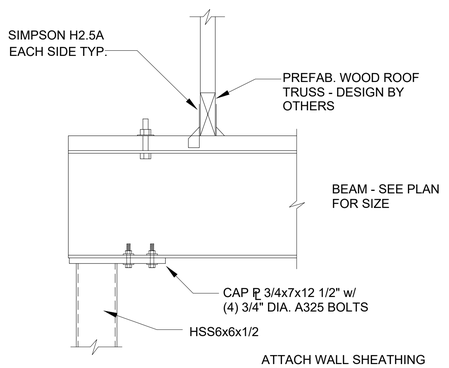
7 TOP OF CMU WALL
NTS



8 TOP OF CMU WALL
NTS

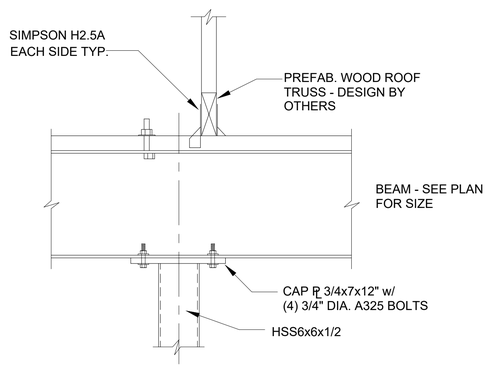


9 DETAIL @ STEEL BEAM
NTS



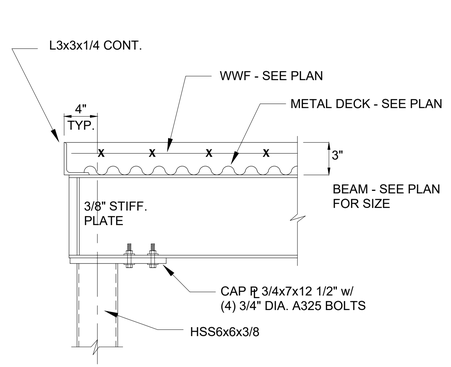
10 DETAIL @ STEEL BEAM
NTS

SEE DETAIL 9 FOR INFO NOT SHOWN



11 DETAIL @ STEEL BEAM
NTS

SEE DETAIL 9 FOR INFO NOT SHOWN



12 DETAIL @ STAIRS
NTS

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kuplicn@gmail.com

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890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

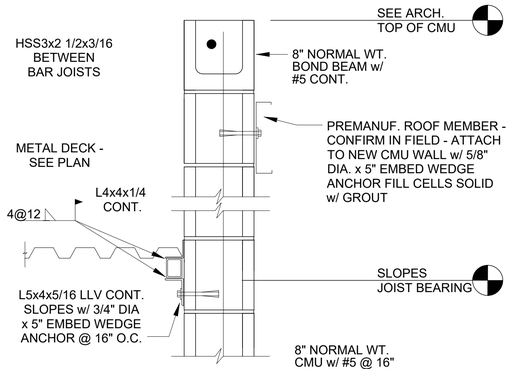
NORTH CAROLINA PROFESSIONAL SEAL 20255 ENGINEER NEIL J. KUPLIC 11/4/24

SHEET NAME:
DETAILS

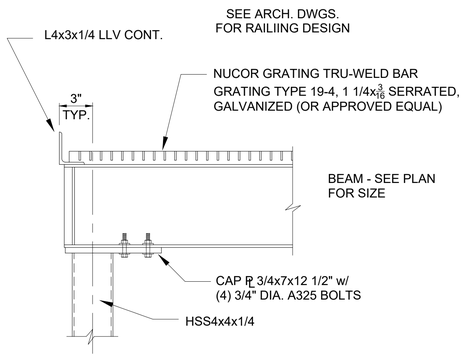
PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

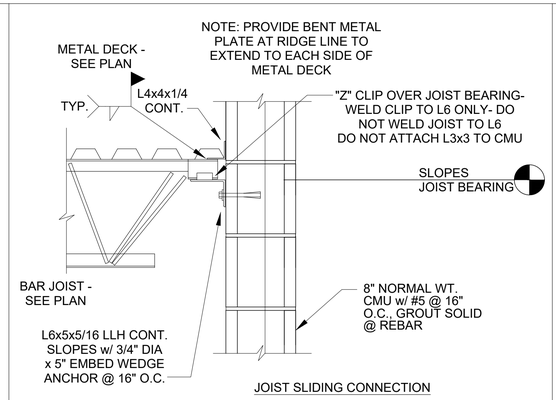
SHEET NUMBER
S203
7 OF 8



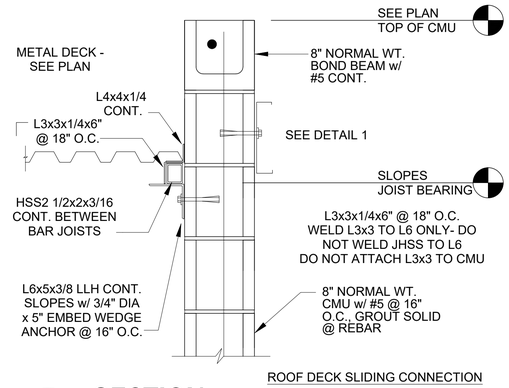
1 SECTION
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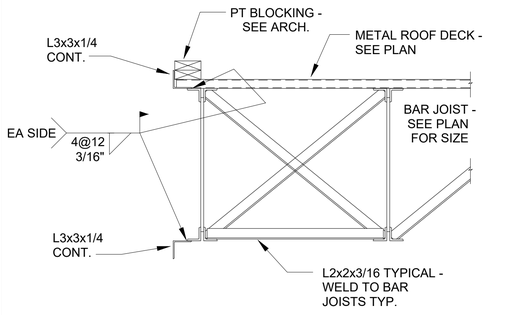
2 SECTION @ MEZZANINE
NTS



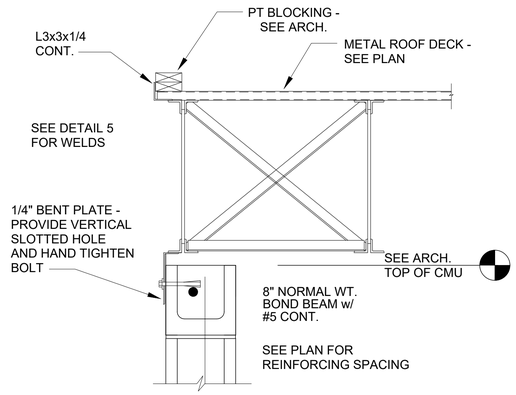
3 SECTION
NTS



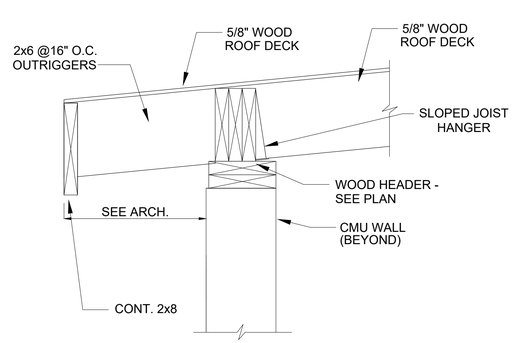
4 SECTION
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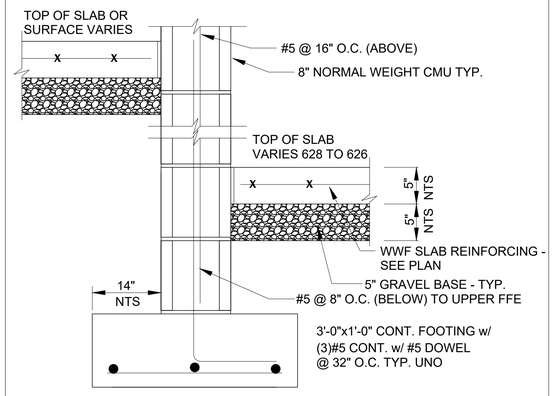
5 SECTION
NTS



6 SECTION
NTS

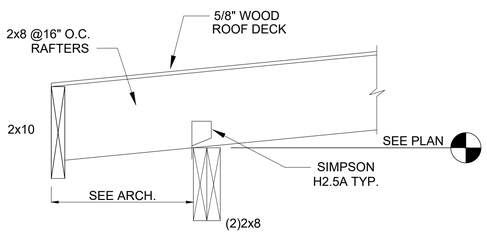


7 SECTION - STORAGE AREA
NTS

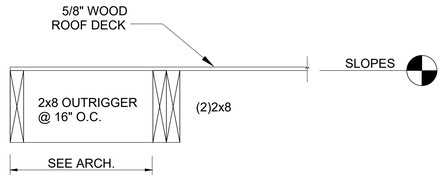


8 SECTION
NTS

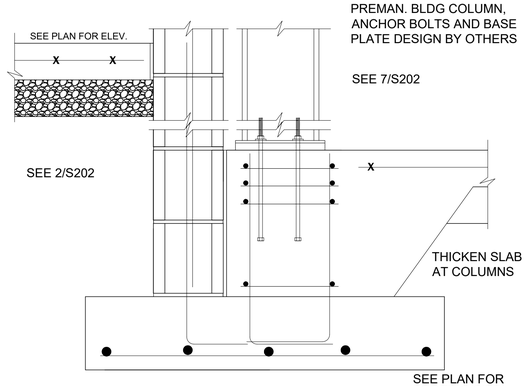
FILL ALL CELLS AT OR BELOW FFE OR FIN. GRADE AND AT REINFORCING SOLID WITH GROUT



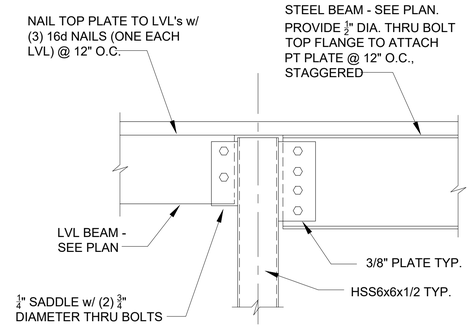
9 SECTION - PICNIC AREA
NTS



10 SECTION - PICNIC AREA
NTS



11 DETAIL
NTS



12 DETAIL - BLDG D
NTS

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kuplicn@gmail.com

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20295 NEIL J. KUPLIC 11/4/24

SHEET NAME:
DETAILS

PHASE:
BID SET

ISSUE DATE: **04 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **NJK**

SHEET NUMBER
S204
8 OF 8

NET SQ. FOOTAGES

ENCLOSED STORAGE

- SALT STORAGE (BUILDING D) — 1,148
- GRAVEL & DIRT STORAGE (BUILDING D) — 2,157
- SALT PALLET STORAGE (BUILDING D) — 852
- ENCLOSED STORAGE A (BUILDING A) — 4,333
- ENCLOSED STORAGE B (BUILDING B) — 2,501
- ENCLOSED STORAGE C (BUILDING C) — 2,704
- TIRE STORAGE (BUILDING C) — 1,152
- LOADING DOCK (BUILDING D) — 2,857

TOTAL ENCLOSED STORAGE — 17,704

COVERED EQUIPMENT STORAGE

- COVERED EQUIPMENT STORAGE A (BUILDING C) — 3,888
- COVERED EQUIPMENT STORAGE B (BUILDING C) — 2,015
- COVERED EQUIPMENT STORAGE C (BUILDING C) — 3,884

TOTAL COVERED STORAGE — 9,787

COVERED PICNIC SHELTER

- COVERED PICNIC SHELTER — 392

TOTAL — 392

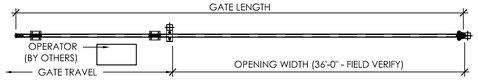
FLEET BUILDING

- EXISTING OFFICE & MAINTENANCE (INCLUDING 2ND LEVEL) — 7,310
- NEW ENCLOSED TRUCK BAY (FLEET BUILDING) — 874
- NEW COVERED WASH BAY (FLEET BUILDING) — 1,176
- NEW OIL STORAGE/COMPRESSOR (FLEET BUILDING) — 211

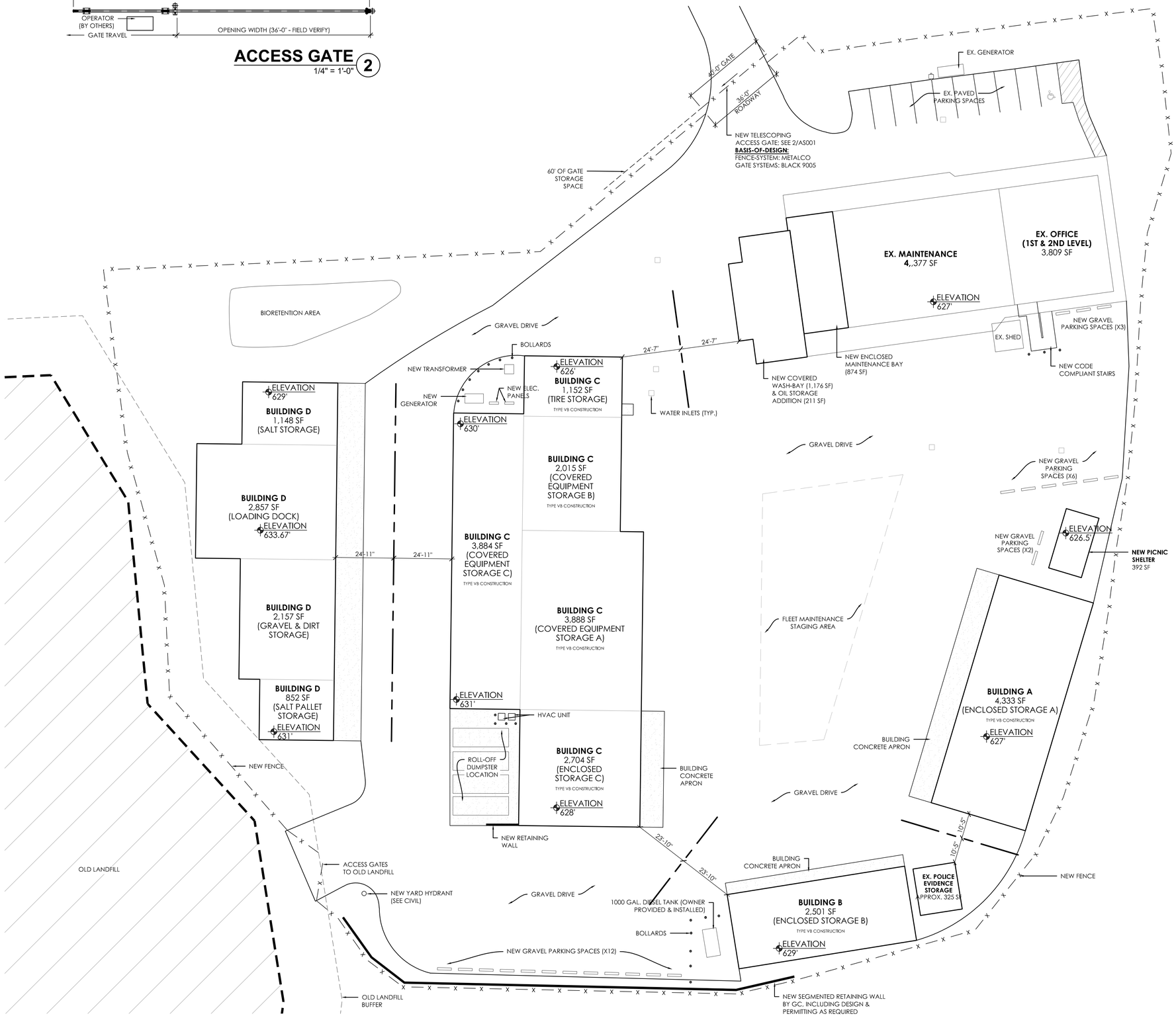
TOTAL FLEET — 9,571

SYMBOLS - ARCH. SITE PLAN

- BOLLARD (SEE PLANS FOR MORE INFO)
- CAR BUMPER
- FENCE
- OLD LANDFILL BOUNDARY
- OLD LANDFILL BUFFER
- PROPERTY LINE



ACCESS GATE 2
1/4" = 1'-0"



SEE CIVIL DRAWINGS FOR EXACT LOCATIONS & QUANTITIES

ARCHITECTURAL SITE PLAN 1
NOT TO SCALE

N

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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

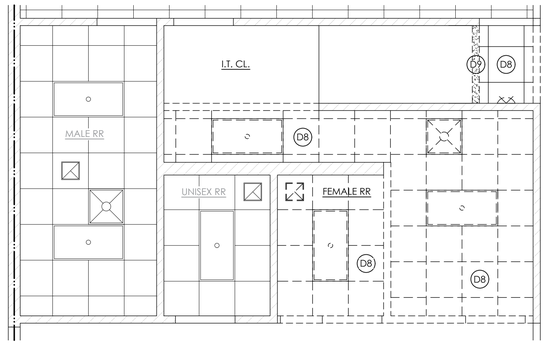
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SHEET NAME:
ARCHITECTURAL SITE PLAN

PHASE:
BID SET

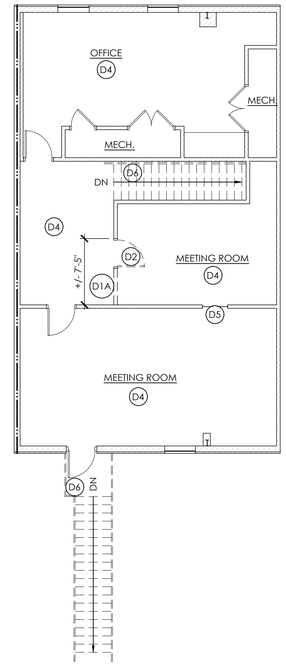
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
AS001



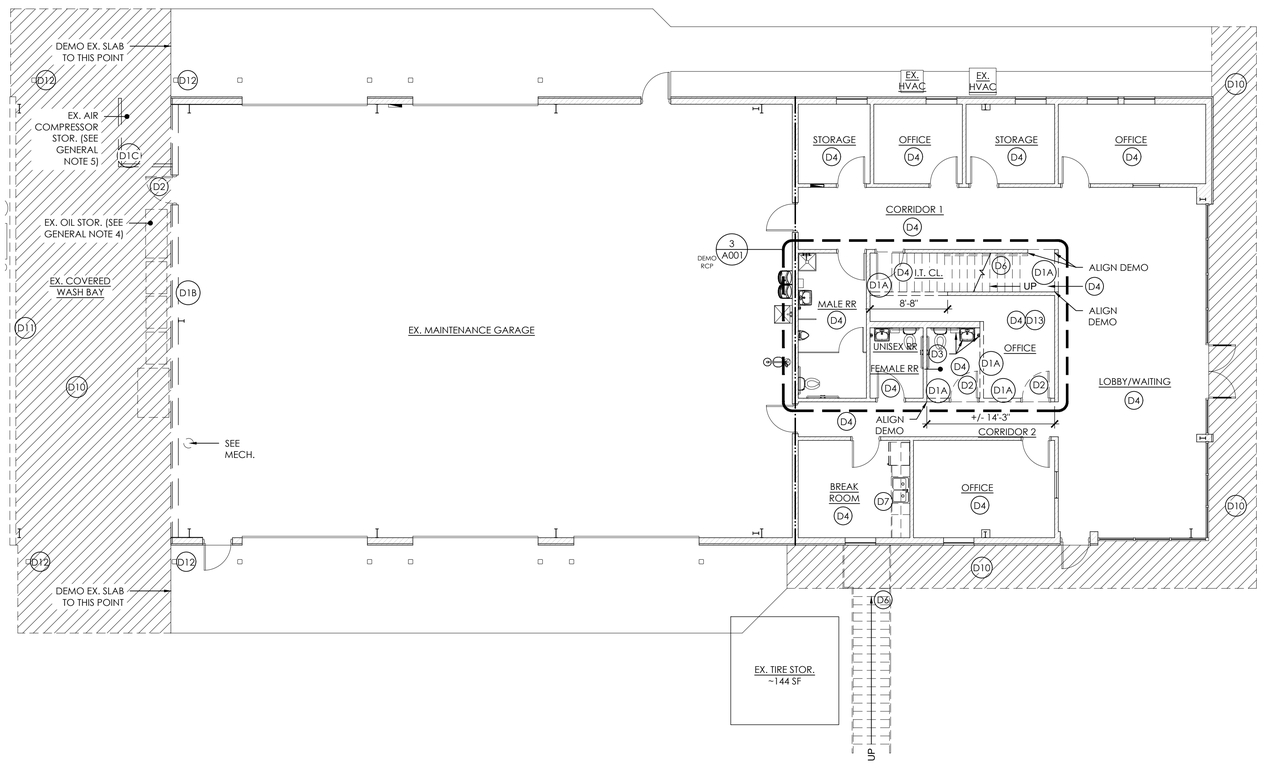
LEVEL 1 DEMOLITION RCP 3

1/4" = 1'-0"



LEVEL 2 DEMOLITION FLOOR PLAN 2

1/8" = 1'-0"



LEVEL 1 - DEMOLITION FLOOR PLAN 1

1/8" = 1'-0"

WALL TYPES

- EXISTING PARTITION
- DEMOLISHED PARTITION
- NEW PARTITION

SYMBOLS - DEMOLITION

- 2-HEAD EMERGENCY LIGHT
- 2X4 LIGHT FIXTURE (RELOCATE AS REQUIRED, SEE ELEC.)
- EXIT SIGN
- HORN/STROBE DEVICE
- D# KEYED DEMO NOTE
- SUPPLY GRILLE (RELOCATE, SEE ELEC.)

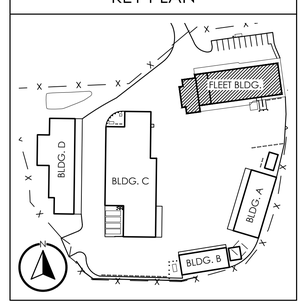
KEYED NOTES - DEMOLITION

D1A	DEMO EXISTING GWB WALL. PATCH & REPAIR DAMAGED SURFACES TO MATCH ADJACENT SURFACES.
D1B	DEMO EXISTING STEEL GIRTS & METAL WALL PANELS.
D1C	DEMO EXISTING WOOD STUD WALL & METAL WALL PANELS.
D2	DEMO EXISTING DOOR & FRAME.
D3	DEMO EXISTING PAPER TOWEL DISP., SOAP DISP., & WALL-HUNG SINK; SEE PLUMBING FOR MORE INFO. PATCH & REPAIR DAMAGED SURFACES TO MATCH ADJACENT SURFACES.
D4	DEMO EXISTING FLOORING & WALL BASE.
D5	DEMO EXISTING WINDOW. INFILL AS DIRECTED ON A100.
D6	DEMO EXISTING STAIR CASE & HANDRAIL.
D7	DEMO EXISTING CASEWORK & SINK; SEE PLUMBING FOR MORE INFO. SALVAGE FRIDGE.
D8	DEMO EXISTING ITEMS INCLUDING, BUT NOT LIMITED TO, CEILING TILES, CEILING GRID, EXISTING HVAC GRILLS & LIGHT FIXTURES.
D9	DEMO EXISTING BULKHEAD.
D10	DEMO EXISTING CONCRETE SLAB.
D11	DEMO EXISTING CONCRETE CURB.
D12	DEMO EXISTING BOLLARD.
D13	DEMO EXISTING CONCRETE SLAB AS REQUIRED FOR NEW PLUMBING WORK.

GENERAL NOTES:

1. VERIFY WITH OWNER WHAT ITEMS ARE TO BE SALVAGED.
2. DEMO CARPET & WALL BASE AS REQUIRED FOR NEW PARTITIONS.
3. EXISTING COLUMNS IN EXISTING WASH BAY ARE TO REMAIN.
4. OIL STORAGE TANKS TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION.
5. EXISTING COMPRESSOR TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION.
6. ALL ITEMS AGAINST EXISTING WALL (KEYED NOTE "D1B") TO BE RELOCATED DURING CONSTRUCTION BY OWNER PRIOR TO CONSTRUCTION.

KEY PLAN



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REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING - LEVEL 1 & LEVEL 2 DEMOLITION FLOOR PLANS & DEMOLITION REFLECTED CEILING PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A001

HARDWARE

HARDWARE SET #H1: 100, 101
- HINGES
- BATH PRIVACY LOCK
- SURFACE CLOSURE
- WALL STOP

HARDWARE SET #H2: 104, A101, A102, A105, A106, B101, B102, B104, C100, C103, D100
- HINGES
- NIGHTLATCH
- CYLINDER
- SURFACE CLOSURE
- THRESHOLD
- SWEEP

HARDWARE SET #H3: 105
- HINGES
- STOREROOM LOCK
- SURFACE CLOSURE
- SWEEP

HARDWARE SET #H4: 106, 107, 108, 109
HINGES
STOREROOM LOCK
SURFACE CLOSURE
SWEEP
THRESHOLD

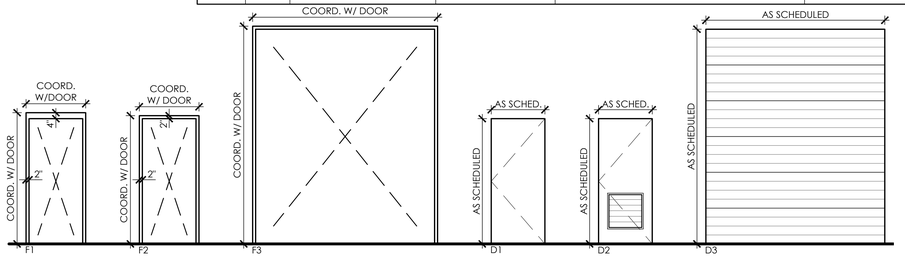
HARDWARE SET #H5: 200
HINGES
OFFICE LOCK
SURFACE CLOSURE

HARDWARE SET #H6: 102, 103
DOOR SENSOR

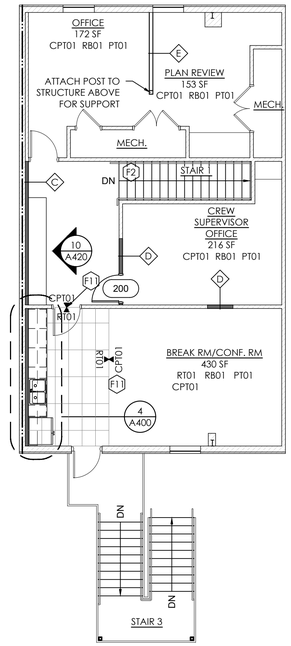
HARDWARE SET #H7: A100, A103, A104, A107, B100, B103, B105, C101, C102, C104, D101

FINISH SCHEDULE

CSI DIV.	CODE	MATERIAL	MANUFACTURER	STYLE NAME / NUMBER / COLOR	LOCATION
DIVISION 9 - FINISHES					
064114	PL01	PLASTIC LAMINATE	WILSONART	OILED SOAPSTONE 4882-38	COUNTERTOPS
074646	FCS01	FIBER CEMENT SIDING	JAMES HARDIE	TBD	BLDG D SIDING
095123	APC01	ACOUSTICAL PANEL CEILING	ARMSTRONG CEILINGS	ULTIMA 15/16" SQUARE LAY-IN #1910 24"X24" W/ 15/16" PRELUDE SUSPENSION SYSTEM BLIZZARD WHITE	201, 204A, & 204B
096513.13	RB01	RESILIENT BASE	TARKETT/ROPPE	BLACK	GENERAL WALL BASE
096513.23	RST01	RESILIENT STAIR TREADS	TARKETT/ROPPE	BLACK	INTERIOR STAIR TREADS & RISERS
096519	RT01	RESILIENT TILE	BENTLEY	BATISTE: CHAMBRAY	2ND FLOOR BREAK RM FLOORING
096813	CPT01	CARPET TILE	SHAW CONTRACT	HAZE TILE 5T037: MYTH 37505	MEZZANINE FLOORING
099123	PT01	PAINT (INTERIOR)	SHERWIN WILLIAMS	ALABASTER SW7008 255-C2	WALLS
099123	PT02	PAINT (INTERIOR)	SHERWIN WILLIAMS	WHITE	CEILINGS
099123	PT03	PAINT (INTERIOR)	SHERWIN WILLIAMS	MATCH EXISTING	DOOR & DOOR FRAMES (AS SCHEDULED)
099123	PT04	PAINT (EXTERIOR)	SHERWIN WILLIAMS	IRON ORE SW7069 251-C7	STAIR 3
099656	EP01	EPOXY FLOORING	SHERWIN WILLIAMS	DECO FLAKE 1/8" : MODERN CAMO	GENERAL FLOORING



DOOR & FRAME TYPES 3
1/4" = 1'-0"



LEVEL 2 RENOVATION FLOOR PLAN 2
1/8" = 1'-0"

DOOR & FRAME SCHEDULE

DOOR #	OPENING SIZE (W X H)	DOOR					FRAME			HARDWARE SET	ROOM
		DOOR TYPE	THICKNESS	MATERIAL	FINISH	GLAZING	FRAME ELEVATION	MATERIAL	FINISH		
100	3'-0" X 7'-0"	D1	1.75"	SWC	CLR	-	F2	HM	PT03	1	FEMALE RR
101	3'-0" X 7'-0"	D1	1.75"	SWC	CLR	-	F2	HM	PT03	1	RR & SHOWER
102	14'-0" X 14'-0"	D3	1.75"	STL	PF	-	F3	STL	PF	1	ROLL-UP; INSULATED; MOTION SENSOR
103	14'-0" X 14'-0"	D3	1.75"	STL	PF	-	F3	STL	PF	1	ROLL-UP; INSULATED; MOTION SENSOR
104	3'-0" X 7'-0"	D1	1.75"	STL	PT03	-	F1	HM	PT03	1	GARAGE MAN DOOR; INSULATED
105	3'-0" X 7'-0" (X2)	D1	1.75"	STL	PT03	-	F1	HM	PT03	1	PRESSURE WASHER; INSULATED
106	3'-8" X 7'-0"	D2	1.75"	STL	PT03	-	F1	HM	PT03	1	COMPRESSOR
107	3'-10" X 7'-0" (X2)	D1	1.75"	STL	PT03	-	F1	HM	PT03	1	OIL TANK STOR.; INSULATED
108	2'-10" X 7'-0" (X2)	D1	1.75"	STL	PT03	-	F1	HM	PT03	1	OIL TANK STOR.; INSULATED
109	2'-10" X 7'-0" (X2)	D1	1.75"	STL	PT03	-	F1	HM	PT03	1	OIL TANK STOR.; INSULATED
200	3'-0" X 7'-0"	D1	1.75"	SWC	CLR	-	F2	HM	PT03	1	OFFICE

WALL TYPES

- EXISTING PARTITION
- NEW PARTITION (SEE G200 FOR WALL TYPES)
- NEW 8" CMU PARTITION

* PROVIDE WATER-RESISTANT GWB UP TO 5'-0" A.F.F. MIN. IN AREAS ADJACENT TO PLUMBING FIXTURES.

SYMBOLS - FLOOR PLAN

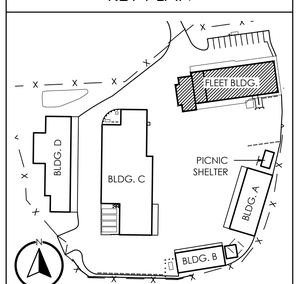
- LOBBY / ### SF / VCT VB PT — ROOM NAME / SQUARE FOOTAGE / WALL FINISH / BASE FINISH / FLOOR FINISH
- # / A### — DETAIL NUMBER / SHEET NUMBER
- 2-HR. FIRE BARRIER
- ### — DOOR TAG
- F# — KEYED RENOVATION NOTE
- TRANSITION STRIP
- A / R-# — WALL TYPE TAG / RATING (HR)

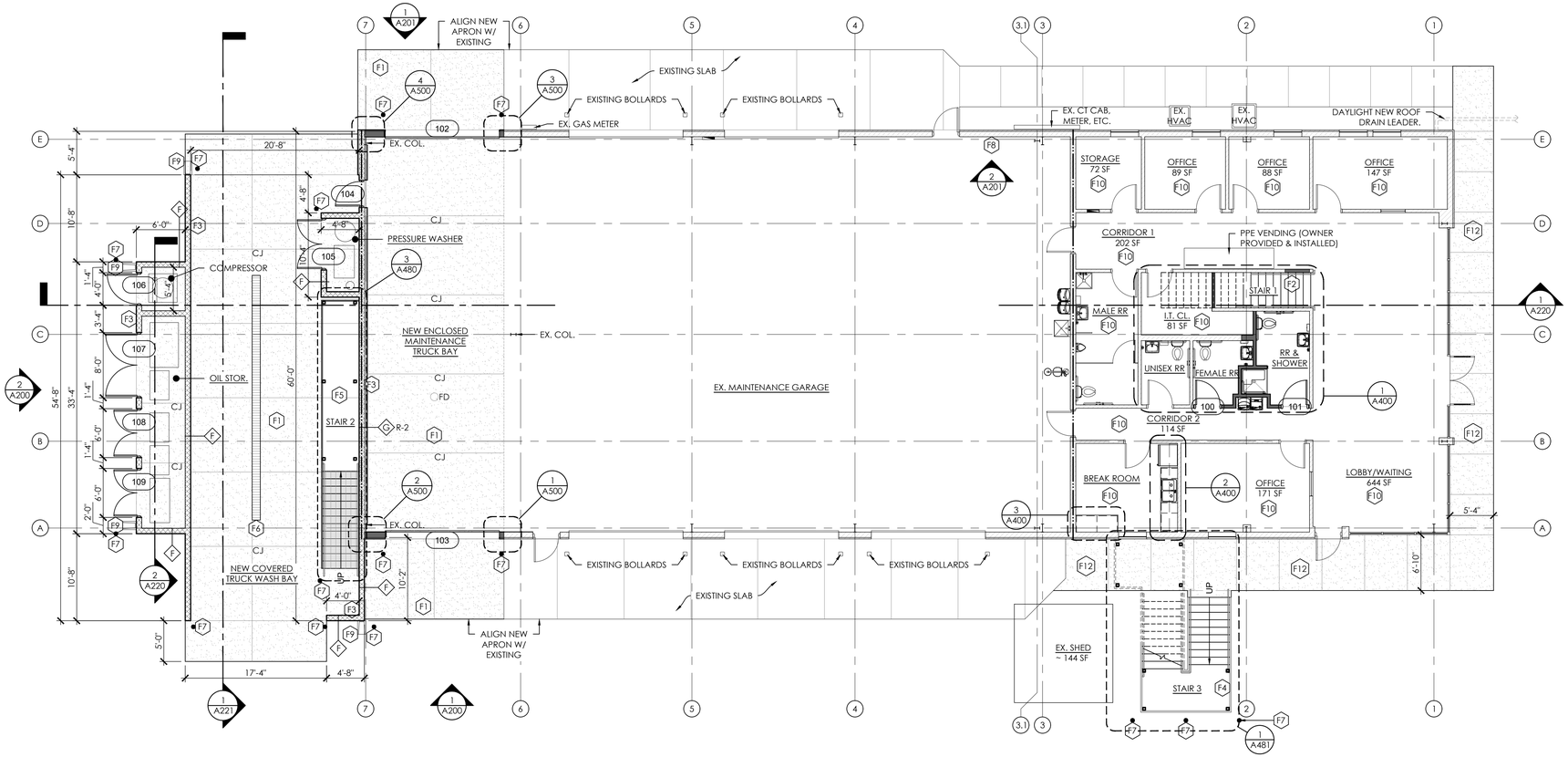
SHEET NOTES - FLOOR PLAN

F1	NEW CONCRETE SLAB (SEE STRUCT. FOR MORE INFO.).
F2	PROVIDE NEW WOOD STAIRS W/ RUBBER STAIR RISERS & TREADS (SEE 1/A480) W/ 1-1/2" DIAM. POWDER COATED HANDRAIL.
F3	NEW CMU WALL (SEE STRUCTURAL FOR MORE INFO.).
F4	NEW CONCRETE PAN STAIRS W/ POWDER COATED HANDRAIL & GUARDRAIL.
F5	NEW METAL GRATED STAIRS & RAISED PLATFORM.
F6	NEW TRENCH DRAIN. SEE PLUMBING FOR MORE INFO.
F7	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
F8	NEW SIDEWALL PROPELLER EXHAUST FAN (SEE MECH. FOR MORE INFO.).
F9	NEW 12"X24" CONCRETE SPLASH BLOCK.
F10	INSTALL NEW EP01 & RB01.
F11	PROVIDE STAINLESS STEEL TRANSITION STRIP.
F12	POUR NEW 4" CONCRETE SLAB (4000 PSI).

GENERAL NOTES:
1. PROVIDE DOOR SENSOR @ ALL NEW ROLL-UP DOORS IN NEW MAINTENANCE TRUCK BAY.
2. SEE G200 FOR WALL TYPES & RATINGS.
3. PATCH CONCRETE AS REQUIRED FROM DEMOLITION WORK.

KEY PLAN





LEVEL 1 - RENOVATION FLOOR PLAN 1
1/8" = 1'-0"

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REVISIONS:

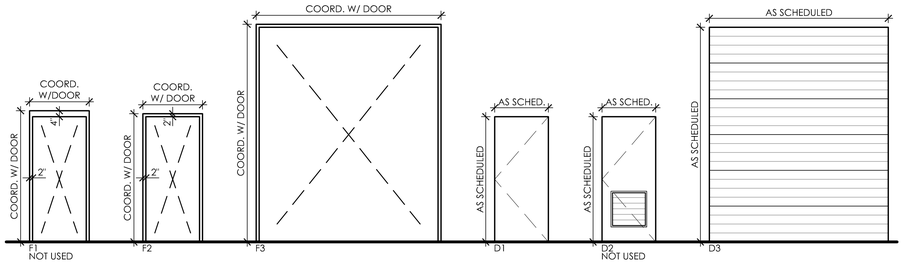
#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING - RENOVATION FLOOR PLANS, DOOR SCHEDULE, & DOOR & FRAME TYPES

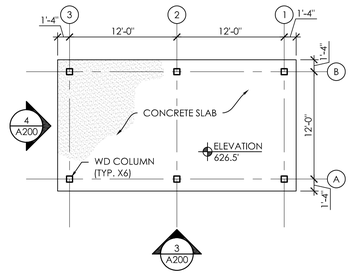
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A100



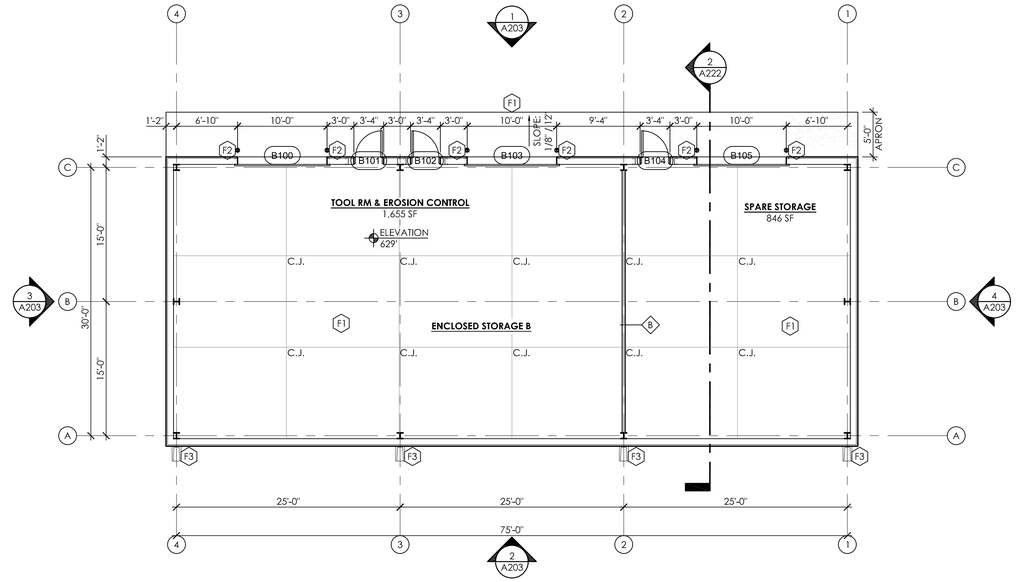
DOOR & FRAME TYPES
1/4" = 1'-0" (4)



PICNIC SHELTER PLAN
1/8" = 1'-0" (3)

BUILDING B DOOR & FRAME SCHEDULE

DOOR #	OPENING SIZE (W X H)	DOOR				FRAME				REMARKS
		DOOR TYPE	THICKNESS	MATERIAL	FINISH	FRAME ELEVATION	MATERIAL	FINISH	HARDWARE SET	
B100	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF	X	ROLL-UP DOOR
B101	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03	X	MAN DOOR
B102	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03		MAN DOOR
B103	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR
B104	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03		MAN DOOR
B105	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR



BUILDING B FLOOR PLAN
1/8" = 1'-0" (2)

HARDWARE

HARDWARE SET #H1: 100, 101
- HINGES
- BATH PRIVACY LOCK
- SURFACE CLOSURE
- WALL STOP

HARDWARE SET #H2: 104, A101, A102, A105, A106, B101, B102, B104, C100, C103, D100
- HINGES
- NIGHTLATCH
- CYLINDER
- SURFACE CLOSURE
- THRESHOLD
- SWEEP

HARDWARE SET #H3: 105
- HINGES
- STOREROOM LOCK
- SURFACE CLOSURE
- SWEEP

HARDWARE SET #H4: 106, 107, 108, 109
HINGES
STOREROOM LOCK
SURFACE CLOSURE
SWEEP
THRESHOLD

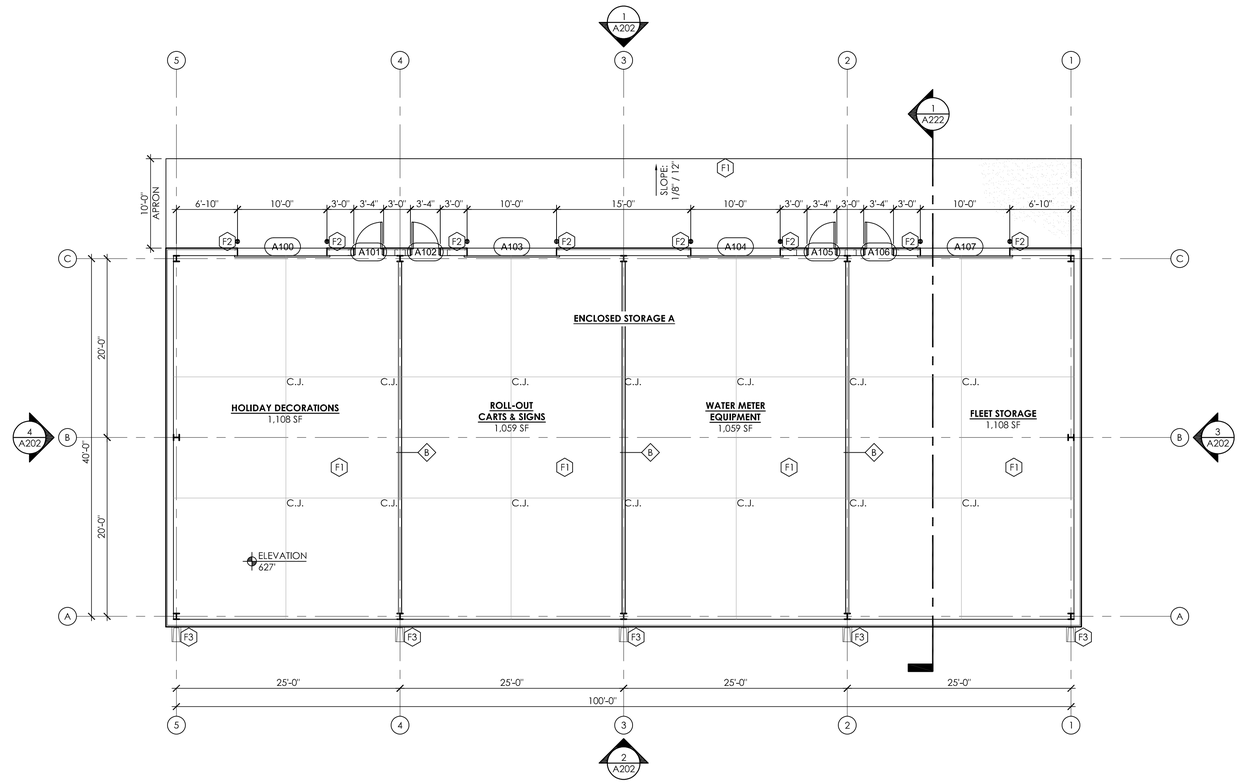
HARDWARE SET #H5: 200
HINGES
OFFICE LOCK
SURFACE CLOSURE

HARDWARE SET #H6: 102, 103
DOOR SENSOR

HARDWARE SET #H7: A100, A103, A104, A107, B100, B103, B105, C101, C102, C104, D101

BUILDING A DOOR & FRAME SCHEDULE

DOOR #	OPENING SIZE (W X H)	DOOR				FRAME				REMARKS
		DOOR TYPE	THICKNESS	MATERIAL	FINISH	FRAME ELEVATION	MATERIAL	FINISH	HARDWARE SET	
A100	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF	X	ROLL-UP DOOR
A101	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03	X	MAN DOOR
A102	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03		MAN DOOR
A103	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR
A104	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR
A105	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03		MAN DOOR
A106	3'-0" X 7'-0"	D1	1.75"	HM	PT03	F2	HM	PT03		MAN DOOR
A107	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR



BUILDING A FLOOR PLAN
1/8" = 1'-0" (1)

SYMBOLS - FLOOR PLAN

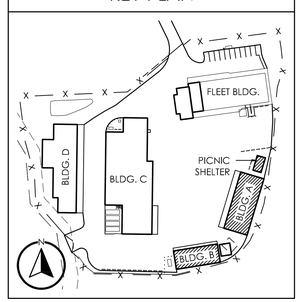
- # / A### — DETAIL NUMBER / SHEET NUMBER
- ### — DOOR TAG
- ELEVATION TAG
- FE — FIRE EXTINGUISHER
- F# — KEYED RENOVATION NOTE
- TRANSITION STRIP
- A R-# — WALL TYPES TAG / RATING (HR.)

SHEET NOTES - FLOOR PLAN

F1	NEW CONCRETE SLAB, SLOPE AS INDICATED ON PLANS (SEE STRUCT. FOR MORE INFO.).
F2	NEW 6" DIAM. STEEL, CONCRETE FILLED BOLLARD 48" HT., PAINTED HAZARD YELLOW.
F3	NEW 12"X24" CONCRETE SPLASH BLOCK.
F4	NEW CONCRETE PIER (SEE STRUCT.).
F5	NEW HVAC UNIT (SEE MECH.).
F6	SLOPE GRAVEL SURFACE AS SHOWN ON PLANS (SEE STRUCT.).
F7	5" YELLOW PAINTED LINE.
F8	NEW 6" HT. CONCRETE CURB.
F9	NEW 42" HT. GUARDRAIL.
F10	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON CURTAINS: SUPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).
F11	CMU WALL (SEE STRUCT.).
F12	PROVIDE 6" THICK CONC. PAD W/ 6X6-W2.0X2.0 W.W.F. SIZE PAD 12" LARGER THAN EQUIP. IN EA. DIRECTION.
F13	NEW 4" CONCRETE SLAB.
F14	EPOXY MASTIC FINISH ON CONCRETE WALLS (SEE SPECS).

GENERAL NOTES:
1. METAL BUILDING STRUCTURE W/ METAL WALL PANELS, U.N.O.
2. SEE G200 FOR WALL TYPES.
3. SEE STRUCTURAL FOR CONTROL JOINT NOTES.

KEY PLAN



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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDINGS A & B & PICNIC SHELTER - FLOOR PLANS & DOOR SCHEDULES

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A101

SHEET NOTES - FLOOR PLAN

F1	NEW CONCRETE SLAB, SLOPE AS INDICATED ON PLANS (SEE STRUCT. FOR MORE INFO.).
F2	NEW 6" DIAM. STEEL, CONCRETE FILLED BOLLARD 48" HT., PAINTED HAZARD YELLOW.
F3	NEW 12"X24" CONCRETE SPLASH BLOCK.
F4	NEW CONCRETE PIER (SEE STRUCT.).
F5	NEW HVAC UNIT (SEE MECH.).
F6	SLOPE GRAVEL SURFACE AS SHOWN ON PLANS (SEE STRUCT.).
F7	5" YELLOW PAINTED LINE.
F8	NEW 6" HT. CONCRETE CURB.
F9	NEW 42" HT. GUARDRAIL.
F10	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON CURTAINS: SUPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).
F11	CMU WALL (SEE STRUCT.).
F12	PROVIDE 6" THICK CONC. PAD W/ 6X6-W2.0X2.0 W.W.F. SIZE PAD 12" LARGER THAN EQUIP. IN EA. DIRECTION.
F13	NEW 4" CONCRETE SLAB.
F14	EPOXY MASTIC FINISH ON CONCRETE WALLS (SEE SPECS).

GENERAL NOTES:

1. METAL BUILDING STRUCTURE W/ METAL WALL PANELS, U.N.O.
2. SEE G200 FOR WALL TYPES.
3. SEE STRUCTURAL FOR CONTROL JOINT NOTES.

SYMBOLS - FLOOR PLAN

- # / A### — DETAIL NUMBER / SHEET NUMBER
- ### — DOOR TAG
- ELEVATION TAG
- FE — FIRE EXTINGUISHER
- F# — KEYED RENOVATION NOTE
- TRANSITION STRIP
- A R-# — WALL TYPES TAG / RATING (HR.)

BUILDING C DOOR & FRAME SCHEDULE

DOOR #	OPENING SIZE (W X H)	DOOR TYPE	DOOR THICKNESS	DOOR MATERIAL	DOOR FINISH	FRAME ELEVATION	FRAME MATERIAL	FRAME FINISH	FRAME HARDWARE SET	REMARKS
C100	3'-0" X 7'-0"	D1	1.75"	HM	PT	F2	HM	PT	X	INSULATED MAN DOOR
C101	12'-0" X 14'-0"	D3	1.75"	STL	PF	F3	STL	PF	X	INSULATED ROLL-UP DOOR
C102	12'-0" X 14'-0"	D3	1.75"	STL	PF	F3	STL	PF		INSULATED ROLL-UP DOOR
C103	3'-0" X 7'-0"	D1	1.75"	HM	PT	F2	HM	PT		MAN DOOR
C104	12'-0" X 14'-0"	D3	1.75"	STL	PF	F3	STL	PF		ROLL-UP DOOR

HARDWARE

HARDWARE SET #H1: 100, 101
- HINGES
- BATH PRIVACY LOCK
- SURFACE CLOSURE
- WALL STOP

HARDWARE SET #H2: 104, A101, A102, A105, A106, B101, B102, B104, C100, C103, D100
- HINGES
- NIGHTLATCH
- CYLINDER
- SURFACE CLOSURE
- THRESHOLD
- SWEEP

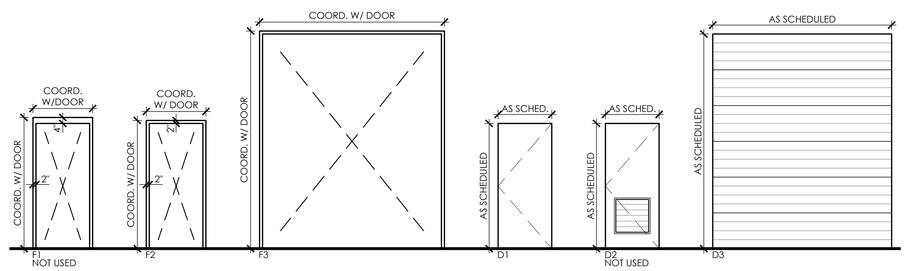
HARDWARE SET #H3: 105
- HINGES
- STOREROOM LOCK
- SURFACE CLOSURE
- SWEEP

HARDWARE SET #H4: 106, 107, 108, 109
HINGES
STOREROOM LOCK
SURFACE CLOSURE
SWEEP
THRESHOLD

HARDWARE SET #H5: 200
HINGES
OFFICE LOCK
SURFACE CLOSURE

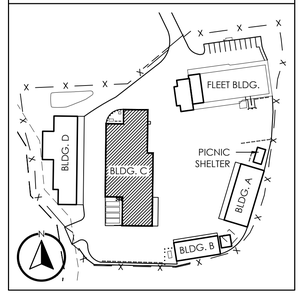
HARDWARE SET #H6: 102, 103
DOOR SENSOR

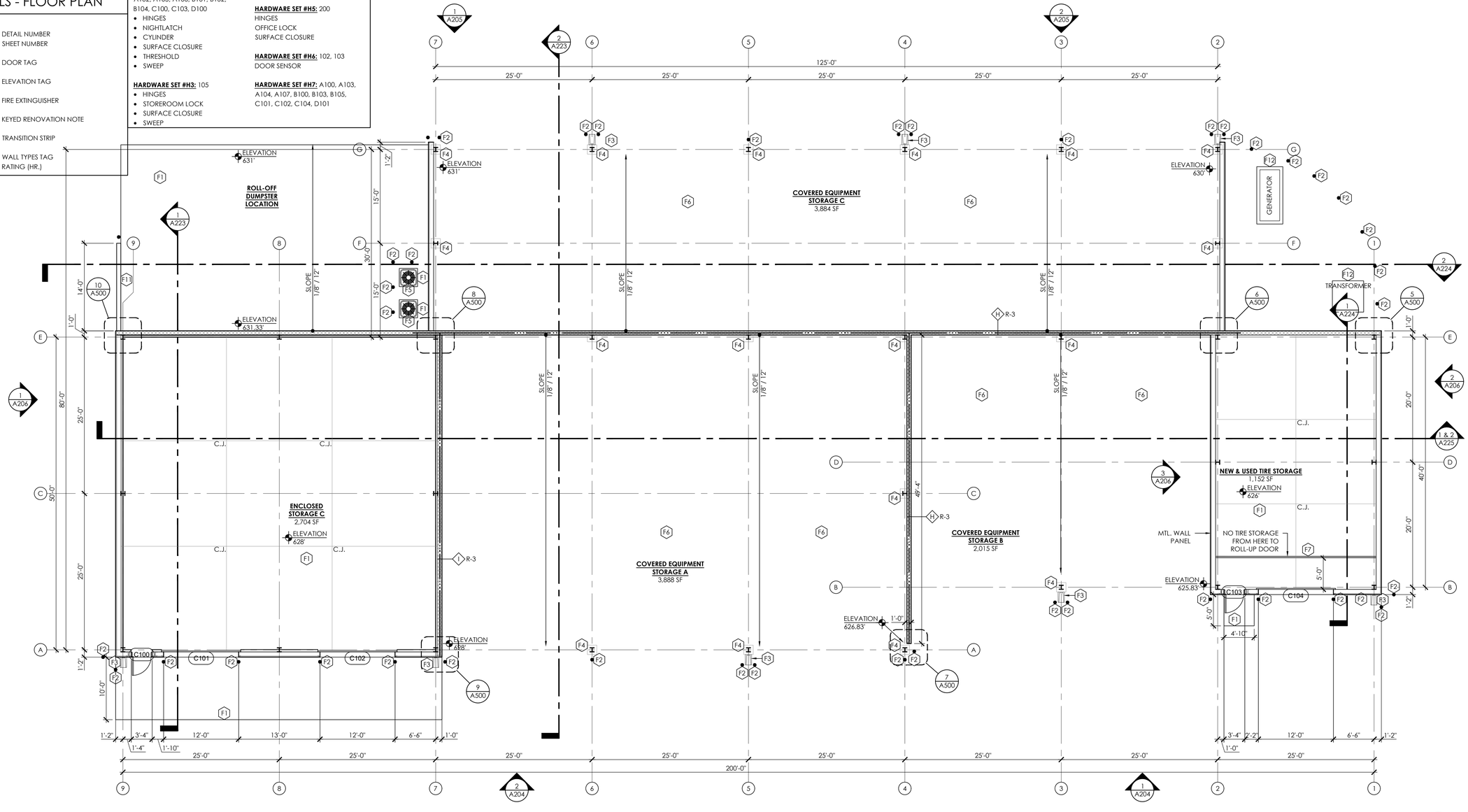
HARDWARE SET #H7: A100, A103, A104, A107, B100, B103, B105, C101, C102, C104, D101



DOOR & FRAME TYPES (2)
1/4" = 1'-0"

KEY PLAN





BUILDING C FLOOR PLAN (1)
1/8" = 1'-0"

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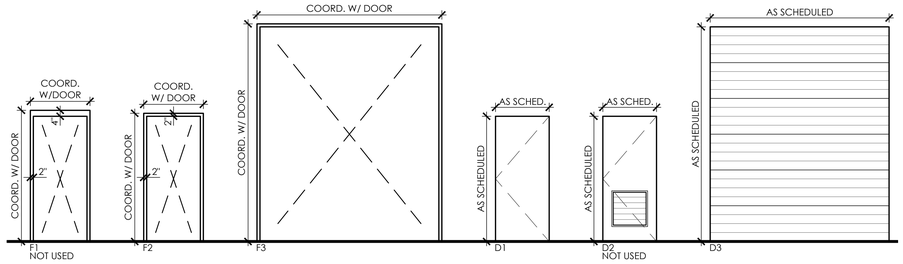
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C - FLOOR PLAN & DOOR SCHEDULE

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A102



DOOR & FRAME TYPES 2

1/4" = 1'-0"

HARDWARE

HARDWARE SET #H1: 100, 101
- HINGES
- BATH PRIVACY LOCK
- SURFACE CLOSURE
- WALL STOP

HARDWARE SET #H2: 104, A101, A102, A105, A106, B101, B102, B104, C100, C103, D100
- HINGES
- NIGHTLATCH
- CYLINDER
- SURFACE CLOSURE
- THRESHOLD
- SWEEP

HARDWARE SET #H3: 105
- HINGES
- STOREROOM LOCK
- SURFACE CLOSURE
- SWEEP

HARDWARE SET #H4: 106, 107, 108, 109
HINGES
STOREROOM LOCK
SURFACE CLOSURE
SWEEP
THRESHOLD

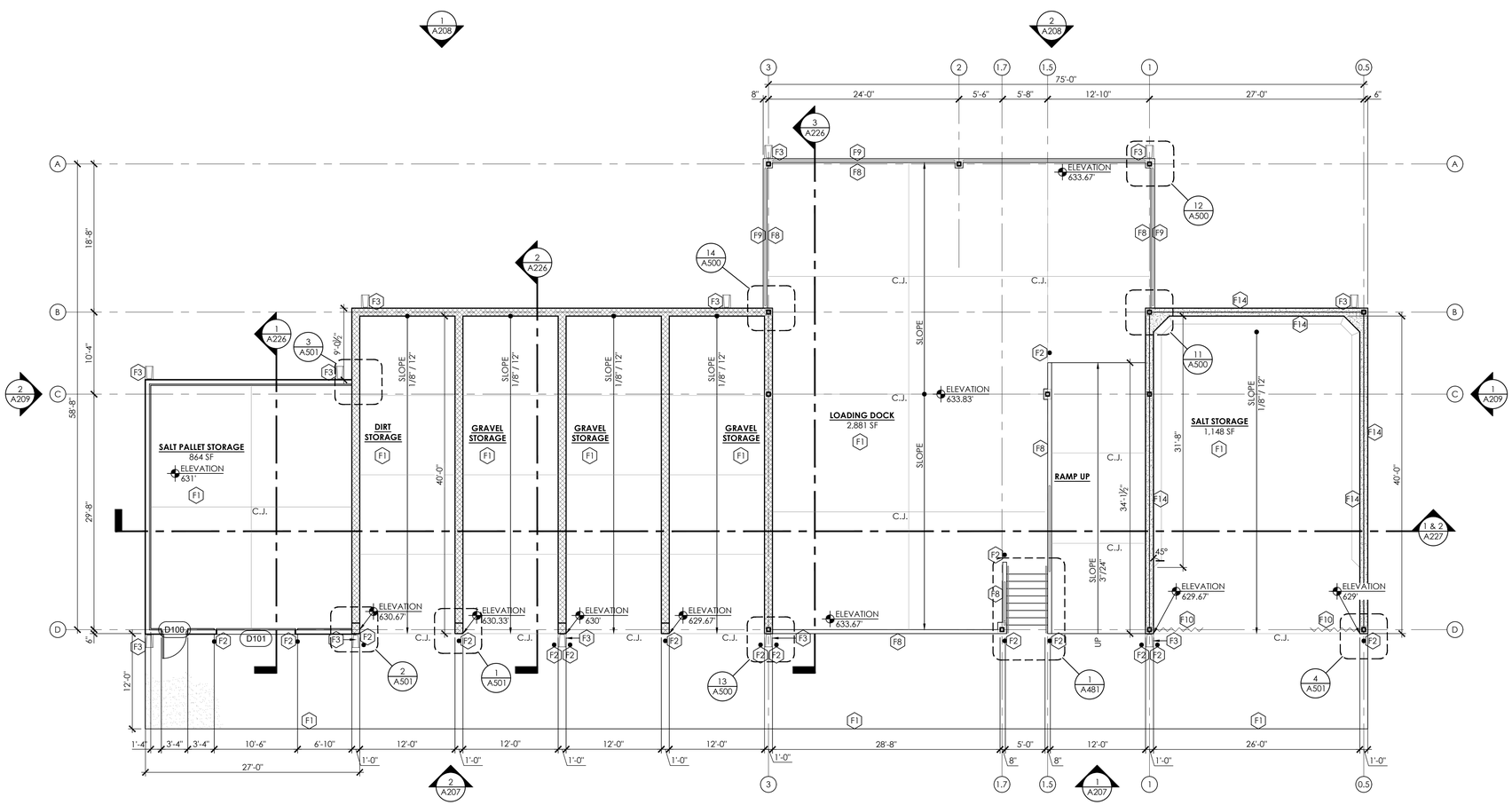
HARDWARE SET #H5: 200
HINGES
OFFICE LOCK
SURFACE CLOSURE

HARDWARE SET #H6: 102, 103
DOOR SENSOR

HARDWARE SET #H7: A100, A103, A104, A107, B100, B103, B105, C101, C102, C104, D101

BUILDING D DOOR & FRAME SCHEDULE

DOOR #	OPENING SIZE (W X H)	DOOR				FRAME				REMARKS
		DOOR TYPE	THICKNESS	MATERIAL	FINISH	FRAME ELEVATION	MATERIAL	FINISH	HARDWARE SET	
D100	3'-0" X 7'-0"	D1	1.75"	HM	PT	F2	HM	PT	X	MAN DOOR
D101	10'-0" X 12'-0"	D3	1.75"	STL	PF	F3	STL	PF	X	ROLL-UP DOOR



BUILDING D FLOOR PLAN 1

1/8" = 1'-0"

SYMBOLS - FLOOR PLAN

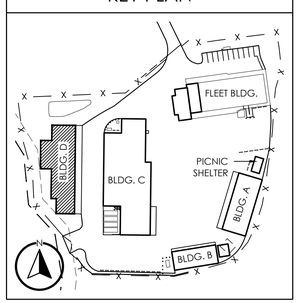
- # / A### — DETAIL NUMBER / SHEET NUMBER
- ### — DOOR TAG
- ELEVATION TAG
- FE — FIRE EXTINGUISHER
- F# — KEYED RENOVATION NOTE
- TRANSITION STRIP
- A R-# — WALL TYPES TAG / RATING (HR.)

SHEET NOTES - FLOOR PLAN

F1	NEW CONCRETE SLAB, SLOPE AS INDICATED ON PLANS (SEE STRUCT. FOR MORE INFO.).
F2	NEW 6" DIAM. STEEL, CONCRETE FILLED BOLLARD 48" HT., PAINTED HAZARD YELLOW.
F3	NEW 12"X24" CONCRETE SPLASH BLOCK.
F4	NEW CONCRETE PIER (SEE STRUCT.).
F5	NEW HVAC UNIT (SEE MECH.).
F6	SLOPE GRAVEL SURFACE AS SHOWN ON PLANS (SEE STRUCT.).
F7	5" YELLOW PAINTED LINE.
F8	NEW 6" HT. CONCRETE CURB.
F9	NEW 42" HT. GUARDRAIL.
F10	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON CURTAINS; SUPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).
F11	CMU WALL (SEE STRUCT.).
F12	PROVIDE 6" THICK CONC. PAD W/ 6X6-W2.0X2.0 W.W.F. SIZE PAD 12" LARGER THAN EQUIP. IN EA. DIRECTION.
F13	NEW 4" CONCRETE SLAB.
F14	EPOXY MASTIC FINISH ON CONCRETE WALLS (SEE SPECS).

GENERAL NOTES:
1. METAL BUILDING STRUCTURE W/ METAL WALL PANELS, U.N.O.
2. SEE G200 FOR WALL TYPES.
3. SEE STRUCTURAL FOR CONTROL JOINT NOTES.

KEY PLAN



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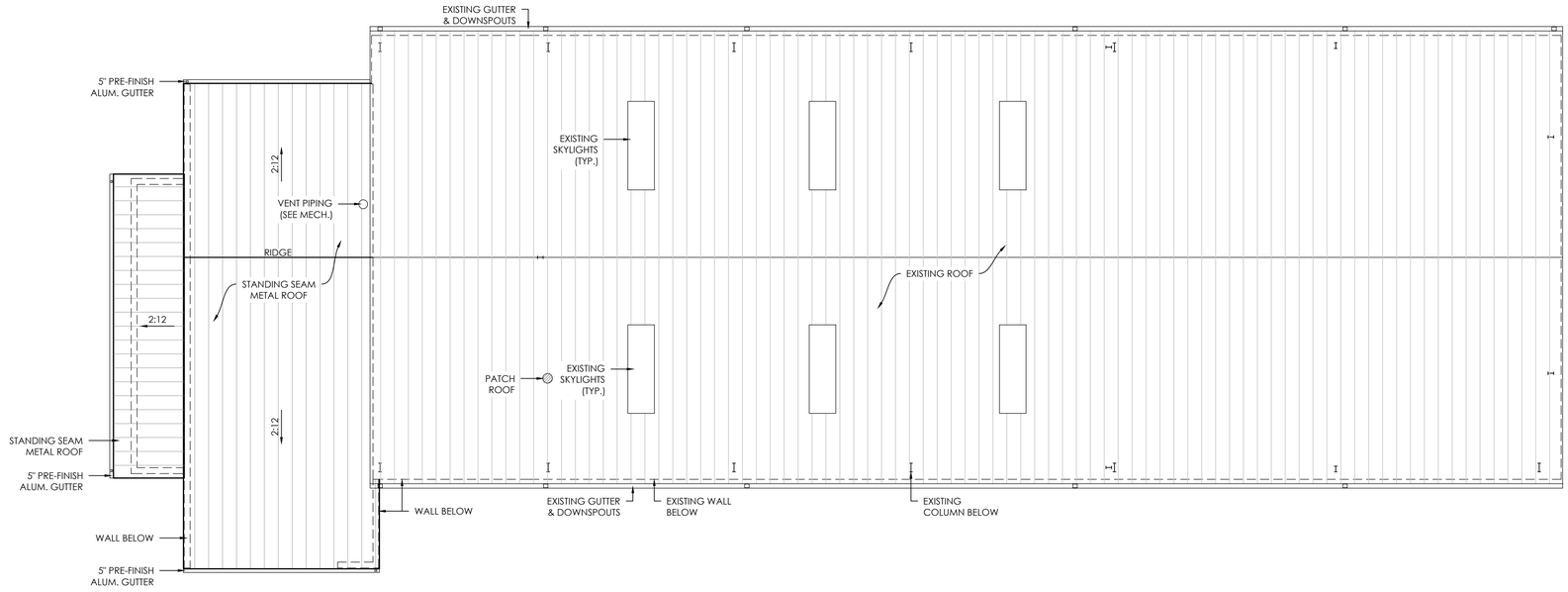
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SHEET NAME:
BUILDING D - FLOOR PLAN & DOOR SCHEDULE

PHASE:
BID SET

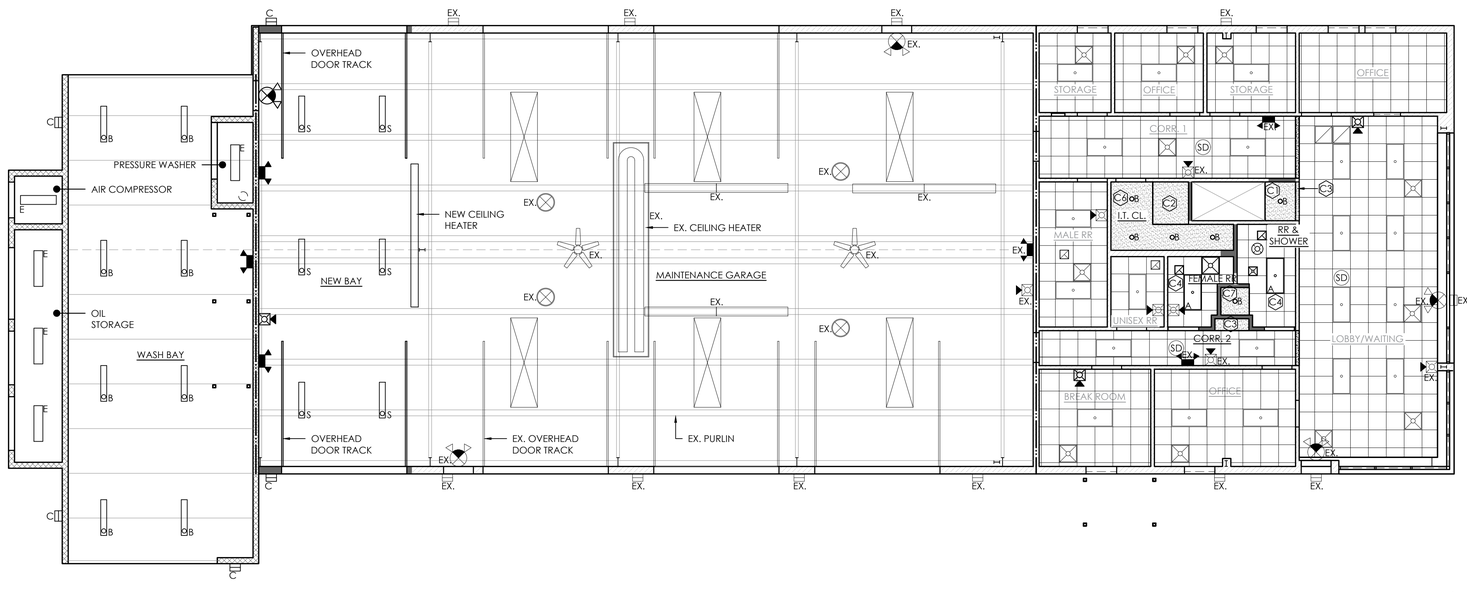
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PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A103



FLEET BUILDING - ROOF PLAN 3

1/8" = 1'-0"



LEVEL 1 - REFLECTED CEILING PLAN 1

1/8" = 1'-0"

SYMBOLS - CEILINGS

- 2-HEAD EMERGENCY EXIT SIGN
- 2-HEAD EMERGENCY LIGHT
- 2-HR. OCCUPANCY SEPARATION/FIRE BARRIER
- 2X4 LED LIGHT FIXTURE (A)
- 3-HR. FIRE BARRIER
- 4 FT. LIGHT FIXTURE (B/E/S/W)
- 6 INCH RECESSED LIGHT FIXTURE (D)
- CEILING RENOVATION NOTE
- EXISTING CEILING FAN
- EXISTING LIGHT FIXTURE
- EXISTING SKYLIGHT
- HORN/STROBE DEVICE
- HVAC EXHAUST GRILLE
- HVAC RETURN GRILLE
- HVAC SUPPLY GRILLE
- LED WALL PACK (C/EX.)
- SMOKE DETECTOR

CEILING TYPES

APC01
09 51 13 ACOUSTICAL PANEL CEILINGS
NAME: ACOUSTICAL CEILING TILE
NUMBER: 1940
GRID/TILE MANUFACTURER: ARMSTRONG
GRID SIZE: 15/16"
GRID COLOR: WHITE
GRID STYLE: PRELUDE
TILE SIZE: 24X24
TILE COLOR: WHITE
TILE STYLE: ULTIMA SQUARE LAY-IN FINE TEXTURE
TILE THICKNESS: 7/8"
NOTES:INSTALL HANGER WIRE PER MANUFACTURER'S SPECIFICATIONS.

CL01
09 21 16 GYPSUM BOARD CEILING
MATERIAL: GYPSUM BOARD CEILING
FINISH: PT02
THICKNESS: 5/8"

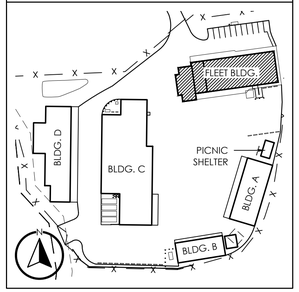
REFLECTED CEILING NOTES

1. SUPPORT LIGHT FIXTURES & AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
2. LOCATE REGISTERS & LIGHT FIXTURES WITHIN GRID LINES. CENTER RECESSED FIXTURES, SMOKE DETECTORS, & SIMILAR CEILING ELEMENTS IN ACOUSTICAL CEILING UNITS, UNLESS NOTED OTHERWISE.
3. LOCATION OF ELECTRICAL, MECHANICAL, & PLUMBING FIXTURES INDICATED ON ARCHITECTURAL BACKGROUNDS ARE FOR LOCATIONS PURPOSES ONLY. REFER TO ENGINEERING DRAWINGS FOR FINAL TYPES & QUANTITIES.
4. UNLESS NOTED OTHERWISE, ALL EXPOSED CONDUIT & PIPING PERMITTED TO BE PAINTED PER THE NORTH CAROLINA BUILDING CODE TO BE PAINTED.
5. SEE ELECTRICAL FOR MORE INFORMATION ON LIGHT FIXTURES.

SHEET NOTES - CEILING

C1	CL01 TO BE INSTALLED @ 9'-10" A.F.F.
C2	CL01 TO BE INSTALLED DIRECTLY ON THE UNDERSIDE OF STAIRCASE.
C3	CL01 TO BE INSTALLED @ 6'-11"
C4	INSTALL APC01 @ 8'-0" A.F.F.
C5	PAINT EX. STEEL STRUCTURE TO MATCH EXISTING ADJ.
C6	CL01 TO BE INSTALLED @ 9'-0" A.F.F.
C7	CL01 TO BE INSTALLED @ 7'-10" A.F.F.

KEY PLAN



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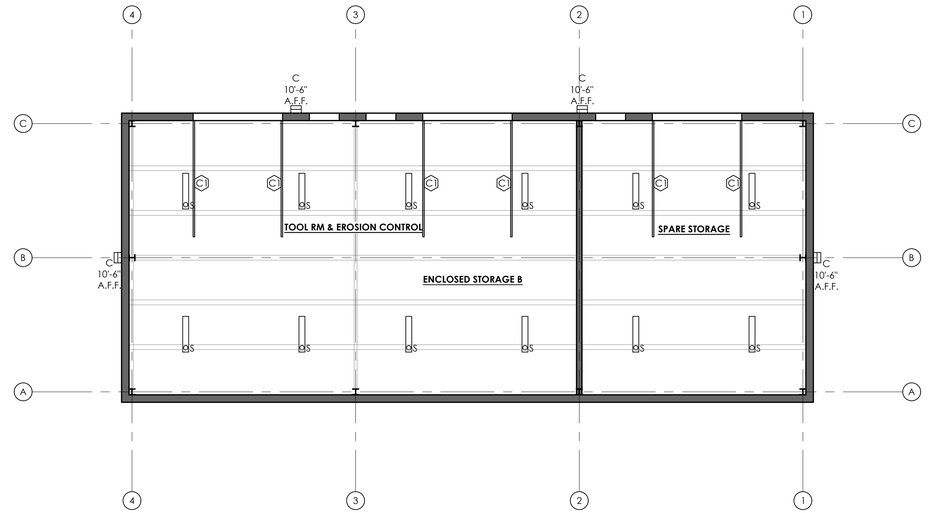
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SHEET NAME:
FLEET BUILDING - REFLECTED CEILING PLANS & ROOF PLAN

PHASE:
BID SET

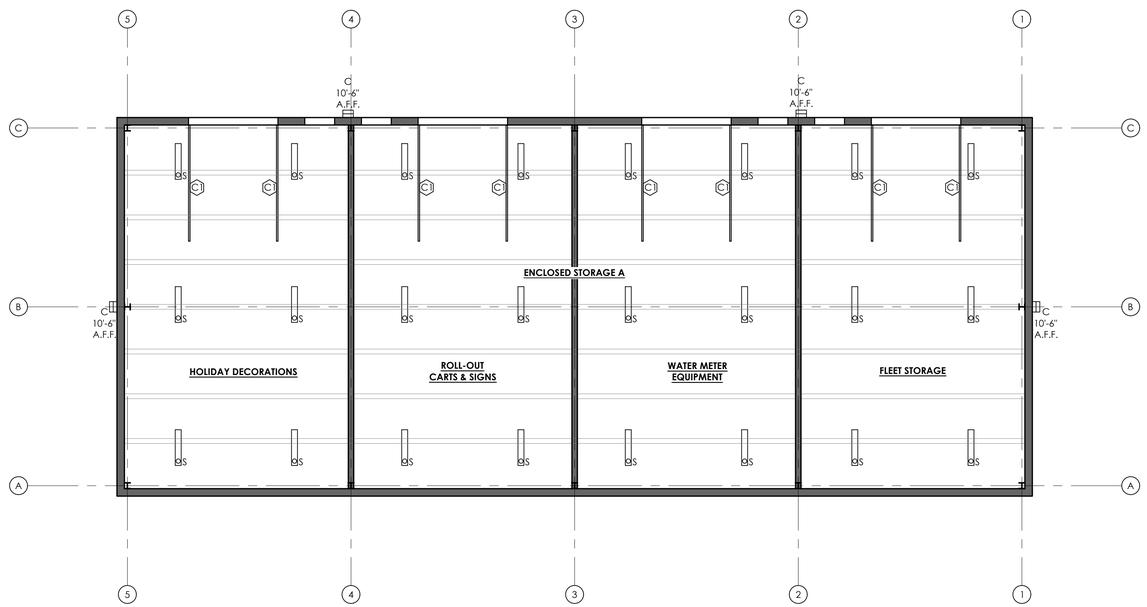
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PROJECT #: **21167**
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SHEET NUMBER
A120



BUILDING B - REFLECTED CEILING PLAN 2

1/8" = 1'-0"



BUILDING A - REFLECTGED CEILING PLAN 1

1/8" = 1'-0"

SYMBOLS - CEILINGS

	2-HEAD EMERGENCY EXIT SIGN
	2-HEAD EMERGENCY LIGHT
	4 FT. LIGHT FIXTURE (B/E/S/W)
C1	CEILING RENOVATION NOTE
	LED WALL PACK (C/EX.)

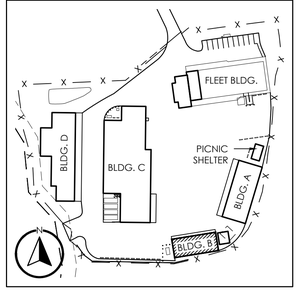
SHEET NOTES - CEILING

C1	ROLL-UP GARAGE DOOR (SEE DOOR SCHEDULE).
C2	HVAC DUCT (SEE MECH.).
C3	OUTDOOR CURTAIN SUPPORT.

GENERAL NOTES:

1. SUPPORT LIGHT FIXTURES & AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
2. SEE ELECTRICAL FOR MORE INFORMATION ON LIGHT FIXTURES.
3. LOCATION OF LIGHT FIXTURE IS TO BE COORDINATED WITH ROLL-UP GARAGE DOORS & DUCT WORK.

KEY PLAN



SYMBOLS - CEILINGS

	2-HEAD EMERGENCY EXIT SIGN
	2-HEAD EMERGENCY LIGHT
	4 FT. LIGHT FIXTURE (B/E/S/W)
C1	CEILING RENOVATION NOTE
	LED WALL PACK (C/EX.)

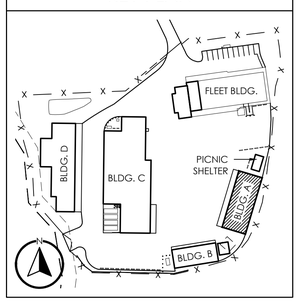
SHEET NOTES - CEILING

C1	ROLL-UP GARAGE DOOR (SEE DOOR SCHEDULE).
C2	HVAC DUCT (SEE MECH.).
C3	OUTDOOR CURTAIN SUPPORT.

GENERAL NOTES:

1. SUPPORT LIGHT FIXTURES & AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
2. SEE ELECTRICAL FOR MORE INFORMATION ON LIGHT FIXTURES.
3. LOCATION OF LIGHT FIXTURE IS TO BE COORDINATED WITH ROLL-UP GARAGE DOORS & DUCT WORK.

KEY PLAN



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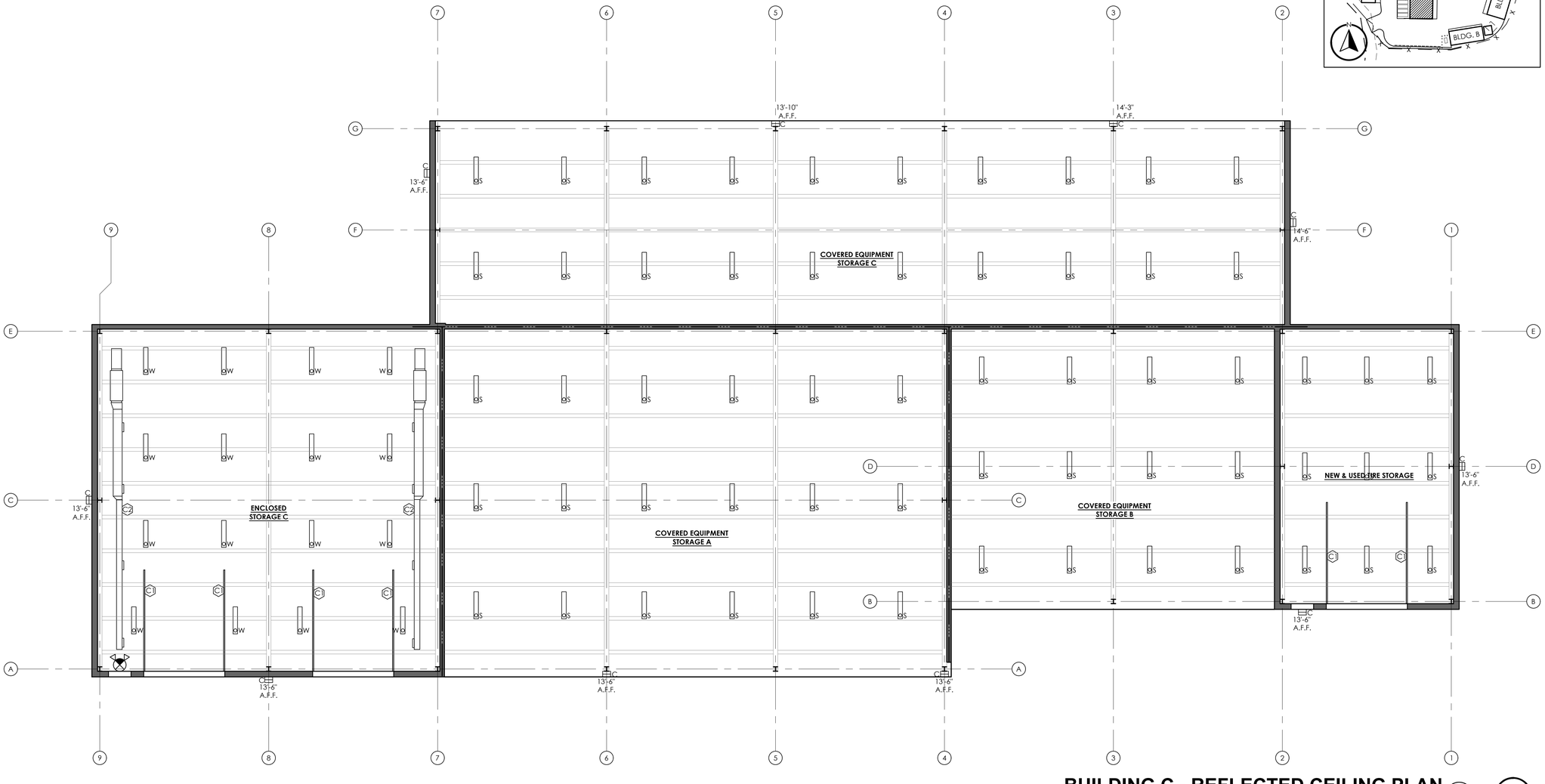
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDINGS A & B - REFLECTED CEILING PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
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SHEET NUMBER
A121



BUILDING C - REFLECTED CEILING PLAN

1/8" = 1'-0" (1)

SYMBOLS - CEILINGS

	2-HEAD EMERGENCY EXIT SIGN
	4 FT. LIGHT FIXTURE (B/E/S/W)
C#	CEILING RENOVATION NOTE
	LED WALL PACK (C/EX.)

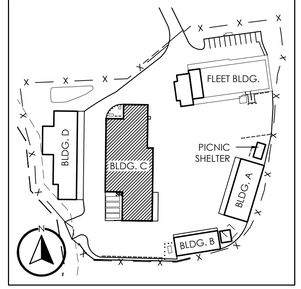
SHEET NOTES - CEILING

C1	ROLL-UP GARAGE DOOR (SEE DOOR SCHEDULE).
C2	HVAC DUCT (SEE MECH.).
C3	OUTDOOR CURTAIN SUPPORT.

GENERAL NOTES:

1. SUPPORT LIGHT FIXTURES & AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
2. SEE ELECTRICAL FOR MORE INFORMATION ON LIGHT FIXTURES.
3. LOCATION OF LIGHT FIXTURE IS TO BE COORDINATED WITH ROLL-UP GARAGE DOORS & DUCT WORK.

KEY PLAN



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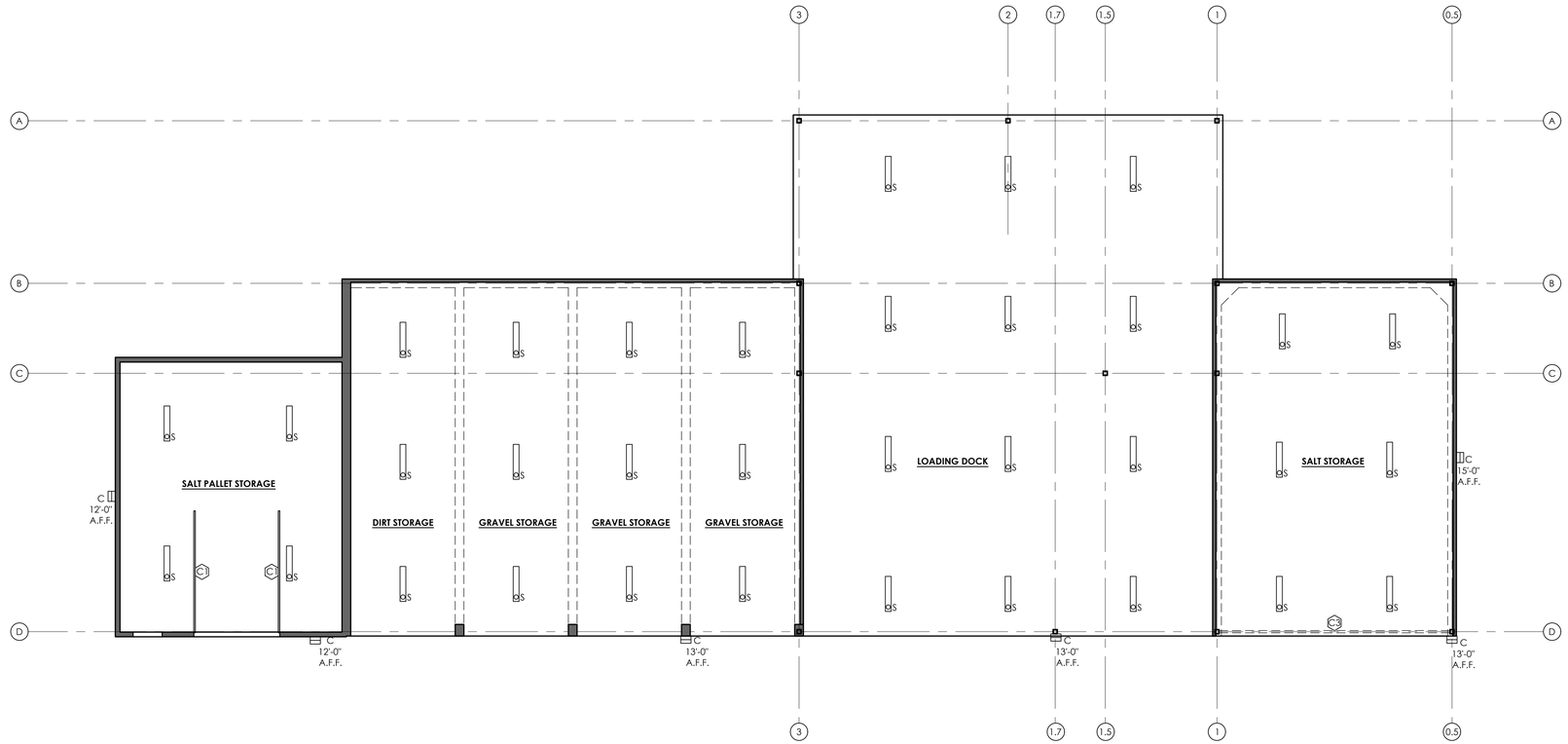
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C - REFLECTED CEILING PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A122



BUILDING D - REFLECTED CEILING PLAN

1/8" = 1'-0" (1)

SYMBOLS - CEILINGS

	4 FT. LIGHT FIXTURE (B/E/S)
C#	CEILING RENOVATION NOTE
	LED WALL PACK (C/EX.)

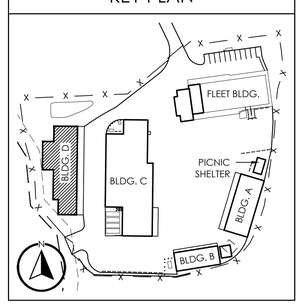
SHEET NOTES - CEILING

C1	ROLL-UP GARAGE DOOR (SEE DOOR SCHEDULE).
C2	HVAC DUCT (SEE MECH.).
C3	OUTDOOR CURTAIN SUPPORT.

GENERAL NOTES:

1. SUPPORT LIGHT FIXTURES & AIR DIFFUSERS DIRECTLY BY WIRES TO THE STRUCTURE ABOVE.
2. SEE ELECTRICAL FOR MORE INFORMATION ON LIGHT FIXTURES.
3. LOCATION OF LIGHT FIXTURE IS TO BE COORDINATED WITH ROLL-UP GARAGE DOORS & DUCT WORK.

KEY PLAN



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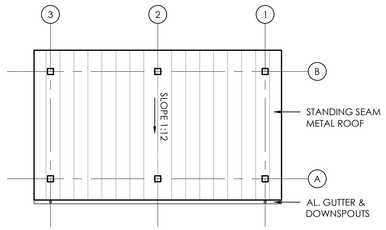
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SHEET NAME:
BUILDING D - REFLECTED CEILING PLAN

PHASE:
BID SET

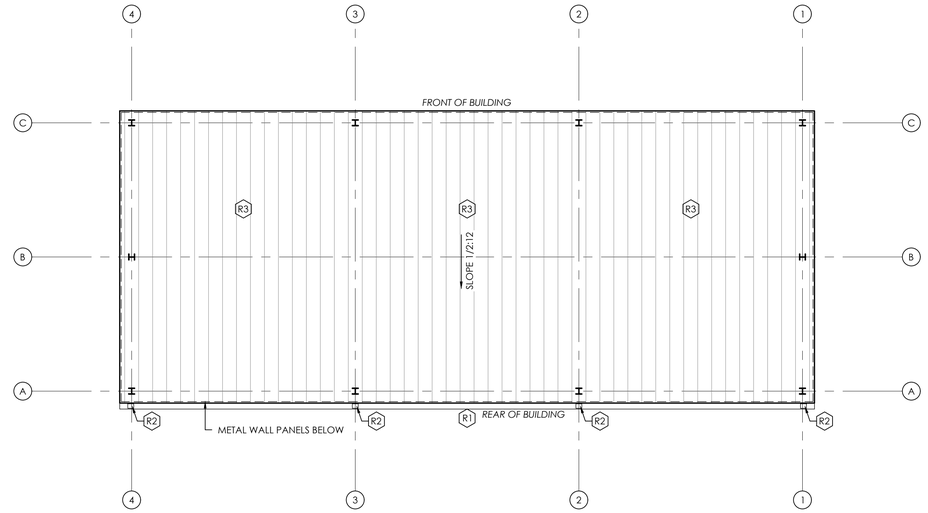
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SHEET NUMBER
A123



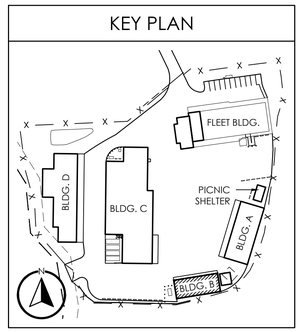
PICNIC SHELTER ROOF PLAN 3

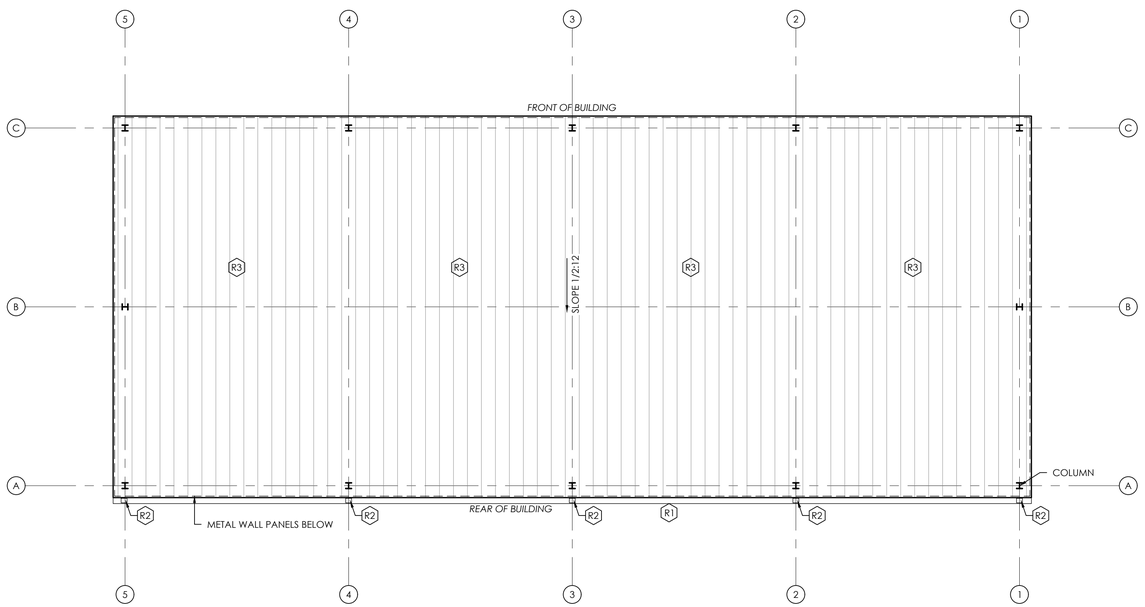
1/8" = 1'-0"



BUILDING B ROOF PLAN 2

1/8" = 1'-0"





BUILDING A ROOF PLAN 1

1/8" = 1'-0"

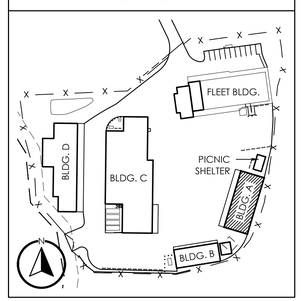
SHEET NOTES - ROOF PLAN

R1	PRE-FINISHED ALUM. GUTTER.
R2	PRE-FINISHED ALUM. DOWNSPOUT.
R3	STANDING SEAM METAL ROOF.

GENERAL NOTES:

1. COORDINATE LOCATION & SIZE OF ROOF OPENINGS & ASSOCIATED PENETRATIONS WITH STRUCTURE.
2. ROOF DETAILS MAY NOT ENTIRELY REPRESENT ACTUAL CONSTRUCTION CONDITIONS. ACTUAL DETAILS ASSEMBLIES SHALL BE APPROVED BY ROOFING MANUFACTURER.

KEY PLAN



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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDINGS A & B - ROOF PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A150

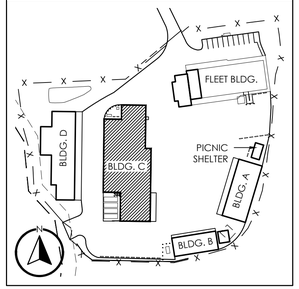
SHEET NOTES - ROOF PLAN

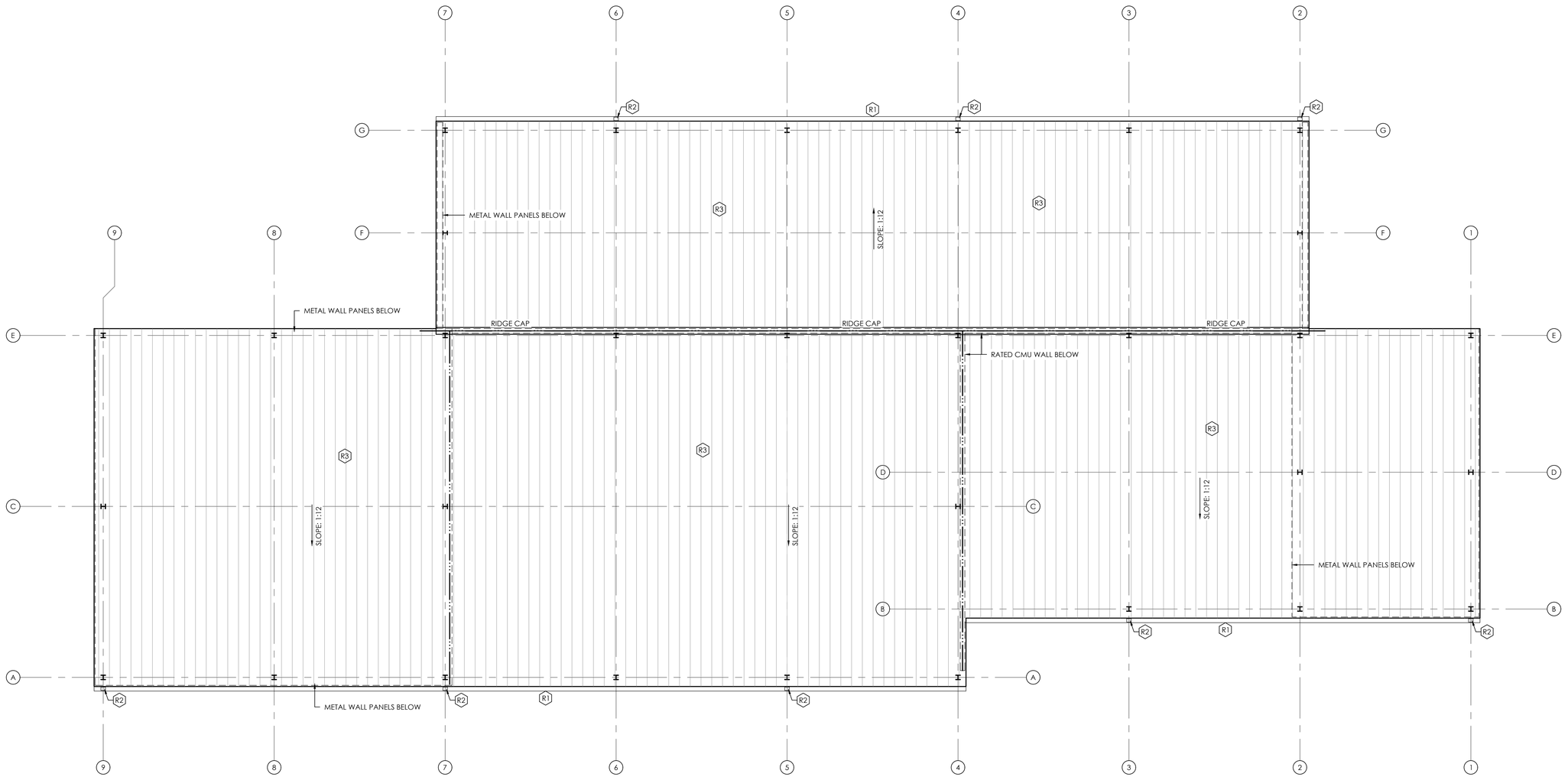
R1	PRE-FINISHED ALUM. GUTTER.
R2	PRE-FINISHED ALUM. DOWNSPOUT.
R3	STANDING SEAM METAL ROOF.

GENERAL NOTES:

1. COORDINATE LOCATION & SIZE OF ROOF OPENINGS & ASSOCIATED PENETRATIONS WITH STRUCTURE.
2. ROOF DETAILS MAY NOT ENTIRELY REPRESENT ACTUAL CONSTRUCTION CONDITIONS. ACTUAL DETAILS ASSEMBLIES SHALL BE APPROVED BY ROOFING MANUFACTURER.

KEY PLAN





BUILDING C ROOF PLAN 1

1/8" = 1'-0"

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HILLSBOROUGH, NORTH CAROLINA

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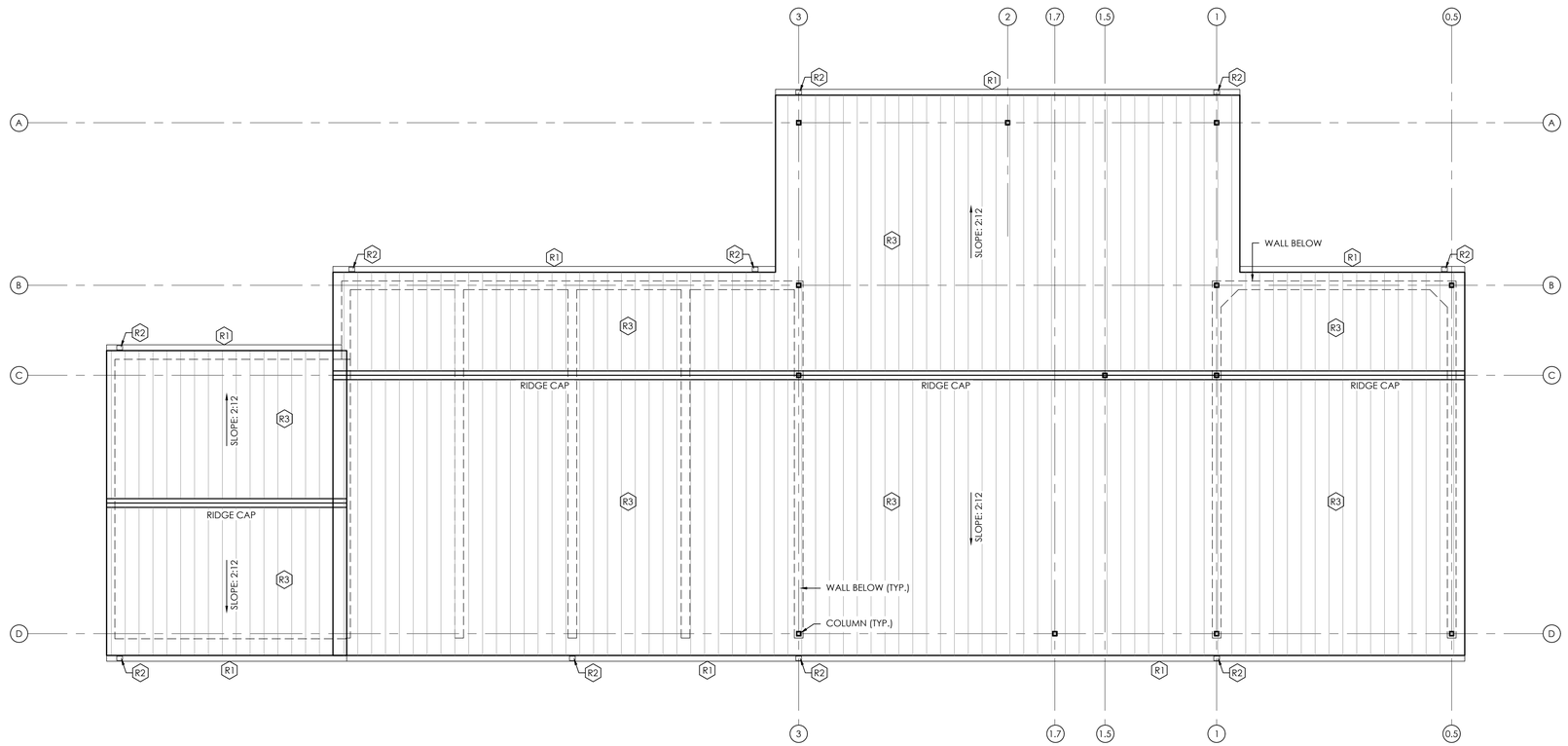
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C - ROOF PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A151



BUILDING D ROOF PLAN 1

1/8" = 1'-0"

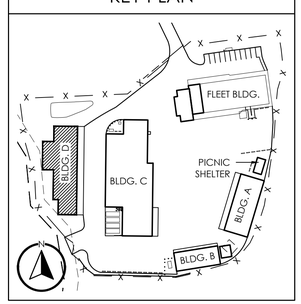
SHEET NOTES - ROOF PLAN

R1	PRE-FINISHED ALUM. GUTTER.
R2	PRE-FINISHED ALUM. DOWNSPOUT.
R3	STANDING SEAM METAL ROOF.

GENERAL NOTES:

1. COORDINATE LOCATION & SIZE OF ROOF OPENINGS & ASSOCIATED PENETRATIONS WITH STRUCTURE.
2. ROOF DETAILS MAY NOT ENTIRELY REPRESENT ACTUAL CONSTRUCTION CONDITIONS. ACTUAL DETAILS ASSEMBLIES SHALL BE APPROVED BY ROOFING MANUFACTURER.

KEY PLAN



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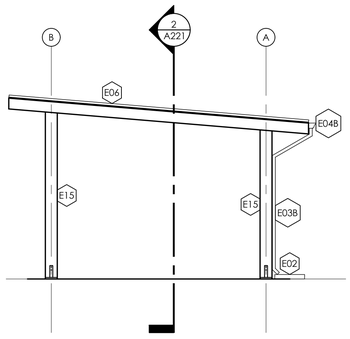
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING D - ROOF PLAN

PHASE:
BID SET

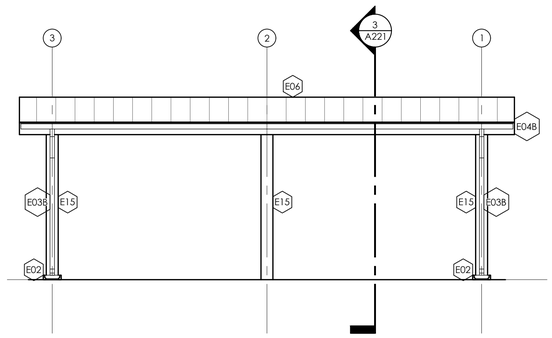
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A152



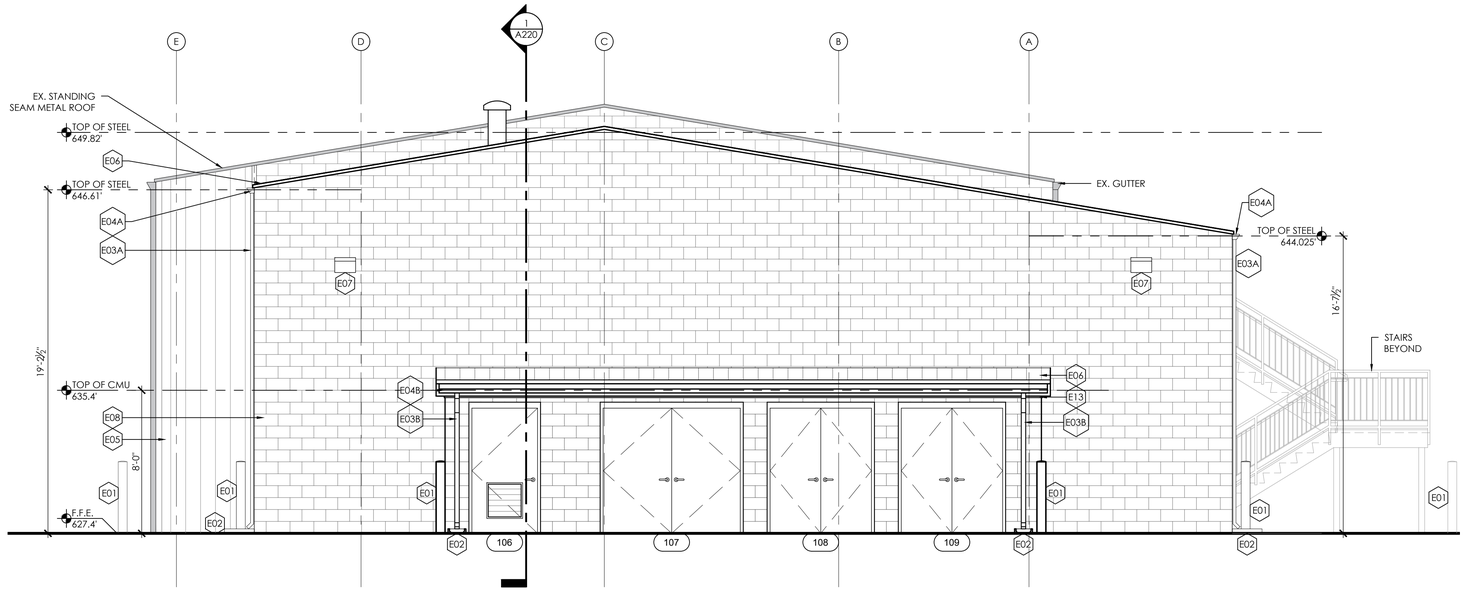
PICNIC SHELTER ELEVATION 4

1/4" = 1'-0"



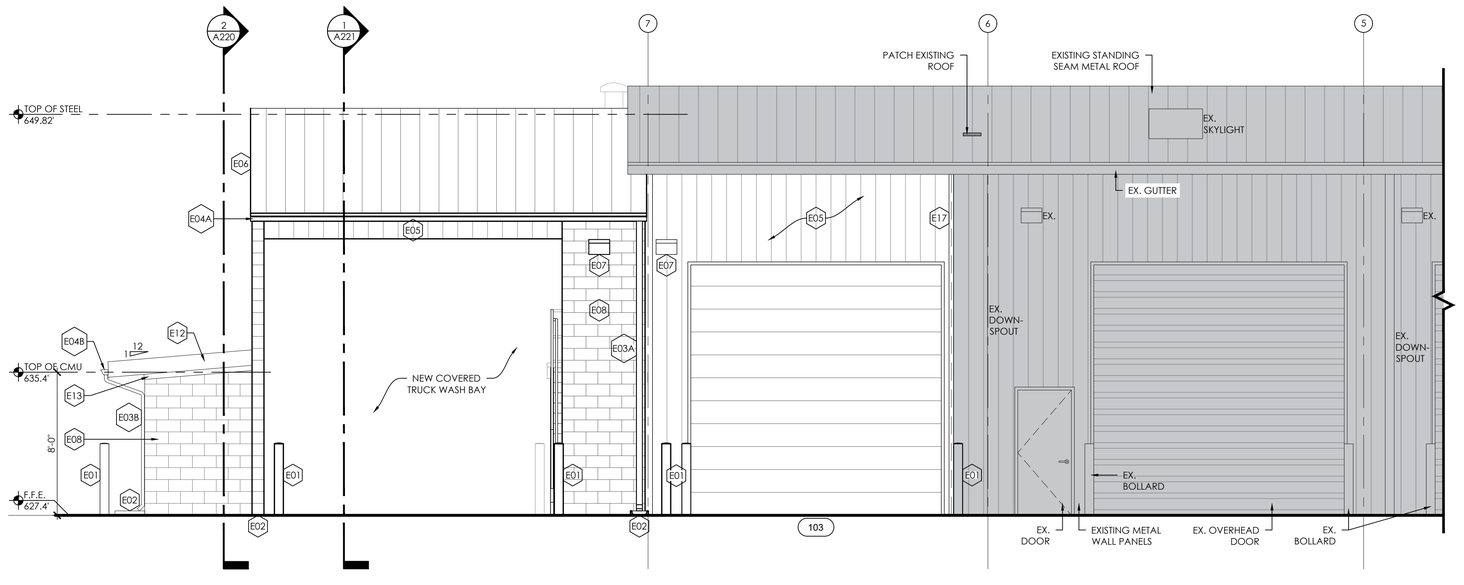
PICNIC SHELTER ELEVATION 3

1/4" = 1'-0"



FLEET - EXTERIOR ELEVATION 2

1/4" = 1'-0"



FLEET - EXTERIOR ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK.
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
~~E16~~	~~ASPHALT SHINGLE ROOFING.~~
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN.

GENERAL NOTES:

1. PROVIDE DOOR SENSOR @ NEW ROLL-UP DOORS IN NEW MAINTENANCE TRUCK BAY.
2. STAIRS 3: HANDRAILS & GUARDRAILS TO BE PAINTED PT04.

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

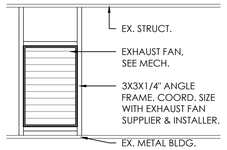
#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING - EXTERIOR ELEVATIONS

PHASE:
BID SET

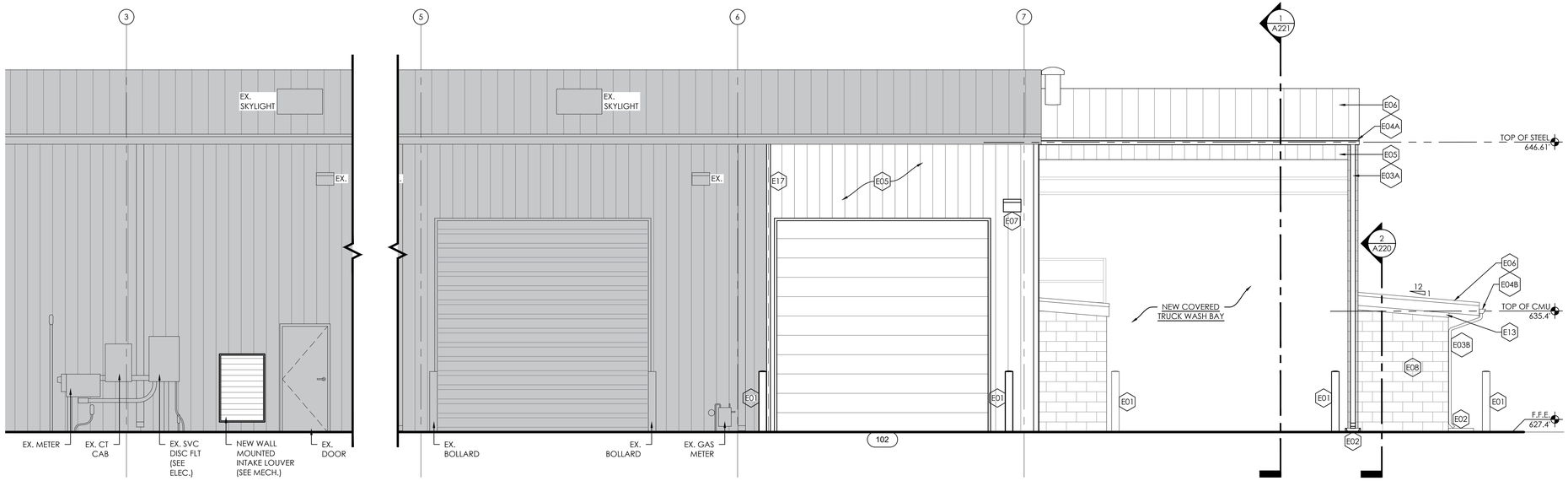
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A200



FLEET - EXHAUST FAN ELEVATION 2

1/4" = 1'-0"



FLEET - EXTERIOR ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK.
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
~~E16~~	~~ASPHALT SHINGLE ROOFING.~~
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN.

GENERAL NOTES:

1. PROVIDE DOOR SENSOR @ NEW ROLL-UP DOORS IN NEW MAINTENANCE TRUCK BAY.
2. STAIRS 3: HANDRAILS & GUARDRAILS TO BE PAINTED PT04.

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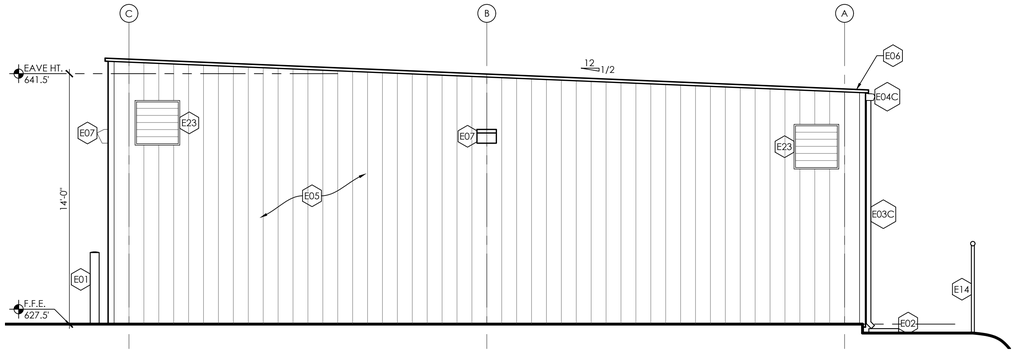
#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING - EXTERIOR ELEVATION

PHASE:
BID SET

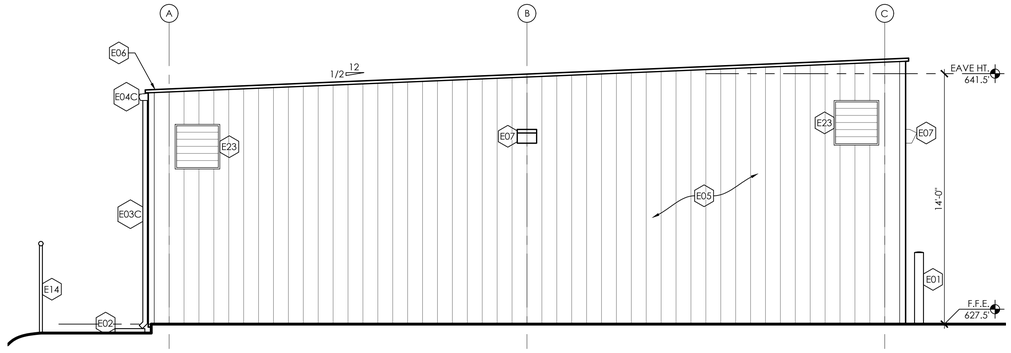
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A201



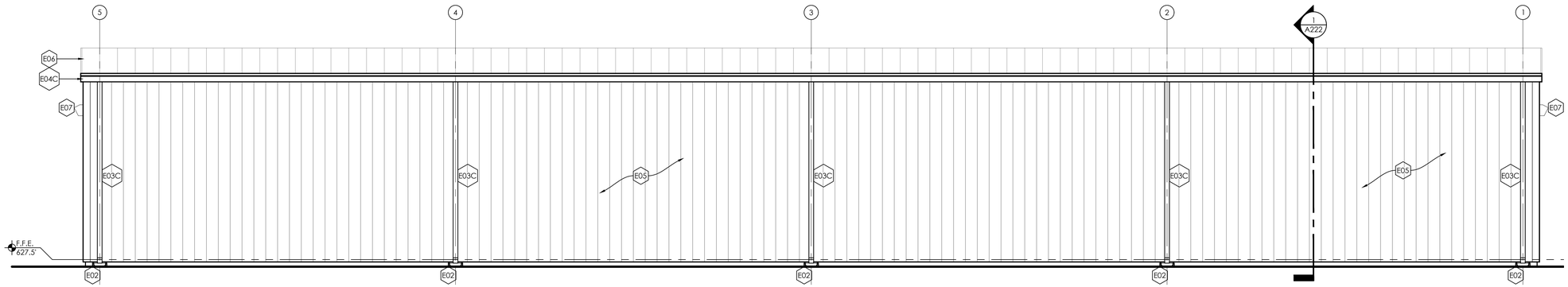
BUILDING A ELEVATION 4

1/4" = 1'-0"



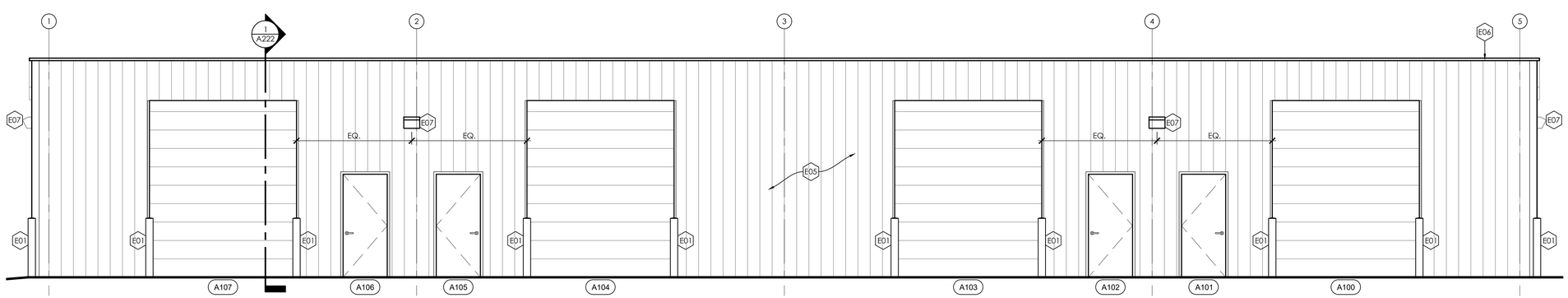
BUILDING A ELEVATION 3

1/4" = 1'-0"



BUILDING A ELEVATION 2

1/4" = 1'-0"



BUILDING A ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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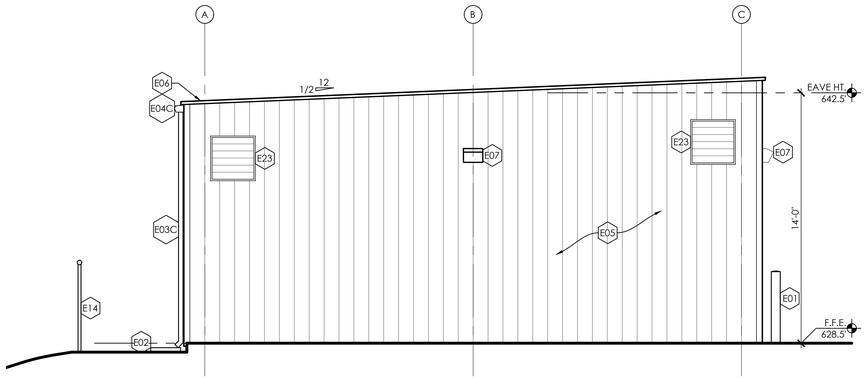
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SHEET NAME:
BUILDING A - EXTERIOR ELEVATIONS

PHASE:
BID SET

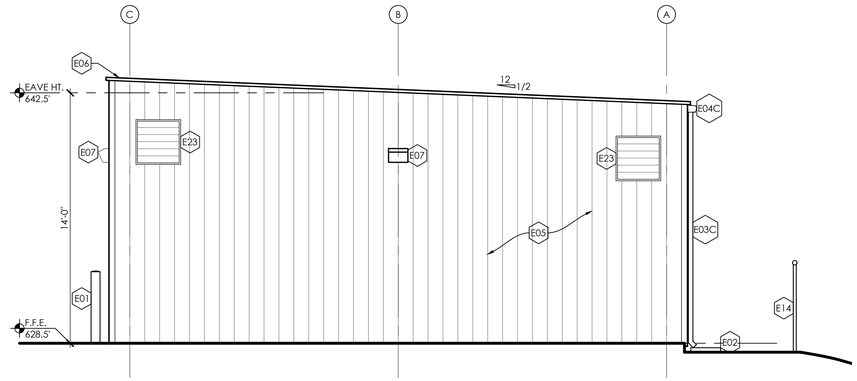
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A202



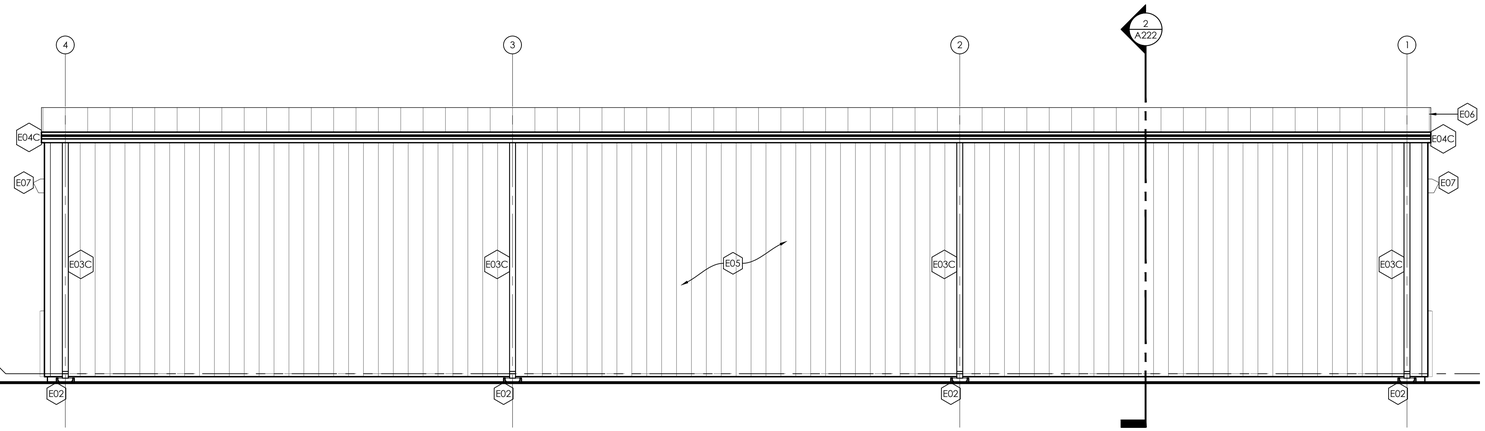
BUILDING B ELEVATION 4

1/4" = 1'-0"



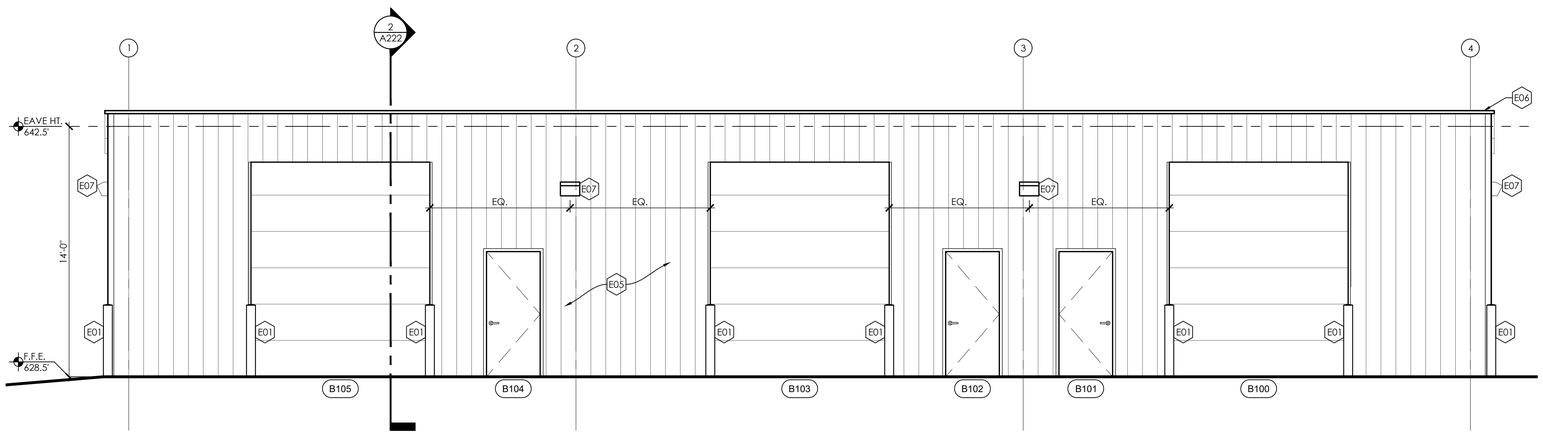
BUILDING B ELEVATION 3

1/4" = 1'-0"



BUILDING B ELEVATION 2

1/4" = 1'-0"



BUILDING B ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
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E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
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E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
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E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
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E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
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E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

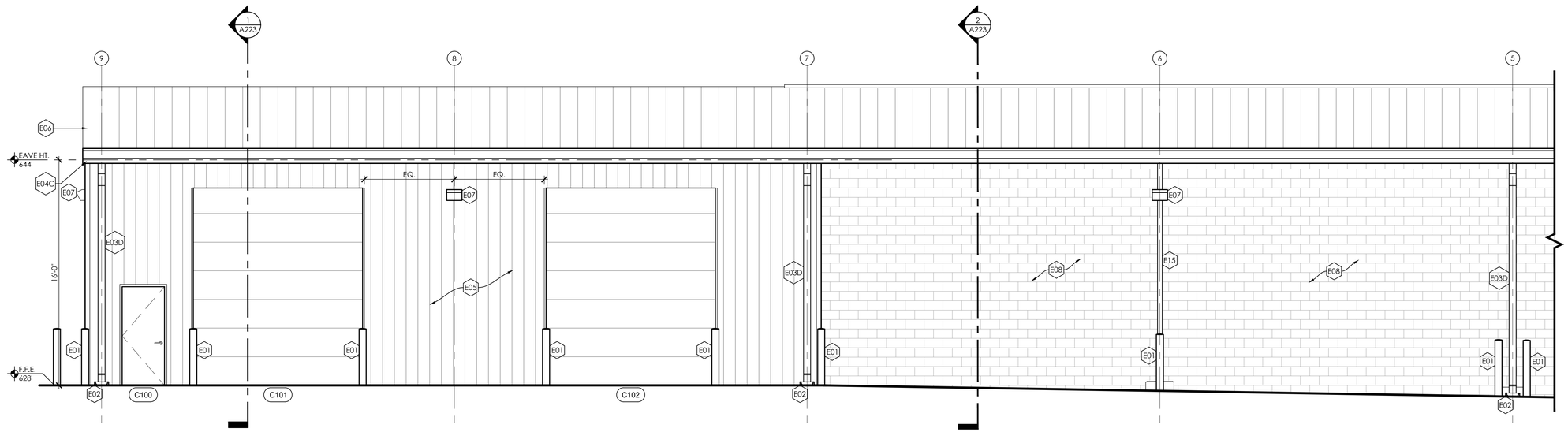
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SHEET NAME:
BUILDING B - EXTERIOR ELEVATIONS

PHASE:
BID SET

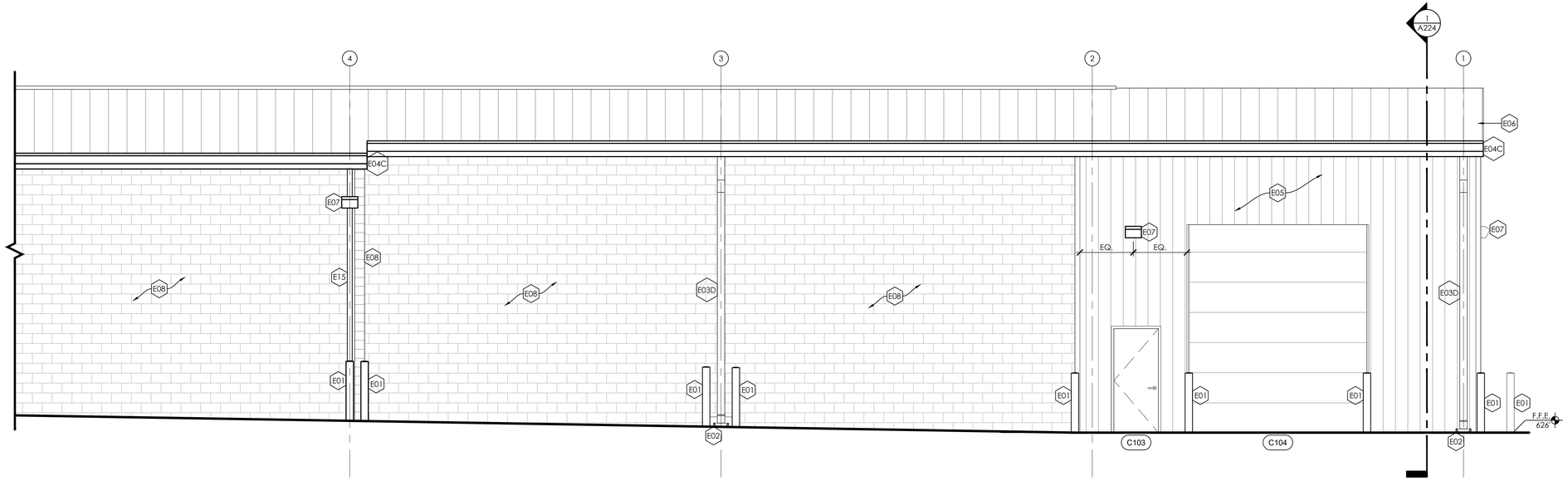
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A203



BUILDING C ELEVATION (2)

1/4" = 1'-0"



BUILDING C ELEVATION (1)

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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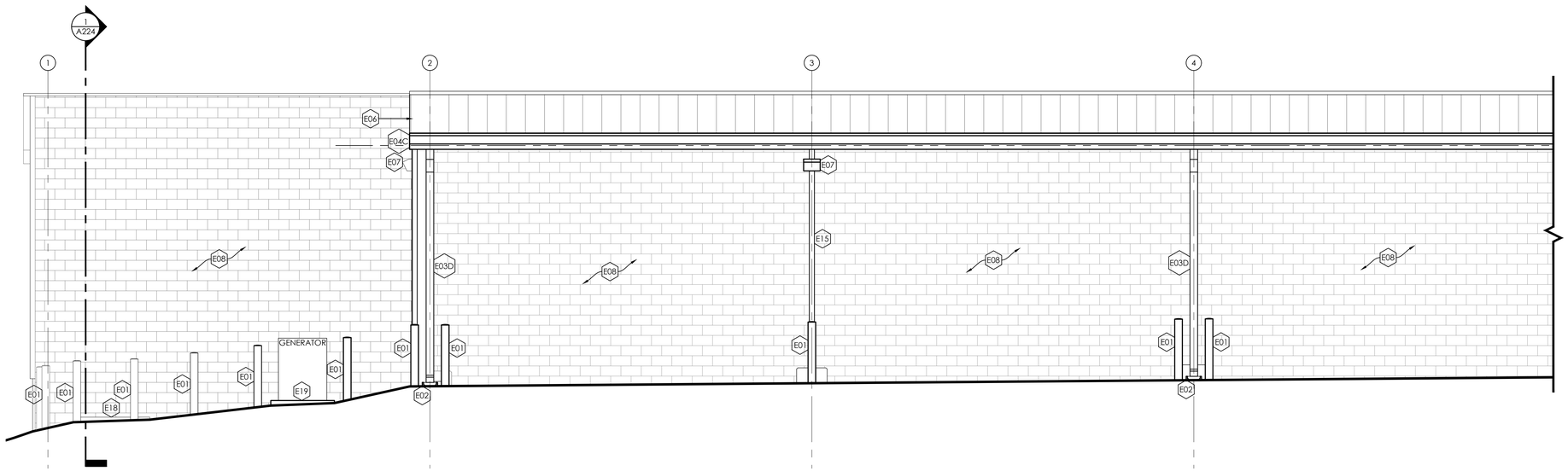
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SHEET NAME:
BUILDING C - EXTERIOR ELEVATIONS

PHASE:
BID SET

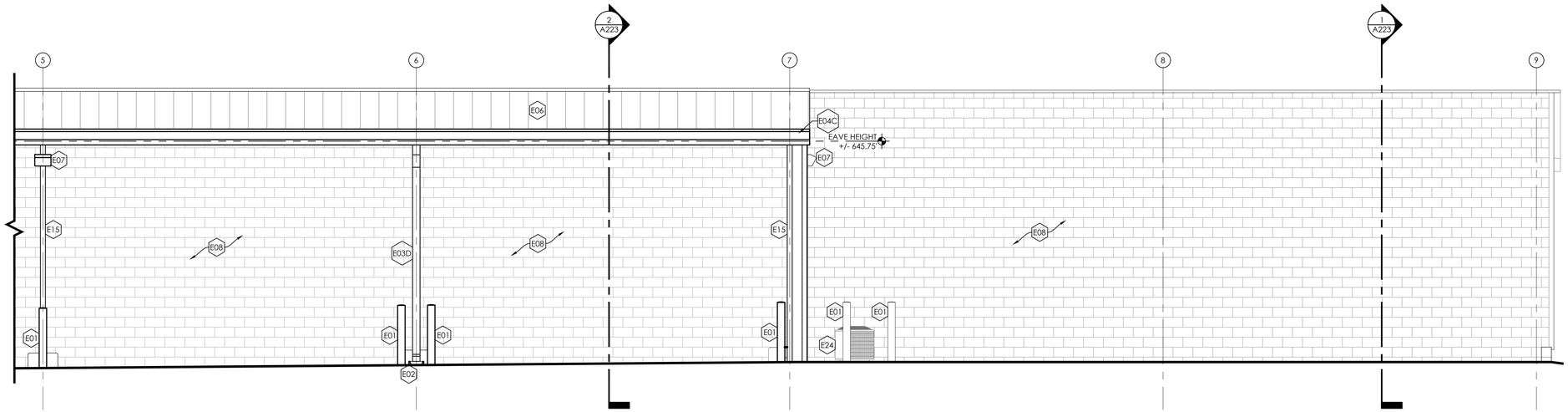
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A204



BUILDING C ELEVATION 2

1/4" = 1'-0"



BUILDING C ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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HILLSBOROUGH, NORTH CAROLINA

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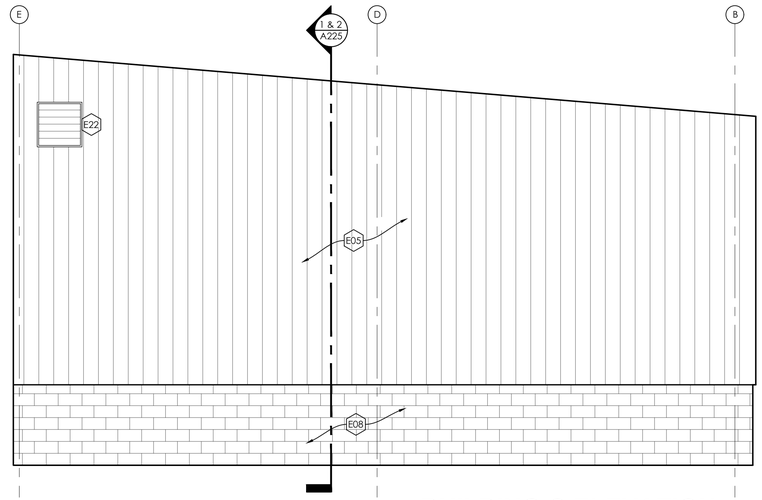
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C - EXTERIOR ELEVATIONS

PHASE:
BID SET

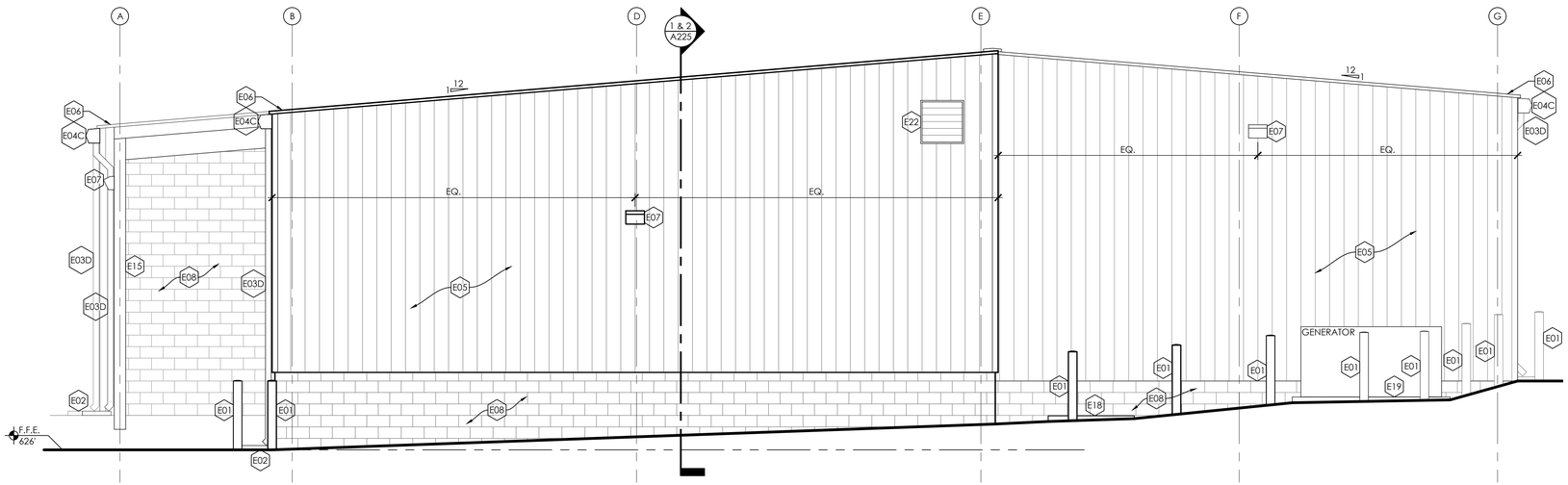
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A205



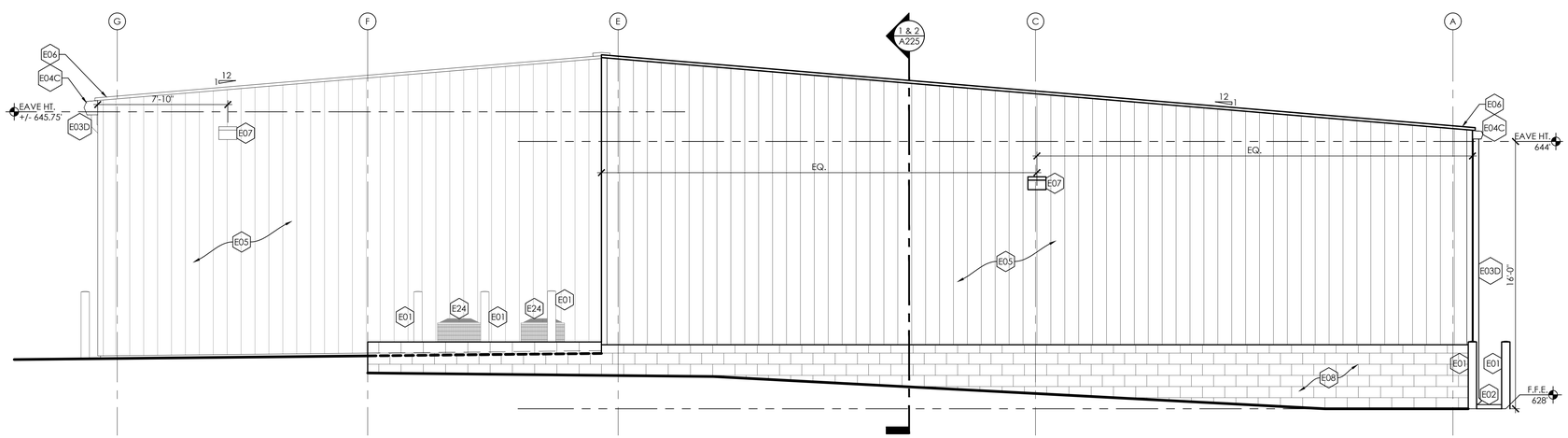
BUILDING C ELEVATION 3

1/4" = 1'-0"



BUILDING C ELEVATION 2

1/4" = 1'-0"



BUILDING C ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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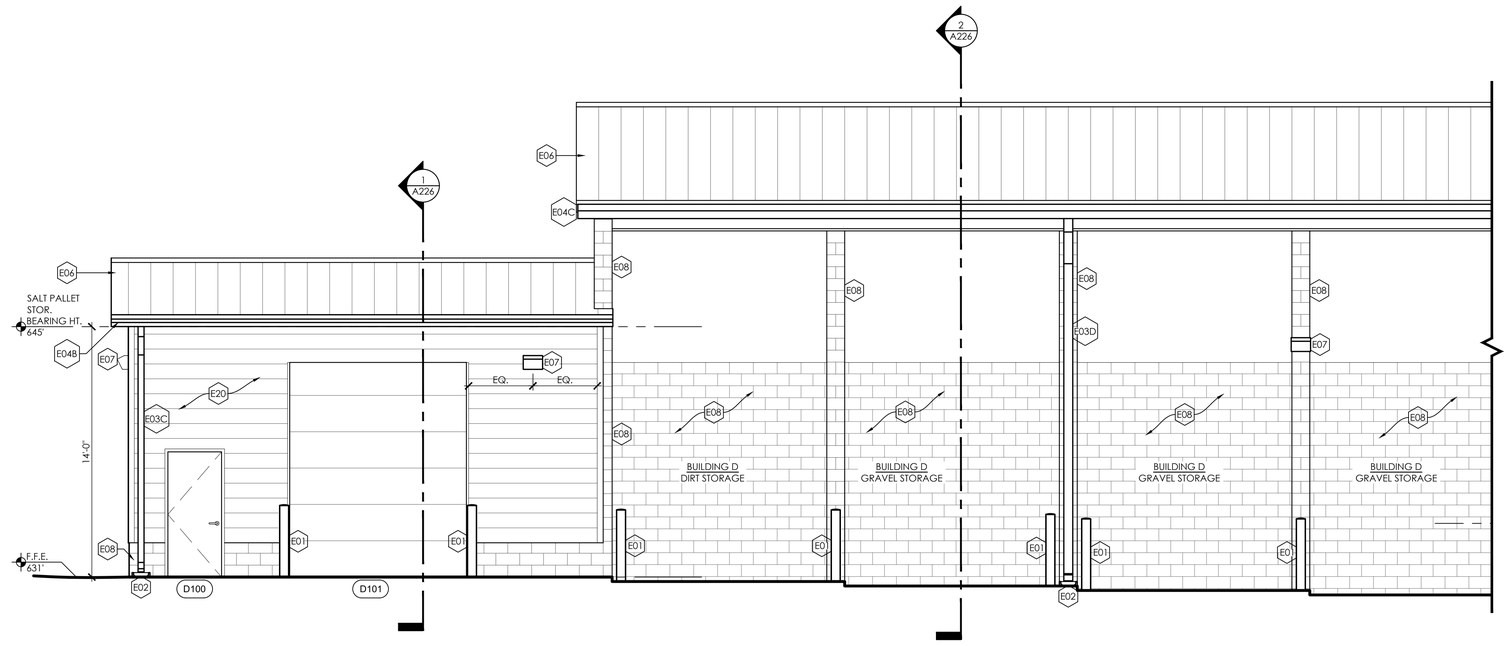
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SHEET NAME:
BUILDING C - EXTERIOR ELEVATIONS

PHASE:
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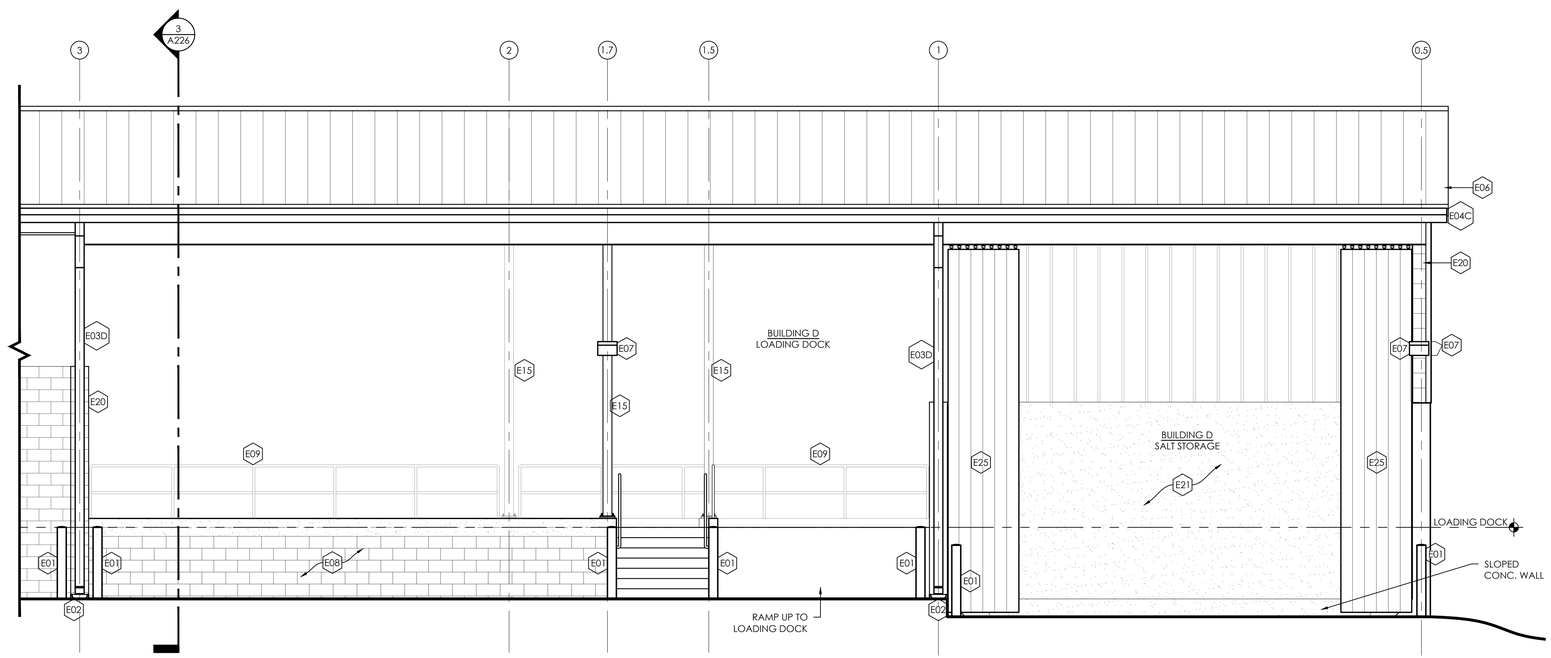
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A206



BUILDING D ELEVATION (2)

1/4" = 1'-0"



BUILDING D ELEVATION (1)

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
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E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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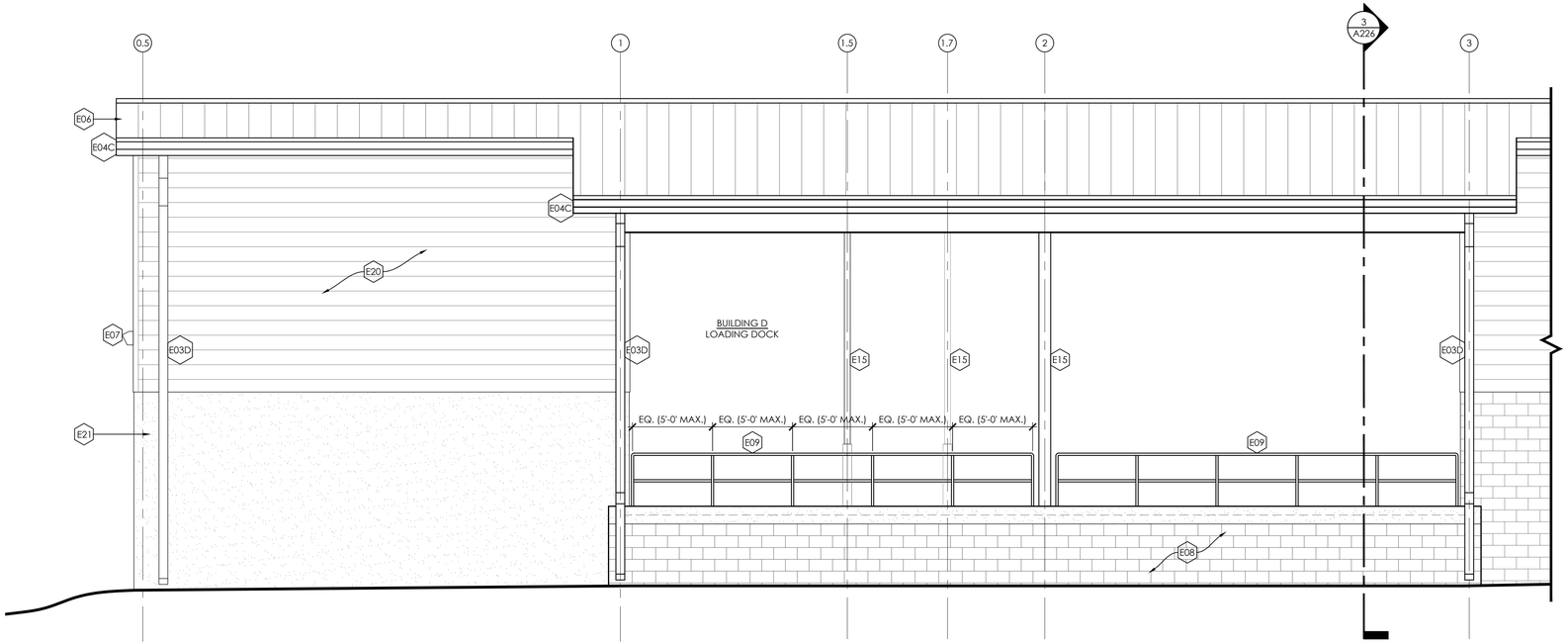
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SHEET NAME:
BUILDING D - EXTERIOR ELEVATIONS

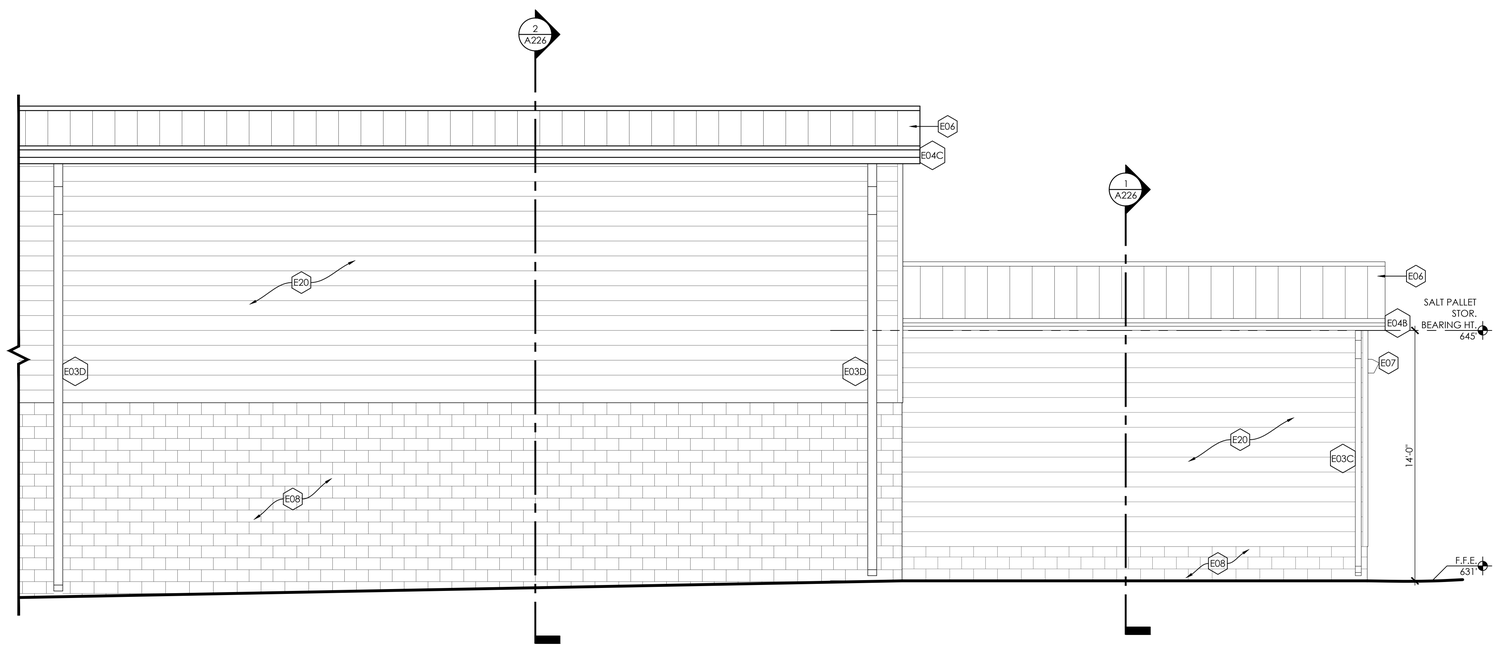
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ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A207



BUILDING D ELEVATION (2)
1/4" = 1'-0"



BUILDING D ELEVATION (1)
1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
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E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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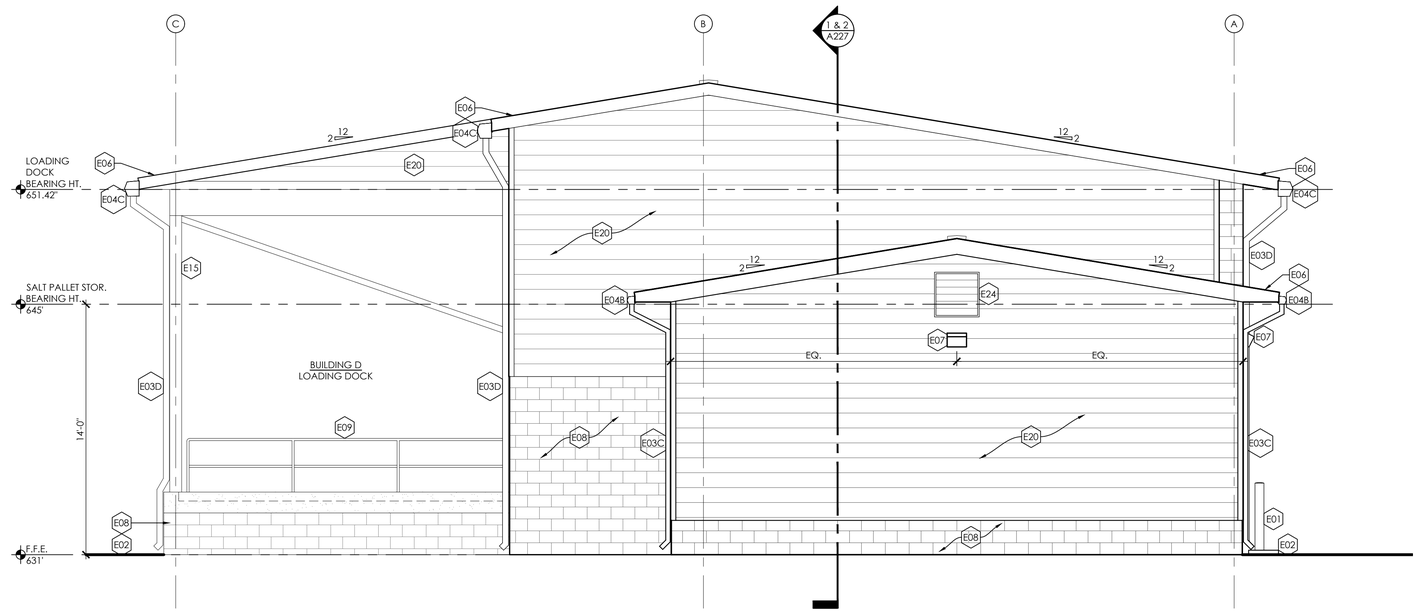
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SHEET NAME:
BUILDING D - EXTERIOR ELEVATIONS

PHASE:
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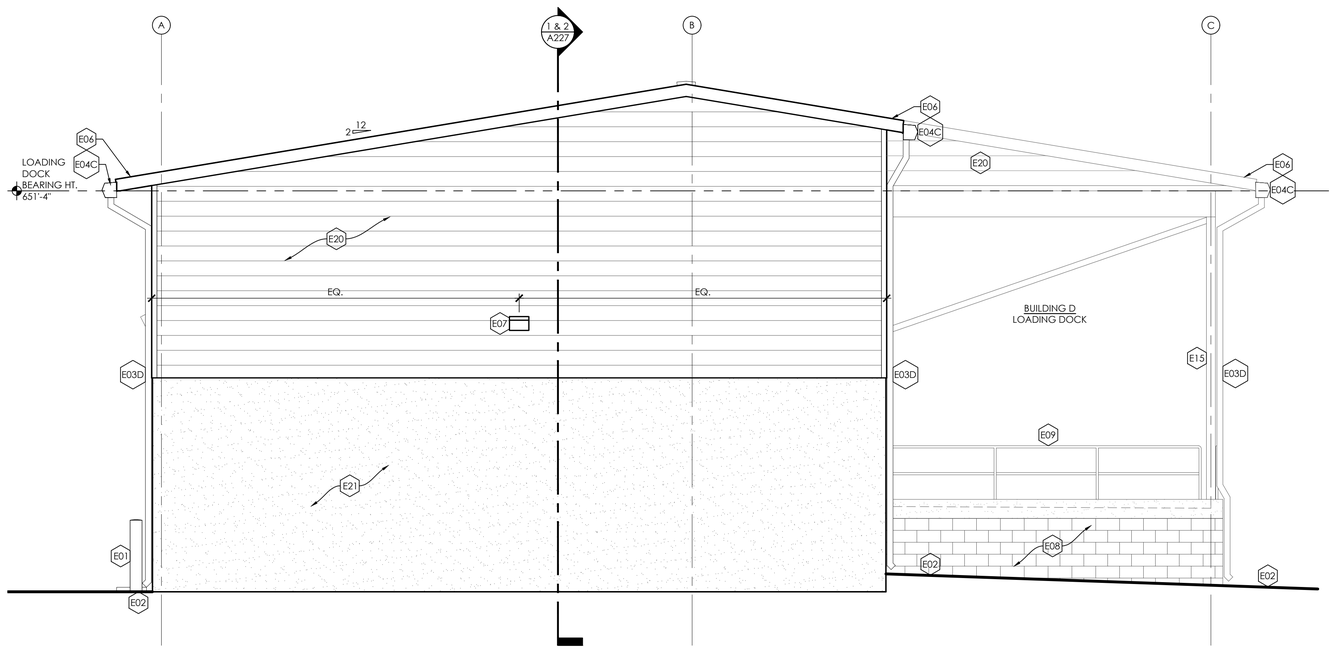
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A208



BUILDING D ELEVATION 2

1/4" = 1'-0"



BUILDING D ELEVATION 1

1/4" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
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E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
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E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK (SEE ELEC.).
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E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
E16	ASPHALT SHINGLE ROOFING.
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED, INCLUDING TRIM.
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E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN (BASIS-OF-DESIGN: AKON: SUPPER DUTY OUTDOOR CURTAIN W/ HD ROLLERS, WEBBING, MESH VISION PANEL, & ANCHORS).

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

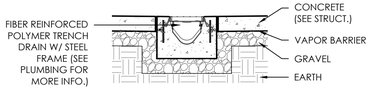
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SHEET NAME:
BUILDING D - EXTERIOR ELEVATIONS

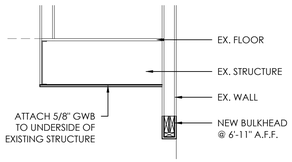
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

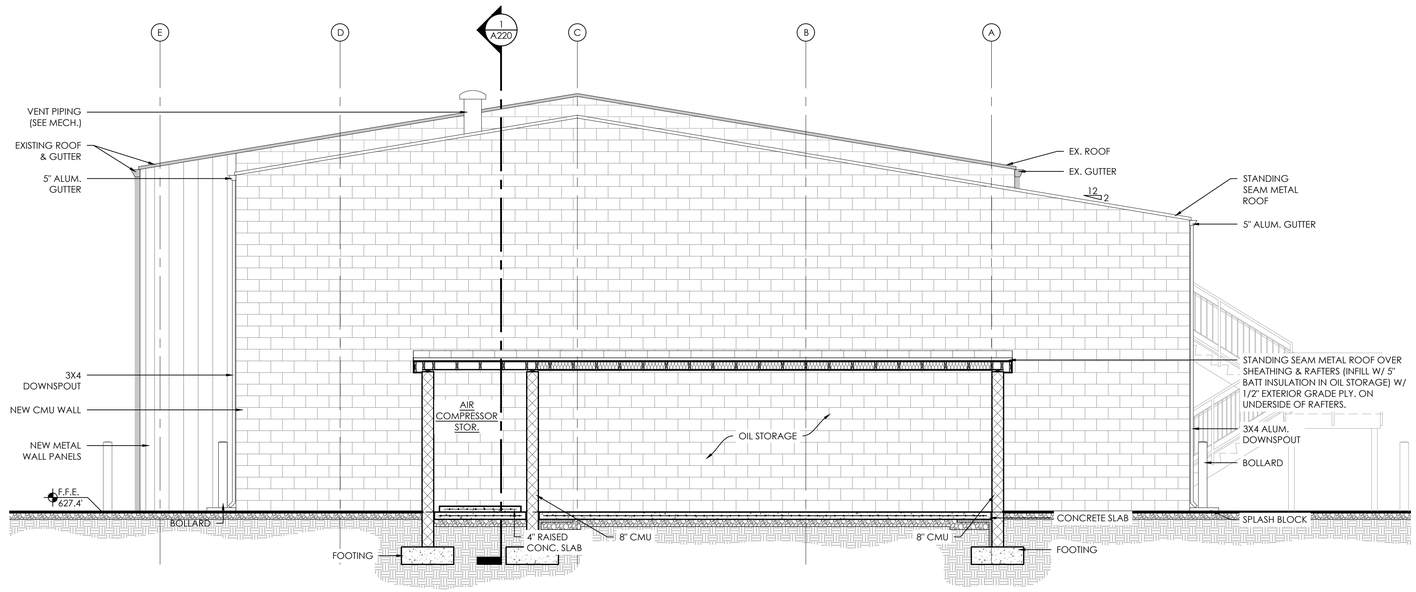
SHEET NUMBER
A209



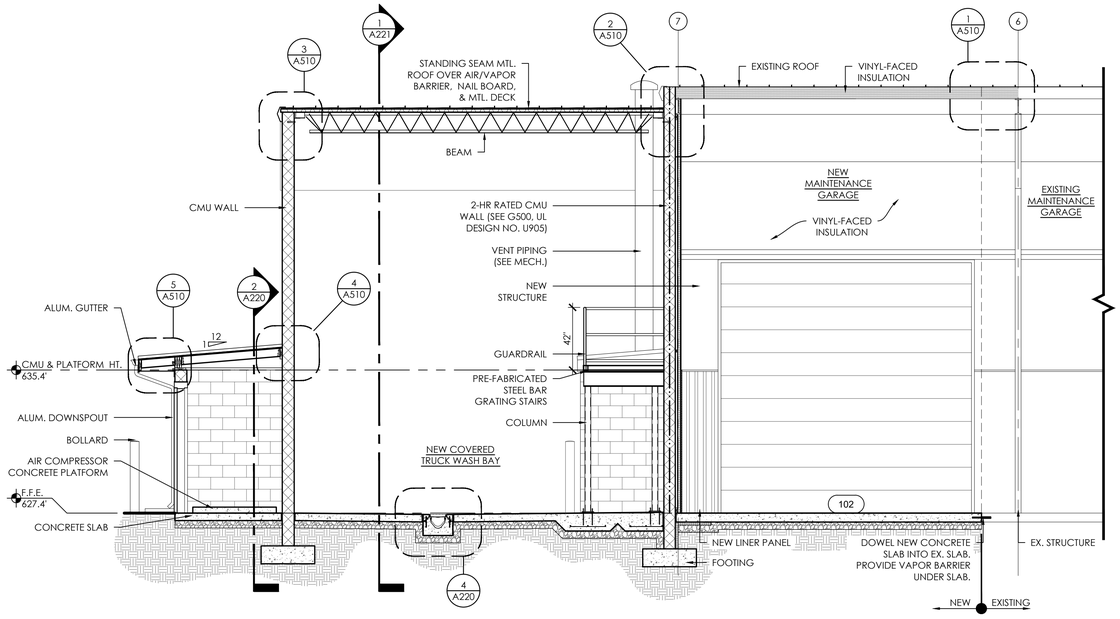
FLEET - DETAIL 4
1/2" = 1'-0"

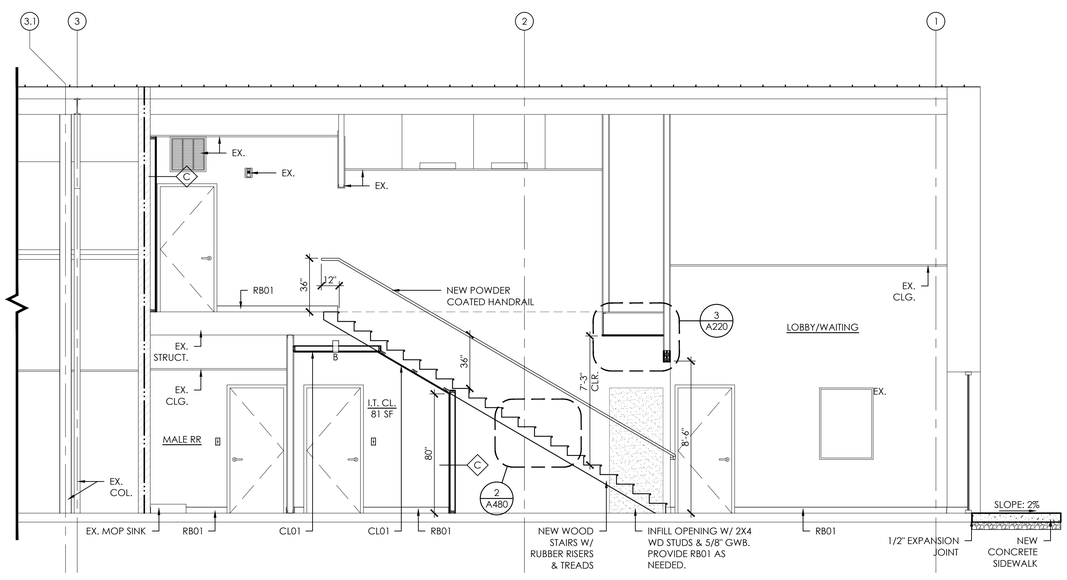


FLEET - DETAIL 3
1/2" = 1'-0"



FLEET - SECTION 2
1/4" = 1'-0"





FLEET - SECTION 1
1/4" = 1'-0"

SEE STRUCTURAL FOR ALL FOOTING, WALL, SLAB, STEEL, TRUSS FOR MORE INFORMATION

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HIGHWAY 86 PUBLIC WORKS

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REVISIONS:

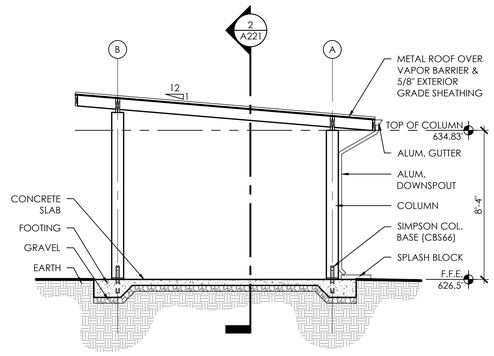
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SHEET NAME:
FLEET BUILDING - BUILDING SECTIONS

PHASE:
BID SET

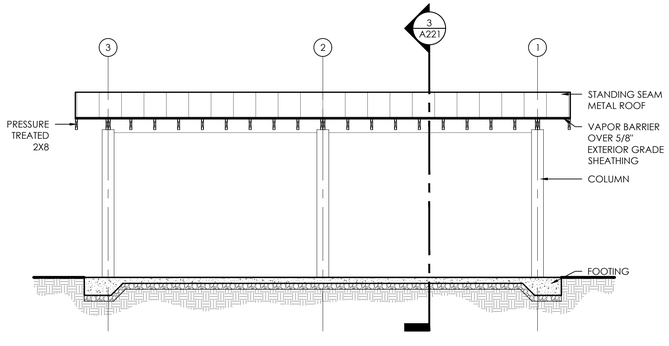
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A220



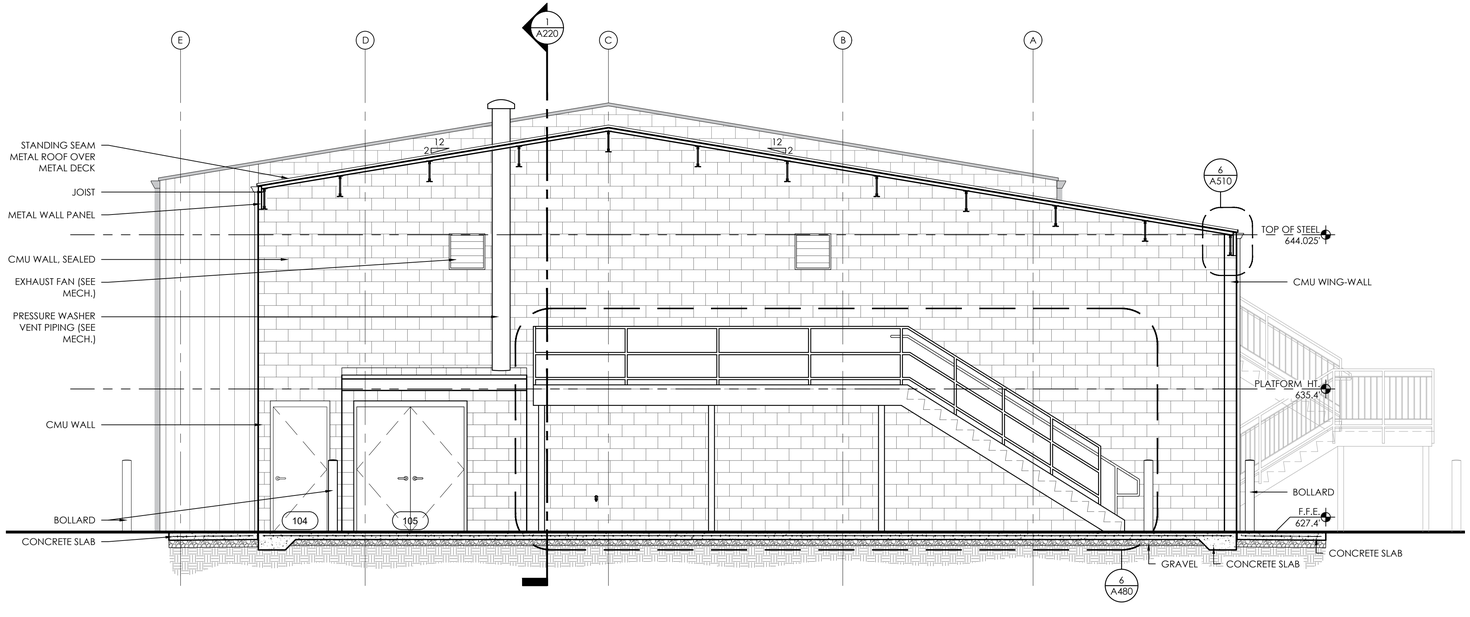
PICNIC SHELTER - SECTION 3

1/4" = 1'-0"



PICNIC SHELTER - SECTION 2

1/4" = 1'-0"



FLEET - SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL FOOTING, WALL, & SLAB INFORMATION

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REVISIONS:

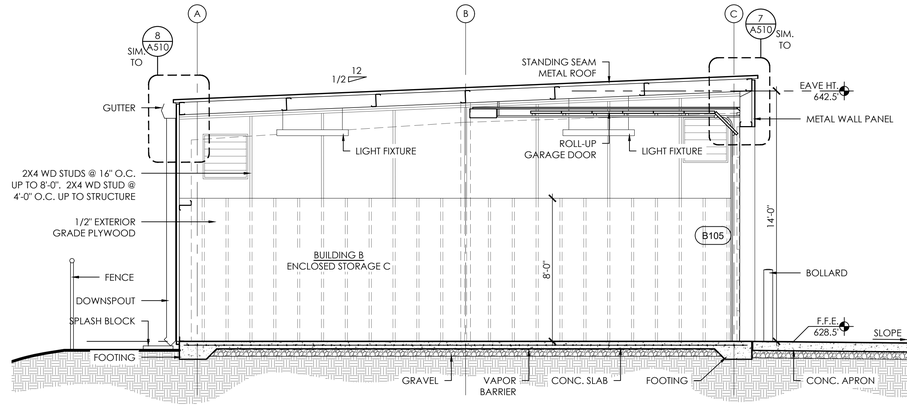
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SHEET NAME:
FLEET BUILDING - BUILDING SECTION

PHASE:
BID SET

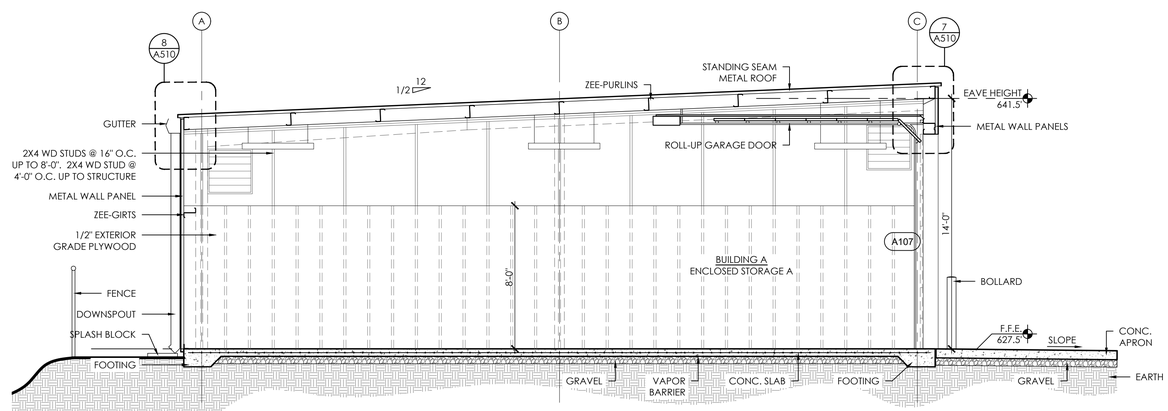
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A221



BUILDING B SECTION 2

1/4" = 1'-0"



BUILDING A SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, SLABS, & WOOD FRAMING

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REVISIONS:

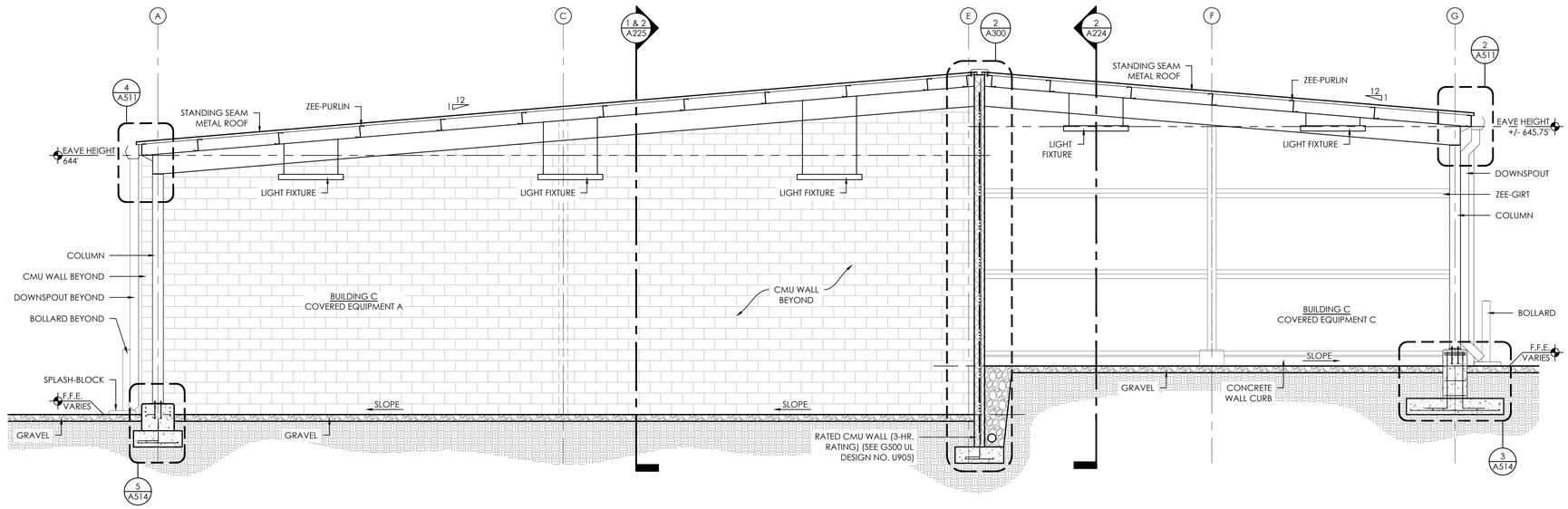
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SHEET NAME:
BUILDING SECTIONS - BUILDING A & B

PHASE:
BID SET

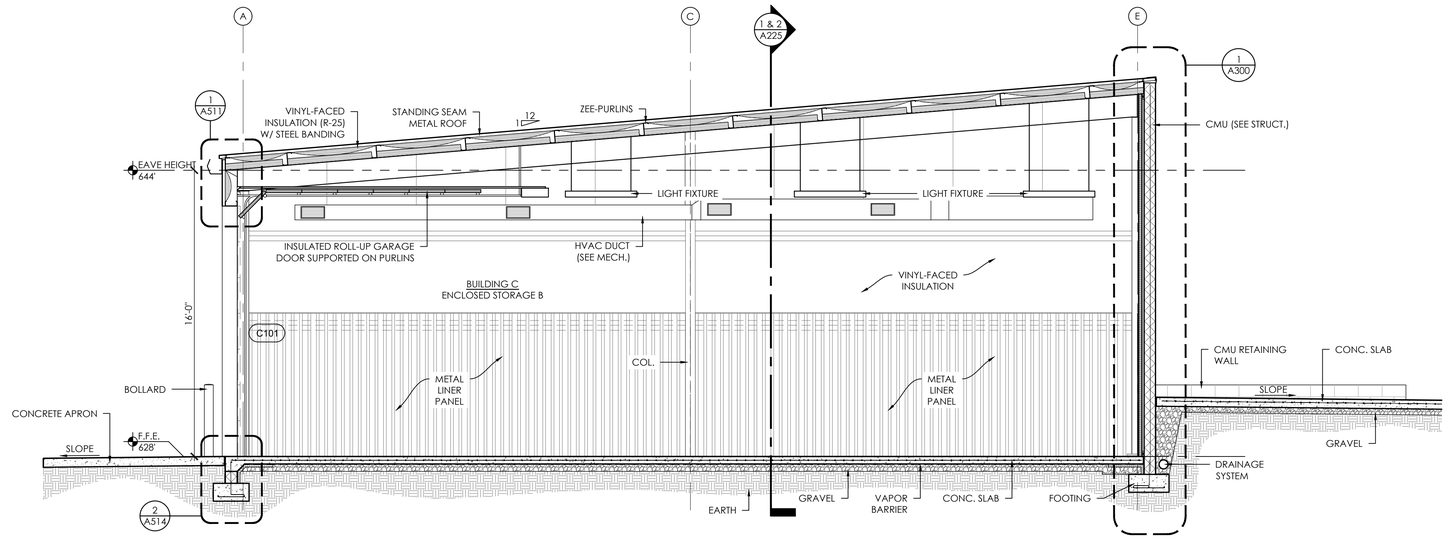
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A222



BUILDING C SECTION 2

1/4" = 1'-0"



BUILDING C SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, SLABS, ETC.

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REVISIONS:

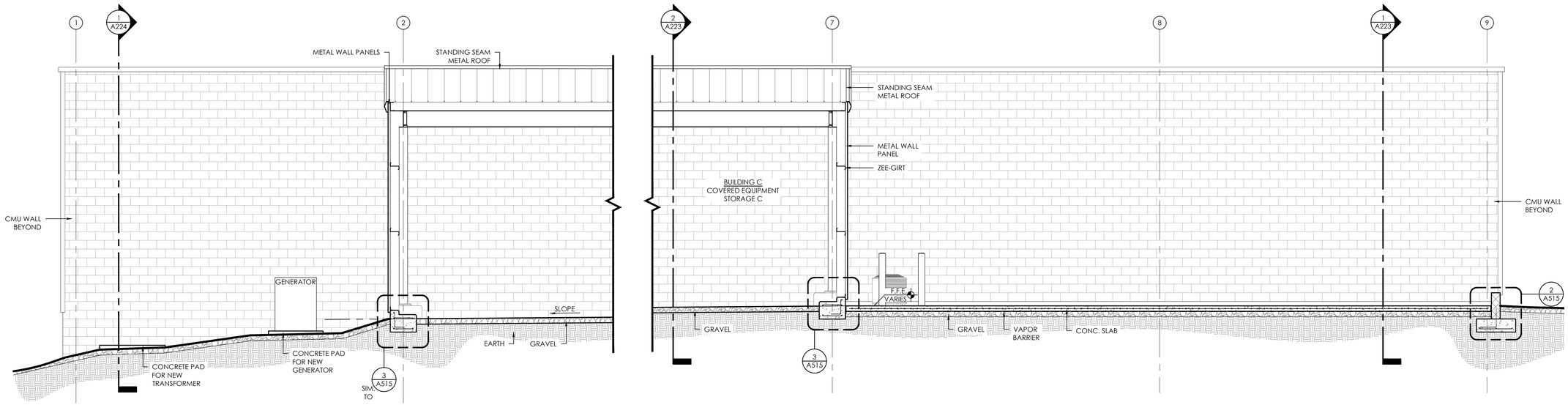
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SHEET NAME:
BUILDING SECTIONS - BUILDING C

PHASE:
BID SET

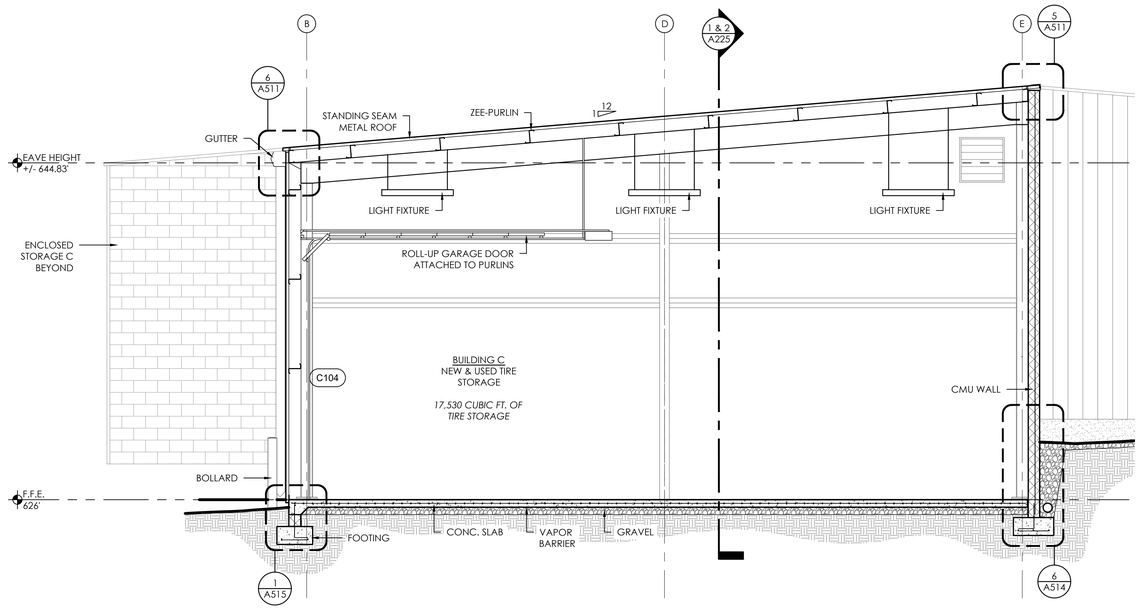
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A223



BUILDING C SECTION 2

1/4" = 1'-0"



BUILDING C SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, SLABS, ETC.

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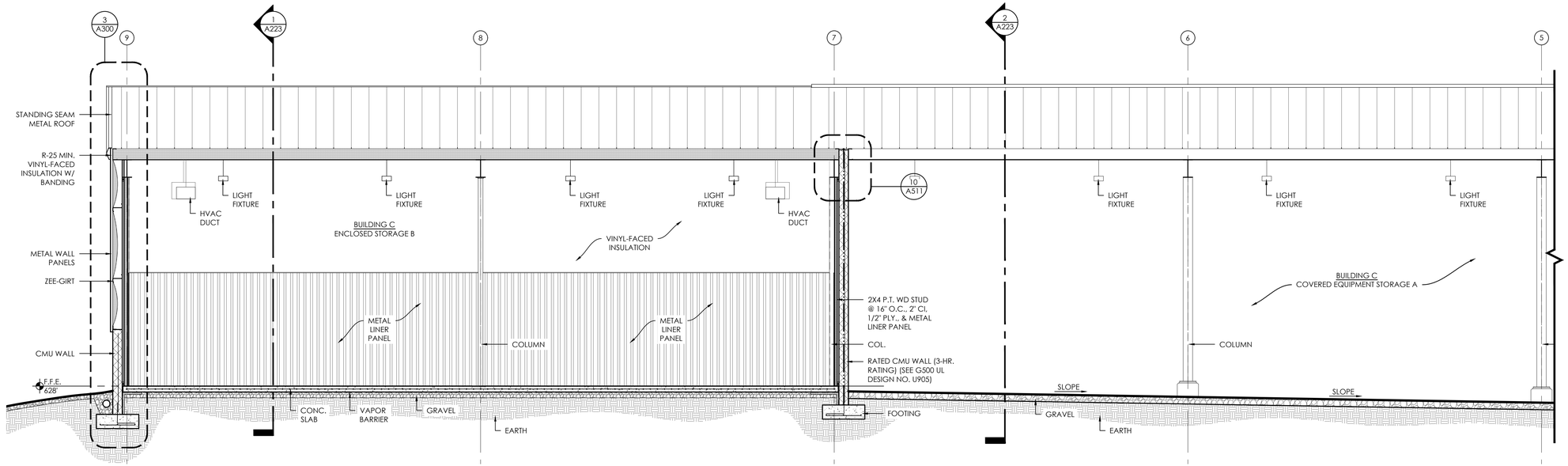
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SHEET NAME:
BUILDING SECTIONS - BUILDING C

PHASE:
BID SET

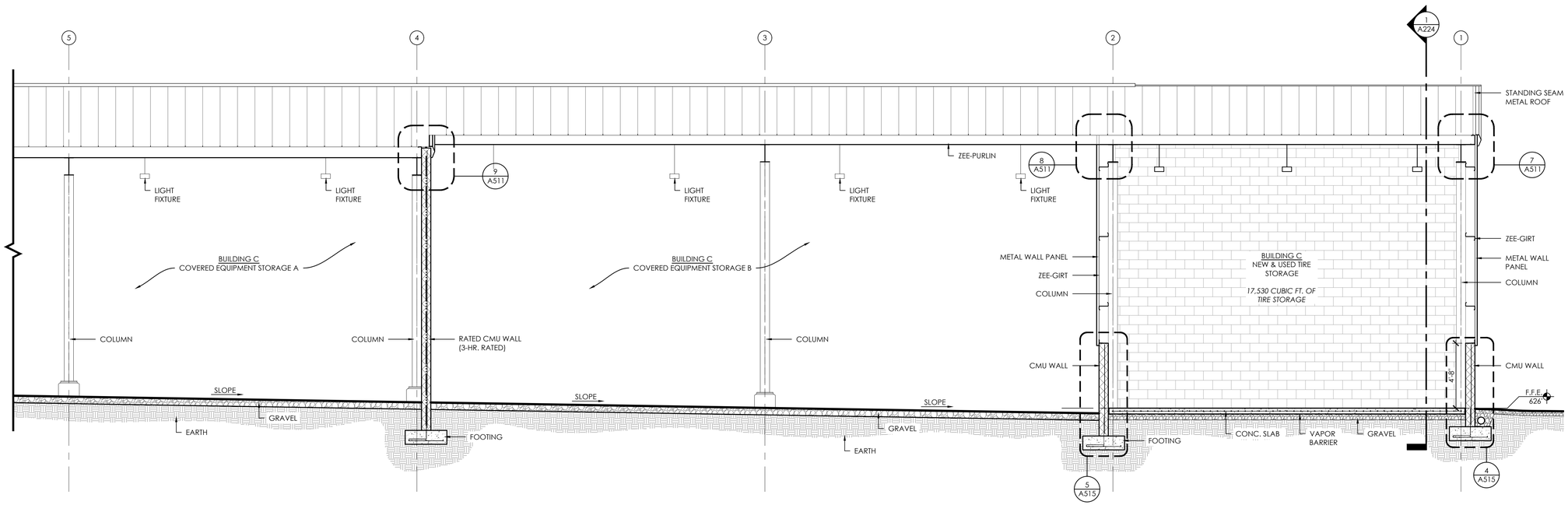
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A224



BUILDING C SECTION 2

1/4" = 1'-0"



BUILDING C SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL FOOTING, WALL, & SLAB INFORMATION

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REVISIONS:

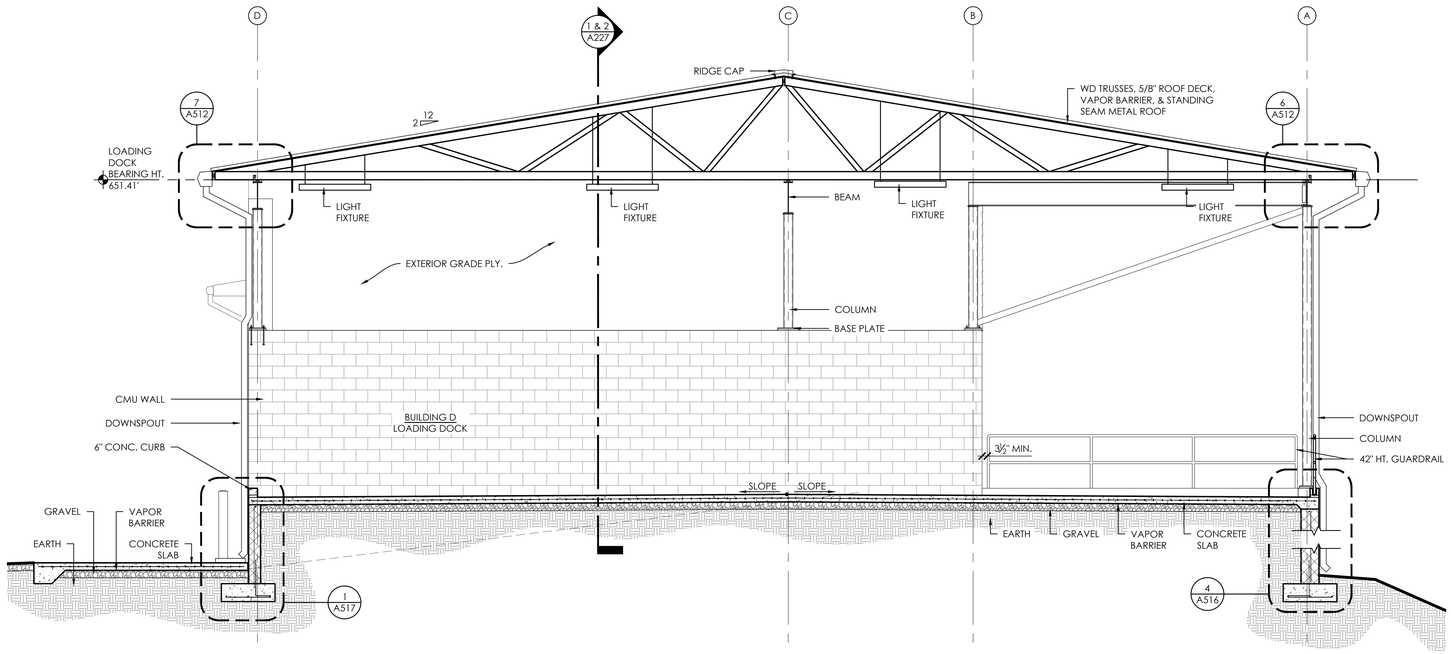
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SHEET NAME:
BUILDING SECTIONS - BUILDING C

PHASE:
BID SET

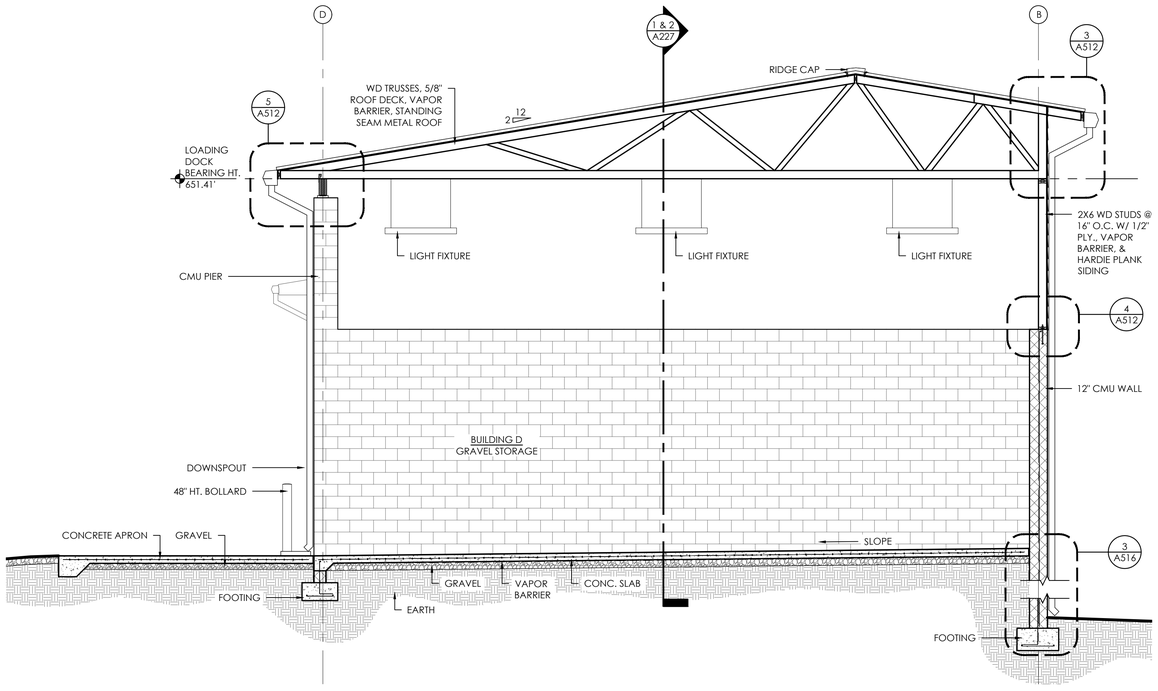
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A225



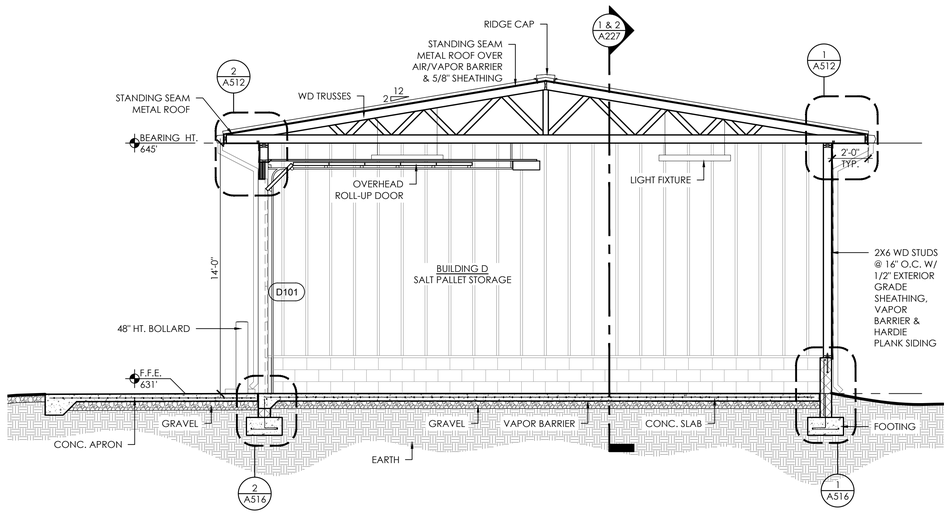
BUILDING D SECTION 3

1/4" = 1'-0"



BUILDING D SECTION 2

1/4" = 1'-0"



BUILDING D SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, WALLS, SLABS, STEEL, TRUSSES, BEAMS, ETC.

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REVISIONS:

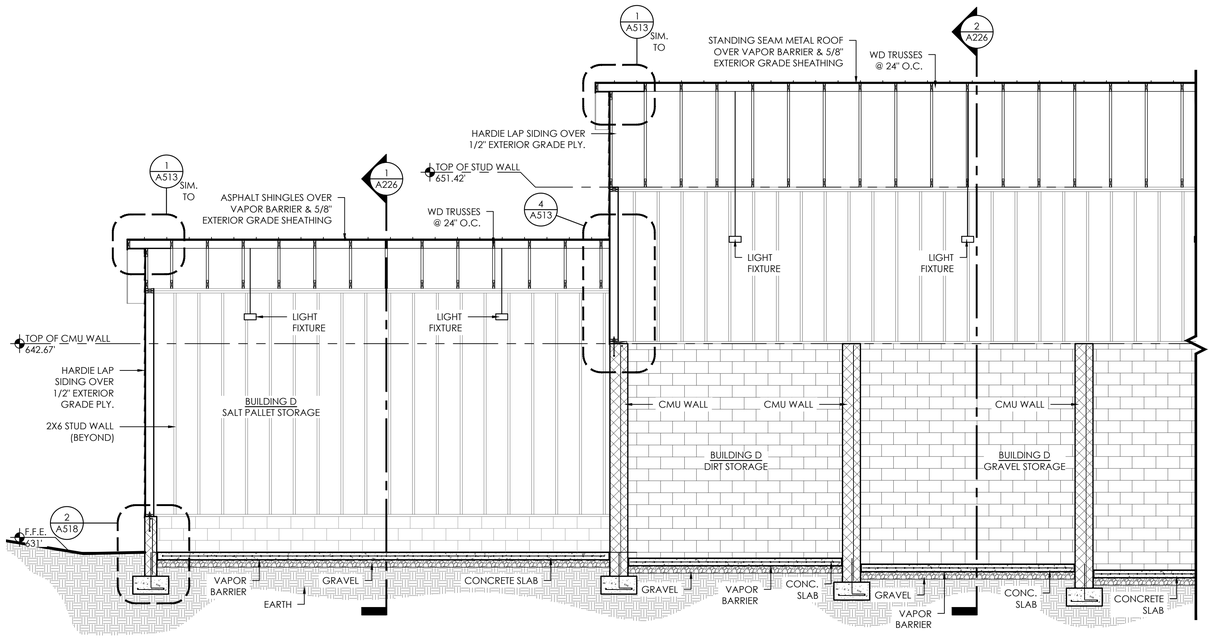
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SHEET NAME:
BUILDING SECTIONS - BUILDING D

PHASE:
BID SET

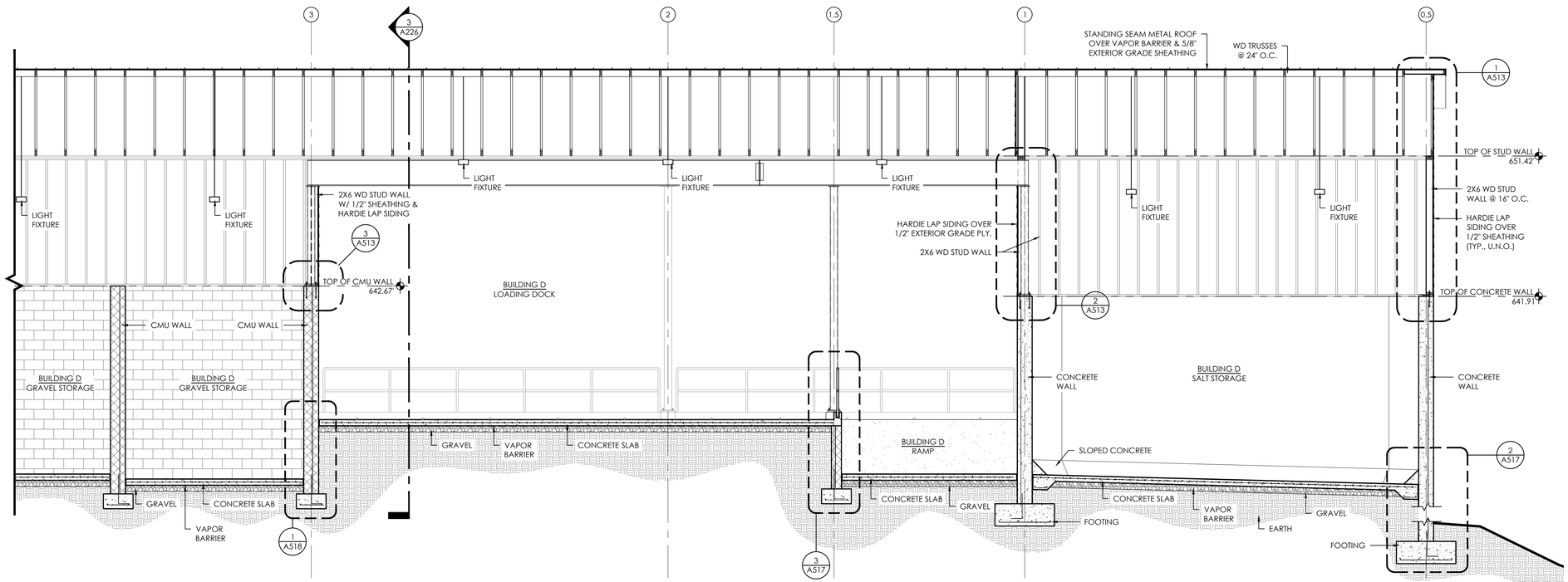
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A226



BUILDING D SECTION 2

1/4" = 1'-0"



BUILDING D SECTION 1

1/4" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, WALLS, SLABS, STEEL, TRUSSES, BEAMS, ETC.

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HIGHWAY 86 PUBLIC WORKS

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REVISIONS:

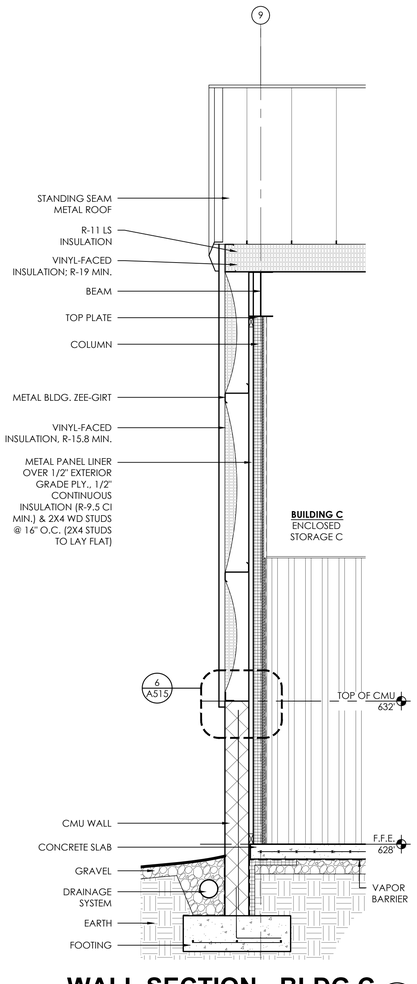
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SHEET NAME:
BUILDING SECTIONS - BUILDING D

PHASE:
BID SET

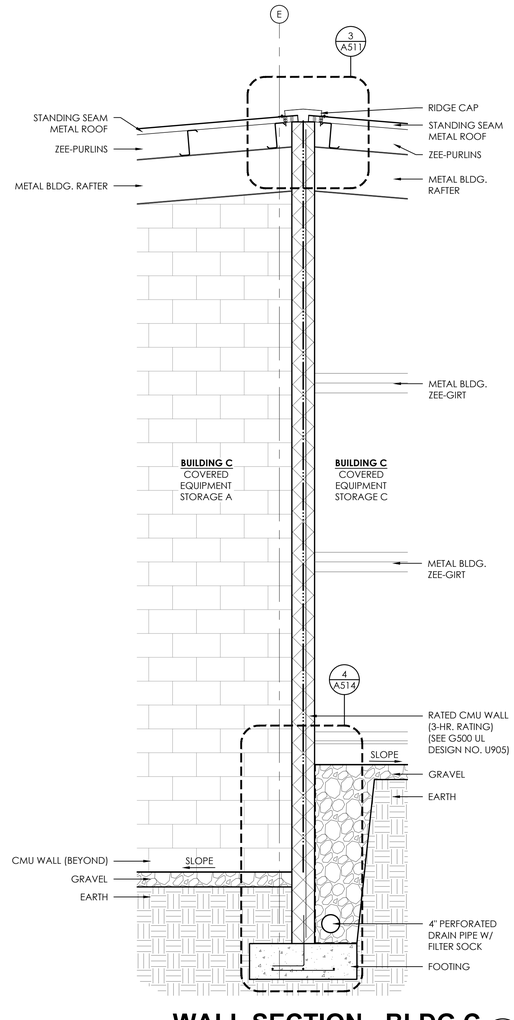
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A227



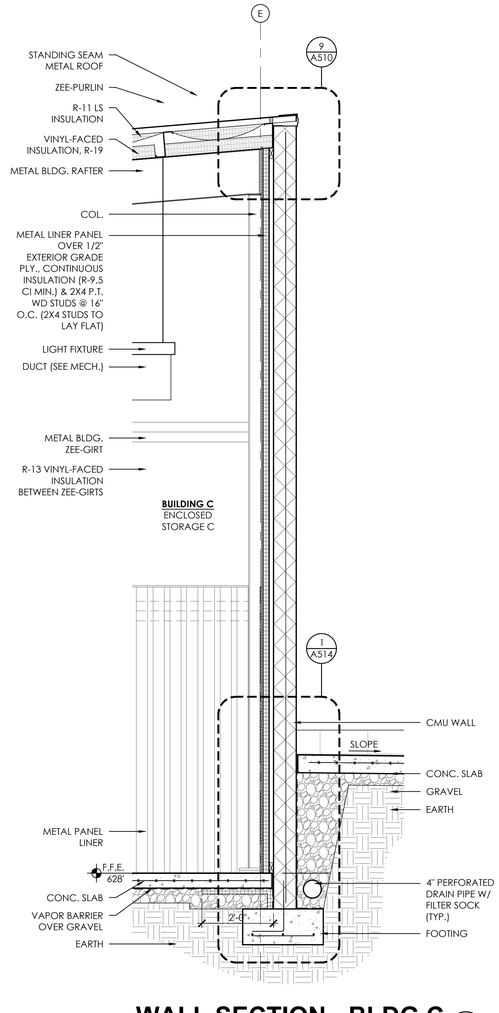
WALL SECTION - BLDG C 3

1/2" = 1'-0"



WALL SECTION - BLDG C 2

1/2" = 1'-0"



WALL SECTION - BLDG C 1

1/2" = 1'-0"

SEE STRUCTURAL FOR ALL INFORMATION FOR FOOTINGS, WALLS, SLABS, STEEL, TRUSSES, BEAMS, ETC.

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REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
EXTERIOR WALL SECTIONS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A300

TOILET ACCESSORIES

MARK	MATERIAL	MANUFACTURER	MODEL #
TA01	18" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 18"
TA02	36" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 36"
TA03	42" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 42"
TA04	MIRROR	BRADLEY	740-018240
TA05	PAPER TOWEL DISPENSER	PALMER	PFCTD20102
TA06	SOAP DISPENSER	BETCO	91822
TA07	TOILET PAPER DISPENSER	SCOTT	44518

PLUMBING FIXTURES

MARK	MATERIAL	MANUFACTURER	MODEL #
PF01	DRINKING FOUNTAIN	ELKAY	LZSTL8WSLP
PF02	WALL-HUNG HAND SINK	AMERICAN STANDARD	LUCERNE: 0356O150.020
PF03	SINK FAUCET	AMERICAN STANDARD	MONTERREY: 6540174.002
PF04	FLOOR-MOUNTED TOILET	SLOAN	5092102009, (FLUSH VALVE) 3720019
PF05	ADA SHOWER	AQUATIC BATH	1363BFRF-WH
PF06	STAINLESS STEEL KITCHEN SINK	AMERICAN STANDARD	PORTSMOUTH: 18DB.9311800S.075
PF07	KITCHEN SINK FAUCET	ELKAY	LK406GN0814

FINISH SCHEDULE

CSI DIV.	CODE	MATERIAL	MANUFACTURER	STYLE NAME / NUMBER / COLOR	LOCATION
DIVISION 9 - FINISHES					
064114	PL01	PLASTIC LAMINATE	WILSONART	OILED SOAPSTONE 4882-38	COUNTERTOPS
074646	FCS01	FIBER CEMENT SIDING	JAMES HARDIE	TBD	BLDG D SIDING
095123	APC01	ACOUSTICAL PANEL CEILING	ARMSTRONG CEILINGS	ULTIMA 15/16" SQUARE LAY-IN #1910 24"X24" W/ 15/16" PRELUDE SUSPENSION SYSTEM BLIZZARD WHITE	201, 204A, & 204B
096513.13	RB01	RESILIENT BASE	TARKETT/ROPPE	BLACK	GENERAL WALL BASE
096513.23	RST01	RESILIENT STAIR TREADS	TARKETT/ROPPE	BLACK	INTERIOR STAIR TREADS & RISERS
096519	RT01	RESILIENT TILE	BENTLEY	BATISTE: CHAMBRAY	2ND FLOOR BREAK RM FLOORING
096813	CPT01	CARPET TILE	SHAW CONTRACT	HAZE TILE 5T037: MYTH 37505	MEZZANINE FLOORING
099123	PT01	PAINT (INTERIOR)	SHERWIN WILLIAMS	ALABASTER SW7008 255-C2	WALLS
099123	PT02	PAINT (INTERIOR)	SHERWIN WILLIAMS	WHITE	CEILINGS
099123	PT03	PAINT (INTERIOR)	SHERWIN WILLIAMS	MATCH EXISTING	DOOR & DOOR FRAMES (AS SCHEDULED)
099123	PT04	PAINT (EXTERIOR)	SHERWIN WILLIAMS	IRON ORE SW7069 251-C7	STAIR 3
099656	EP01	EPOXY FLOORING	SHERWIN WILLIAMS	DECO FLAKE 1/8" : MODERN CAMO	GENERAL FLOORING

ENLARGED PLAN 4
1/2" = 1'-0"

ENLARGED PLAN 3
1/2" = 1'-0"

ENLARGED PLAN 2
1/2" = 1'-0"

ENLARGED FLOOR PLAN 1
1/2" = 1'-0"

SHEET NOTES - INTERIORS

I01	NEW WALL-HUNG SINK (PF02) & FAUCET (PF03); PROVIDE PIPE PROTECTION.
I02	NEW 36X36 ADA SHOWER UNIT (PF05).
I03	NEW BOTTLE FILLER W/ STANDARD & ADA WATER COOLER (PF01).
I04	NEW ADA COMPLIANT TOILET (PF04), TOILET PAPER DISP. (TA07), & GRAB BARS (TA01, TA02, TA03).
I05	NEW STAINLESS STEEL UNDER MOUNT KITCHEN SINK (PF06) W/ ADA COMPLIANT 2-HANDLE BRUSHED NICKEL FAUCET (PF07).
I06	NEW MIRROR (TA04), PAPER TOWEL DISP. (TA05), & SOAP DISP. (TA06).
I07	PROVIDE 1/2" PLY. FOR I.T. EQUIPMENT.

GENERAL NOTES:
1. SEE G200 FOR WALL TYPES.

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BARRY FRANKLIN HILL REGISTERED 5124 PROFESSIONAL ENGINEER NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
ENLARGED FLOOR PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

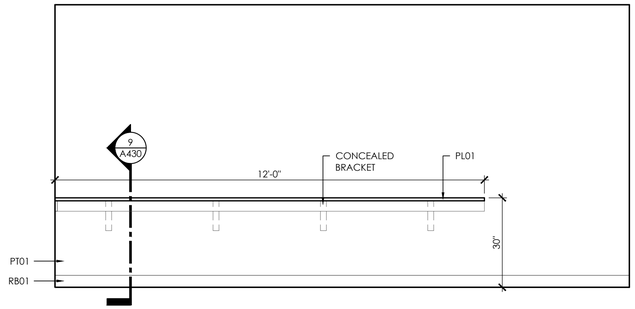
SHEET NUMBER
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TOILET ACCESSORIES

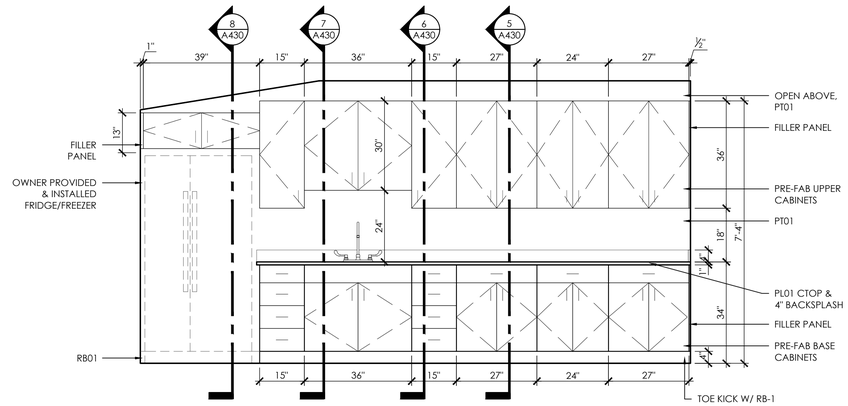
MARK	MATERIAL	MANUFACTURER	MODEL #
TA01	18" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 18"
TA02	36" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 36"
TA03	42" GRAB BAR	AMERICAN SPECIALTIES	TYPE-01 - 42"
TA04	MIRROR	BRADLEY	740-018240
TA05	PAPER TOWEL DISPENSER	PALMER	PFCTD20102
TA06	SOAP DISPENSER	BETCO	91822
TA07	TOILET PAPER DISPENSER	SCOTT	44518

PLUMBING FIXTURES

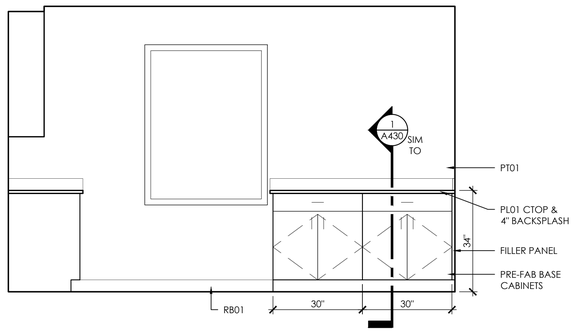
MARK	MATERIAL	MANUFACTURER	MODEL #
PF01	DRINKING FOUNTAIN	ELKAY	LZSTL8WSLP
PF02	WALL-HUNG HAND SINK	AMERICAN STANDARD	LUCERNE: 03560150.020
PF03	SINK FAUCET	AMERICAN STANDARD	MONTERREY: 6540174.002
PF04	FLOOR-MOUNTED TOILET	SLOAN	5092102009, (FLUSH VALVE) 3720019
PF05	ADA SHOWER	AQUATIC BATH	1363BFRF-WH
PF06	STAINLESS STEEL KITCHEN SINK	AMERICAN STANDARD	PORTSMOUTH: 18DB.9311800S.075
PF07	KITCHEN SINK FAUCET	ELKAY	LK406GN08T4



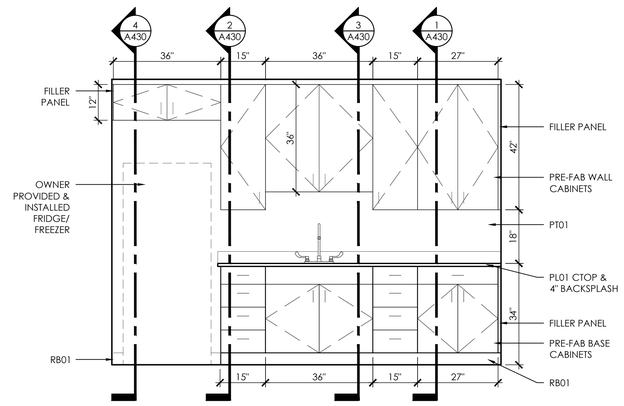
INTERIOR ELEVATION 10
1/2" = 1'-0"



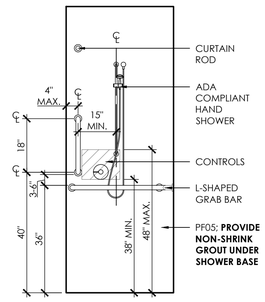
INTERIOR ELEVATION 9
1/2" = 1'-0"



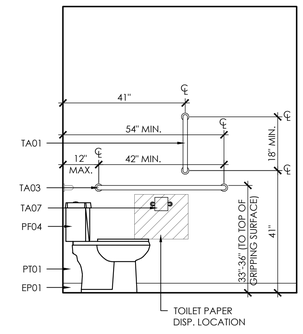
INTERIOR ELEVATION 8
1/2" = 1'-0"



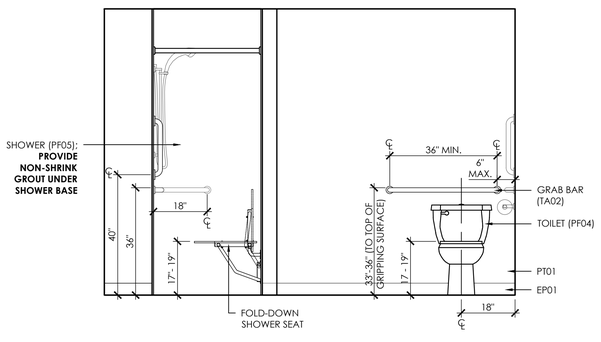
INTERIOR ELEVATION 7
1/2" = 1'-0"



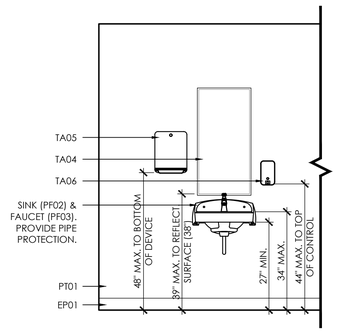
INTERIOR ELEVATION 6
1/2" = 1'-0"



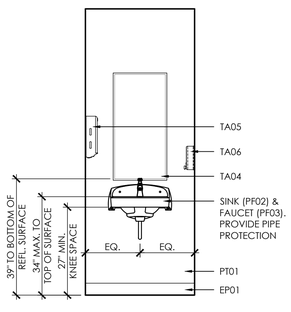
INTERIOR ELEVATION 5
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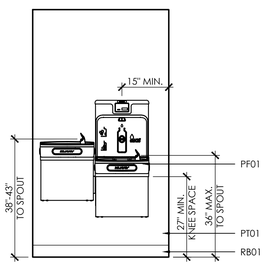
INTERIOR ELEVATION 4
1/2" = 1'-0"



INTERIOR ELEVATION 3
1/2" = 1'-0"



INTERIOR ELEVATION 2
1/2" = 1'-0"



INTERIOR ELEVATION 1
1/2" = 1'-0"

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BARRY FRANKLIN HILL REGISTERED ARCHITECT 5124 11.11.24 NORTH CAROLINA DURHAM, NC

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

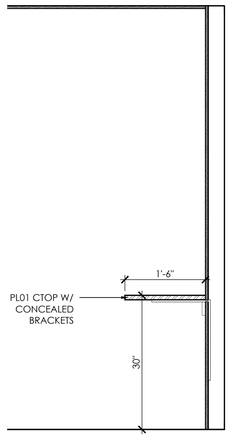
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SHEET NAME:
INTERIOR ELEVATIONS

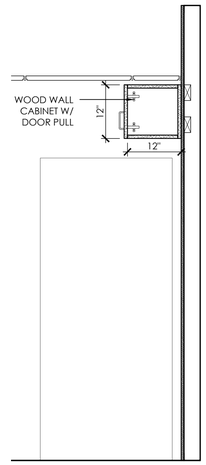
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

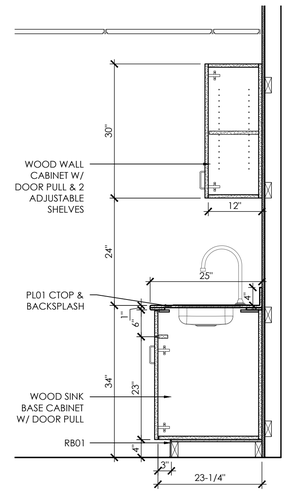
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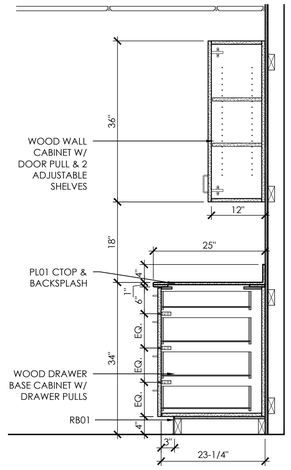
CASEWORK SECTION 9
3/4" = 1'-0"



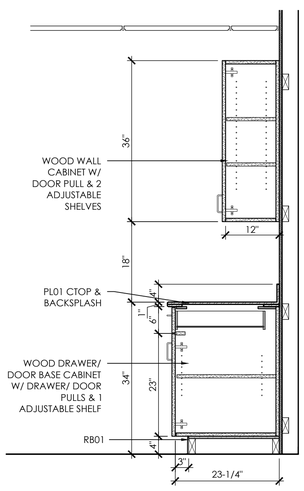
CASEWORK SECTION 8
3/4" = 1'-0"



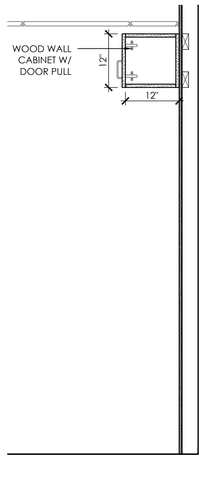
CASEWORK SECTION 7
3/4" = 1'-0"



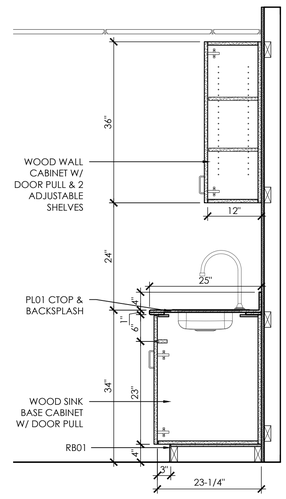
CASEWORK SECTION 6
3/4" = 1'-0"



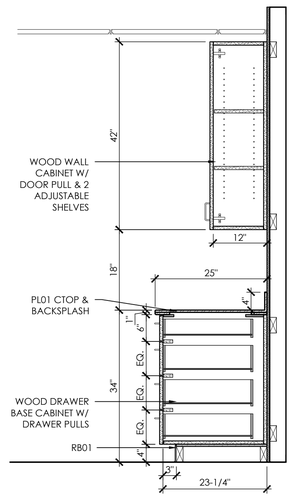
CASEWORK SECTION 5
3/4" = 1'-0"



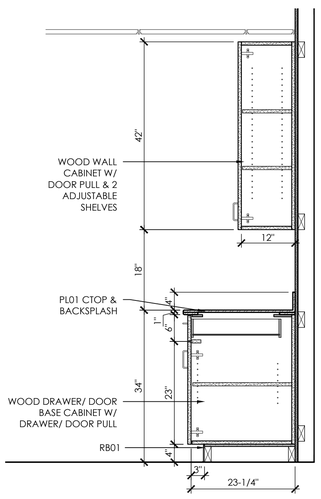
CASEWORK SECTION 4
3/4" = 1'-0"



CASEWORK SECTION 3
3/4" = 1'-0"



CASEWORK SECTION 2
3/4" = 1'-0"



CASEWORK SECTION 1
3/4" = 1'-0"

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HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

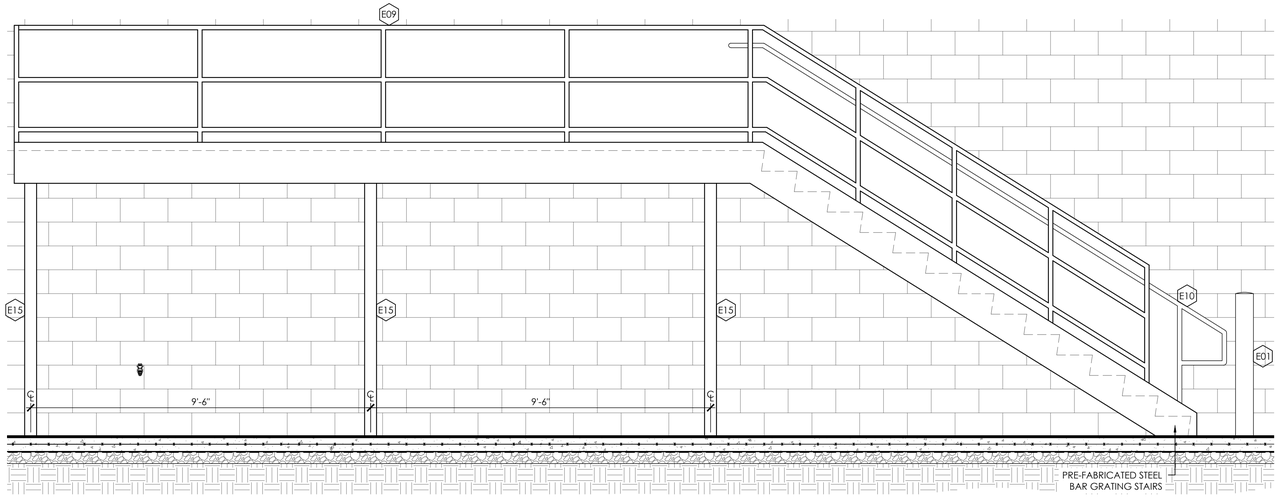
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SHEET NAME:
CASEWORK SECTIONS

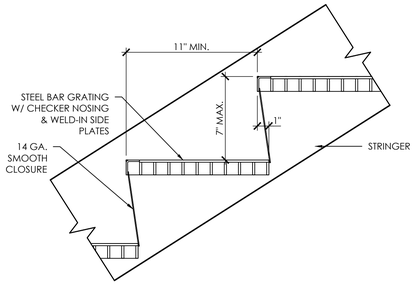
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

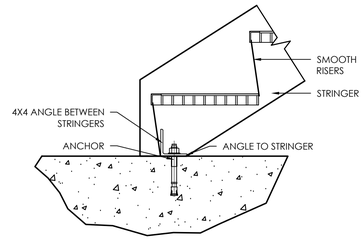
SHEET NUMBER
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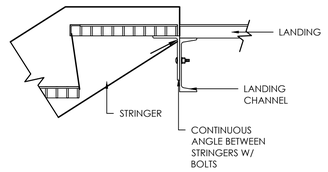
ENLARGED ELEVATION 6
1/2" = 1'-0"



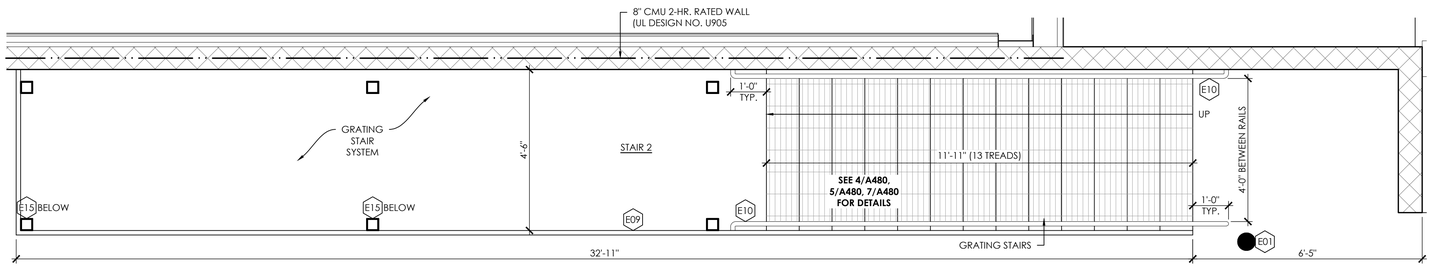
GRATING STAIRS CONNECTION TO SLAB 5
N.T.S.



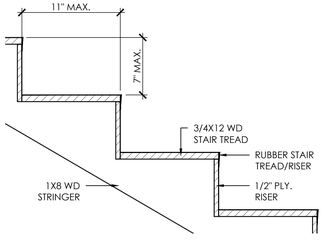
GRATING STAIRS CONNECTION TO SLAB 4
N.T.S.



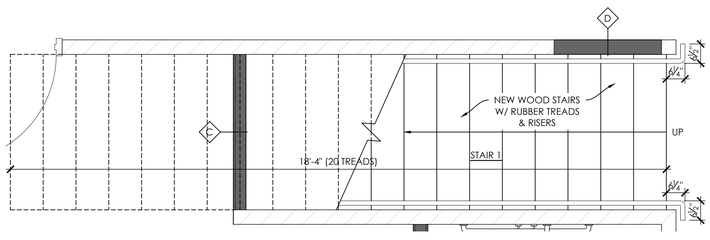
GRATING STAIRS CONNECTION TO SLAB 7
N.T.S.



ENLARGED FLOOR PLAN 3
1/2" = 1'-0"



FLEET - DETAIL 2
1-1/2" = 1'-0"



ENLARGED FLOOR PLAN 1
1/2" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK.
E08	NEW CMU (WING) WALL, SEALED.
E09	NEW STEEL GUARDRAIL, 42" HT, PAINTED HAZARD YELLOW.
E10	NEW STEEL HANDRAIL, PAINTED HAZARD YELLOW.
E11	NEW STAIR STRINGER.
E12	HARDIE BOARD FASCIA.
E13	HARDIE BOARD TRIM.
E14	CHAIN LINK FENCE (SEE CIVIL FOR MORE INFO.).
E15	COLUMN (SEE STRUCT.).
~~E16~~	~~ASPHALT SHINGLE ROOFING.~~
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN.

GENERAL NOTES:

1. PROVIDE DOOR SENSOR @ NEW ROLL-UP DOORS IN NEW MAINTENANCE TRUCK BAY.
2. STAIRS 3: HANDRAILS & GUARDRAILS TO BE PAINTED PT04.

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REVISIONS:

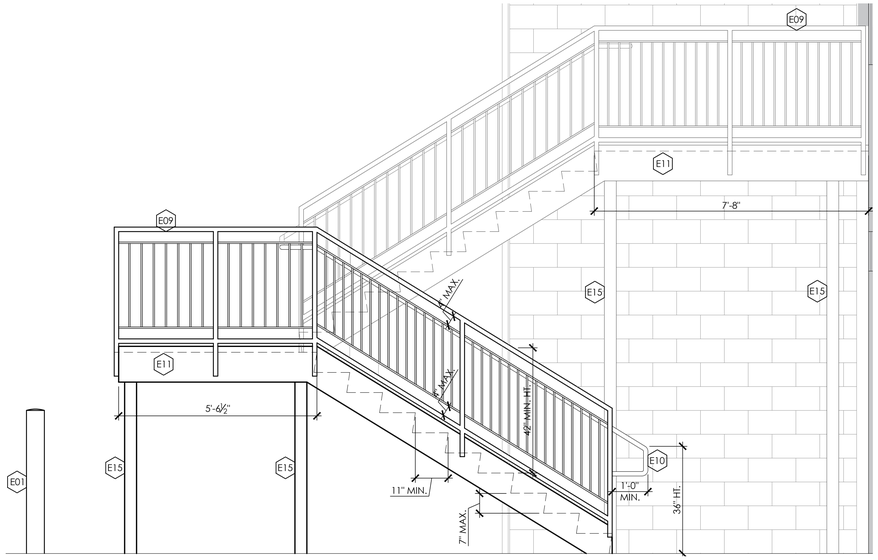
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SHEET NAME:
ENLARGED FLOOR PLANS

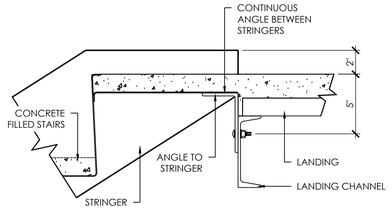
PHASE:
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PROJECT #: **21167**
DRAWN BY: **KNG**

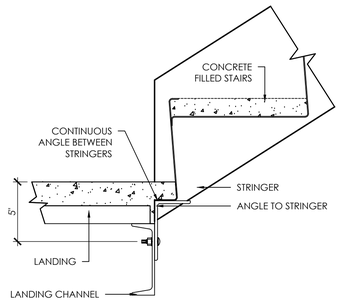
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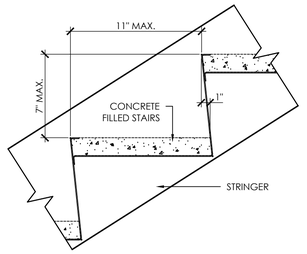
ENLARGED ELEVATION 5
1/2" = 1'-0"



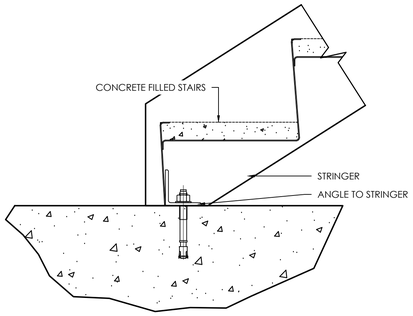
CONCRETE PAN STAIRS TOP STAIR CONNECTION 7
N.T.S.



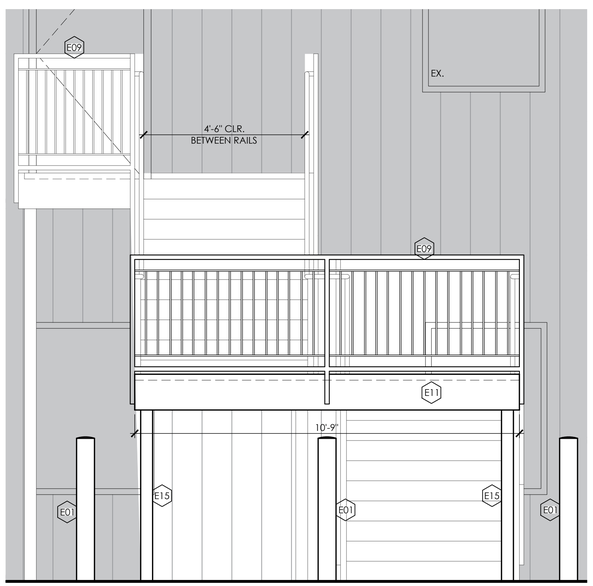
CONCRETE PAN STAIRS BOTTOM STAIR TO LANDING 6
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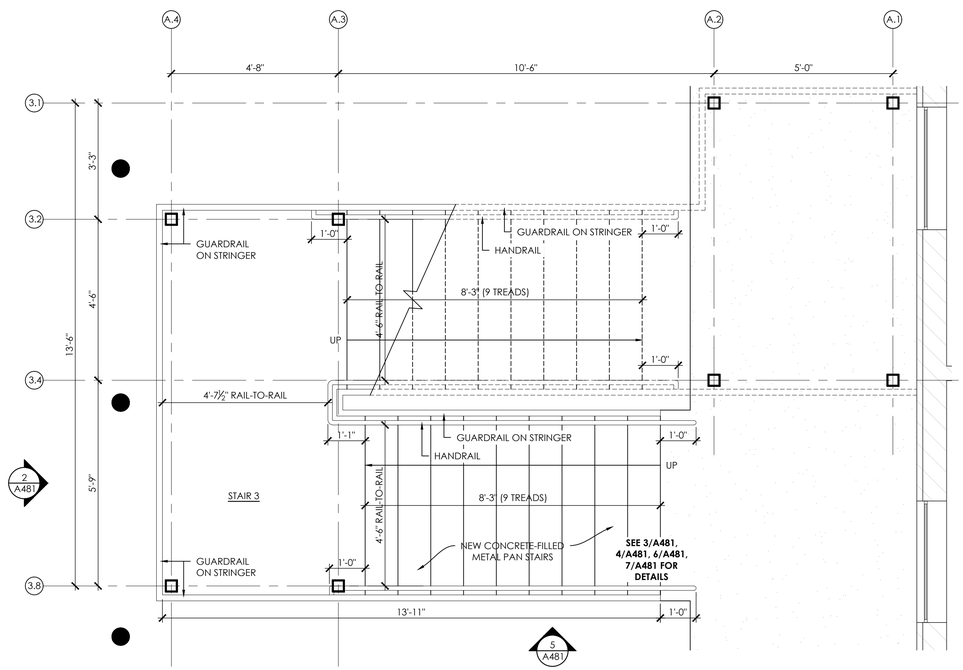
CONCRETE PAN STAIRS TREAD RISER CONSTRUCTION 4
N.T.S.



CONCRETE PAN STAIRS CONNECTION TO SLAB 3
N.T.S.



ENLARGED ELEVATION 2
1/2" = 1'-0"



ENLARGED FLOOR PLAN 1
1/2" = 1'-0"

SHEET NOTES - ELEVATIONS

E01	NEW 6" DIAM. STEEL, CONCRETE-FILLED BOLLARD, 48" HT., PAINTED HAZARD YELLOW.
E02	NEW 12"X24" CONCRETE SPLASH BLOCK.
E03A	NEW PRE-FINISHED ALUM. DOWNSPOUT, MATCH EX. SIZE & FINISH.
E03B	NEW 2X3" PRE-FINISHED ALUM. DOWNSPOUT.
E03C	NEW 3X4" PRE-FINISHED ALUM. DOWNSPOUT.
E03D	NEW 4X6" PRE-FINISHED ALUM. DOWNSPOUT.
E04A	NEW PRE-FINISHED ALUM. GUTTER, MATCH EX. SIZE & FINISH.
E04B	NEW 5" PRE-FINISHED ALUM. GUTTER.
E04C	NEW 6" PRE-FINISHED ALUM. GUTTER.
E05	NEW METAL WALL PANELS.
E06	NEW STANDING SEAM METAL ROOF.
E07	NEW LED WALL PACK.
E08	NEW CMU (WING) WALL, SEALED.
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~~E16~~	~~ASPHALT SHINGLE ROOFING.~~
E17	MECHANICALLY FASTENED CONNECTOR PLATE.
E18	TRANSFORMER CONCRETE PAD (SEE STRUCT.).
E19	GENERATOR CONCRETE PAD (SEE STRUCT.).
E20	HARDIE LAP SIDING, PRE-FINISHED.
E21	CONCRETE WALL (SEE STRUCT.).
E22	24"X24" LOUVER BY METAL BLDG. SUPPLIER.
E23	30"X30" LOUVER BY METAL BLDG. SUPPLIER.
E24	HEAT PUMP (SEE MECH.).
E25	NEW INDUSTRIAL OUTDOOR CURTAIN.

GENERAL NOTES:

1. PROVIDE DOOR SENSOR @ NEW ROLL-UP DOORS IN NEW MAINTENANCE TRUCK BAY.
2. STAIRS 3: HANDRAILS & GUARDRAILS TO BE PAINTED PT04.

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HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

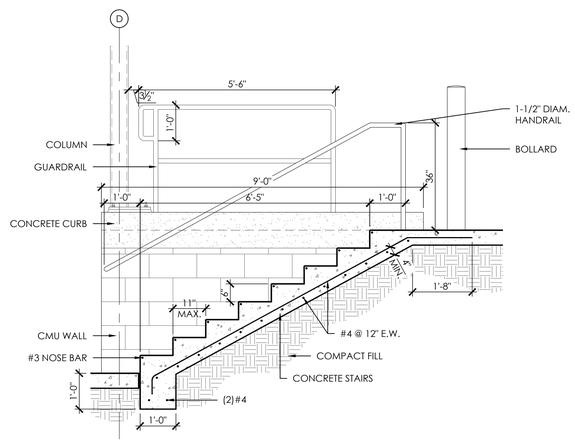
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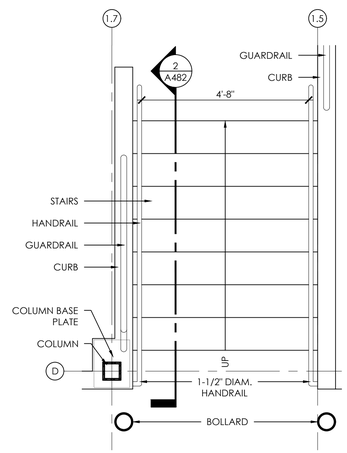
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A481



CONCRETE STAIRS DETAIL 2

1/2" = 1'-0"



ENLARGED STAIR PLAN 1

1/2" = 1'-0"

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HIGHWAY 86 PUBLIC WORKS

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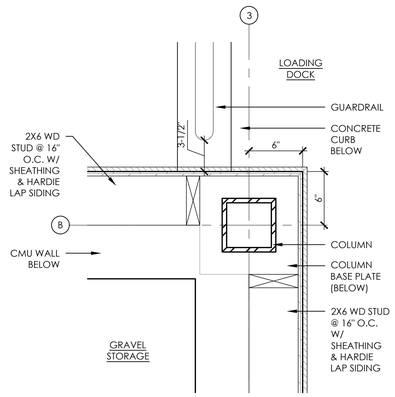
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STAIR DETAILS

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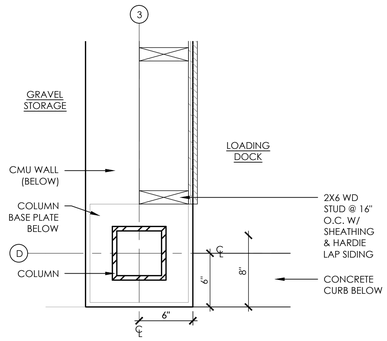
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PROJECT #: **21167**
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SHEET NUMBER
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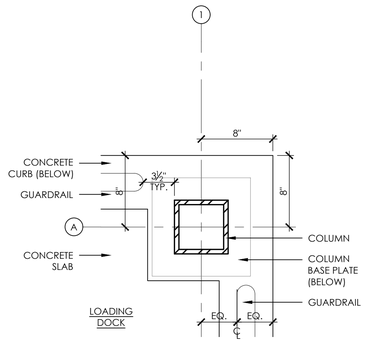
PLAN DETAIL - BLDG D 14

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



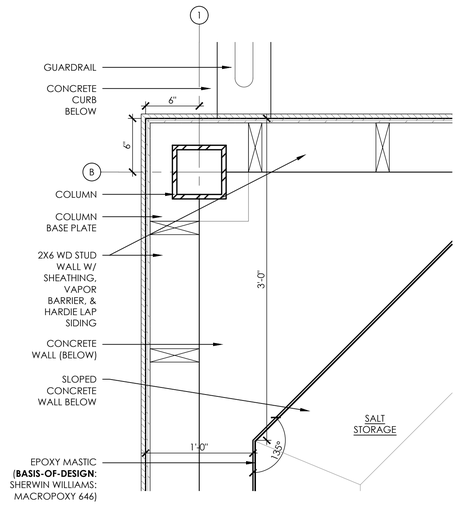
PLAN DETAIL - BLDG D 13

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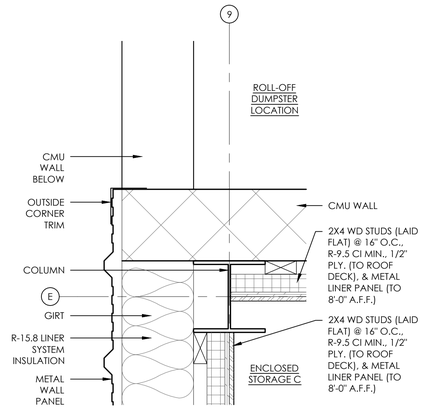
PLAN DETAIL - BLDG D 12

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



PLAN DETAIL - BLDG D 11

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



PLAN DETAIL - BLDG C 10

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

PLAN DETAIL - BLDG C 9

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

PLAN DETAIL - BLDG C 8

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

PLAN DETAIL - BLDG C 7

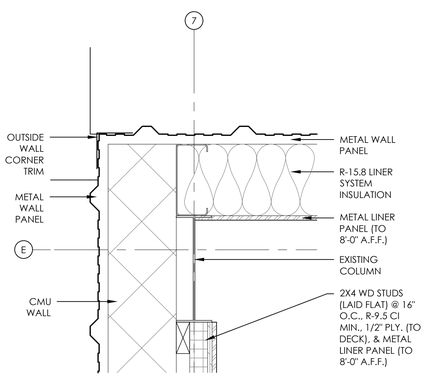
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PLAN DETAIL - BLDG C 6

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

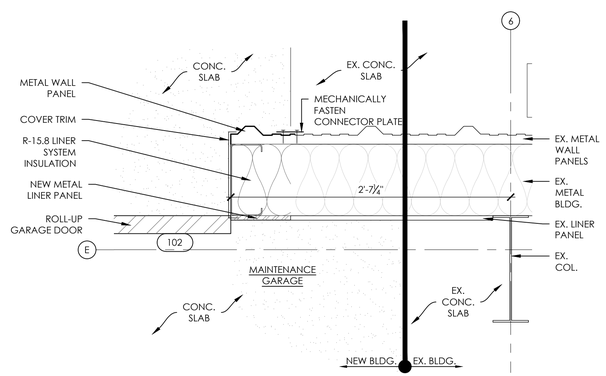
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1-1/2" = 1'-0"



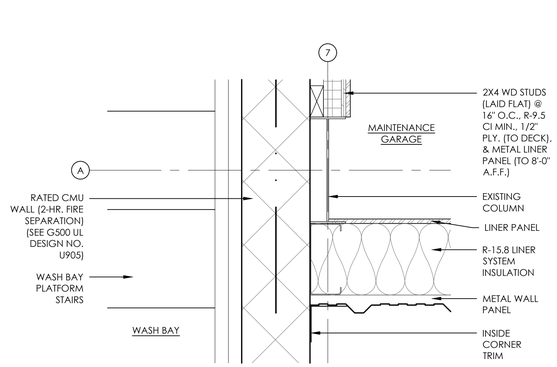
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1-1/2" = 1'-0"



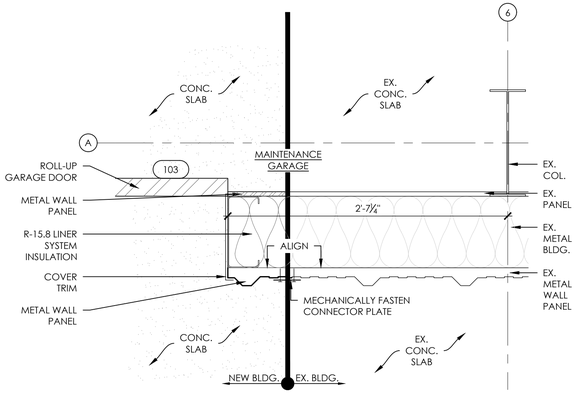
PLAN DETAIL - FLEET BLDG 3

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



PLAN DETAIL - FLEET BLDG 2

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



PLAN DETAIL - FLEET BLDG 1

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

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890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

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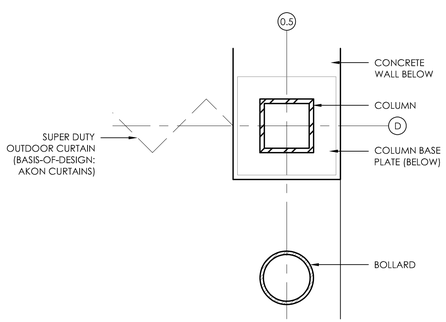
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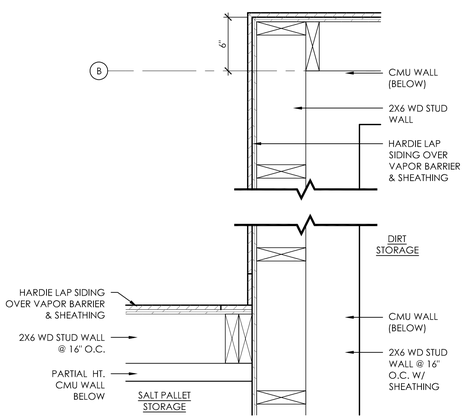
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
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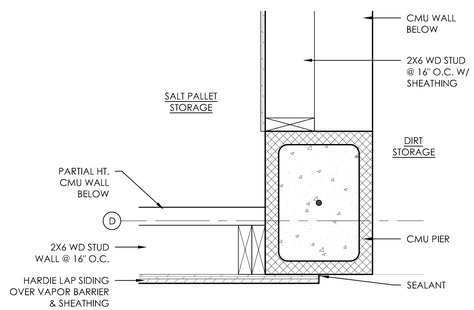
PLAN DETAIL - BLDG D 4

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



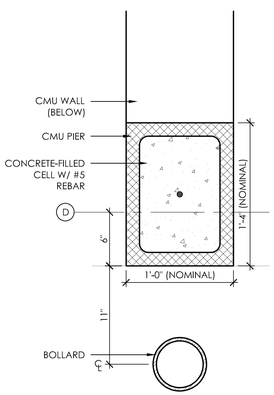
PLAN DETAIL - BLDG D 3

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



PLAN DETAIL - BLDG D 2

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



PLAN DETAIL - BLDG D 1

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

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REVISIONS:

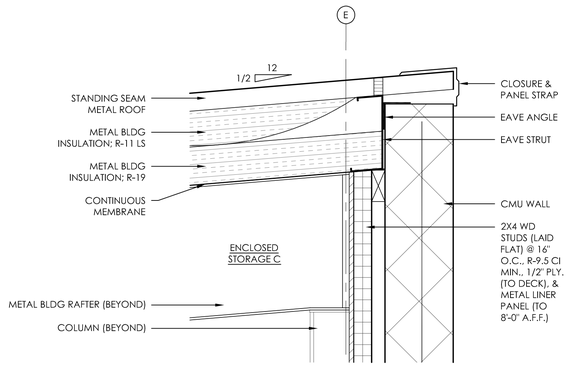
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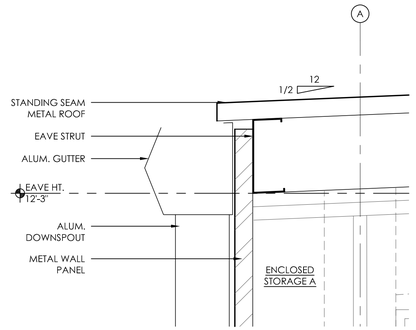
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ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

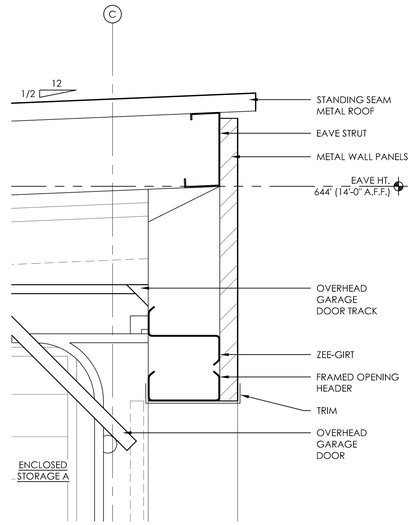
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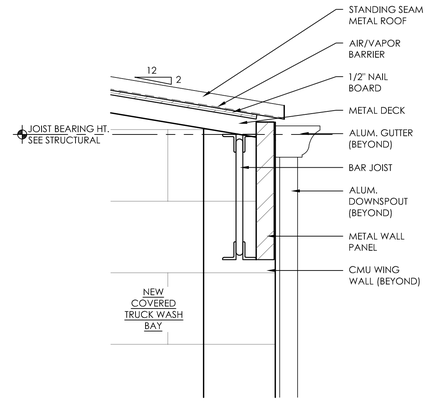
SECTION DETAIL BLDG C 9
1-1/2" = 1'-0"



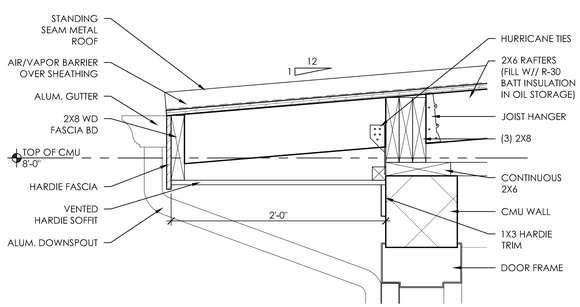
SECTION DETAIL BLDG A 8
1-1/2" = 1'-0"



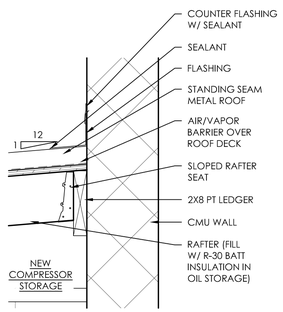
SECTION DETAIL BLDG A 7
1-1/2" = 1'-0"



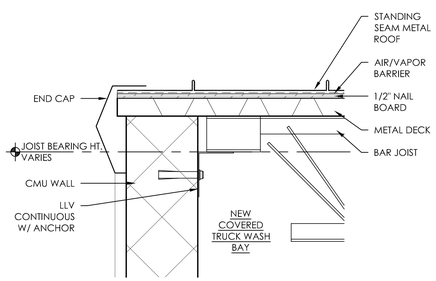
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1-1/2" = 1'-0"



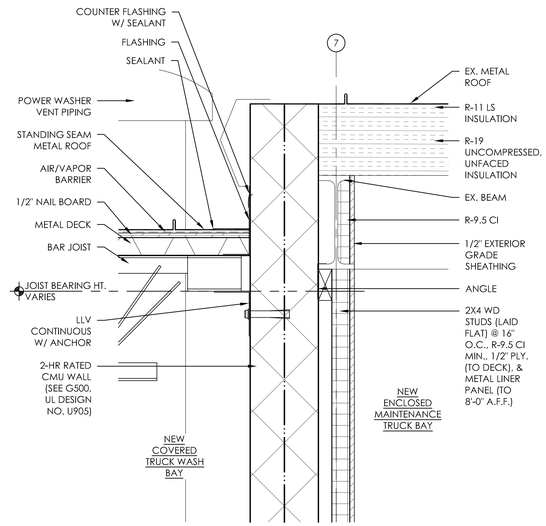
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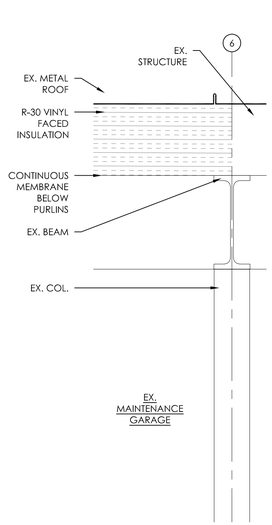
SECTION DETAIL FLEET BLDG 4
1-1/2" = 1'-0"



SECTION DETAIL FLEET BLDG 3
1-1/2" = 1'-0"



SECTION DETAIL FLEET BLDG 2
1-1/2" = 1'-0"



SECTION DETAIL FLEET BLDG 1
1-1/2" = 1'-0"

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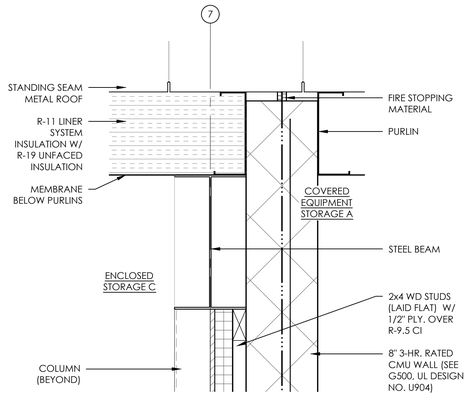
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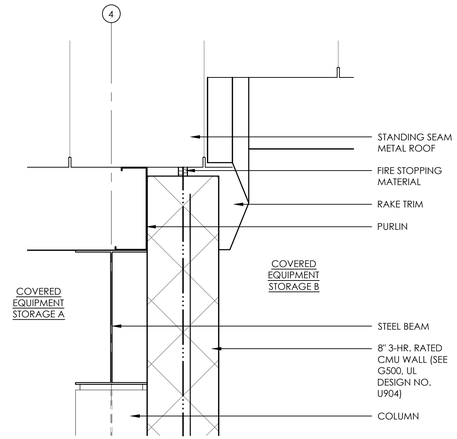
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A510



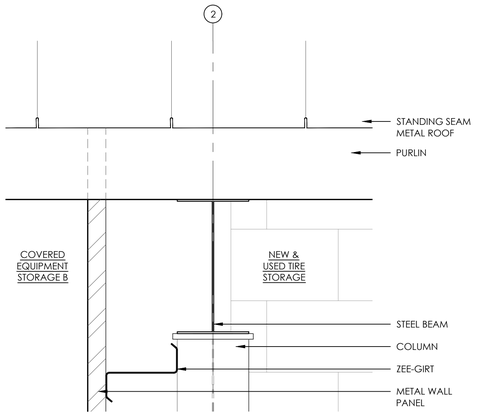
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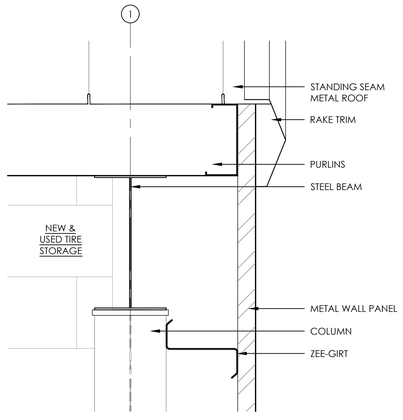
SECTION DETAIL - BLDG C 9

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



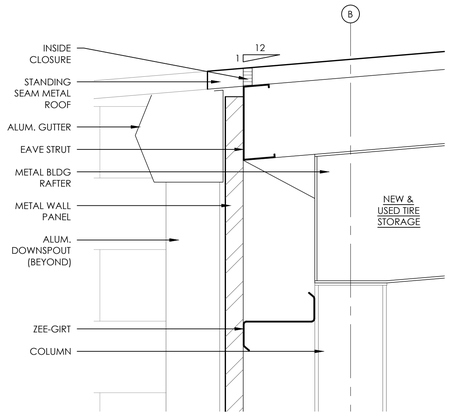
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1-1/2" = 1'-0"



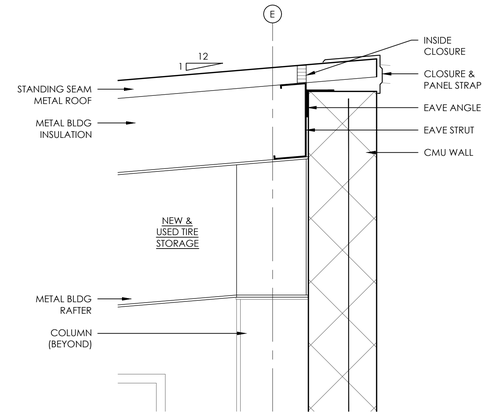
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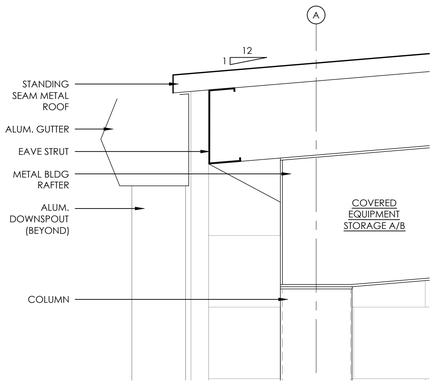
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1-1/2" = 1'-0"



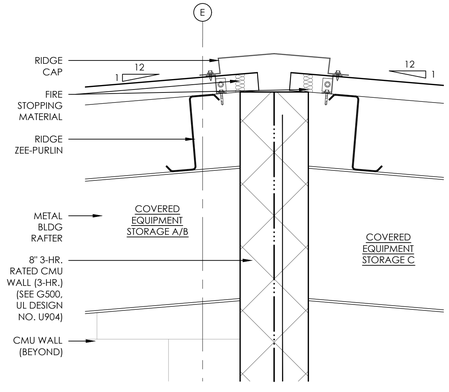
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1-1/2" = 1'-0"



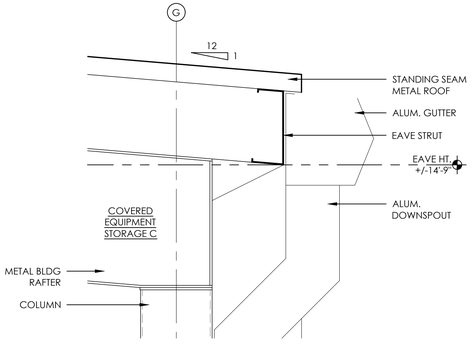
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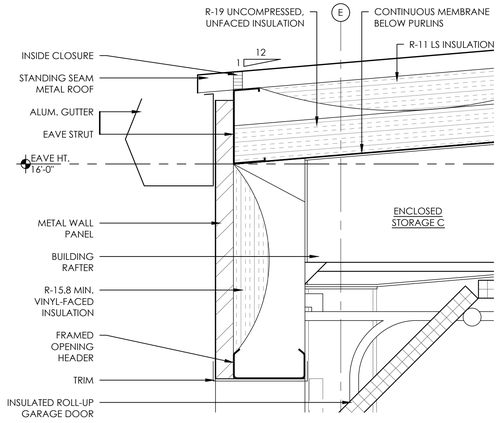
SECTION DETAIL - BLDG C 3

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



SECTION DETAIL - BLDG C 2

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



SECTION DETAIL - BLDG C 1

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

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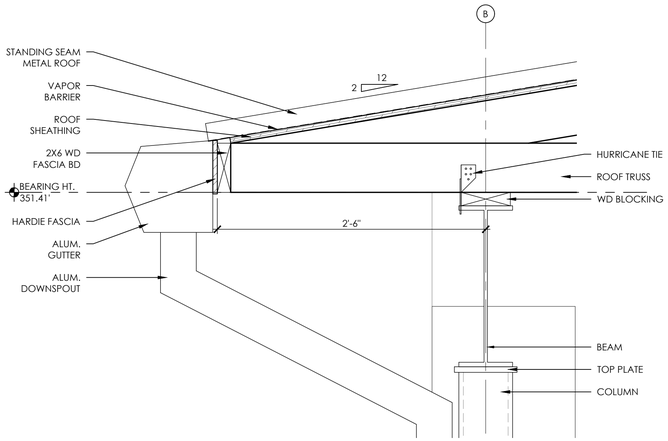
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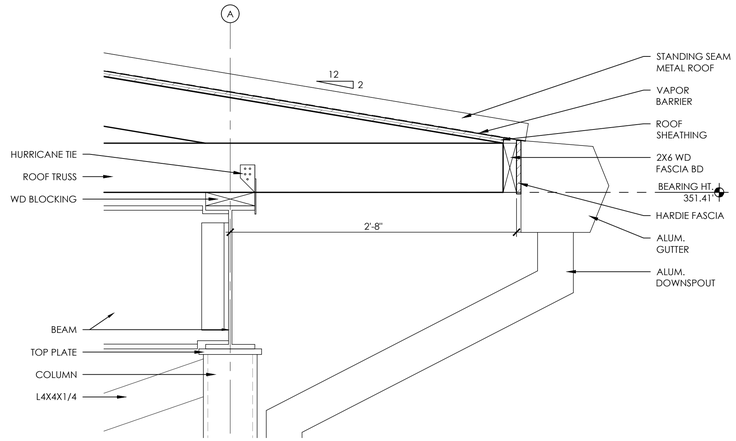
ISSUE DATE: **11 NOV 2024**
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DRAWN BY: **KNG**

SHEET NUMBER
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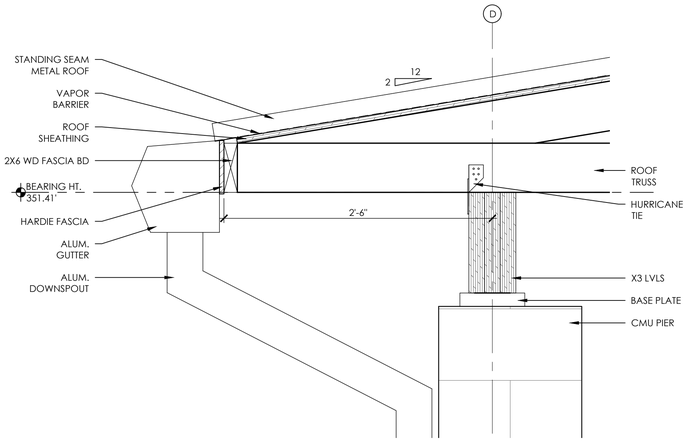
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1-1/2" = 1'-0"



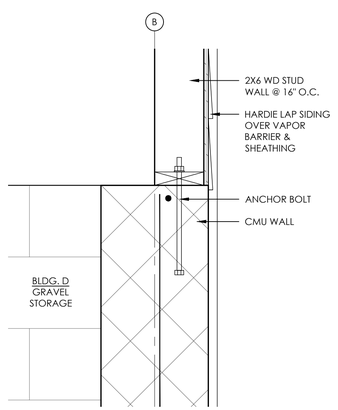
SECTION DETAIL - BLDG D 6

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



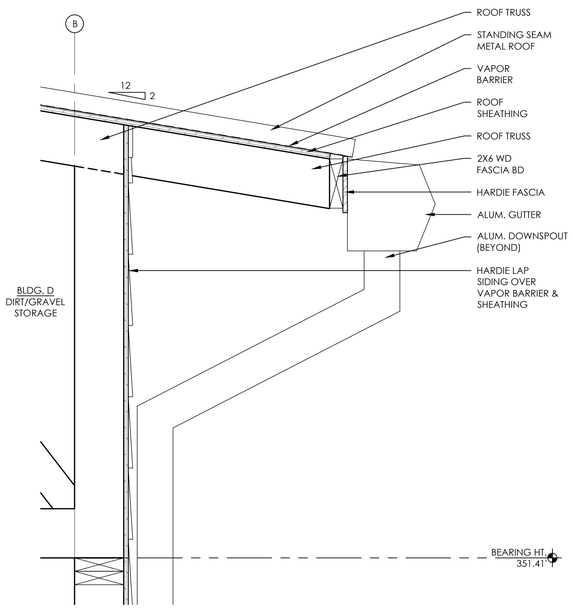
SECTION DETAIL - BLDG D 5

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



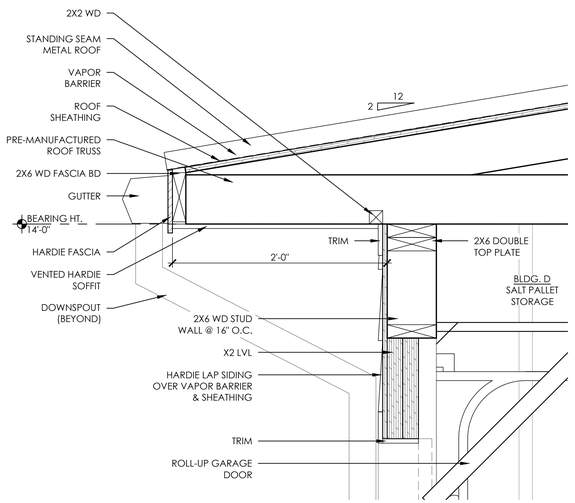
SECTION DETAIL - BLDG D 4

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



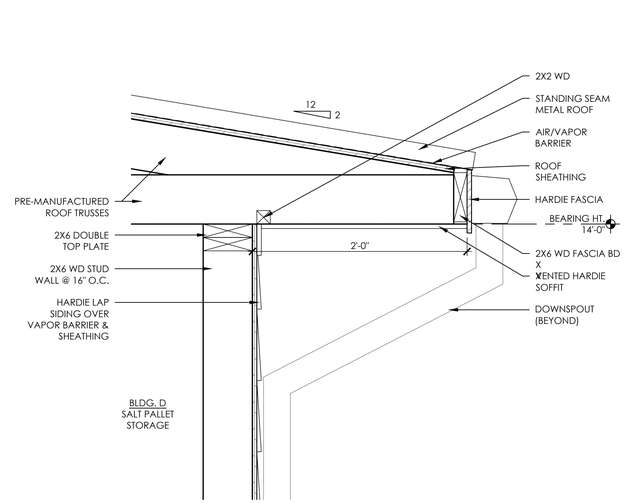
SECTION DETAIL - BLDG D 3

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



SECTION DETAIL - BLDG D 2

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



SECTION DETAIL - BLDG D 1

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

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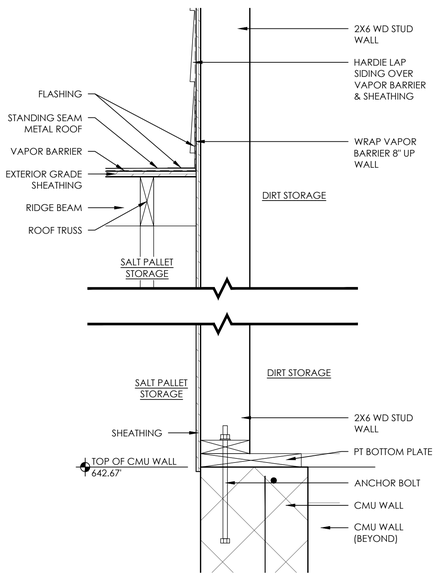
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SECTION DETAILS

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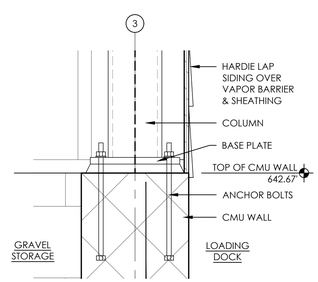
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A512



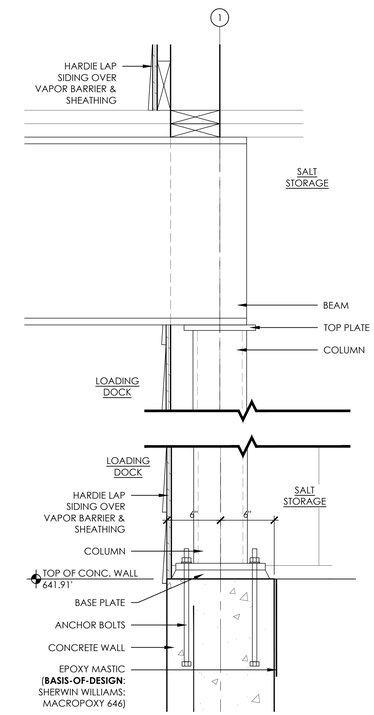
SECTION DETAIL - BLDG D 4

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



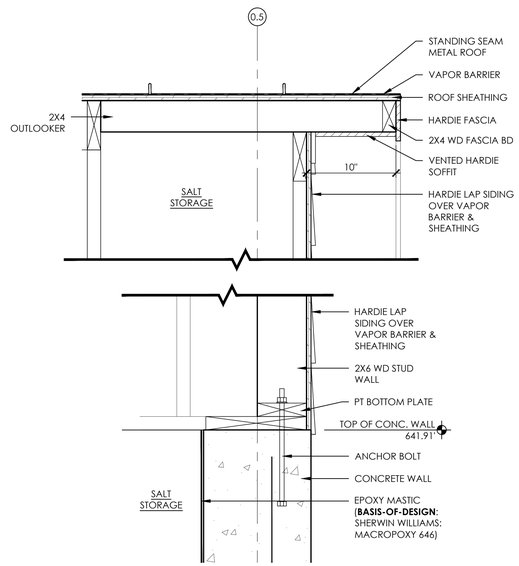
SECTION DETAIL - BLDG D 3

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



SECTION DETAIL - BLDG D 3

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



SECTION DETAIL - BLDG D 1

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

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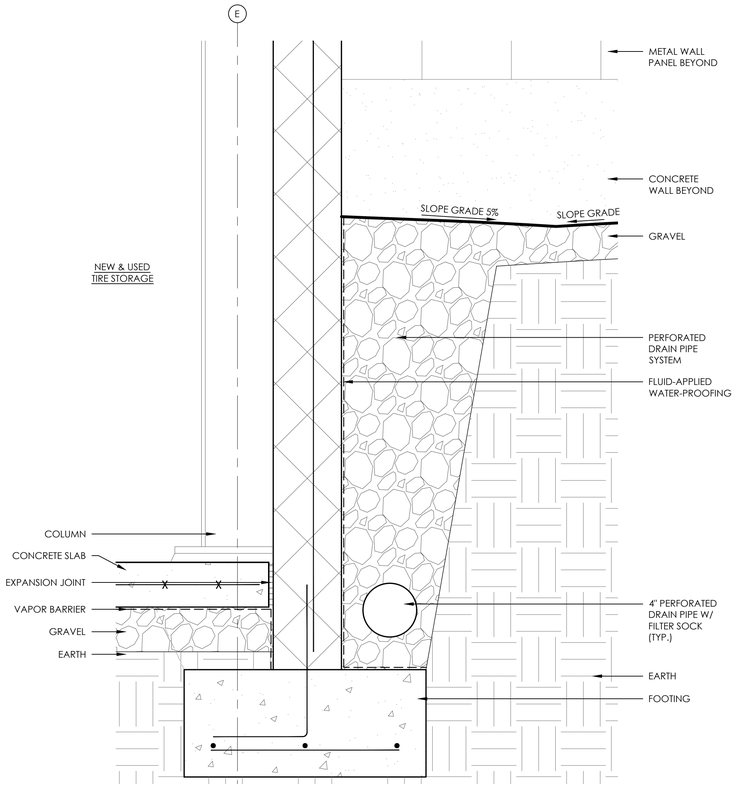
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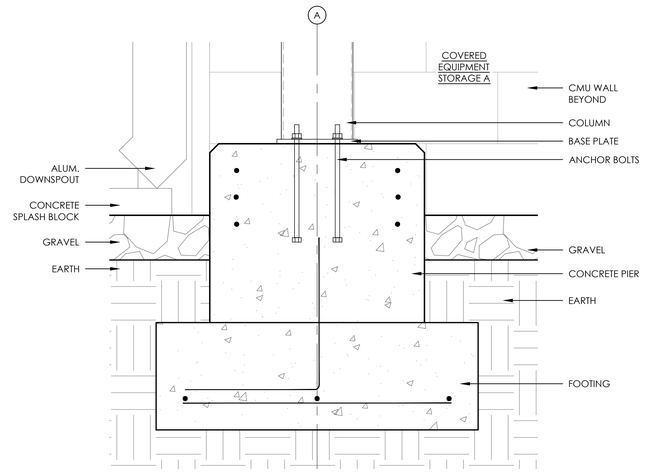
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
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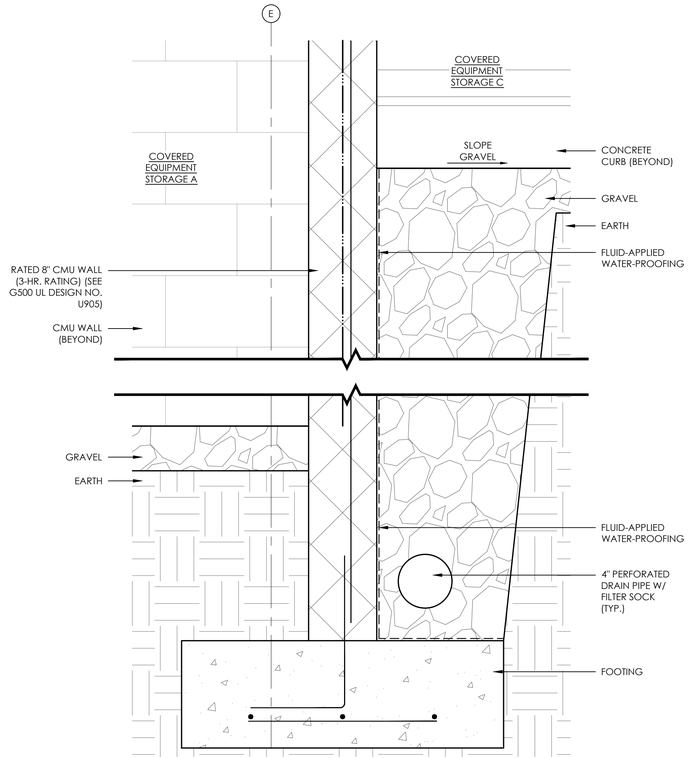
SECTION DETAIL - BLDG C 6

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



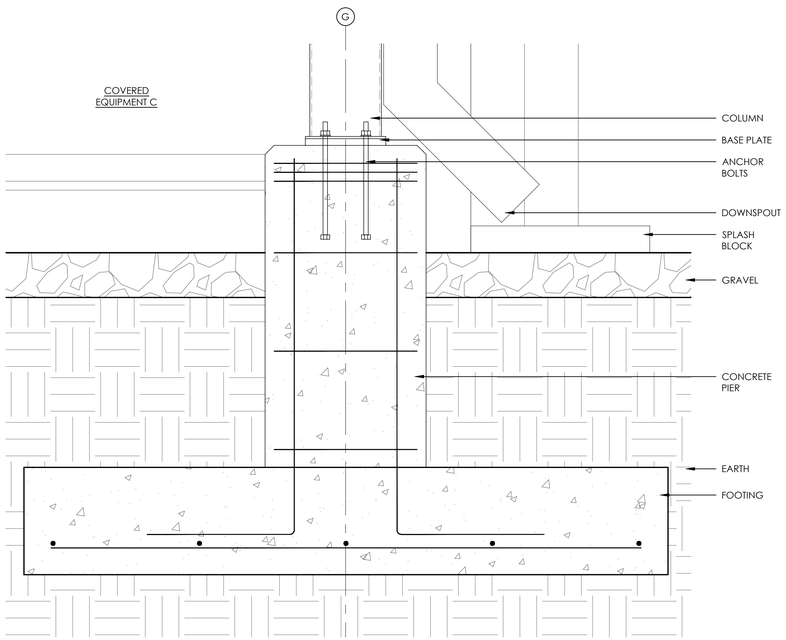
SECTION DETAIL - BLDG C 5

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



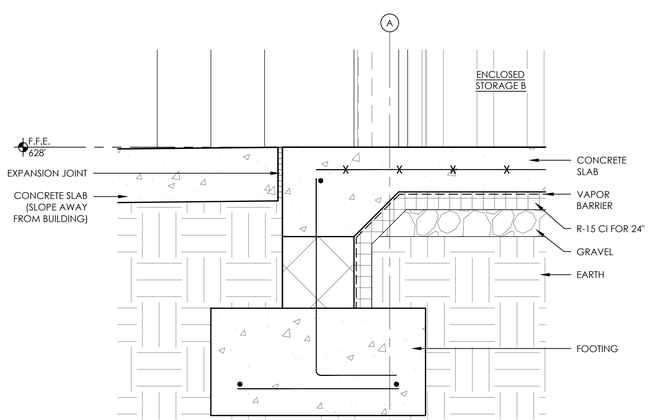
SECTION DETAIL - BLDG C 4

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



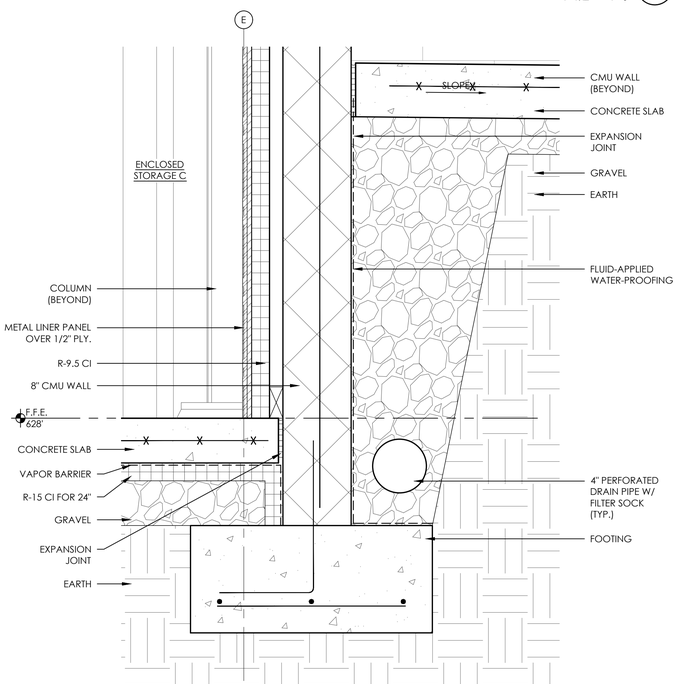
SECTION DETAIL - BLDG C 3

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



SECTION DETAIL - BLDG C 2

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



SECTION DETAIL - BLDG C 1

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

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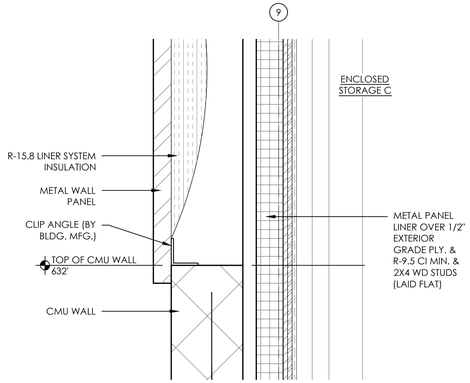
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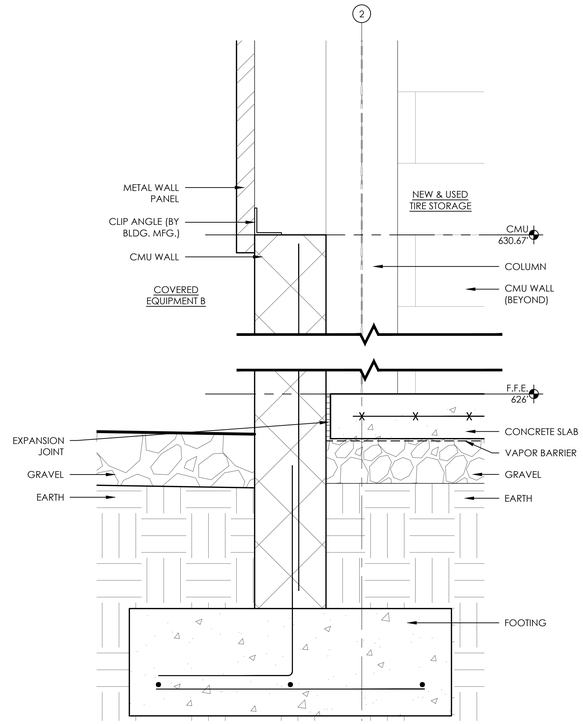
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BID SET

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PROJECT #: **21167**
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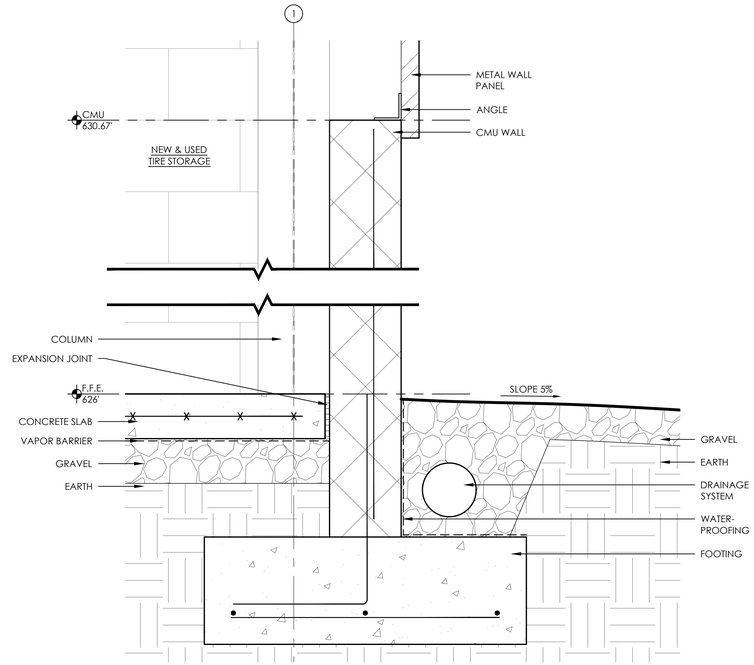
SHEET NUMBER
A514



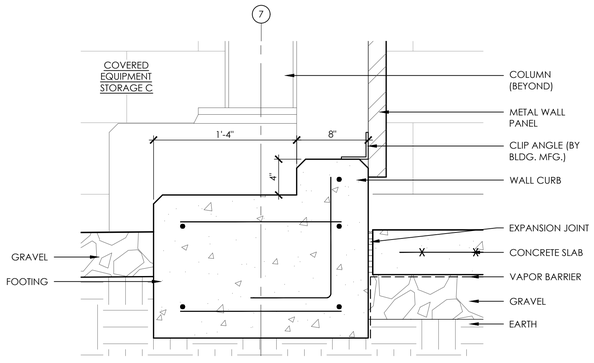
SECTION DETAIL - BLDG C 6
1-1/2" = 1'-0"



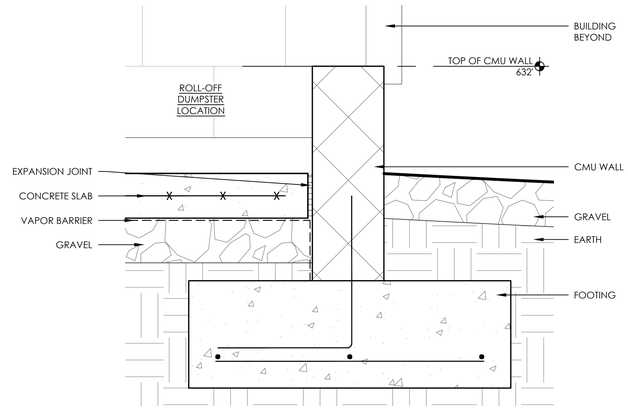
SECTION DETAIL - BLDG C 5
1-1/2" = 1'-0"



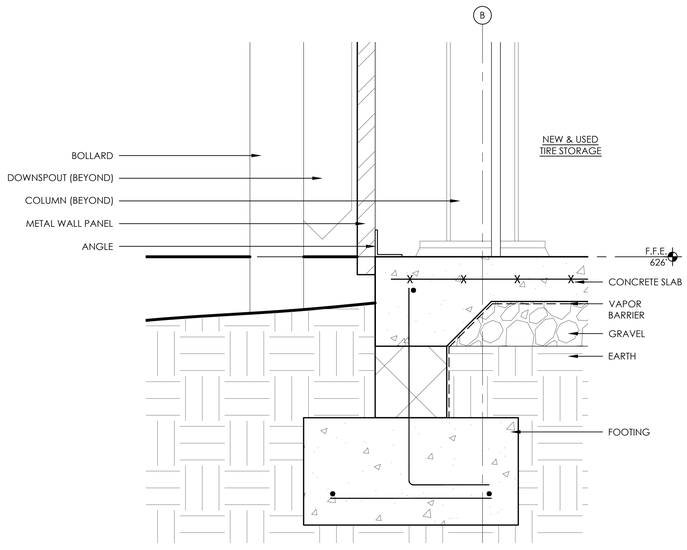
SECTION DETAIL - BLDG C 4
1-1/2" = 1'-0"



SECTION DETAIL - BLDG C 3
1-1/2" = 1'-0"



SECTION DETAIL - BLDG C 2
1-1/2" = 1'-0"



SECTION DETAIL - BLDG C 1
1-1/2" = 1'-0"

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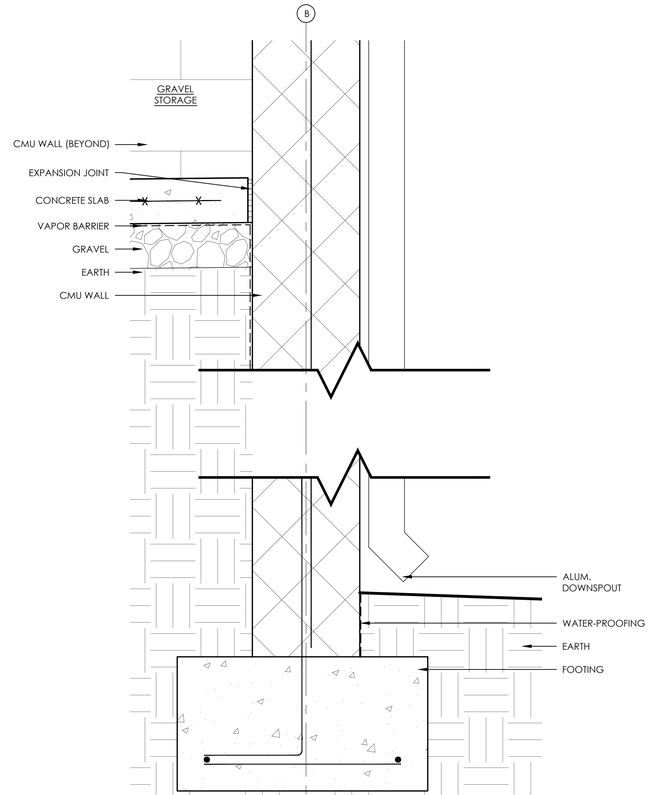
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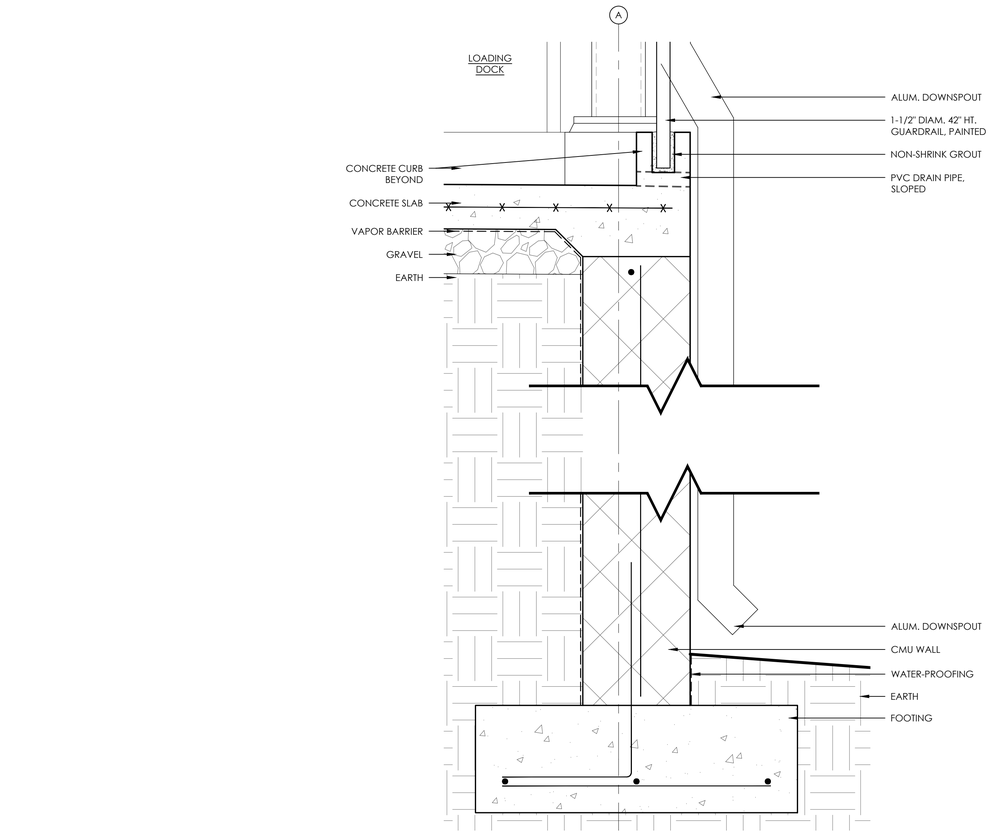
ISSUE DATE: **11 NOV 2024**
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DRAWN BY: **KNG**

SHEET NUMBER
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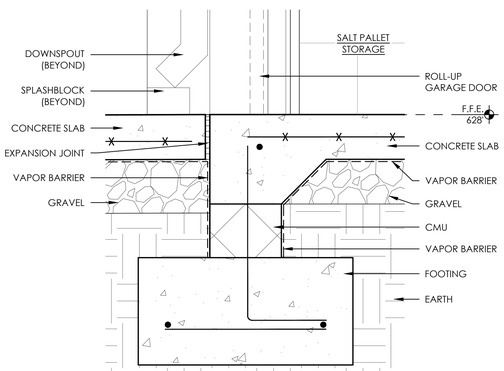
SECTION DETAIL - BLDG D 3

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



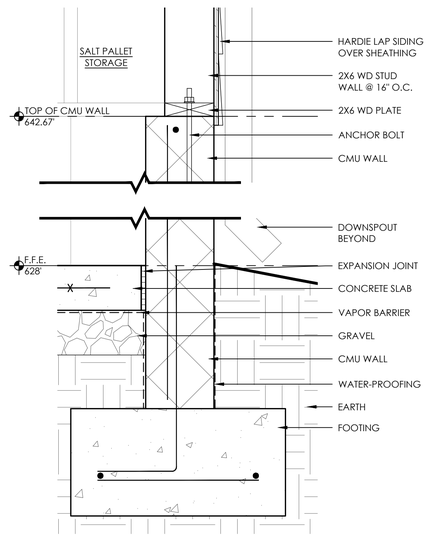
SECTION DETAIL - BLDG D 4

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



SECTION DETAIL - BLDG D 2

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



SECTION DETAIL - BLDG D 1

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

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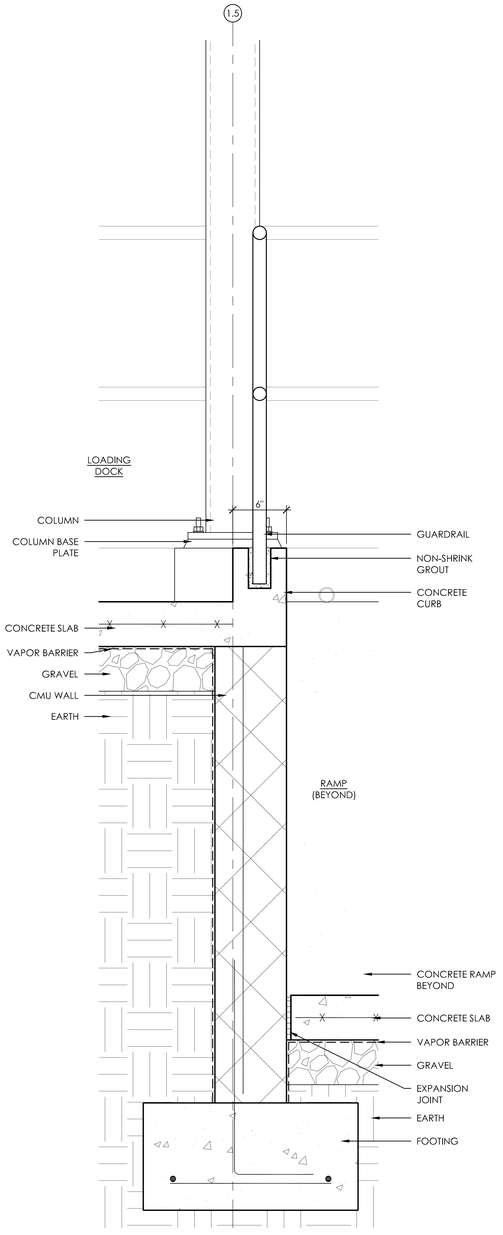
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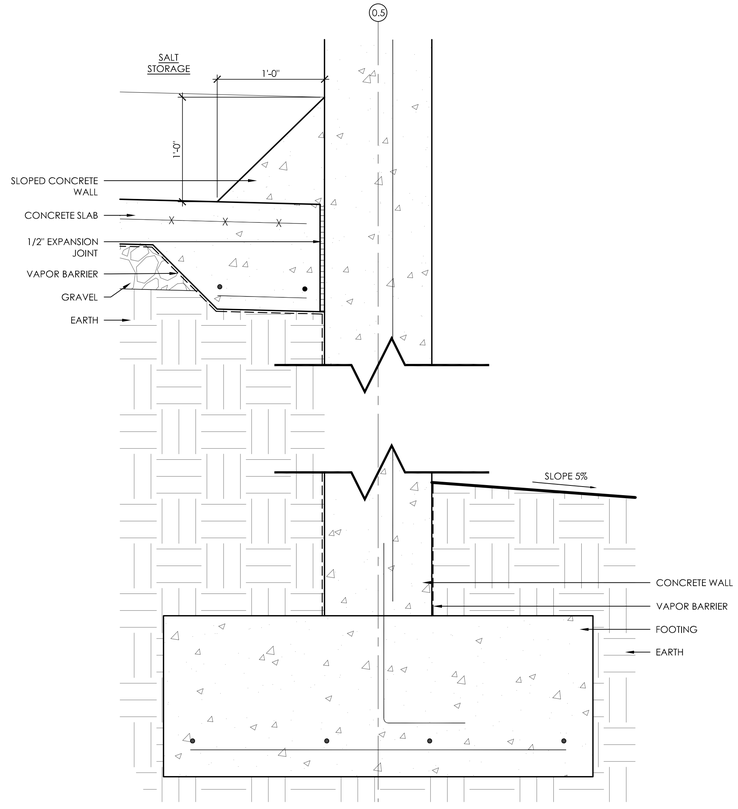
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A516



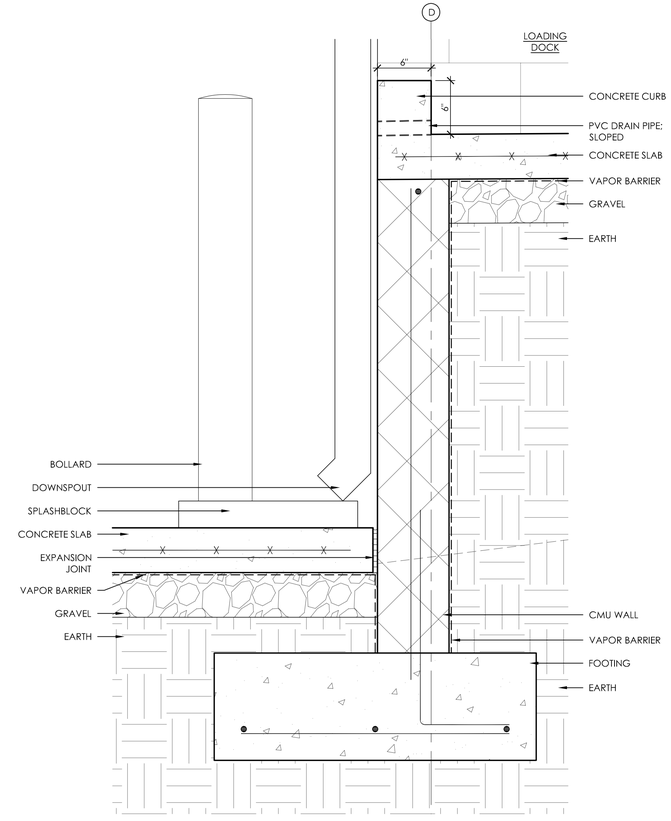
SECTION DETAIL - BLDG D 3

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



SECTION DETAIL - BLDG D 2

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



SECTION DETAIL - BLDG D 1

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

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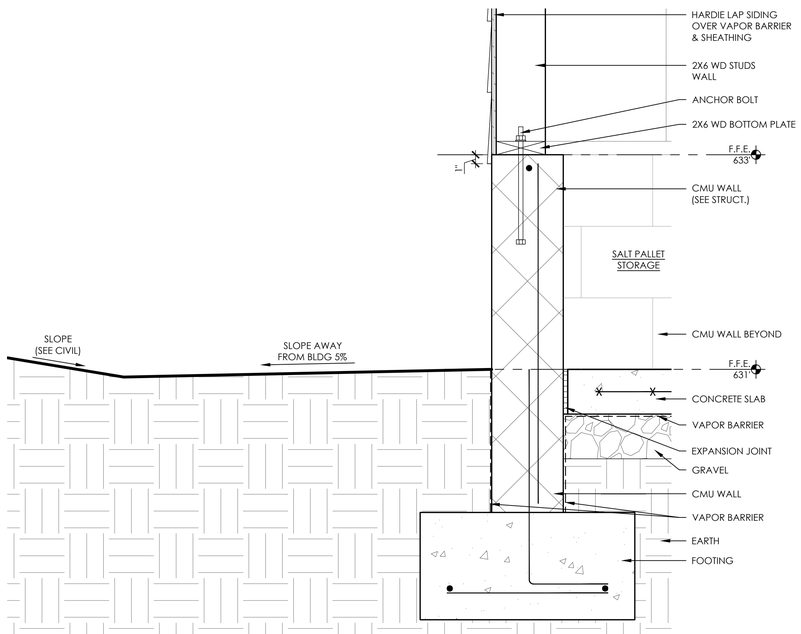
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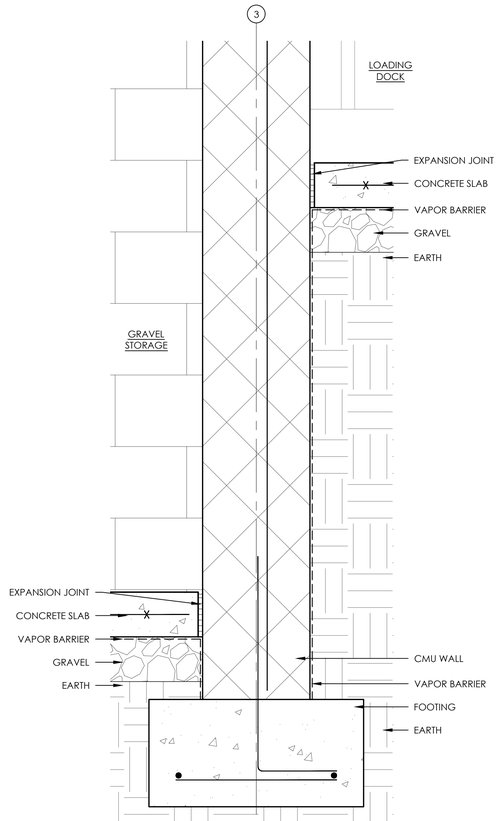
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A517



SECTION DETAIL - BLDG D (2)

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



SECTION DETAIL - BLDG D (1)

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

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HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
SECTION DETAILS

PHASE:
BID SET

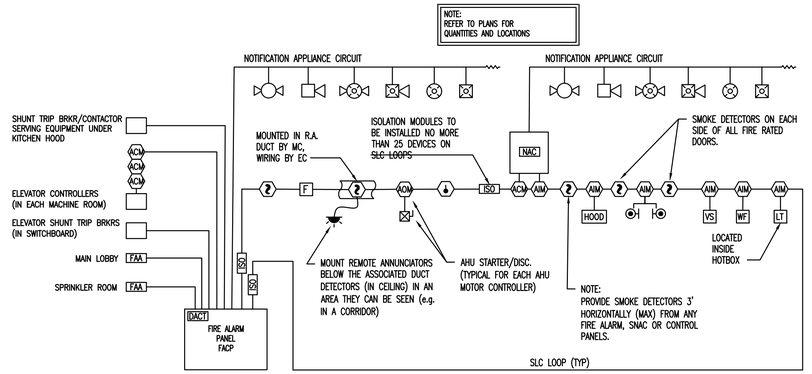
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **KNG**

SHEET NUMBER
A518

FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX

	SYSTEM INPUTS	SYSTEM OUTPUTS: FACP ANNUNCIATION — ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE TROUBLE SIGNAL	ACTUATE ZONE OR DEVICE ADDRESS ALARM INDICATOR	ACTUATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	SYSTEM OUTPUTS: NOTIFICATION — RELEASE MAGNETICALLY HELD DOORS	RECALL ELEVATOR TO RECALL FLOOR	RECALL ELEVATOR TO ALTERNATE RECALL FLOOR	ACTUATE WIRING TO ELEVATOR CABS	DELAYED REMOVAL OF POWER TO ELEVATOR CABS	CLOSE ALL SMOKE DAMPERS	UNLOCK EXITS AND CONTROL DOORS	SHUT DOWN RESPECTIVE AIR HANDLING EQUIPMENT	SYSTEM OUTPUTS: REQUIRED FIRE SAFETY CONTROL — ACTUATE FLOOR PRESSURIZATION	ACTUATE STAIRWELL PRESSURIZATION	ACTUATE SMOKE EXHAUST	ACTIVATE SOUND EQUIPMENT SHUNT TRIP BREAKER		
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y		
1	FIRE ALARM SYSTEM AC POWER FAILURE					●	●						●															1
2	FIRE ALARM SYSTEM LOW BATTERY					●	●						●															2
3	OPEN CIRCUIT					●	●						●															3
4	GROUND FAULT					●	●						●															4
5	NOTIFICATION APPLIANCE CIRCUIT SHORT					●	●						●															5
6	BUILDING MANUAL PULL STATIONS	●	●					●	●	●	●			●						●								6
7	CORRIDOR SMOKE DETECTORS	●	●					●	●	●	●			●	●				●	●		●	●	●	●			7
8	AREA SMOKE DETECTORS	●	●					●	●	●	●			●	●				●	●		●	●	●	●			8
9	HVAC AIR DUCT SMOKE DETECTORS			●	●			●				●									●							9
10	AREA HEAT DETECTORS	●	●					●	●	●	●			●	●				●	●		●	●	●	●			10
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	V	W		

FIRE ALARM SCOPE OF WORK:
RELOCATE & ADD ADDITIONAL INITIATING & NOTIFICATION DEVICES TO ACCOMMODATE NEW FLOOR PLAN. CONNECT TO EXISTING FIRE ALARM SYSTEM.



1 FIRE ALARM RISER DIAGRAM
FA001 SCALE: NTS

WIRE LEGEND:

NAC CIRCUITS : 2 CONDUCTOR, #12AWG, BLUE+, BLACK–
CLASS "B" LOOP: 1 PAIR #18AWG TWISTED, OVERALL SHIELD, RED+,BLACK–,RED JACKET.

FIRE ALARM RISER NOTES

1. PROVIDE "ADDRESSABLE" FIRE ALARM SYSTEM AS SHOWN. ALL WORK SHALL BE IN ACCORDANCE WITH NFPA 72. ALL WIRING SHALL BE SIZED AS REQUIRED BY THE MANUFACTURER.
2. SEE FIRE ALARM PLAN FOR LOCATION AND NUMBER OF DEVICES. THE DRAWINGS INDICATE THE SUGGESTED LOCATIONS FOR INITIATING, NOTIFICATION, AND OTHER MISCELLANEOUS DEVICES INDIRECTLY CONNECTED TO THE FIRE ALARM SYSTEM. MISCELLANEOUS REQUIREMENTS ARE FOR THE GENERAL INFORMATION OF THE CONTRACTOR EXACT LOCATIONS, INSTALLATIONS, AND CONNECTIONS SHALL BE PER FIRE ALARM MANUFACTURERS INSTRUCTIONS AND DIRECTIONS FOR A COMPLETED SYSTEM. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, PULL BOXES, JUNCTION BOXES, AND MISCELLANEOUS REQUIREMENTS AS REQUIRED BY FIRE ALARM EQUIPMENT SUPPLIER.
3. PROVIDE BATTERY CALCULATIONS FOR THE DEVICES REQUIRED. ALLOW 25% ADDITIONAL CAPACITY FOR FUTURE DEVICES.
4. FIRE SEAL ALL CONDUIT PENETRATIONS.
5. PROVIDE GRAPHIC ANNUNCIATOR CHART AT THE MAIN LOBBY TO INDICATE ALL DEVICE POINT ASSIGNMENTS AND LOCATIONS.
6. ALL COMPONENTS SHALL BE COMPATIBLE. PROVIDE ALL NECESSARY CONTROL WIRING AND CONDUIT PER MANUFACTURERS REQUIREMENTS.
7. INITIATION OF FIRE ALARM SHALL CAUSE ALL AIR HANDLING UNITS TO SHUT DOWN.
8. ALL DEVICES/SUBMITTALS SHALL BE APPROVED BY THE FIRE MARSHALL PRIOR TO ORDERING/INSTALLATION.
9. COORDINATE WITH ELEVATOR CONTRACTOR/GC AND PROVIDE ALL CONTROL MODULES/RELAYS TO ACCOMPLISH ELEVATOR RECALL.
10. COORDINATE QUANTITY AND LOCATION OF TAMPER AND FLOW SWITCHES WITH SPRINKLER CONTRACTOR.
11. COORDINATE QUANTITY, LOCATION AND VOLTAGE OF FIRE DAMPERS WITH MECHANICAL CONTRACTOR. THE FIRE ALARM INSTALLER SHALL BE RESPONSIBLE FOR ALL WIRING REQUIRED TO FACILITATE DAMPER CONTROL FUNCTIONS AS INITIATED BY THE FACP.

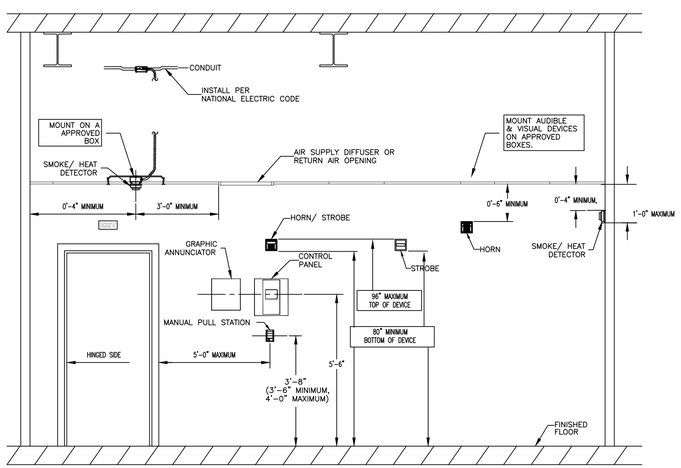
ABBREVIATIONS

AFC	ABOVE FINISHED CEILING	NA	NOT APPLICABLE
AFF	ABOVE FINISHED FLOOR	NAC	NOTIFICATION APPLIANCE CIRCUIT
AFG	ABOVE FINISHED GRADE	NCSBC	NORTH CAROLINA STATE BUILDING CODE
AHJ	AUTHORITY HAVING JURISDICTION	NEC	NATIONAL ELECTRICAL CODE
BLDG	BUILDING	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
C	CONDUIT	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CLG	CEILING	NIC	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	NTS	NOT TO SCALE
EM	EMERGENCY	MC	MECHANICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING	R	RELOCATED
EX	EXISTING TO REMAIN	SLC	SIGNAL LINE CIRCUIT
FA	FIRE ALARM	UL	UNDERWRITER'S LABORATORIES
FAA	FIRE ALARM ANNUNCIATOR	UON	UNLESS OTHERWISE NOTED
FACP	FIRE ALARM CONTROL PANEL	W	WIRE
GC	GENERAL CONTRACTOR	W/	WITH
G	GROUND	W/O	WITHOUT
IMC	INTERMEDIATE METAL CONDUIT	WP	WEATHERPROOF
JB	JUNCTION BOX		

FIRE ALARM GENERAL NOTES

1. AS USED ON THESE DOCUMENTS, THE WORD "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL THE ITEM OR EQUIPMENT AND MAKE THE FINAL CONNECTION AS REQUIRED.
2. FIRE ALARM CONTRACTOR TO ENSURE CANDELA RATINGS OF EXISTING DEVICES MATCH THOSE INDICATED. ADJUST OR REPLACE EXISTING DEVICES AS REQUIRED TO ACHIEVE PROPER RATINGS AND COVERAGE. ALL FIRE ALARM NOTIFICATION DEVICES SHALL SYNC.
3. A SOUND PRESSURE LEVEL OF 75db or 15dB ABOVE AVERAGE AMBIENT NOISE LEVEL, WHICHEVER IS GREATER, IS REQUIRED IN ALL ROOMS (WITH DOORS CLOSED). ADJUST HORN OUTPUT LEVELS TO MEET THIS REQUIREMENT PRIOR TO FIRE MARSHALL INSPECTION.
4. EXISTING NOTIFICATION DEVICES SHALL BE FIELD INSPECTED BY FIRE ALARM CONTRACTOR TO ENSURE SYNCHRONIZATION CAPABILITY PRIOR TO PRICING. EXISTING DEVICES SHALL BE REMOVED & REPLACED AS REQUIRED.

NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



2 FIRE ALARM DEVICE MOUNTING DETAIL
FA001 SCALE: NTS

FIRE ALARM SCHEDULE

SYMBOL	CALLOUT	NOTE
	AUDIBLE–VISUAL APPLIANCE (WALL MOUNTED)	CANDELA RATING AS NOTED
FAA	FIRE ALARM ANNUNCIATOR	
FACP	FIRE ALARM CONTROL UNIT	
F	PULL STATION – FIRE ALARM	
2	SMOKE DETECTOR SENSOR – PHOTOELECTRIC TYPE	
	VISUAL ONLY APPLIANCE (CEILING MOUNTED)	CANDELA RATING AS NOTED
	VISUAL ONLY APPLIANCE (WALL MOUNTED)	CANDELA RATING AS NOTED

E – INDICATES EXISTING TO REMAIN
R – INDICATES EXISTING TO BE REMOVED/RELOCATED

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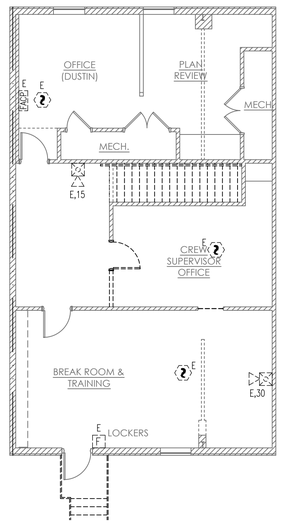
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FIRE ALARM COVER SHEET

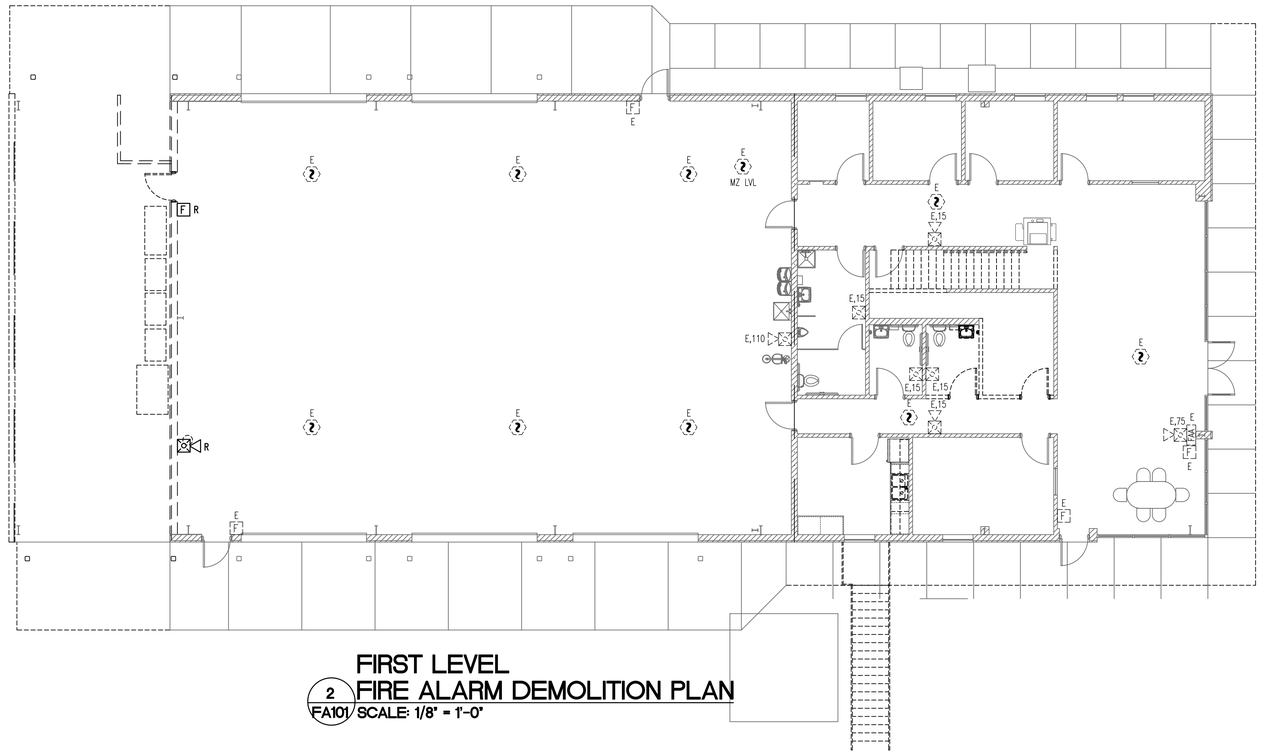
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

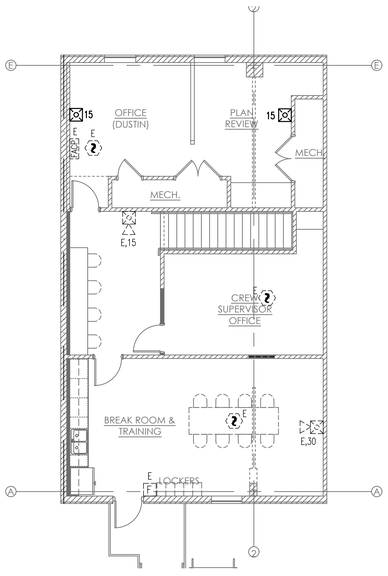
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FA001



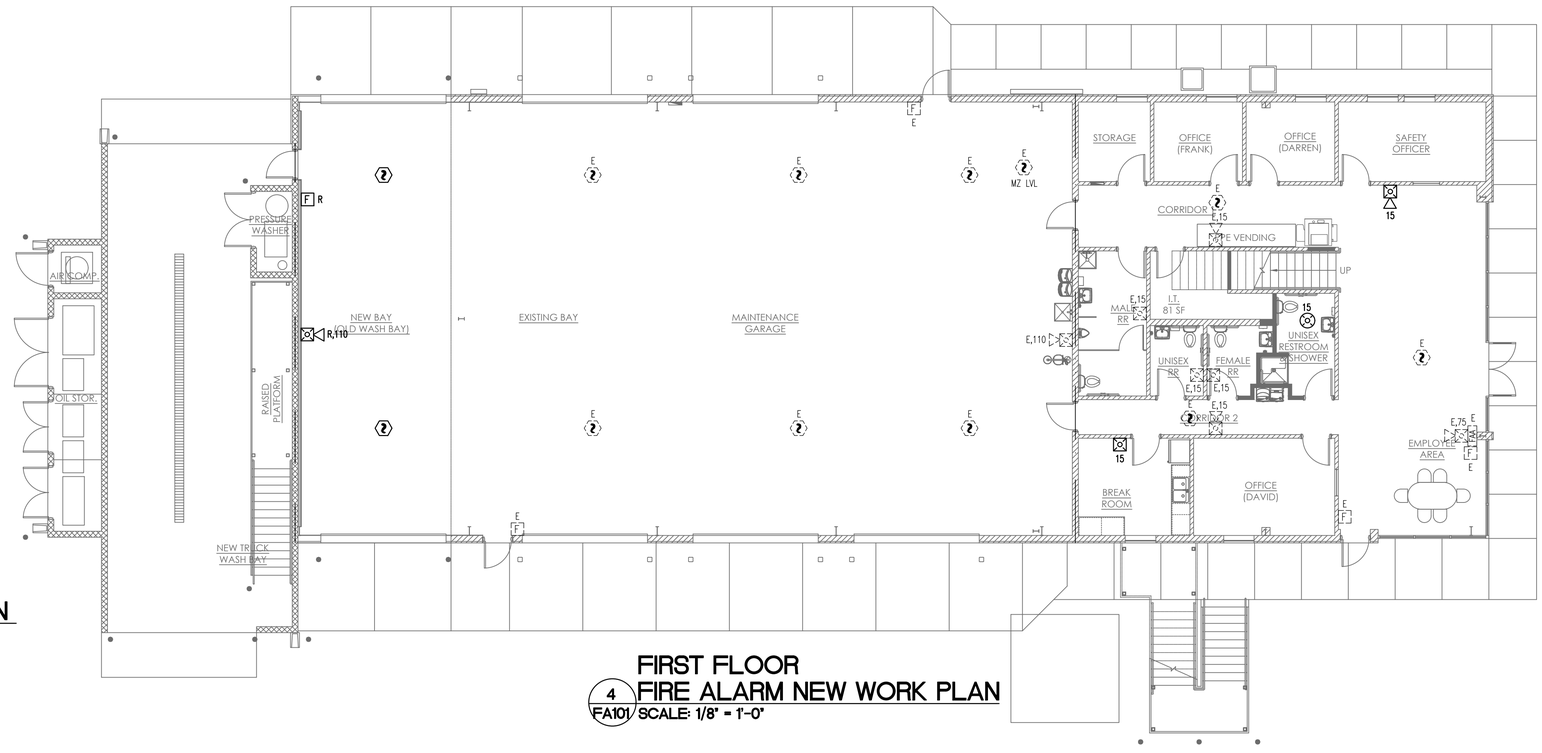
MEZZANINE
1 DEMOLITION PLAN
FA101 SCALE: 1/8" = 1'-0"



FIRST LEVEL
2 FIRE ALARM DEMOLITION PLAN
FA101 SCALE: 1/8" = 1'-0"



MEZZANINE
3 FIRE ALARM NEW WORK PLAN
FA101 SCALE: 1/8" = 1'-0"



FIRST FLOOR
4 FIRE ALARM NEW WORK PLAN
FA101 SCALE: 1/8" = 1'-0"

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SHEET NAME:
FLEET BUILDING FIRE ALARM PLANS

PHASE:
BID SET

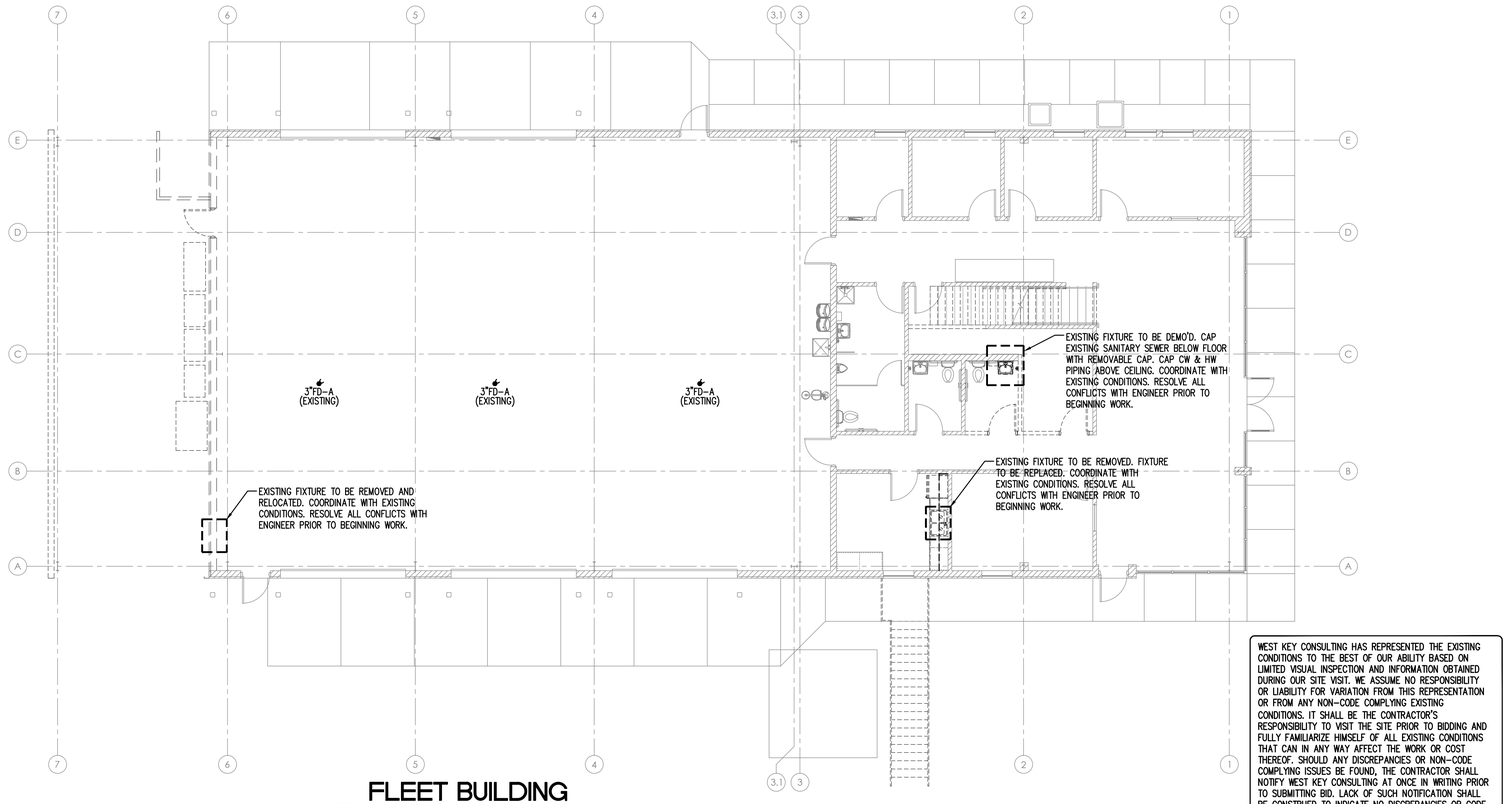
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DRAWN BY: **RW**

SHEET NUMBER
FA101

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1 P001 FLEET BUILDING DEMO PLAN - PLUMBING
SCALE: 1/8" = 1' - 0"

WEST KEY CONSULTING HAS REPRESENTED THE EXISTING CONDITIONS TO THE BEST OF OUR ABILITY BASED ON LIMITED VISUAL INSPECTION AND INFORMATION OBTAINED DURING OUR SITE VISIT. WE ASSUME NO RESPONSIBILITY OR LIABILITY FOR VARIATION FROM THIS REPRESENTATION OR FROM ANY NON-CODE COMPLYING EXISTING CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE PRIOR TO BIDDING AND FULLY FAMILIARIZE HIMSELF OF ALL EXISTING CONDITIONS THAT CAN IN ANY WAY AFFECT THE WORK OR COST THEREOF. SHOULD ANY DISCREPANCIES OR NON-CODE COMPLYING ISSUES BE FOUND, THE CONTRACTOR SHALL NOTIFY WEST KEY CONSULTING AT ONCE IN WRITING PRIOR TO SUBMITTING BID. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED TO INDICATE NO DISCREPANCIES OR CODE CONFLICTS. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.

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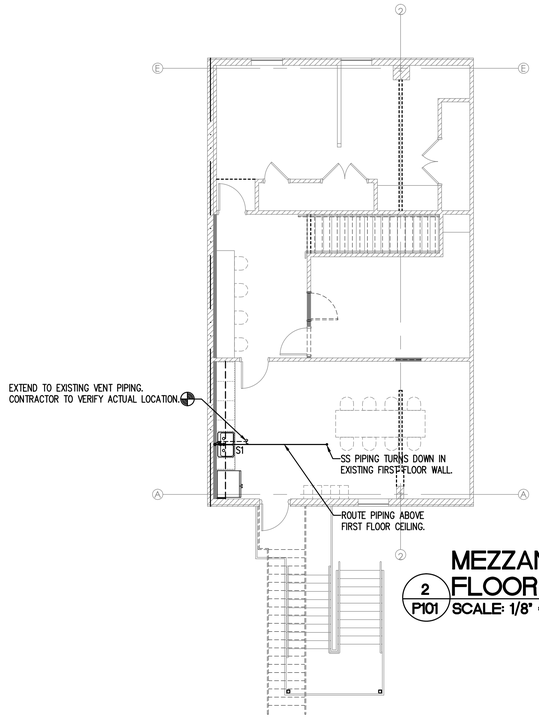
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FLEET PLUMBING DEMO PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

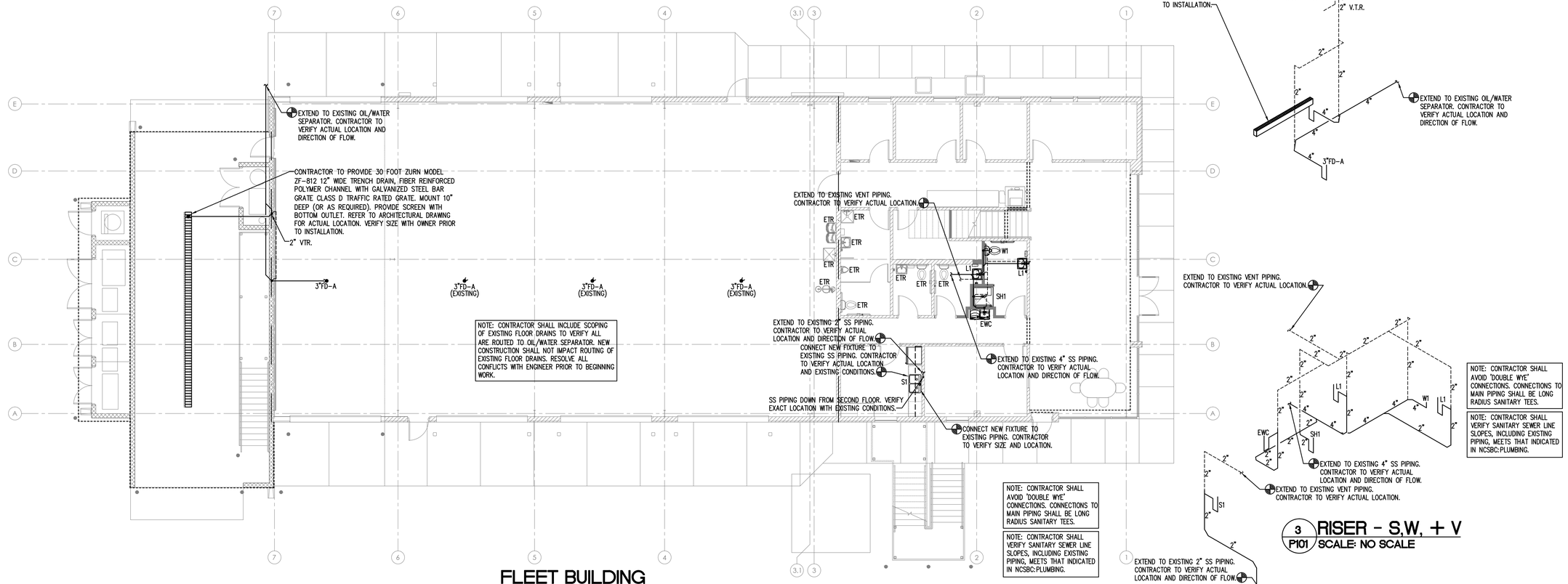
SHEET NUMBER

P001



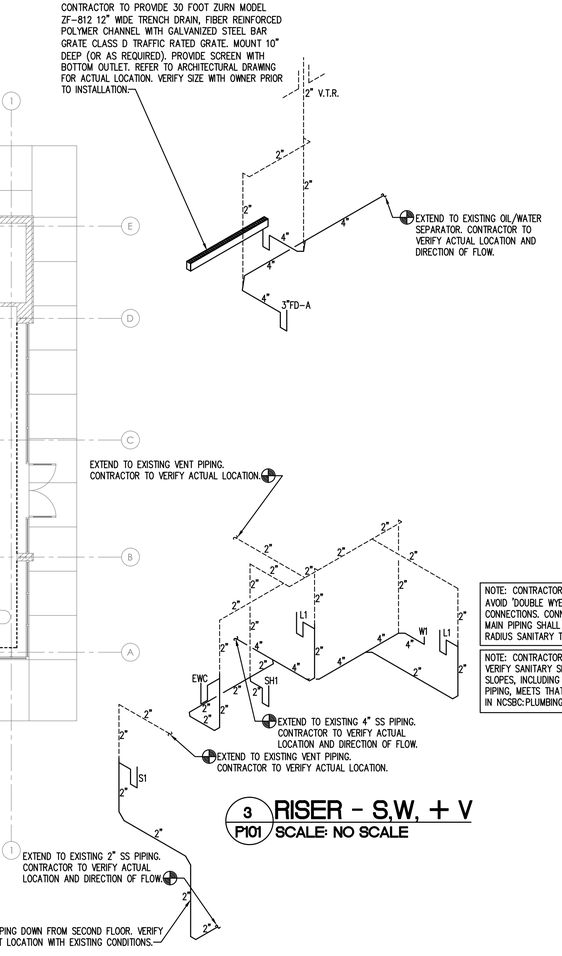
MEZZANINE FLOOR PLAN - S,W, + V

2 / P101 SCALE: 1/8" = 1' - 0"



FLEET BUILDING FLOOR PLAN - S,W, + V

1 / P101 SCALE: 1/8" = 1' - 0"



RISER - S,W, + V

3 / P101 SCALE: NO SCALE

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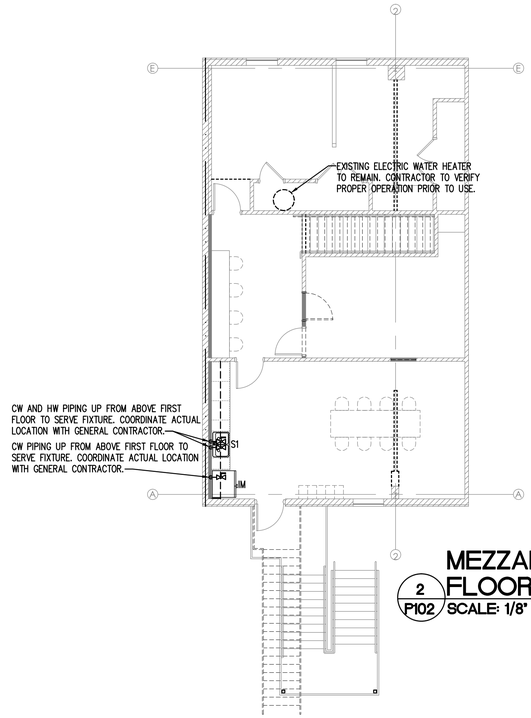
SHEET NAME:
FLEET S,W,&V FLOOR PLAN & RISER

PHASE:
BID SET

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PROJECT #: **21167**
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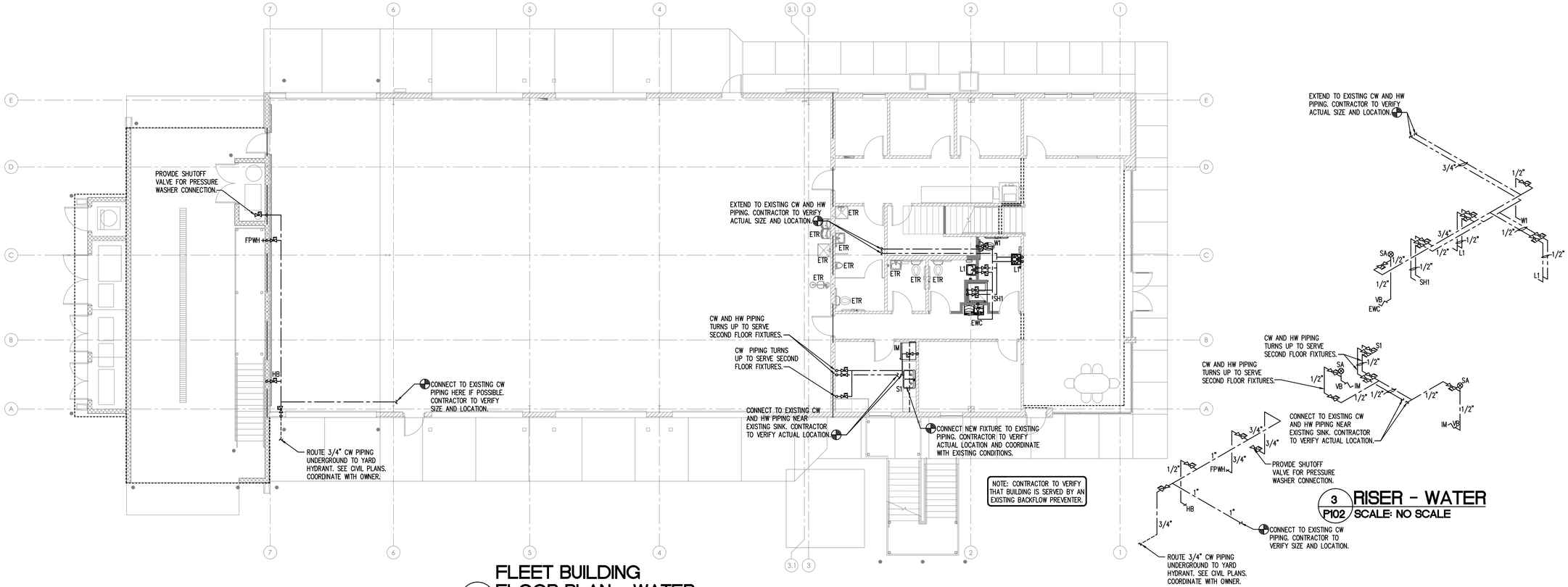
SHEET NUMBER

P101



MEZZANINE FLOOR PLAN - WATER

2 / P102 SCALE: 1/8" = 1' - 0"



FLEET BUILDING FLOOR PLAN - WATER

1 / P102 SCALE: 1/8" = 1' - 0"

RISER - WATER

3 / P102 SCALE: NO SCALE

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FLEET WATER FLOOR PLAN & RISER

PHASE:
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PROJECT #: **21167**
DRAWN BY: **JMR**

SHEET NUMBER

P102

PLUMBING SPECIFICATIONS

PLUMBING SPECIFICATIONS:

1.) THE ENTIRE PLUMBING SYSTEM SHALL BE IN ACCORDANCE WITH 2018 NORTH CAROLINA PLUMBING CODE AND LOCAL PLUMBING INSPECTOR.

2.) ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.

3.) THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSET, TEES, ELBOWS, ETC. FOR A COMPLETE WORKING PLUMBING SYSTEM.

4.) THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES RELATED TO PERMITTING, INSPECTIONS, TAPS, ETC.

5.) CONTRACTOR SHALL COORDINATE ANY PLUMBING SYSTEM REQUIRING SHUTDOWN WITH THE OWNER 48 HOURS PRIOR TO BEGINNING WORK.

6.) ALL DOMESTIC WATER PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.

7.) ALL DOMESTIC WATER PIPING (ABOVE SLAB) SHALL BE TYPE "L" COPPER WITH 95/5 LEAD FREE SOLDER. ABOVE SLAB, OUTSIDE OF PLENUM SPACES, PEX PIPING IS ACCEPTABLE. ALL WATER PIPING (BELOW SLAB) SHALL BE TYPE "K" SOFT COPPER. COMPLY W/ ASTM B-88-88A.

8.) ALL WATER PIPING SHALL BE INSULATED WITH CLOSED CELL (ARMAFLEX) TYPE INSULATION WITH THE FLAME DENSITY RATING NOT EXCEEDING 25 & THE SMOKE DENSITY RATING NOT EXCEEDING 50. THICKNESS FOR COLD WATER PIPING SHALL BE 1/2" THICK. THICKNESS FOR HOT WATER & RETURN PIPING SHALL BE 1" THICK.

9.) ALL BRANCH LINES SHALL HAVE SHUT-OFF VALVES. ALL DOMESTIC WATER BALL VALVES SHALL BE BRASS BODY. FULL PORT, CHROME PLATED BALL, TEFLON SEATS, 150# WSP, FOR SIZES 1/2" THRU 2". SIZES ABOVE 2" SHALL BE BRONZE GATE VALVE, NRS SOLID DISC, SCREW OVER BONNET, 125# WSP. PROVIDE VALVE HANDLE EXTENSIONS AS REQUIRED FOR INSULATION.

10.) ALL PLUMBING FIXTURES AND KITCHEN EQUIPMENT SHALL HAVE A PISTON TYPE WATER HAMMER ARRESTOR SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS & PDI STANDARDS.

11.) ALL SANITARY SEWER PIPING SHOWN IS BELOW SLAB/WITHIN WALLS UNLESS NOTED OTHERWISE. ALL SANITARY VENT PIPING SHOWN IS ABOVE CEILING/WITHIN WALLS UNLESS NOTED OTHERWISE.

12.) ALL WASTE & VENT PIPING (ABOVE SLAB) SHALL BE PVC-DWV WITH PIPING AND FITTINGS CONFORMING TO ASTM D-2665. PLENUM SPACE WASTE & VENT PIPING (ABOVE SLAB) SHALL BE SERVICE WEIGHT CAST IRON WITH NO-HUB FITTINGS CONFORMING TO CISPI 301. JOINTS SHALL BE ONE-PIECE NEOPRENE GASKET WITH STAINLESS STEEL BAND AND BOLTS CONFORMING TO ASTM C564-85.

13.) ALL WASTE & VENT PIPING (BELOW SLAB) SHALL BE PVC-DWV WITH PIPING AND FITTINGS CONFORMING TO ASTM D-2665.

14.) ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY 2018 NORTH CAROLINA PLUMBING CODE & MANUFACTURER'S RECOMMENDATIONS.

15.) ALL PIPING PENETRATIONS THRU NEW/EXISTING WALLS/FLOORS SHALL BE SEALED TO EQUAL THE RATING OF THE NEW/EXISTING WALL OR FLOOR.

16.) ALL PLUMBING SYSTEMS SHALL BE TESTED AS REQUIRED BY 2018 NORTH CAROLINA PLUMBING CODE.

17.) THE PLUMBING CONTRACTOR SHALL COORDINATE ALL UNDERSLAB PLUMBING PIPING WITH ALL STRUCTURAL FOUNDATIONS. P.C. SHALL COORDINATE ALL UNDERSLAB PLUMBING PIPING ELEVATION INVERTS WITH SITE UTILITY ELEVATION INVERTS.

18.) P.C. SHALL COORDINATE ALL KITCHEN EQUIPMENT REQUIRING PLUMBING CONNECTIONS WITH KITCHEN EQUIPMENT VENDOR. PROVIDE ALL NECESSARY P-TRAPS, SUPPLY STOPS, INDIRECT PIPING, ETC. REQUIRED FOR COMPLETE HOOK-UP OF KITCHEN EQUIPMENT REQUIRING PLUMBING CONNECTIONS.

19.) THE BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AS REQUIRED PER LOCAL AUTHORITY.

20.) THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH 2018 NORTH CAROLINA PLUMBING CODE.

21.) ALL VENT THRU THE ROOF PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND SHALL BE CONCEALED BEHIND ROOF RIDGE WHERE POSSIBLE. P.C. SHALL PROVIDE ALL FLASHING MATERIAL REQUIRED FOR VENT THRU ROOF. ALL VTR'S SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ALL OUTSIDE AIR INTAKES.

22.) ALL GAS PIPING AND GAS FLUE TO GAS WATER HEATER BY PLUMBING CONTRACTOR.

23.) PLUMBING CONTRACTOR SHALL HAVE RECEIVED APPROVED SHOP DRAWINGS FROM THE ENGINEER PRIOR TO BEGINNING NEW WORK.

PLUMBING LEGEND AND ABBREVIATIONS

———	SANITARY SEWER PIPING (W)
- - - - - - - - - - - -	VENT PIPING (V)
——— - ———	COLD WATER PIPING (CW)
——— - - ———	HOT WATER PIPING (HW)
——— - - - ———	HOT WATER RETURN PIPING (HWR)
	ELL TURNS UP
	ELL TURNS DOWN
	CHECK VALVE
	BALL VALVE
	GATE VALVE IN HORIZONTAL POSITION
	CLEANOUT IN GROUND (GCO)
	CLEANOUT IN FLOOR OR SLAB (FCO)
A.F.F.	ABOVE FINISH FLOOR
FD - A	FLOOR DRAIN - TYPE (SEE SCHEDULE)
H.B.	HOSE BIBB
FPWH	FREEZE PROOF WALL HYDRANT
H.D.	HUB DRAIN
INV. ELEV. OR I.E.	INVERT ELEVATION
P.C.	PLUMBING CONTRACTOR
V.T.R.	VENT THROUGH ROOF
CV	COMMON VENT
EOCV	END OF CIRCUIT VENT
BOCV	BEGINNING OF CIRCUIT VENT
— · — — · — · —	1 HOUR RATED BARRIER/PARTITION/WALL
— · — — · — · —	2 HOUR RATED BARRIER/PARTITION/WALL
— · — — · — · —	3 HOUR RATED BARRIER/PARTITION/WALL
	CONNECT TO EXISTING

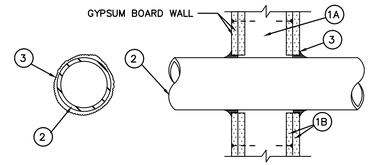
PLUMBING FIXTURES AND EQUIPMENT

MARK	DESCRIPTION	PIPE SERVICE AND CONN. SIZE CW	HW	WASTE	FIXTURE SPECIFICATIONS
W1	WATER CLOSET FLR. MTD. (ADA)	1/2"		4"	KOHLER "HIGHLINE" K-3979, ADA, 1.6 GPF WHITE VITREOUS CHINA ELONGATED BOWL WITH SIPHON JET FLUSHING, WITH SIDE TRIP LEVER, 12" ROUGH-IN, 17" HIGH, & 2 BOLT CAPS. SEAT: BEMIS MODEL 2055SSCT ANTI MICROBIAL HEAVY DUTY ELONGATED WHITE OPEN FRONT SEAT. VALVE: McGUIRE MODEL 2166. 3/8" x 12" FLEX RISER ANGLE CLOSET SUPPLY WITH STOP. MOUNT SIDE TRIP LEVER ON WIDE SIDE OF TOILET STALL.
L1	LAVATORY WALL MOUNTED (ADA)	1/2"	1/2"	1-1/2"	KOHLER "PINOIR" K-2028, VITREOUS CHINA 22"X18" LAVATORY WITH 4" FAUCET CENTERS. MOUNT LAVATORY RIM AT 34" A.F.F. TO MEET ADA REQUIREMENTS. PROVIDE SHROUD. TRAP & SUPPLIES: MCGUIRE NO. 8902 17 GA. 1 1/4" X 1 1/2" P-TRAP AND NIPPLE. McGUIRE NO. 2165 ANGLE SUPPLY STOPS. FAUCET: DELTA 500-DST SINGLE HANDLE WITH GRID WASTE ASSEMBLY AND 0.5 GPM FLOW RESTRICTOR. ACCESSORIES: TRUEBRO HANDI-LAV GUARD INSULATION MODEL NO. 101 3-PIECE INTERLOCKING TRAP ASSEMBLY AND 2-PIECE INTERLOCKING HOT WATER ANGLE VALVE ASSEMBLY, AND NYLON TYPE FASTENERS.
S1	SINK DOUBLE BOWL CTR. MTD.	1/2"	1/2"	1-1/2"	JUST MODEL NO. DL-ADA-2133-A-GR, 304 STAINLESS STEEL, 18 GAUGE, SELF-RIMMING DOUBLE BOWL, DIM. 33" x 21" x 6 1/2 DEEP, 3 HOLES @ 4" CENTERS. TRAP & SUPPLIES: McGUIRE NO. 151 CHROME PLATED FORGED BRASS BASKET STRAINER WITH 1-1/2" x 4" TAILPIECE, McGUIRE NO. 8912 17 GA. 1-1/2" P-TRAP AND NIPPLE. McGUIRE NO. 2165 3/8"x12" FLEX RISER ANGLE SUPPLY STOPS. FAUCET: FAUCET: AMERICAN STANDARD "ELLIS" 9391321.075 GOOSENECK SPOUT WITH SINGLE HANDLE AND 1.5 GPM FLOW RESTRICTOR. PROVIDE WITH ADA COMPLIANT LEVER. ACCESSORIES: TRUEBRO HANDI-LAV GUARD INSULATION MODEL NO. 101 3-PIECE INTERLOCKING TRAP ASSEMBLY AND 2-PIECE INTERLOCKING HOT WATER ANGLE VALVE ASSEMBLY, AND NYLON TYPE FASTENERS.
SH1	TRANSFER-TYPE SHOWER (ADA)	1/2"	1/2"	2"	AQUATIC 1363BFRF FIBERGLASS SHOWER ENCLOSURE 36" W x 36" D x 77" H. UNIT SHALL COMPLY WITH ANSI 117:1 REQUIREMENTS. ONE (1) 32" x 16" L-SHAPED WRAP AROUND 1-1/2" 18 GAUGE STAINLESS STEEL GRAB BAR MOUNTED ON THE VALVE WALL AND BACK WALL, 34" ABOVE BOTTOM OF SHOWER. ONE (1) 36" L x 1" OD 18 GAUGE STAINLESS STEEL CURTAIN ROD WITH BRASS SHOWER DRAIN & TEXTURED BOTTOM. UNIT IS INTENDED TO BE A TRANSFER-TYPE SHOWER. CONFIRM DRAIN LOCATION PRIOR TO ORDER. SEAT: BOBRICK MODEL B-517 SURFACE-MOUNTED FOLDING SHOWER SEAT. VALVE: DELTA MODEL T13020 PRESSURE BALANCING SHOWER VALVE (THERMOSTATIC MIXING TYPE) WITH ALSONS MODEL 1551PBDSBX PERSONAL HANDHELD SHOWER HEAD. PROVIDE WITH GLIDE RAIL MOUNTING SYSTEM, HAND SHOWER, SWIVEL CONNECTOR, VACUUM BREAKER, SUPPLY ELBOW, SHOWER GLIDE RAIL AND DOUBLE SPIRAL METAL HOSE.
EWC	ELECTRIC WATER COOLER	1/2"		2"	ELKAY MODEL LZSTL8WSLP TWO-LEVEL WHEEL CHAIR TYPE WALL MOUNTED WATER COOLER WITH HERMETICALLY SEALED AND AIR COOLED REFRIGERATING UNIT, WITH ELECTRIC PUSH BUTTON ON FRONT AND SIDE, COLORED VINYL COVERED STEEL SKIRT, AND STAINLESS STEEL HOOD-RECEPTOR. MOUNT HIGHEST SPOUT AT 36" A.F.F. PROVIDE WITH EZH20 BOTTLE FILLER.
IM	ICE MAKER BOX	1/2"			OATEY MODEL #38681 WALL MOUNTED AT 36" AFF
FPWH	FREEZE PROOF WALL HYDRANT	3/4"			WOODFORD MODEL 65, NON-FREEZE, AUTOMATIC DRAINING WALL HYDRANT WITH ANTI-SIPHON VACUUM BREAKER, AND LOOSE TEE KEY OPERATION.
HB	HOSE BIB	1/2"			WOODFORD MODEL 24 IN POLISHED CHROME WITH VACUUM BREAKER AND LOOSE TEE KEY OPERATION
ETR	EXISTING TO REMAIN	1/2"			EXISTING PLUMBING FIXTURE TO REMAIN

VERIFY FIXTURES WITH OWNER PRIOR TO ORDERING.

PLUMBING ACCESSORIES

SYMBOL	SPECIFICATION
FS-A	PLASTIC ODDITIES PFS SERIES 12"x12"x10" DEEP, PVC, 1/2 GRATE, WITH PLASTIC, REMOVABLE SECONDARY STRAINER.
FS-B	ZURN Z1907 CAST IRON BODY, 12"X12"X8" DEEP, BOTTOM DOME STRAINER WITH REMOVABLE SECONDARY STRAINER.
FD-A	ZURN ZN-415 DURACOATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEBRANE CLAMP AND ADJUSTABLE COLLAR WITH 6" TYPE " B " POLISHED NICKEL BRONZE STRAINER. DEEP SEAL P-TRAP WITH TRAP PRIMER CONNECTION
FD-B	ZURN ZN-415 DURACOATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEBRANE CLAMP AND ADJUSTABLE COLLAR WITH 7" TYPE " I " POLISHED NICKEL BRONZE STRAINER WITH RAISED FLANGE. DEEP SEAL P-TRAP WITH TRAP PRIMER CONNECTION
FCO	ZURN ZN-1400 "LEVELTROL" ADJUSTABLE FLOOR CLEANOUT, DURACOATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SCORIATED POLISHED NICKEL BRONZE TOP ADJUSTABLE TO FINISH FLOOR.
WCO	ZURN ZN-1441 WALL CLEANOUT, DURACOATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SMOOTH STAINLESS STEEL ACCESS COVER WITH SECURING SCREW.
SA	WATTS SERIES 15 WATER HAMMER ARRESTOR TO MEET ALL REQUIREMENTS OF ASSE 1010 AS REQUIRED BY 2018 NCSBC, PLUMBING CODE, SECTION 604.9.
VB	ZURN MODEL VACUUM BREAKER TO MEET ALL REQUIREMENTS OF ASSE 1011 AS REQUIRED BY 2018 NCSBC, PLUMBING CODE, SECTION 608.13.6.



System No. W-L-1001

June 15, 2005

F Ratings – 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings – 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft

1. Wall Assembly – The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs – Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* – Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetrant – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe – Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe – Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. Through Penetrating Product* – Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG INC

3. Fill, Void or Cavity Material* – Caulk or Sealant – Min 5/8 , 1-1/4,1-7/8 and 2-1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

3M COMPANY – CP 25WB+ or FB-3000 WT.

FOR FRAMED WALL ONLY 1,2,3, OR 4 HOUR PENETRATION FIRESTOP DETAIL

1 / P201 SCALE: NTS

PLUMBING SUMMARY

SYSTEM & MATERIAL	FIXTURE UNITS	MAIN SIZE
WASTE AND VENT SYSTEM		
SCHEDULE 40 PVC-DWV CONFORMING TO ASTM D-2665	14.0	4"
DOMESTIC WATER SYSTEM		
BELOW SLAB: TYPE "K" SOFT COPPER WITH NO JOINTS BELOW SLAB ABOVE SLAB: TYPE "L" ANNEALED COPPER WITH 95/5 SOLDER JOINTS.	9.0	3/4" 14.0 GPM

NOTE: PLUMBING SUMMARY FOR NEW FIXTURES ONLY.

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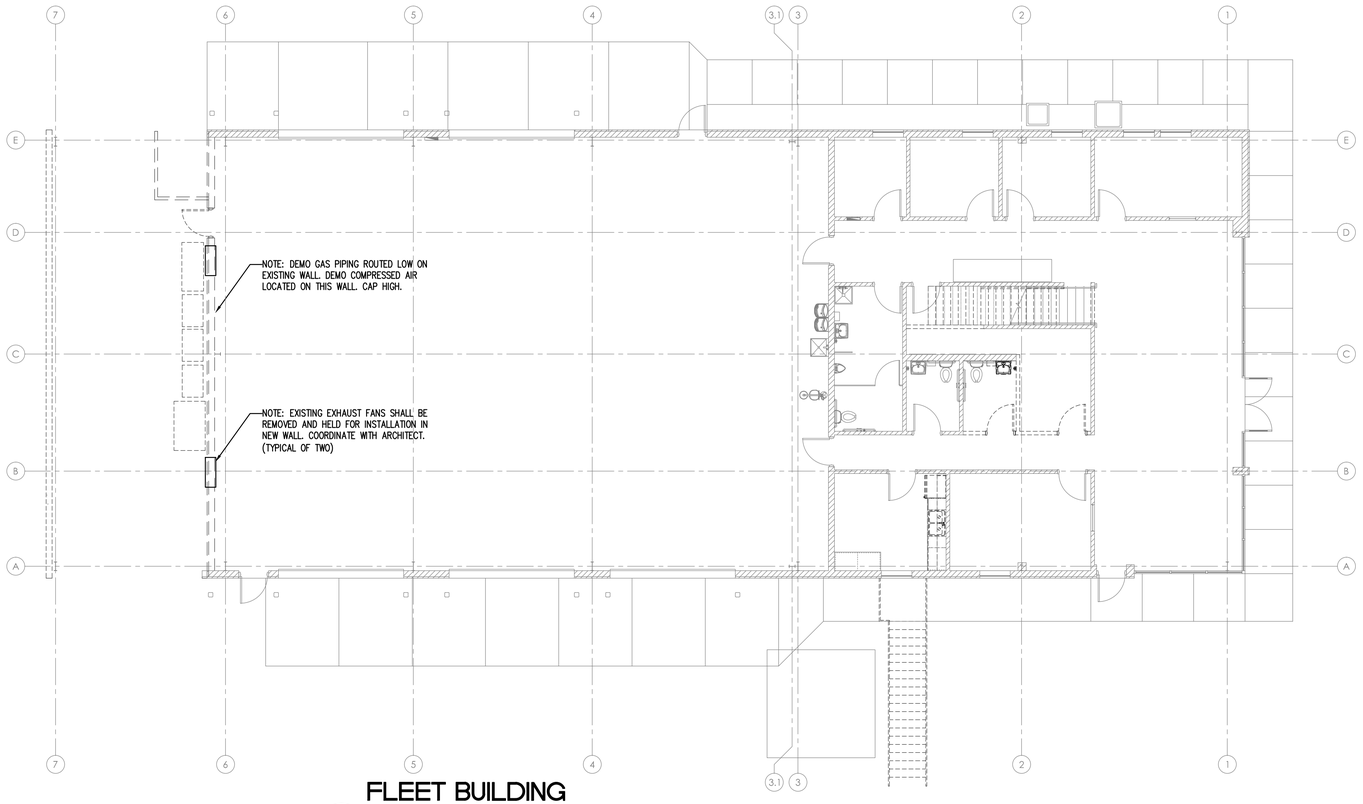
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PLUMBING DETAILS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

SHEET NUMBER

P201



1 M001 FLEET BUILDING DEMO PLAN - HVAC
SCALE: 1/8" = 1' - 0"

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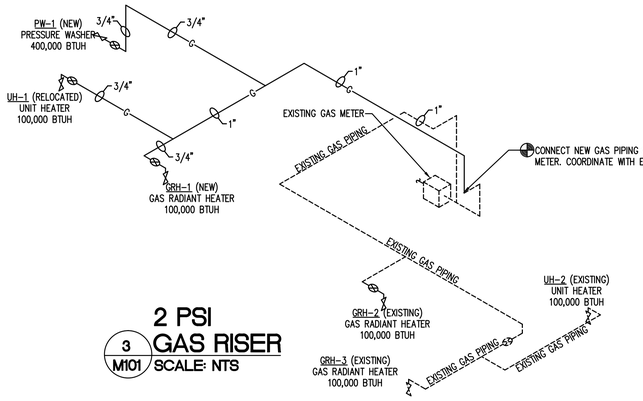
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HVAC DEMO PLAN

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

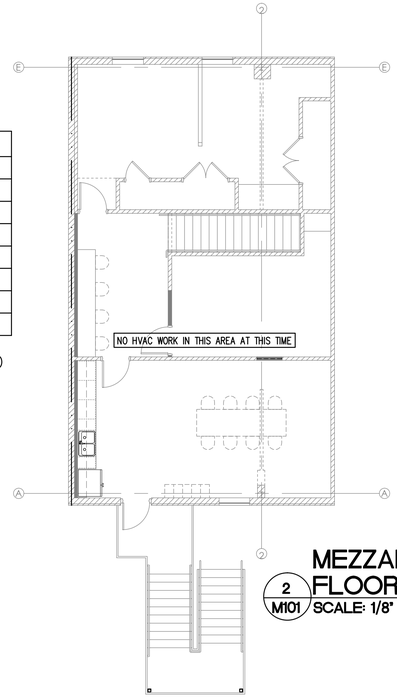
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3 M101 **2 PSI GAS RISER**
SCALE: NTS

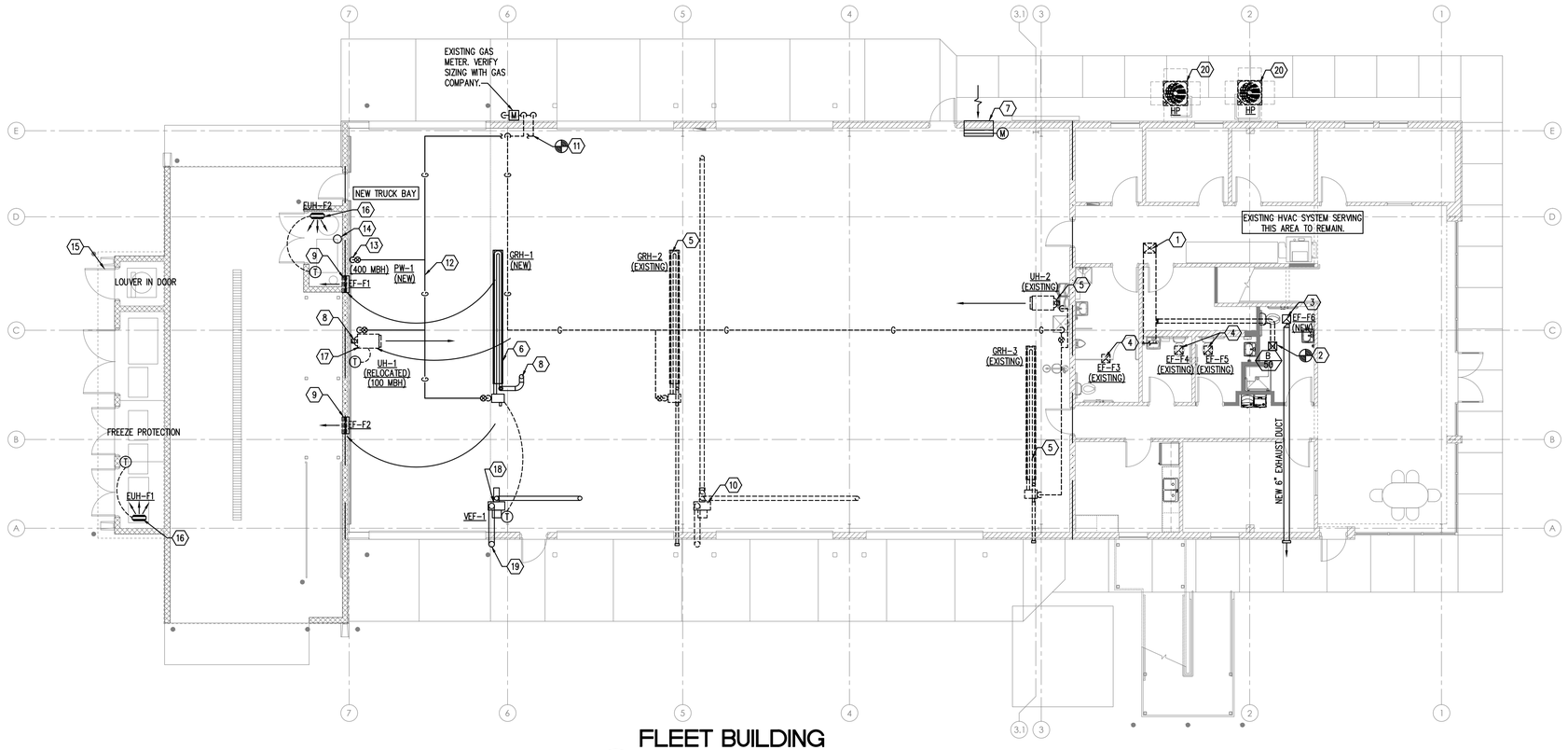
2PSI GAS CONNECTED LOAD		
MARK	EQUIPMENT	BTUH INPUT
UH-1	UNIT HEATER	100,000
UH-2	UNIT HEATER	100,000
GRH-1	GAS RADIANT HEATER	100,000
GRH-2	GAS RADIANT HEATER	100,000
GRH-3	GAS RADIANT HEATER	100,000
PW-1	PRESSURE WASHER	400,000
	TOTAL	900000

EQUIVALENT LENGTH = 150'
GAS PIPE SIZING BASED ON NC 2018 FUEL GAS CODE TABLE 402.4(5)



2 M101 **MEZZANINE FLOOR PLAN - HVAC**
SCALE: 1/8" = 1' - 0"

VENTILATION FOR GARAGE
SEQUENCE OF OPERATION FOR VENTILATION FAN
1. VENTILATION FAN EF-F1 & EF-F2 SHALL OPERATE DURING BUILDING OCCUPIED HOURS TO PROVIDE VENTILATION FOR THE GARAGE AREA AT THE RATE OF 1.5 CFM/SF MINIMUM IN COMPLIANCE WITH NC MECHANICAL CODE, CHAPTER 4. 2. FAN MUST BE SWITCHED ON TO INSURE PROPER VENTILATION OF GARAGE AREA DURING BUSINESS HOURS.
VENTILATION RATE CALCULATION
GARAGE AREA IS VENTILATED AT A MINIMUM RATE OF 1.5 CFM PER SQUARE FOOT. GARAGE AREA => 4150 SQUARE FEET. MINIMUM REQUIRED VENTILATION => 4150 SF X 1.5 CFM/SF = 6225 CFM VERIFY EXHAUST PROVIDED BY FAN EF-F1 & EF-F2 = 6300 CFM



1 M101 **FLEET BUILDING FLOOR PLAN - HVAC**
SCALE: 1/8" = 1' - 0"

1/M101 PLAN KEY NOTES: (#)

1. EXISTING SUPPLY DUCTWORK FROM AIR HANDLING UNIT ON SECOND LEVEL TO REMAIN.
2. PROVIDE NEW DIFFUSER IN NEW RESTROOM. REBALANCE TO 50 CFM. REBALANCE SYSTEM AS REQUIRED.
3. INSTALL NEW EXHAUST FAN IN CEILING. SUSPEND FROM STRUCTURE. ROUTE 6"ø DUCTWORK TO WALL CAP. COORDINATE WITH EXISTING CONDITIONS. MAINTAIN A MINIMUM OF 10FT FROM DISCHARGE TO NEAREST OPENING OR OUTSIDE AIR INTAKE.
4. EXISTING EXHAUST SYSTEMS SERVING EXISTING RESTROOMS TO REMAIN.
5. EXISTING GAS FIRED HEATER TO REMAIN. CONTRACTOR SHALL VERIFY PROPER OPERATION OF EXISTING UNIT. UNIT NOT SCHEDULED.
6. MOUNT TUBE INFRARED HEATER HIGH IN SPACE TO MATCH EXISTING HEATERS. CONTRACTOR TO VERIFY CLEARANCES FROM COMBUSTIBLES PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
7. PROVIDE 36X54 DOWCO MODEL DWE DRAINABLE WALL MOUNTED INTAKE LOUVER IN WALL FOR MAKE-UP AIR. PROVIDE WITH WIRE MESH SECURITY SCREEN. COORDINATE INSTALLATION WITH BUILDING STRUCTURE. MOUNT APPROXIMATELY 6" AFF. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WITH MOTORIZED DAMPER TO OPEN WHEN EXHAUST FANS EF-F1 AND EF-F2 ARE ENERGIZED.
8. TYPE B VENT THRU ROOF. SIZE PER MANUFACTURER'S RECOMMENDATIONS. REUSE EXISTING ROOF OPENING WHERE POSSIBLE. (SEE DETAIL)
9. RELOCATED SIDEWALL PROPELLER EXHAUST FAN SHALL BE MOUNTED IN NEW WALL. FAN SHALL BE CAPABLE OF EXHAUSTING A MINIMUM OF 3150 CFM. MOUNT BOTTOM OF FAN APPROXIMATELY 14' A.F.F. COORDINATE ACTUAL LOCATION WITH BUILDING STRUCTURE. CONTRACTOR TO VERIFY DISCHARGE IS A MINIMUM 10 FEET FROM ANY OUTSIDE AIR INTAKE. CONTROL WITH WALL SWITCH.(TYPICAL OF TWO)
10. EXISTING VEHICLE EXHAUST SYSTEM TO REMAIN. CONTRACTOR SHALL VERIFY PROPER OPERATION OF EXISTING SYSTEM.
11. CONNECT NEW GAS PIPING CLOSE TO EXISTING METER. COORDINATE WITH EXISTING CONDITIONS.
12. ROUTE GAS PIPING TIGHT TO STRUCTURE. COORDINATE WITH EXISTING CONDITIONS.
13. PROVIDE GAS REGULATOR AND VALVE FOR RELOCATED HEATED PRESSURE WASHING UNIT. COORDINATE WITH EQUIPMENT AND EXISTING CONDITIONS.
14. TYPE B VENT PIPING TO ROOF. SIZE PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE WITH EQUIPMENT AND EXISTING CONDITIONS.
15. LOUVER IN DOOR SPECIFIED BY ARCHITECT.
16. MOUNT UNIT HEATER HIGH IN SPACE. CONTRACTOR TO VERIFY CLEARANCES FROM COMBUSTIBLES PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
17. MOUNT RELOCATED UNIT HEATER HIGH IN SPACE. CONTRACTOR TO VERIFY CLEARANCES FROM COMBUSTIBLES PRIOR TO INSTALLATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
18. NEW VEHICLE EXHAUST SYSTEM TO BE PROVIDED AS PART OF THIS PROJECT. CONTACT RICK AT ACS CAROLINAS FOR PRICING AND SPECIFICATION. SEE DETAIL 1/M201 FOR SCHEDULE AND DETAILS.
19. EXTEND VEHICLE EXHAUST DUCTWORK OUT SIDE OF BUILDING. TERMINATE TO MATCH EXISTING VEHICLE EXHAUST SYSTEMS. COORDINATE WITH EXISTING CONDITIONS. MAINTAIN A MINIMUM OF 10FT FROM DISCHARGE TO NEAREST OUTSIDE AIR INTAKE.
20. EXISTING HEAT PUMP UNIT TO REMAIN. CONTRACTOR SHALL VERIFY PROPER OPERATION OF EXISTING UNIT. (TYPICAL)

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ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

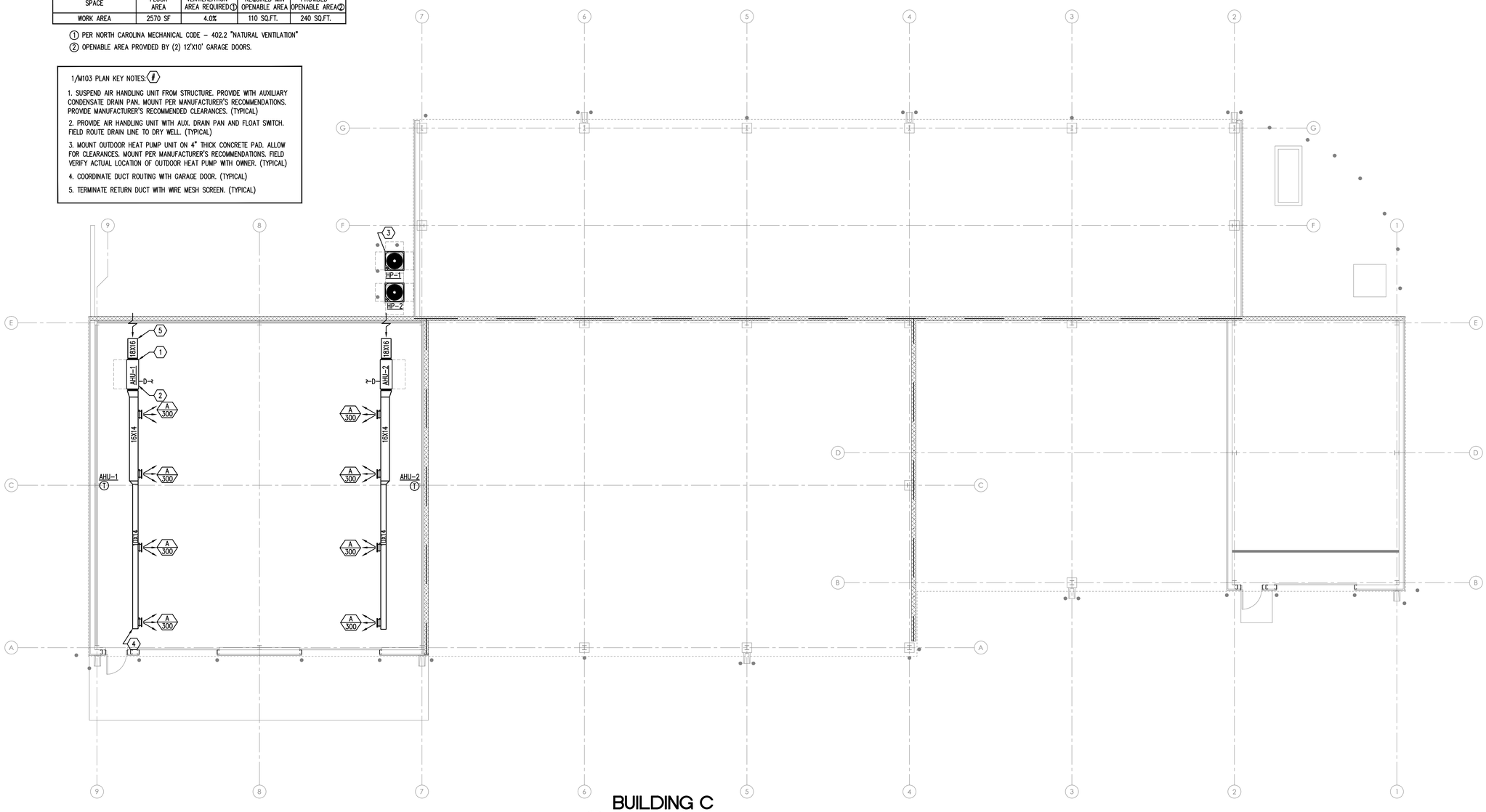
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OUTSIDE AIR CALCULATION (WAREHOUSE)				
SPACE	FLOOR AREA	VENTILALATION AREA REQUIRED①	REQUIRED MIN OPENABLE AREA	PROVIDED OPENABLE AREA②
WORK AREA	2570 SF	4.0%	110 SQ.FT.	240 SQ.FT.

① PER NORTH CAROLINA MECHANICAL CODE – 402.2 "NATURAL VENTILATION"
② OPENABLE AREA PROVIDED BY (2) 12'X10' GARAGE DOORS.

1/M103 PLAN KEY NOTES: (#)

1. SUSPEND AIR HANDLING UNIT FROM STRUCTURE. PROVIDE WITH AUXILIARY CONDENSATE DRAIN PAN. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES. (TYPICAL)
2. PROVIDE AIR HANDLING UNIT WITH AUX. DRAIN PAN AND FLOAT SWITCH. FIELD ROUTE DRAIN LINE TO DRY WELL. (TYPICAL)
3. MOUNT OUTDOOR HEAT PUMP UNIT ON 4" THICK CONCRETE PAD. ALLOW FOR CLEARANCES. MOUNT PER MANUFACTURER'S RECOMMENDATIONS. FIELD VERIFY ACTUAL LOCATION OF OUTDOOR HEAT PUMP WITH OWNER. (TYPICAL)
4. COORDINATE DUCT ROUTING WITH GARAGE DOOR. (TYPICAL)
5. TERMINATE RETURN DUCT WITH WIRE MESH SCREEN. (TYPICAL)



1 M102 BUILDING C FLOOR PLAN - HVAC
SCALE: 1/8" = 1' - 0"

MECHANICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

- ☐ C401.2 Method 1 (ASHRAE 90.1)
- ☒ C401.2 Method 2 (Prescriptive)
- ☐ C401.2 Method 3 (Energy Cost Budget)

Thermal Zone 4A

Exterior Design Conditions
winter dry bulb 16°F
summer dry bulb 90°F
summer wet bulb 75°F
Interior Design Conditions
winter dry bulb 70°F
summer dry bulb 75°F
relative humidity 50%

Building Heating Load Tenant Space – 85,900 BTU/hr
Building Cooling Load Tenant Space – 186,400 BTU/hr
Mechanical Spacing Conditioning System
Unitary – Garage area is served by one existing gas unit heater, two existing gas radiant heaters, one new gas unit heater and one new gas radiant heater. Building C is served by two new split system heat pump units with electric strip auxiliary heating. Efficiencies and outputs for heating and cooling are listed in the schedules – See drawings.

Boiler – Not applicable to this project.
Chiller – Not applicable to this project.
Equipment efficiencies
Efficiencies are listed on equipment schedules – See drawings.

Equipment schedules with motors.
Multispeed motors are used on this project and are included in the efficiency rating of the unit. See drawings for efficiencies.

NCSBC: ENERGY, Section C406 Compliance –
- ☐ C406.2 More Efficient Mechanical Equipment
- ☒ C406.3 Reduced LPD
- ☐ C406.4 Enhanced Digital Lighting Controls
- ☐ C406.5 On-site Renewable Energy
- ☐ C406.6 Dedicated Outdoor Air System
- ☐ C406.7 Reduced Energy Use in Service Water Heating
- ☐ C406.8 Load Fraction
- ☐ N/A

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical system and equipment requirements of the North Carolina State Building, Code, Edition–Energy.

HVAC LEGEND

- CEILING LOUVERED SUPPLY DIFFUSER
- CEILING RETURN GRILLE
- CEILING EXHAUST GRILLE/FAN
- THERMOSTAT
- RECTANGULAR DUCT
- EXISTING DUCT
- MANUAL VOLUME DAMPER
- DUCT TAP & FLEX
- SD — SMOKE DETECTOR
- DUCT TURNS DOWN
- A 100 — DIFFUSER MARK / DIFFUSER CFM
- VEF-1 VEHICLE EXHAUST FAN MARK
- EF-1 EXHAUST FAN MARK
- AHU-1 AIR HANDLING UNIT MARK
- HP-1 HEAT PUMP MARK
- EUH-1 ELECTRIC UNIT HEATER MARK
- PW-1 GAS PRESSURE WASHER UNIT MARK
- GRH-1 GAS RADIANT HEATER MARK
- UH-1 UNIT HEATER MARK
- ONE HOUR RATED PARTITION
- TWO HOUR RATED PARTITION
- THREE HOUR RATED PARTITION

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SHEET NAME:
BUILDING B HVAC FLOOR PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

SHEET NUMBER
M102

SPLIT SYSTEM HEAT PUMP SCHEDULE

INDOOR UNIT																OUTDOOR UNIT									
MARK	CARRIER MODEL NO.	TYPE	CFM	ESP	FAN HP	ELEC. HEAT	STAGES	OUTSIDE AIR	EAT DB/WB	LAT DB/WB	OUTSIDE DESIGN SUMMER/WINTER	VOLT/PH	MCA	MOCP	REMARKS	MARK	CARRIER MODEL NO.	TOTAL COOLING	SENSIBLE COOLING	ARI HEATING	SEER	MCA	MOCP	VOLT/PH	REMARKS
AHU-1	FV4CNF005	HEAT PUMP	1200	0.5"	1/2	6 KW	1	– CFM	80.0°F/67.0°F	60.4°F/58.1°F	92.0°F/16.0°F	208/1	44.7	45	(1)	HP-1	25HCE436	34.40 MBH	25.43 MBH	31.44 MBH	15.5	11.7	20	208/3	(1)
AHU-2	FV4CNF005	HEAT PUMP	1200	0.5"	1/2	6 KW	1	– CFM	80.0°F/67.0°F	60.4°F/58.1°F	92.0°F/16.0°F	208/1	44.7	45	(1)	HP-2	25HCE436	34.40 MBH	25.43 MBH	31.44 MBH	15.5	11.7	20	208/3	(1)

(1) PROVIDE UNIT WITH FAN COIL FILTER, ELECTRIC HEAT COIL, DISCONNECT SWITCH, FACTORY INSTALLED THERMOSTATIC EXPANSION VALVE, AND SINGLE POINT WIRING CONNECTION. PROVIDE WITH CARRIER 7-DAY PROGRAMMABLE THERMOSTAT.

(1) PROVIDE CYCLE PROTECTOR, FILTER DRIER, HIGH AND LOW PRESSURE SWITCHES, EVAPORATOR FREEZE THERMOSTAT, ISOLATION RELAY, COMPRESSOR START ASSIST, CRANKCASE HEATER, OUTDOOR THERMOSTAT, THERMOSTATIC EXPANSION VALVE, TIME DELAY RELAY AND ALL ACCESSORIES REQUIRED FOR LOW AMBIENT OPERATION TO 0°F.

EXHAUST FAN SCHEDULE

MARK	STATUS	COOK MODEL	TYPE	CFM	ESP	WATTS/HP	VOLTS/ϕ	RPM	REMARKS
EF-F1	RELOCATED	–	SIDEWALL PROP	3125	–	–	–	–	(1)
EF-F2	RELOCATED	–	SIDEWALL PROP	3125	–	–	–	–	(1)
EF-F3	EXISTING	–	CABINET FAN	75	–	–	–	–	(1)
EF-F4	EXISTING	–	CABINET FAN	75	–	–	–	–	(1)
EF-F5	EXISTING	–	CABINET FAN	75	–	–	–	–	(1)
EF-F6	NEW	GC-140	CABINET FAN	100	0.25"	70W	120/1	1500	(2)(3)

(1) EXISTING UNIT TO BE SERVICED BY QUALIFIED TECHNICIAN TO VERIFY PROPER OPERATION OF UNIT. MECHANICAL CONTRACTOR SHALL REPAIR EXISTING SYSTEM COMPONENTS AND PROVIDE NEW SYSTEM COMPONENTS TO PROVIDE COMPLETE OPERATIONAL UNIT AS INDICATED ON THE DRAWINGS. VERIFY CFM INDICATED ON SCHEDULE.

(2) FAN CONTROLLED BY WALL MOUNTED CONTROLLER. FAN SHALL BE DIRECT DRIVE. SUPPORT FAN FROM STRUCTURE. PROVIDE FAN WITH BACKDRAFT DAMPER AND SINGLE POINT ELECTRICAL CONNECTION.

(3) PROVIDE WITH COOK MODEL WALL CAP. ROUTE 6"ϕ EXHAUST DUCT TO WALL CAP AS SHOWN ON DRAWINGS.

AIR DISTRIBUTION SCHEDULE

MARK	NAILOR MODEL	PANEL SIZE	TYPE	NECK SIZE	TYPE	REMARKS
(A)	MODEL 61DH-O, STEEL, DOUBLE DEFLECTION, HORZ., PROVIDE W/ OBD.	12X6	SIDEWALL GRILLE	12X6	SUPPLY	COLOR TO BE DETERMINED BY ARCHITECT
(B)	MODEL 6500, STEEL, LOUVERED FACE, WITH BEVELED FRAME, SQUARE TO ROUND TRANSITION, & OBD.	12X12	SURFACE MOUNTED	6"ϕ (9X9)	SUPPLY	VERIFY CEILING TYPES. COLOR BY ARCHITECT

ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUF/MODEL	SERVICE	KW	OUTPUT	VOLTS/ϕ	AMPS	REMARKS
EUH-F1	CHROMALOX CXH-A-EP	–	5.0	17.0	208/1	26.3	(1)
EUH-F2	CHROMALOX CXH-A-EP	–	5.0	17.0	208/1	26.3	(1)

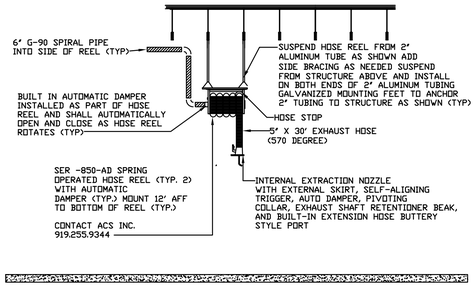
(1) INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WALL MOUNTED THERMOSTAT.

GAS RADIANT HEATER SCHEDULE

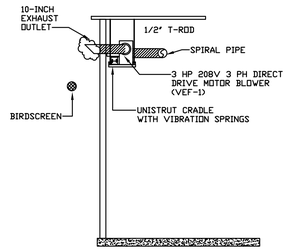
MARK	MANUFACTURER/MODEL	INPUT	OUTPUT	% EFF.	FUEL	VOLTS/ϕ	TUBE LENGTH	CLEARANCES TO COMBUSTABLES(IN) MTG. ANG.	TOP	BELOW	SIDE	SIDE	MTG. HEIGHT	REMARKS
GRH-1	SPACE RAY/LTUS100	100,000	–	–	NAT. GAS	120/1	–	0°	6	66	28	28	–	(1)(2)

(1) PROVIDE HEATER WITH ALUMINIZED STEEL REFLECTORS AND WALL MOUNTED THERMOSTAT.

(2) HEATER ELEVATION TO MATCH EXISTING. INTENT IS TO MATCH EXISTING SYSTEMS. VERIFY CLEARANCES FROM COMBUSTIBLES. INSTALL HEATER PER MANUFACTURER'S RECOMMENDATIONS.



SPRING OPERATED HOSE REEL DETAIL

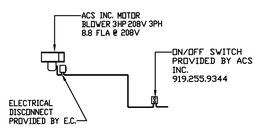


VEF-1 EXHAUST OUTLET DETAIL

VEHICLE EXHAUST VENTILATION FAN SCHEDULE

MARK	TYPE	HP	VOLTAGE	PHASE	AMPERAGE	MODEL NUMBER	NOTES
VEF-1	ACS, INC.	3	208V	THREE	8.8 FLA	4700	1-3

(1) VEHICLE EXHAUST VENTILATION SYSTEM BASED ON ACS, INC. 919.255.9344
(2) REFER TO ELECTRICAL FLOW DIAGRAM AND NOTES FOR SYSTEM WIRING
(3) VEF-1 FAN DATA: 1900 CFM @ 6" SP - 3490 RPM - 87 dB(A) @ 3M @ 5" SP



VEHICLE EXHAUST ELECTRICAL FLOW DIAGRAM

VEHICLE EXHAUST DETAILS/SCHEDULES

1 / M201 SCALE: NTS

N
wkcc
W E
S
WEST KEY CONSULTING CORPORATION
4008 BARRETT DR SUITE 204
RALEIGH NC 27609
919.881.8020
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C-1474
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JAMES M. RUSSELL SEAL 31987 NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 11/8/24

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

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GENERAL NOTES:

1. THE HEATING AND AIR CONDITIONING CONTRACTOR (THE CONTRACTOR) SHALL PROVIDE ALL SPECIFIED AND MISCELLANEOUS MATERIAL AND LABOR AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM AS DESCRIBED BY THESE PLANS AND SPECIFICATIONS.

2. ALL FLEXIBLE DUCT CONNECTIONS TO HAVE MANUFACTURED SPIN-IN FITTINGS WITH DAMPER, AND MANUAL LOCKING QUADRANT.

3. PROVIDE AN ELECTRONIC PROGRAMMABLE THERMOSTAT FOR EACH AIR HANDLING UNIT. THERMOSTAT SHALL BE HONEYWELL MODEL RTH9585WF1004/U (PER OWNER) WITH SUBBASE (OR EQUAL). PROVIDE WITH TRANSPARENT LOCKING COVERS. THE HIGHEST OPERATING COMPONENT OF THE THERMOSTAT SHALL BE MOUNTED AT 48" MAX. A.F.F. AND IN COMPLIANCE WITH NC ACCESSIBILITY CODE. THERMOSTAT SHALL BE CAPABLE OF CONTROLLING COOLING AND HEATING SYSTEM OPERATION IN COMPLIANCE WITH SECTION C403.2.4 OF THE NC ENERGY CONSERVATION CODE.

4. THE MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER TRADES PRIOR TO THE INSTALLATION OF ANY OF HIS EQUIPMENT, DUCTWORK, OR PIPING.

5. ALL EQUIPMENT, MATERIALS, AND INSTALLATION OF SUCH SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. IF THERE IS A CONFLICT IN THE ABOVE REQUIREMENTS, THE MORE STRINGENT SHALL BE USED. ACCESS TO ALL EQUIPMENT SHALL BE PROVIDED IN COMPLIANCE WITH CHAPTER 3 OF THE NORTH CAROLINA MECHANICAL CODE.

6. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS REQUIRED FOR HIS WORK.

7. WORKMANSHIP SHALL BE FIRST-CLASS AND PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN.

8. REFER TO ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS, DO NOT SCALE THESE DRAWINGS.

9. COORDINATE EXACT LOCATION OF ALL DIFFUSERS WITH LIGHTS, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES.

10. THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL HIS OWN SUPPORT EQUIPMENT. LOCATIONS SHALL BE COORDINATED WITH ALL CONTRACTORS PRIOR TO INSTALLATION.

11. ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE. ALL EQUIPMENT INSTALLATIONS SHALL ALLOW FOR ALL CODE AND MANUFACTURER REQUIRED CLEARANCES.

12. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER CONNECTIONS TO THE EQUIPMENT PROVIDED UNDER HIS CONTRACT.

13. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONTROL WIRING FOR HIS EQUIPMENT.

14. ALL OUTSIDE AIR SUPPLY AND EXHAUST DUCTWORK, FANS, AND EXTERIOR OPENINGS SHALL BE PROVIDED WITH CLASS 1 MOTORIZED DAMPERS IN COMPLIANCE WITH SECTION C403.2.4.3 OF THE NC ENERGY CONSERVATION CODE. GRAVITY DAMPERS MAY BE PERMITTED IN BUILDING LESS THAN 3 STORIES IN HEIGHT OR FOR EXHAUST AIRFLOW OF 300 CFM OR LESS.

15. FOR SPACES LARGER THAN 500 SQUARE FEET, THE CONTRACTOR SHALL PROVIDE CO2 SENSORS AND MOTORIZED DAMPERS ON ALL HVAC SYSTEMS TO PROVIDE DEMAND CONTROLLED VENTILATION IN COMPLIANCE WITH SECTION C403.2.6 OF THE NC ENERGY CONSERVATION CODE UNLESS OTHERWISE NOTED.

16 LINE SUPPLY AND RETURN DUCT WITH DUCT LINER A MINIMUM OF FIVE FEET BEYOND FIRST ELBOW DOWNSTREAM OF DISCHARGE AND INTAKE OF UNIT. DUCT LINER SHALL BE A MINIMUM OF R-6 ACOUSTICAL LINER. INSULATE ALL SUPPLY AND RETURN DUCT DOWN STREAM OF LINED DUCT WITH BLANKET INSULATION. BLANKET INSULATION SHALL A MINIMUM OF R-6 GLASS FIBER WITH FIRE RETARDANT FOIL-SCRIM KRAFT JACKET. AS AN ALTERNATE, THE MECHANICAL CONTRACTOR MAY LINE RIGID DUCTWORK WITH ACOUSTICAL LINER IN LIEU OF WRAPPING DUCTWORK WITH BLANKET INSULATION. PROVIDE R-6 DUCT INSULATION FOR ANY DUCTWORK LOCATED OUTSIDE OF OUTSIDE OF BUILDING ENVELOPE. ALL INSULATION R-VALUES SHALL BE IN COMPLIANCE WITH SECTION C403.2.9 OF THE NORTH CAROLINA ENERGY CONSERVATION CODE.

17. DUCTWORK AS SHOWN ON THE DRAWINGS IS STRICTLY DIAGRAMMATIC. ALL DUCT SIZES SHOWN ARE FREE AREA. COORDINATE EXACT LOCATION OF ALL DUCTWORK WITH THE BUILDING STRUCTURE AND OTHER TRADES.

18. IT WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT ITEMS TO BE FURNISHED UNDER HIS CONTRACT WILL FIT THE SPACE AVAILABLE. HE SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SERVICE CLEARANCES, AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT AND MEANING OF THESE DRAWINGS AND SPECIFICATIONS.

19. ALL DUCT TO BE CONSTRUCTED OF GALVANIZED STEEL SHEETS IN ACCORDANCE WITH SMACNA GAGES AND STANDARDS. SUPPLY DUCT JOINTS SHALL BE SEALED AIRTIGHT AND SHALL BE IN COMPLIANCE WITH SECTION C403.2.9.1 OF THE NORTH CAROLINA ENERGY CONSERVATION CODE. ALL SQUARE BENDS OR ELBOW FITTINGS SHALL HAVE TURNING VANES. PROVIDE SPLITTER DAMPERS AT SUPPLY TEES AND EXTRACTORS AT ALL SUPPLY AIR BRANCHES. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE REQUIRED FOR SYSTEM BALANCING AS SHOWN ON PLANS OR AS REQUIRED.

20. INSTALL FLEXIBLE DUCT CONNECTIONS AT THE SUPPLY AND RETURN DUCTWORK CONNECTIONS OF ALL AIR HANDLING UNITS FOR VIBRATION ISOLATION.

21. PROVIDE FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH THE FIRE-RATED WALLS AS SHOWN ON PLANS OR AS REQUIRED. PROVIDE RADIATION DAMPERS AT ALL DIFFUSERS/GRILLES MOUNTED IN FIRE-RATED CEILINGS AND CEILING ASSEMBLIES AS SHOWN ON PLANS OR AS REQUIRED.

22. PROVIDE ACCESS PANELS IN THE DUCTWORK FOR ALL FIRE DAMPERS OR OTHER DUCT MOUNTED EQUIPMENT. LOCATE ACCESS PANEL SO THAT ACCESS TO EQUIPMENT IS EASILY ATTAINED.

23. CONTRACTOR SHALL PROVIDE ENTHALPY CONTROLLED ECONOMIZERS FOR ANY AIR CONDITIONING UNIT OVER 65,000 BTHU OF COOLING UNLESS OTHERWISE NOTED. ECONOMIZER SHALL CONFORM TO REQUIREMENTS OF SECTION C403.3 OF THE NC ENERGY CONSERVATION CODE.

24. PRIOR TO BIDDING, MECHANICAL CONTRACTOR IS TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND RESOLVE ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND THESE PLANS WITH THE ENGINEER.

25. PROVIDE A COMPLETE 1-YEAR WARRANTY ON ALL LABOR AND MATERIALS. ALSO, MANUFACTURER'S PUBLISHED 5-YEAR NON PRORATED COMPRESSOR WARRANTY.

26. CONTRACTOR SHALL FURNISH A BOUND SET OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT TO THE OWNER UPON COMPLETION OF PROJECT. MANUALS SHALL INCLUDE ALL ITEMS AS SPECIFIED IN SECTION C408.2.5 OF THE NORTH CAROLINA ENERGY CONSERVATION CODE.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SYSTEM COMMISSIONING AS REQUIRED PER SECTION C408 OF THE NC ENERGY CONSERVATION CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STATEMENT OF SYSTEM COMMISSIONING (APPENDIX C1) AS REQUIRED IN SECTION 503.2.9.3 OF THE NORTH CAROLINA ENERGY CONSERVATION CODE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING STATEMENT OF COMPLIANCE AS REQUIRED

28. OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM ALL EXHAUST DISCHARGE AND PLUMBING VENTS.

29. INSTALL ESCUTCHEONS IN ALL PLACES WHERE PIPING PENETRATES A WALL IN AN EXPOSED LOCATION.

30. REPLACE ALL FILTERS JUST PRIOR TO ACCEPTANCE BY THE OWNER.

31. THE MECHANICAL CONTRACTOR SHALL PROVIDE SMOKE DETECTORS PER SECTION 606 OF N.C. MECHANICAL CODE IN THE RETURN OF EACH UNIT TO DE-ENERGIZE UNIT IN THE EVENT OF FIRE. SMOKE DETECTORS SHALL BE U.L. LISTED FOR DUCT INSTALLATION. SUPERVISION OF DUCT DETECTOR SHALL BE PER SECTION 606.4.1. MECHANICAL CONTRACTOR SHALL PROVIDE VISUAL AND AUDIBLE ALARM FOR EACH DETECTOR.

32. MOUNT AIR HANDLING UNIT IN SUCH A WAY THAT ADEQUATE SLOPE IS PROVIDED FOR ALL DRAIN LINES. PIPE CONDENSATE FROM COIL AND DRAIN PAN FULL SIZE TO AN APPROVED PLACE OF DISPOSAL IN COMPLIANCE WITH NCMC, SECTION 307. PROVIDE FLOAT SWITCH IN CONDENSATE PANS TO STOP FAN UPON ACCUMULATION OF CONDENSATE IN PAN.

33. THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE MECHANICAL PLANS, INCLUDING THE SCHEDULES AND DETAILS PRIOR TO INSTALLATION OF ANY MECHANICAL SYSTEMS AND SHALL RESOLVE ANY CONFLICTS WITH THE ENGINEER.

34. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES. ALL DRAWINGS INDICATE THE GENERAL ARRANGEMENT DESIRED. THE EXACT LOCATIONS AND DETAILS OF CONSTRUCTION MAY BE SUCH THAT VARIANCES ARE REQUIRED. THE DRAWINGS DO NOT SHOW ALL BENDS, OFFSETS, AND FITTINGS THAT MAY BE REQUIRED FOR THE COMPLETE EXECUTION OF THIS CONTRACT. SUCH VARIANCES AND CONTINGENCIES SHALL BE ALLOWED FOR IN THE CONTRACTOR'S BID AND SHALL BE ACCOMPLISHED WITHOUT ADDITIONAL COST TO THE OWNER. PRIOR TO ORDERING EQUIPMENT, THE CONTRACTOR SHALL PREPARE COORDINATION DRAWINGS SHOWING HOW HIS EQUIPMENT IS TO BE LOCATED IN THE SPACE INDICATED. THIS DRAWING SHALL SHOW THE NEW AND EXISTING WORK OF ALL OTHER TRADES. THE CONTRACTOR SHALL CONTACT THE OTHER CONTRACTORS INVOLVED FOR DIMENSIONS, LOCATIONS, AND REQUIRED CLEARANCES OF THE EQUIPMENT THEY INTEND TO PROVIDE FOR THIS JOB. THE AFOREMENTIONED COORDINATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

35. ALL MATERIALS USED SHALL BE NEW AND FREE OF DEFECTS. WHERE TRADE NAMES ARE MENTIONED, THEY ARE GIVEN AS A REFERENCE TO THE QUALITY OF THE APPARATUS REQUIRED. ALL MATERIALS AND EQUIPMENT SHALL BEAR THE UL LABEL OR EQUIVALENT WHERE APPLICABLE. OTHER MAKES MAY BE USED IF APPROVED IN WRITING BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A COMPLETE LIST OF MATERIALS AND EQUIPMENT PROPOSED FOR USE IN THIS CONTRACT TO THE ENGINEER WITHIN TEN DAYS FOLLOWING THE AWARD OF CONTRACT. IF SUCH LIST IS NOT SUBMITTED, THE CONTRACTOR SHALL SUPPLY THE MATERIALS AND EQUIPMENT SPECIFIED OR AS DIRECTED BY THE ENGINEER.

36. FLEXIBLE DUCT SHALL BE INSULATED, SOUND ATTENUATING, LOW VELOCITY TYPE AND SHALL COMPLY WITH NFPA 90A AND 90B. FLEXIBLE DUCT SHALL BE U.L. LISTED, CLASS 1 INSULATED TYPE, RATED FOR A MINIMUM OF 4" POSITIVE STATIC PRESSURE AND A MINIMUM OF 1" NEGATIVE STATIC PRESSURE. FLEXIBLE DUCT SHALL BE FACTORY-FORMED, COMPOSED OF SPIRAL WOUND, CORROSION RESISTANT WIRE BONDED TO AN INNER FABRIC LINER, COVERED WITH INSULATION WITH A VAPOR BARRIER. INSULATION R-VALUES SHALL BE PER THE NORTH CAROLINA ENERGY CONSERVATION CODE.

37. ROUTE REFRIGERANT LINES FROM OUTDOOR CONDENSING UNITS IN THE MOST DIRECT PATH TO AIR HANDLER LOCATED ABOVE CEILING. INSULATE WITH FOAM INSULATION. INSULATION SHALL BE IN COMPLIANCE WITH THE NORTH CAROLINA ENERGY CONSERVATION CODE. PROVIDE LONG LINE REFRIGERATION KIT AS REQUIRED.

38. IF FIRE ALARM SYSTEM IS PROVIDED IN BUILDING, THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND WIRE ALL SMOKE DETECTORS. IF FIRE ALARM SYSTEM IS NOT PROVIDED IN BUILDING, THE MECHANICAL CONTRACTOR SHALL PROVIDE AND WIRE SMOKE DETECTORS. REGARDLESS OF WHO PROVIDES DETECTOR, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO INSTALL THE SMOKE DETECTORS IN THE RETURN OF REQUIRED UNITS TO DE-ENERGIZE UNIT IN THE EVENT OF FIRE. SMOKE DETECTORS SHALL BE U.L. LISTED FOR DUCT INSTALLATION. ELECTRICAL CONTRACTOR AND MECHANICAL CONTRACTOR SHALL COORDINATE SMOKE DETECTOR REQUIREMENTS FOR SYSTEM PRIOR TO INSTALLATION.

39. UPON COMPLETION OF THE WORK, A TEST AND BALANCE SHALL BE PERFORMED IN ACCORDANCE WITH "AABC" REQUIREMENTS. AIR FLOW AND STATIC PRESSURE SHALL BE MEASURED AND RECORDED FOR ALL OUTLETS ON EACH SYSTEM. ONE WEEK AFTER THE OWNER HAS OCCUPIED THE BUILDING AND OPENED FOR BUSINESS, THE CONTRACTOR SHALL RE-BALANCE THE SYSTEM ACCORDING TO THE NEEDS OF THE OCCUPANTS. PROVIDE A COMPLETE TEST AND BALANCE REPORT TO THE ENGINEER.

40. AS APPLICABLE, THE CONTRACTOR SHALL VERIFY THE OPERATION OF ALL EXISTING MECHANICAL EQUIPMENT IN THE AREA OF WORK. ALL MEASUREMENTS SHALL BE RECORDED NECESSARY TO ASCERTAIN THE PROPER OPERATION OF THE EQUIPMENT INCLUDING, BUT NOT LIMITED TO, AMPERAGE, GPM FLOW, INLET AND OUTLET TEMPERATURES, AIR FLOW, AND INLET AND OUTLET STATIC PRESSURES. ANY DEFICIENCY IN THE RATED OUTPUT OF THE EQUIPMENT SHALL BE REPORTED TO THE ENGINEER AND BUILDING OWNER. IN ANY CASE, SAID REPORT SHALL BE SUBMITTED TO THE ENGINEER UPON REQUEST.

41. THE CONTRACTOR SHALL, AT THE COMPLETION OF THE WORK, CLEAN, POLISH, AND/OR WASH ALL EXPOSED ITEMS OF MATERIALS, EQUIPMENT, AND FIXTURES IN HIS CONTRACT TO LEAVE SUCH ITEMS BRIGHT AND CLEAN. THE CONTRACTOR SHALL KEEP THE PREMISES CLEAR OF DEBRIS FROM HIS WORK DURING CONSTRUCTION AND LEAVE THE AREA AND BUILDING CLEAN AT COMPLETION OF THE CONTRACT.

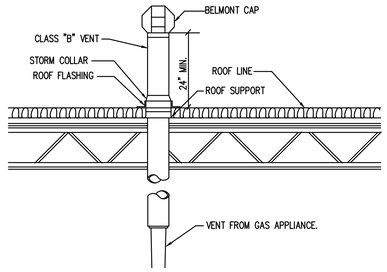
42. MECHANICAL AND ELECTRICAL EQUIPMENT SHALL OPERATE WITHOUT OBJECTIONABLE NOISE OR VIBRATION, AS DETERMINED BY THE ENGINEER. IF SUCH OBJECTIONABLE NOISE OR VIBRATION SHOULD BE PRODUCED AND TRANSMITTED TO OCCUPIED PORTIONS OF THE BUILDING, THE CONTRACTOR SHALL MAKE THE NECESSARY CHANGES TO CORRECT THE NOISE OR VIBRATION WITHOUT ADDITIONAL COST TO THE OWNER.

43. ALL AIR HANDLING UNIT SUPPLY FANS SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.

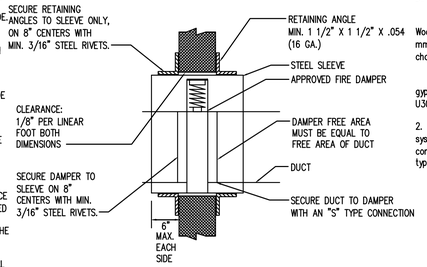
44. MECHANICAL CONTRACTOR SHALL CONCEAL ALL EXTERIOR PENETRATIONS WHERE POSSIBLE. COORDINATE ALL EXTERIOR PENETRATIONS WITH BUILDING OWNER (TENANT) AND GENERAL CONTRACTOR.

45. CATALOG PART NUMBERS INDICATED ARE FOR DESCRIPTIVE AND QUALITY STANDARDS ONLY, NOT TO BE UTILIZED FOR ORDERING WITHOUT VERIFICATION. ENGINEER SHALL NOT BE RESPONSIBLE FOR MISMATCHED OR INACCURATE PART NUMBERS. COORDINATE CLOSELY WITH ALL TRADES PRIOR TO MATERIAL/EQUIPMENT ORDERING.

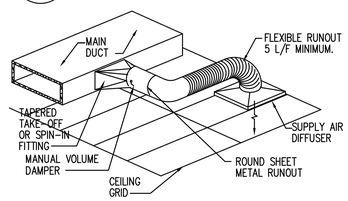
46. ALL GAS PIPING SHALL BE INSTALLED BY THE MECHANICAL CONTRACTOR. GAS PIPE SHALL BE SCHEDULE 40 BLACK STEEL. PROVIDE ALL VALVES, FITTINGS AND CONTROLS AS REQUIRED BY LOCAL, STATE, AND NATIONAL CODES OR BY MANUFACTURER'S WRITTEN RECOMMENDATIONS FOR A COMPLETE AND OPERATIONAL SYSTEM. THE GAS SYSTEM SHALL HAVE AN INITIAL SYSTEM PRESSURE OF 2 PSI. SIZING OF GAS PIPE SIZES BASED ON A PRESSURE DROP OF 1.0 PSI. GAS SPECIFIC GRAVITY OF 0.65. PROVIDE ALL APPLIANCES CONNECTED TO GAS SYSTEM WITH GAS REGULATOR. WHEN LOCATED INDOORS, REGULATORS SHALL BE VENTED TO OUTDOORS OR EQUIPPED WITH A LEAK LIMITING DEVICE IN COMPLIANCE WITH THE NORTH CAROLINA FUEL CODE, SECTION 410.



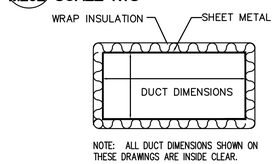
1 GAS APPLIANCE VENT DETAIL
M202 SCALE: NONE



3 FIRE DAMPER DETAIL
M202 SCALE: NONE

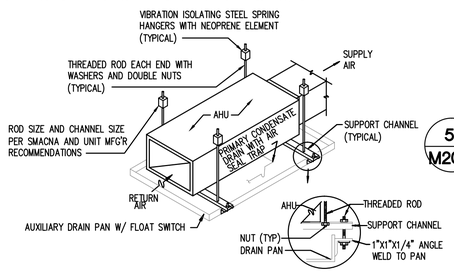


4 SUPPLY DIFFUSER INSTALLATION DETAIL
M202 SCALE: NTS

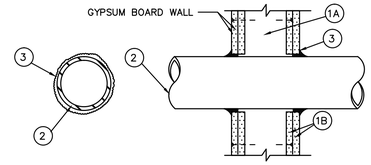


NOTE: ALL DUCT DIMENSIONS SHOWN ON THESE DRAWINGS ARE INSIDE CLEAR.

5 PRIMARY DUCT FABRICATION DETAIL
M202 SCALE: NONE



2 AHU HANGER DETAIL ABOVE CEILING
M202 SCALE: NONE



System No. W-L-1001

June 15, 2005

F Ratings – 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings – 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient – less than 1 CFM/sq ft
L Rating At 400 F – less than 1 CFM/sq ft

1. Wall Assembly – The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs – Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3-5/8 in. (92 mm) wide by 1-3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* – Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetrant – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe – Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe – Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit – Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing – Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe – Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. Through Penetrating Product* – Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG INC

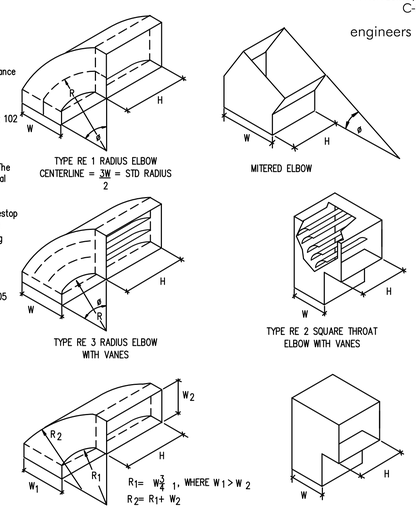
3. Fill, Void or Cavity Material* – Caulk or Sealant – Min 5/8. , 1–1/4,1–7/8 and 2–1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

3M COMPANY – CP 25WB+ or FB-3000 WT.

FOR FRAMED WALL ONLY 1,2,3, OR 4 HOUR PENETRATION FIRESTOP DETAIL
6 M202 SCALE: NONE



7 RECTANGULAR SHEETMETAL ELBOWS
M202 SCALE: NONE

N
wkcc
E
S
WEST KEY CONSULTING CORPORATION
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engineers | consultants

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HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING C HVAC FLOOR PLANS

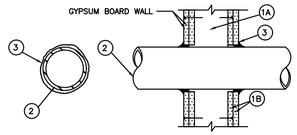
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **JMR**

SHEET NUMBER
M202

GENERAL NOTES AND REQUIREMENTS.

1. WORKMANSHIP SHALL CONFORM TO NECA PUBLICATION "STANDARDS OF INSTALLATION".
2. INSTALLATION SHALL COMPLY WITH NATIONAL ELECTRICAL CODE, STATE BUILDING CODE, AND ALL REQUIREMENTS OF THE LOCAL INSPECTOR (FURNISH INSPECTION CERTIFICATE). ALL WORK SHALL BE BY LICENSED ELECTRICAL CONTRACTOR.
3. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS. DO NOT SCALE THESE DRAWINGS.
4. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THE PROJECT, PRIOR TO INSTALLATION OF ELEC. EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND TO ALLOW FOR OPTIMUM MAINTENANCE AND WORKING SPACE.
5. ALL BRANCH CIRCUITS SHALL BE IN ZINC–COATED EMT, OR RIGID CONDUIT AS PERMITTED OR REQUIRED BY THE NATIONAL ELECTRICAL CODE. TYPE MC CABLE MAY BE USED AS PERMITTED BY THE NATIONAL ELECTRICAL CODE. SCHEDULE 40 PVC CONDUIT MAY BE USED ONLY FOR THE SECONDARY UNDERGROUND SERVICE, THE UNDERGROUND TELEPHONE SERVICE CONDUIT, AND BRANCH TELEPHONE SYSTEM CONDUITS LOCATED BELOW THE FLOOR SLAB ON GRADE OR BURIED ON THE EXTERIOR OF THE BUILDING, OR IN CONCRETE BLOCK WALLS. ALL CONDUIT SHALL BE A 1/2" MINIMUM SIZE. EMT FITTINGS SHALL BE STEEL COMPRESSION TYPE.
6. PROVIDE 4"WIDE PLASTIC TAPE, MAGNETIC DETECTABLE TYPE, COLORED RED WITH SUITABLE WARNING LEGEND DESCRIBING BURIED ELECTRICAL LINES OR ORANGE DESCRIBING BURIED TELEPHONE LINES.
7. ALL CONDUCTORS SHALL BE COPPER TYPE THHN, OR XHHW, SOLID FOR #10 AWG OR #12 AWG, AND STRANDED FOR ALL LARGER SIZES.
8. ALL WIRING SHALL BE CONCEALED IN WALLS, UNDER SLAB, OR ABOVE SUSPENDED CEILING SPACE.
9. ALL WIRE AND CONDUIT SIZES ARE BASED ON 75°C THHN WIRE UNLESS OTHERWISE NOTED.
10. CONDUITS MAY BE RUN EXPOSED IN MECHANICAL AREAS. CONDUITS SHALL BE RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS AND SHALL BE RUN IN GROUPS. SEAL ALL PENETRATIONS TIGHT AROUND ALL CONDUITS WHEN PASSING INTO MECHANICAL ROOMS.
11. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY OF THE SUSPENDED CEILING SYSTEM.
12. WHERE FIRST OUTLET ON BRANCH CIRCUIT IS GREATER THAN FIFTY (50) FEET FROM THE PANELBOARD, USE #10 AWG MINIMUM TO THE FIRST OUTLET.
13. ALL MOUNTING HEIGHTS ARE GIVEN TO THE CENTERLINE OF THE DEVICE UNLESS OTHERWISE NOTED. RECEPTACLES, DATA AND TELEPHONE OUTLET TO BE MOUNTED 18"AFF UNLESS OTHERWISE NOTED. LIGHT SWITCHES TO BE MOUNTED 48"AFF UNLESS OTHERWISE NOTED.
14. THE LOCATION OF ALL WALL MOUNTED DEVICES, INCLUDING MOUNTING HEIGHTS, SHALL BE FIELD VERIFIED WITH THE ARCHITECT PRIOR TO INSTALLATION.
15. ALL FUSES, DISCONNECT SWITCHES, AND BREAKER SIZES, SHOWN FOR MECHANICAL EQUIPMENT, SHALL BE VERIFIED BEFORE THE PURCHASE OR INSTALLATION OF SAID EQUIPMENT, WITH THE EQUIPMENT SUPPLIER AND THE MECHANICAL CONTRACTOR.
16. ALL DISCONNECT SWITCHES ARE TO BE FUSIBLE TYPE. FUSE IN ACCORDANCE WITH THE NAMEPLATE DATA WITH DUAL ELEMENT TYPE FUSES BY BUSSMAN OR EQUAL.
17. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS, SWITCHES, AND RECEPTACLES UNDER THE ELECTRICAL BID AND SHALL INCLUDE ALL NECESSARY CIRCUITS TO AND FINAL CONNECTIONS TO THE EQUIPMENT PROVIDED BY ALL SUPPLIERS, UNLESS NOTED OTHERWISE BY OTHER DISCIPLINES. COORDINATE CLOSELY.
18. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED SO THAT ALL CODE–REQUIRED AND MANUFACTURER–RECOMMENDED SERVICING CLEARANCES ARE MAINTAINED. INSTALLATIONS SHALL FULLY COMPLY WITH NEC 110–26 FOR CLEARANCE REQUIREMENTS.
19. COORDINATE LOCATIONS OF ALL LIGHT FIXTURES WITH THE REFLECTED CEILING PLANS. LIGHT FIXTURES INSTALLED IN MECHANICAL AREAS SHALL AVOID MECHANICAL PIPING, EQUIPMENT, DUCTWORK, ETC.
20. GROUND SHALL BE PER N.E.C. PROVIDE SEPARATE GROUNDING CONDUCTOR FOR ALL CIRCUITS. PROVIDE DRIVEN AND COLD WATER GROUND FOR MAIN SERVICE.
21. GROUND TELEPHONE EQUIPMENT PER NEC.
22. THE ELECTRICAL CONTRACTOR SHALL PATCH ANY WALL, CEILING, OR FLOOR OPENING AND PENETRATIONS RESULTING FROM DEMOLITION OR NEW WORK IN EXISTING AREAS.
23. ALL WIRING SHALL BE CONCEALED IN METALLIC CONDUIT.
24. COMBINE HOMERUNS IN CONDUIT AS DESIRED (3 ON 3–PHASE, 2 ON SINGLE PHASE). DO NOT OVERLOAD NEUTRALS.
25. ALL CIRCUITS SHALL BE TESTED WITH 500 VOLT TESTER PRIOR TO ENERGIZING.
26. ALL WALL OUTLET BOXES SHALL BE STEEL CITY OR RACO
27. RECEPTACLES, SWITCHES, COVERPLATES, ETC. SHALL BE HUBBELL, LEVITON, OR LEGRAND EXCEPT AS SPECIFIED. COLOR SPECIFIED BY ARCHITECT, VERIFY COLOR PRIOR TO PURCHASE.
28. PROVIDE PULL WIRE IN ALL EMPTY CONDUIT.
29. CONDUIT SHALL BE LABELED EVERY TEN FEET.
30. ALL RECEPTACLE AND SWITCH PLATES SHALL BE LEGIBLY MARKED WITH LABEL MARKER TO CLEARLY INDICATE PANELBOARD ORIGIN AND CIRCUIT NUMBER. VERIFY IF LABEL SHOULD BE ON THE INSIDE OR OUTSIDE FACE OF COVERPLATE WITH OWNER/TENANT.
31. PROVIDE PHENOLIC LABELS ON ALL MAJOR EQUIPMENT INCLUDING SWITCHBOARDS, MOTOR CONTROL CENTERS, PANELBOARDS, INDIVIDUAL STARTERS, SAFETY SWITCHES, AND TRANSFORMERS. PROVIDE ENGRAVED THREE–LAYER LAMINATED PLASTIC, WHITE LETTERS ON BLACK BACKGROUND.
32. ALL CIRCUIT BREAKERS IN PANEL SHALL BE SERIES RATED WITH MAIN BREAKER OR FULLY RATED FOR THE SYSTEM.
33. CONTRACTOR SHALL PROVIDE ENGINEER A MINIMUM OF 3 COPIES OF SHOP DRAWINGS FOR LIGHTS, SWITCHGEAR, PANELS, ETC.
34. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE W/ ALL OTHER TRADES REGARDING VOLTAGES, LOADS, CIRCUIT BREAKERS, ETC. PRIOR TO BEGINNING ANY WORK.
35. AS USED ON THESE DOCUMENTS, THE WORD "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL THE ITEM OR EQUIPMENT AND MAKE THE FINAL CONNECTION AS REQUIRED.
36. PANELS SHALL BE BY SQUARE "D", G.E. AND SIEMENS. PANELS SHALL BE SQUARE "D" TYPE NQOD OR "I–LINE" AS REQUIRED.
37. FOR NEW OR MODIFIED SERVICES, PRIOR TO ENERGIZATION AND AFTER UTILITY FAULT CURRENT CONFIRMATION AT THE DELIVERY POINT, PROVIDE PLAQUE AT SERVICE EQUIPMENT STATING MAXIMUM AVAILABLE FAULT CURRENT AND DATE OF CALCULATION PER NEC 110.24.
38. OPERABLE DEVICES SHALL BE ACCESSIBLE IN COMPLIANCE WITH ANSI A117.1, SECTION 309, OPERABLE PARTS. WHERE GFI RECEPTACLES ARE NOT ACCESSIBLE, PROVIDE GFI BREAKER.
39. RECESSED LIGHTING FIXTURES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE IC RATED AND LABELED AS MEETING ASTM E283. OR SHALL BE TENTED TO REMOVE THEM FROM THE THERMAL ENVELOPE
40. BRANCH CIRCUITS SERVING EXIT & EMERGENCY FIXTURES SHALL BE CLEARLY LABELED ON THE PANELBOARD DIRECTORY PER NEC 110.22(A), 408.4 & 700.12(I).
41. UPON PROJECT COMPLETION, THE EC SHALL PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL NEW AND ALTERED PANELBOARDS WITH CIRCUIT DESIGNATIONS COMPLYING WITH THE REQUIREMENTS OF NEC 408.4(A).
42. ALL EXIT AND EMERGENCY LIGHTING SHALL BE FED FROM LOCAL BRANCH CIRCUIT, UNSWITCHED AND HAVE A MINIMUM OF 90 MINUTE BATTERY BACKUP PER NEC 700.12(I)(2).
43. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES AND EQUIPMENT SHALL BE LABELED AND LISTED BY A THIRD PARTY AGENCY. THE THIRD PARTY AGENCY SHALL BE AMONG THOSE ACCEPTABLE TO THE NC BUILDING CODE COUNCIL TO LABEL ELECTRICAL AND MECHANICAL EQUIPMENT.



U.L. #WL1001

1. Wall Assembly - The 1,2,3, or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plateds and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.

B. Wallboard,Gypsum* - Nom 1/2 or 5/8 in. thick, 4ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 13-1/2 in.

2. Pipe or Conduit - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing or Type L or (or heavier) copper tubing or nom 1 in. (or smaller) flexible steel conduit. When copper pipe or flexible steel conduit is used, max F Rating of firestop system (Item 3) is 2h. Steel pipes or conduits larger than nom 4 in. diam may only be used in wall constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides of wall assembly.

3. Fill, Void or Cavity Material* - Caulk - Caulk fill material installed to completely fill annular space between pipe or conduit and gypsum wallboard and with a min 1/4 in. diam bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam, In	Annular Space, In	F Rating, Hr	T Rating, Hr
1	0 to 3/16	1 or 2	0+, 1 or 2
1	1/4 to 1/2	3 or 4	3 or 4
4	0 to 1/4	1 or 2	0
4	0 to 1-1/2#	1 or 2	0
6	1/4 to 1/2	3 or 4	0
12	3/16 to 3/8	1 or 2	0

\+ When copper pipe is used, T Rating is 0 h
\# 0 to 1-1/2 in. annular space applies only when Type CP-25 WB+ caulk is used.

Minnesota Mining & Mfg. Co. - Types CP-25 S/L, CP-25 N/S, CP-25 WB, CP-25 WB+.
(NOTE: L Rating apply only when Type CP-25 WB+ caulk is used).
*Bearing the UL Classification Marking

1 E001 RATED WALL PENETRATION DETAIL
SCALE: NTS

ELECTRICAL SYSTEM AND EQUIPMENT (SECTION C405)

METHOD OF COMPLIANCE SECTION C405.1 ■

LIGHTING SCHEDULE
LAMP TYPE REQUIRED IN FIXTURE
NUMBER OF LAMPS IN FIXTURE
BALLAST TYPE USED IN FIXTURE
NUMBER OF BALLASTS IN FIXTURE
TOTAL WATTAGE PER FIXTURE
} SEE LIGHTING FIXTURE SCHEDULE
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED: 7.5KW VS 18.1KW
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED: 0.8KW VS 3.4kW

ADDITIONAL EFFICIENCY PACKAGE OPTIONS
☐ C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE
■ C406.3 REDUCED LIGHTING POWER DENSITY (below 90% of allowed watts)
☐ C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
☐ C406.5 ON–SITE RENEWABLE ENERGY
☐ C406.6 DEDICATED OUTDOOR AIR SYSTEM
☐ C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

DESIGNER STATEMENT:

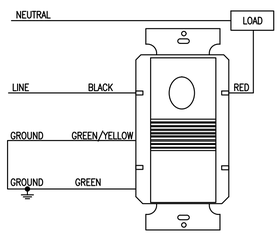
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, ENERGY CODE 2018 EDITION

NAME: ANGUS M. CLARK PE

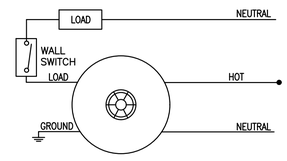
TITLE: ELECTRICAL ENGINEER

ABBREVIATIONS

A	AMPS, AMPERES	KVA	KILOVOLT–AMPERES
AIC	AMPS INTERRUPTING CURRENT	LTG	LIGHTING
ATS	AUTOMATIC TRANSFER SWITCH	MC	METAL CLAD CABLE
AF	AMP FUSE	MCA	MINIMUM CIRCUIT AMPACITY
AFC	ABOVE FINISHED CEILING	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MLO	MAIN LUGS ONLY
AFG	ABOVE FINISHED GRADE	NA	NOT APPLICABLE
AHJ	AUTHORITY HAVING JURISDICTION	NCSBC	NORTH CAROLINA STATE BUILDING CODE
BRKR	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
BLDG	BUILDING	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
C	CONDUIT	NF	NON–FUSED
CKT	CIRCUIT	NL	NIGHT LIGHT – UNSWITCHED
CLG	CEILING	NIC	NOT IN CONTRACT
CTR	COUNTER – DEVICE MOUNTED ABOVE	NTS	NOT TO SCALE
DISC	DISCONNECT SWITCH	MC	MECHANICAL CONTRACTOR
E	EXISTING TO REMAIN	P	POLES
EC	ELECTRICAL CONTRACTOR	PC	PLUMBING CONTRACTOR
ECB	ENCLOSED CIRCUIT BREAKER	PH	PHASE
EF	EXHAUST FAN	PNL	PANELBOARD
EM	EMERGENCY	R	RELOCATED
EMT	ELECTRICAL METALLIC TUBING	SW	SHOW WINDOW RECEP, 18"MAX ABOVE WINDOW
ETR	EXISTING TO REMAIN	T	TAMPER RESISTANT RECEPTACLE
EX	EXISTING	UL	UNDERWRITER'S LABORATORIES
FA	FIRE ALARM	ULSE	UL SERVICE ENTRANCE
GC	GENERAL CONTRACTOR	UON	UNLESS OTHERWISE NOTED
GFCI	GROUND FAULT CURRENT INTERRUPTER	V	VOLTS
G	GROUND	W	WIRE
HP	HORSEPOWER	W/	WITH
IMC	INTERMEDIATE METAL CONDUIT	W/O	WITHOUT
JB	JUNCTION BOX	WP	WEATHERPROOF
KW	KILOWATT		



2 E001 OCC. SENSOR SWITCH WIRING DIAGRAM (TYP.)
SCALE: NTS



3 E001 OCC. SENSOR SWITCH WIRING DIAGRAM (TYP.)
SCALE: NTS

ELECTRICAL LEGEND

(ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT)

	HOMERUN TO POWER SOURCE, 2#12,#12G 1/2"C UON
	BRANCH CIRCUIT WIRING CONCEALED IN WALLS AND CEILINGS
	BRANCH CIRCUIT WIRING CONCEALED UNDER FLOOR OR UNDERGROUND
	RECESSED LIGHT FIXTURE, REFER TO LUMINAIRE SCHEDULE
	DOWNLIGHT FIXTURE, REFER TO LUMINAIRE SCHEDULE
	WALL MOUNTED LIGHT FIXTURE, REFER TO LUMINAIRE SCHEDULE
	SURFACE MOUNTED LIGHT FIXTURE, REFER TO LUMINAIRE SCHEDULE
	EXIT SIGN, DIRECTIONAL ARROWS AS INDICATED. REFER TO LUMINAIRE SCHEDULE
	EMERGENCY LIGHT, REFER TO LUMINAIRE SCHEDULE
	EXIT/EMERGENCY LIGHT COMBINATION, REFER TO LUMINAIRE SCHEDULE
	DUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE
	SIMPLEX RECEPTACLE, AMP RATING AS NOTED, OR MATCH BREAKER SIZE
GFI	GFCI RECEPTACLE
WP	WEATHERPROOF WHILE N USE GFCI RECEPTACLE
T	TAMPER RESISTANT RECEPTACLE
SW	SHOW WINDOW RECEPTACLE MOUNTED 18"MAX ABOVE WINDOW
	FLUSH MOUNTED FLOOR RECEPTACLE
	FLUSH MOUNTED QUAD RECEPTACLE AND DATA, PROVIDE (2)1"C FOR DATA/HDMI CABLES TO ABOVE CEILING VOID.
J	JUNCTION BOX FOR POWER CONNECTION
	EQUIPMENT POWER CONNECTION
	FUSED DISCONNECT SWITCH
	NON–FUSED DISCONNECT SWITCH
	PANELBOARD
$	SINGLE POLE SWITCH
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
$OS	WALL MOUNTED DUAL TECH OCCUPANCY SENSOR SWITCH (LINE VOLTAGE)
OS	CEILING OR WALL MOUNTED DUAL TECH OCCUPANCY SENSOR (LINE VOLTAGE)
$LV	LOW VOLTAGE LIGHTING CONTROL SWITCH
$D	DIMMER SWITCH. 1500W SLIDER TYPE
$	DIMMER SWITCH, 0–10V
$0–10V	KEYED SWITCH
$T	WALL MOUNTED DECORATOR DIGITAL TIMER SWITCH WITH ON/OFF BUTTON, 48"AFF, 120/277V PROGRAMMABLE . INTERMATIC E1400 SERIES OR EQUAL.
LC	LIGHTING CONTACTOR, MECHANICALLY HELD
LCP	LIGHTING CONTROL PANEL
	COMBINATION TELEPHONE/DATA OUTLET, EMPTY SINGLE GANG BOX WITH 3/4"C STUBBED ABOVE CEILING.
TV	CABLE TV OUTLET, EMPTY SINGLE GANG BOX WITH 3/4"C STUBBED ABOVE CEILING. COORDINATE EXACT MOUNTING HEIGHT WITH GC PRIOR TO ROUGH–IN.
CR	CARD READER ROUGH–IN, WITH EMPTY 3/4"C STUBBED ABOVE CEILING
GND	BUILDING GROUND CONNECTION POINT, 3/8" COPPER STUD WITH #6G WIRE ROUTED TO GROUND BUS AT SERVICE DISCONNECT
PC	PHOTOCELL, MOUNT WITH SENSOR FACING NORTH, EXACT LOCATION TO BE DETERMINED
C	CAMERA ROUGH–IN, PROVIDE 3/4"C TO ABOVE CEILING VOID. COORDINATE EXACT LOCATIONS & MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO ROUGH–INS.
CR	CEILING MOUNTED CORD REEL, SELECTED BY OWNER & INSTALLED BY EC. MOUNTED TO BOTTOM OF STRUCTURAL CEILINGS.
(X)	EXISTING EQUIPMENT TO BE REMOVED
(E)	EXISTING EQUIPMENT TO REMAIN
(R)	EXISTING EQUIPMENT TO BE RELOCATED

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13719 ANGUS M. CLARK

11/8/2024

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

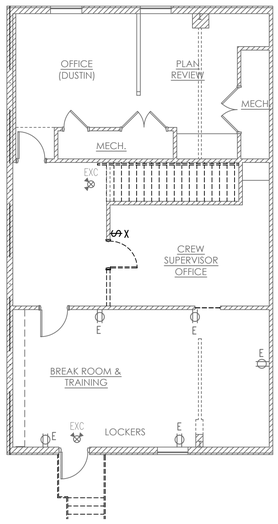
#	DESCRIPTION:	DATE

SHEET NAME:
ELECTRICAL COVER SHEET

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

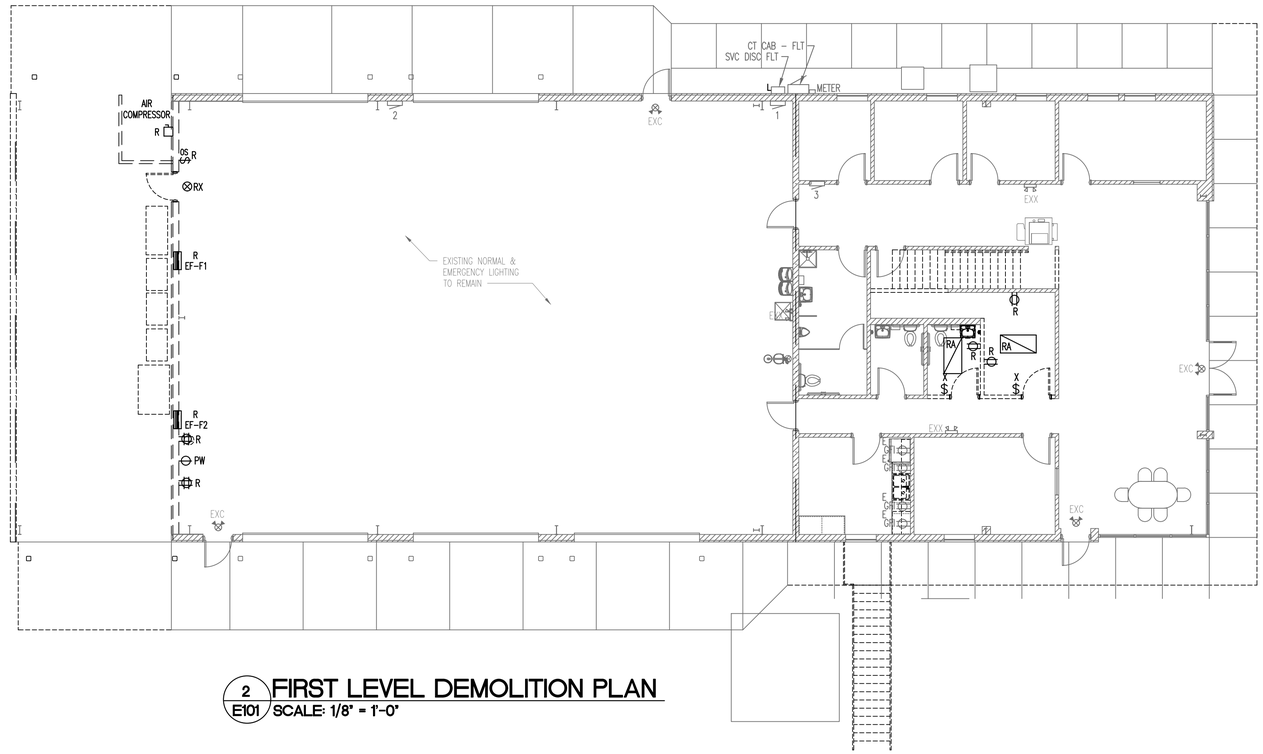
SHEET NUMBER
E001



1 E101 LEVEL 2 DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
3. EXIT, EMERGENCY AND NIGHT LIGHTS (NL) SHALL BE CONNECTED "UNSWITCHED" TO LIGHTING CIRCUIT SERVING ROOM WHERE THEY ARE LOCATED (TYPICAL)
4. RELOCATED LIGHT FIXTURES REMAIN CONNECTED TO EXISTING LIGHTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED AND REVISE SWITCHING AS SHOWN.
5. COORDINATE EXACT LOCATIONS & MOUNTING HEIGHTS OF EXTERIOR LIGHT FIXTURES WITH GC & ARCHITECT PRIOR TO ROUGH-INS.



2 E101 FIRST LEVEL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

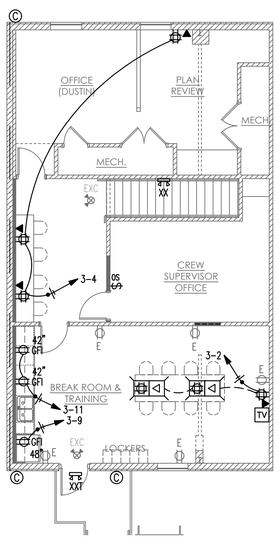
KEY NOTES:

(A) EXISTING/RELOCATED RECEPTACLES SHALL BE REMOVED & REPLACED WITH NEW GFCI RECEPTACLES, TYPICAL FOR MAINTENANCE GARAGE AREA.

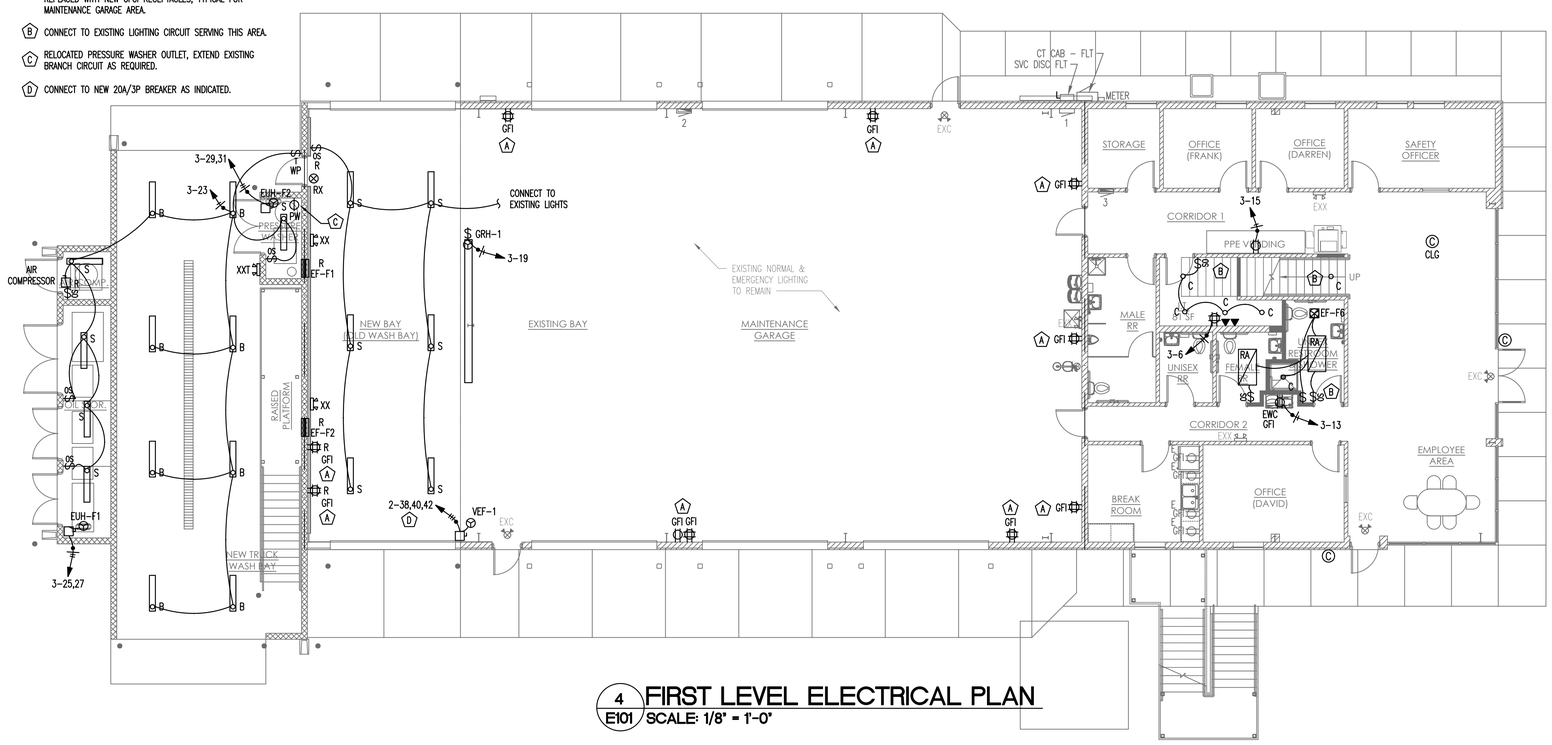
(B) CONNECT TO EXISTING LIGHTING CIRCUIT SERVING THIS AREA.

(C) RELOCATED PRESSURE WASHER OUTLET, EXTEND EXISTING BRANCH CIRCUIT AS REQUIRED.

(D) CONNECT TO NEW 20A/3P BREAKER AS INDICATED.



3 E107 LEVEL 2 ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"



4 E101 FIRST LEVEL ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

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11/8/2024

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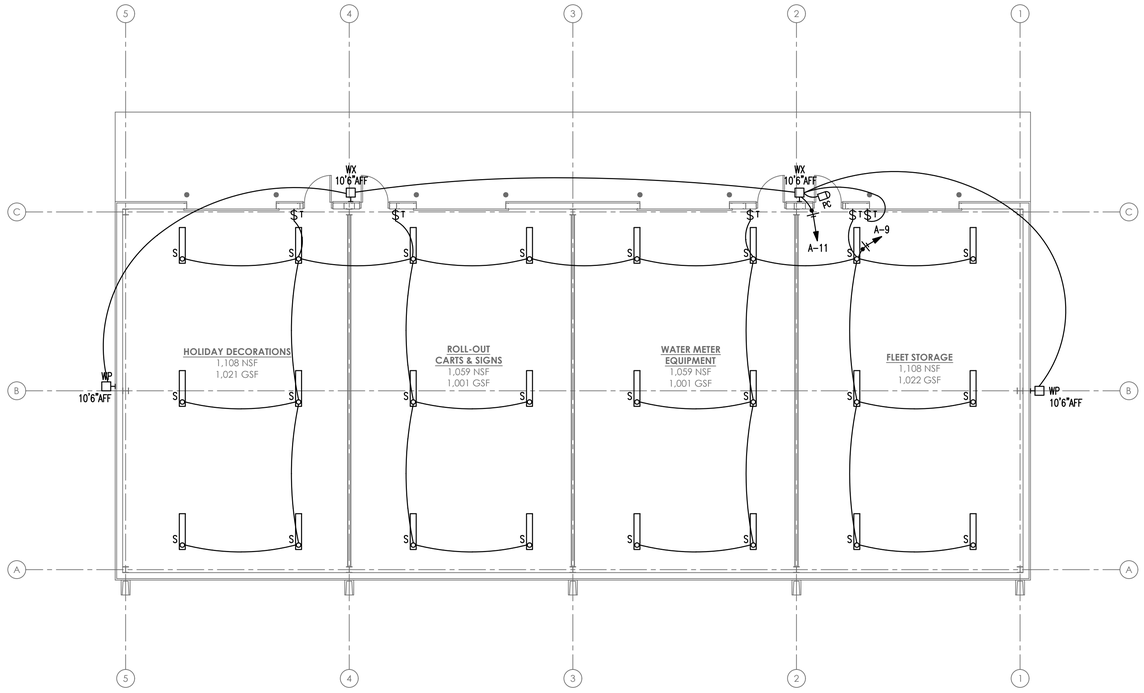
#	DESCRIPTION:	DATE

SHEET NAME:
FLEET BUILDING ELECTRICAL PLANS

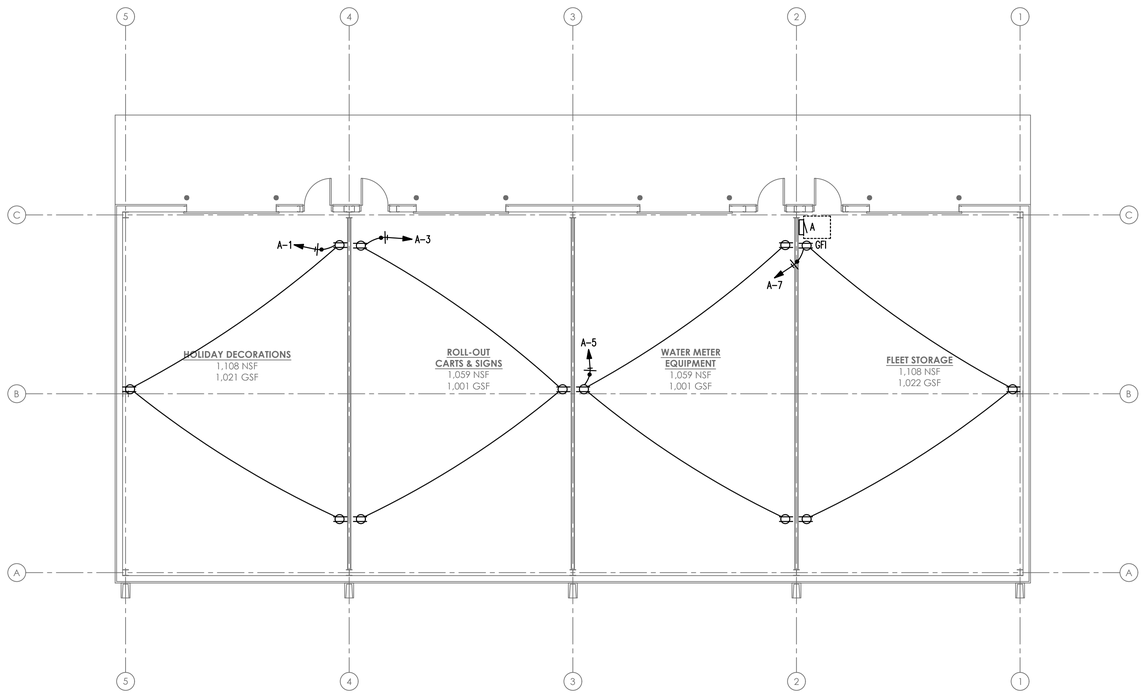
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E101



1 E102 BUILDING A - LIGHTING PLAN
SCALE: 1/8" = 1'-0"



2 E102 BUILDING A - POWER PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
3. EXIT, EMERGENCY AND NIGHT LIGHTS (NL) SHALL BE CONNECTED "UNSWITCHED" TO LIGHTING CIRCUIT SERVING ROOM WHERE THEY ARE LOCATED (TYPICAL)
4. RELOCATED LIGHT FIXTURES REMAIN CONNECTED TO EXISTING LIGHTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED AND REVISE SWITCHING AS SHOWN.
5. COORDINATE EXACT LOCATIONS & MOUNTING HEIGHTS OF EXTERIOR LIGHT FIXTURES WITH GC & ARCHITECT PRIOR TO ROUGH-INS.

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#	DESCRIPTION:	DATE

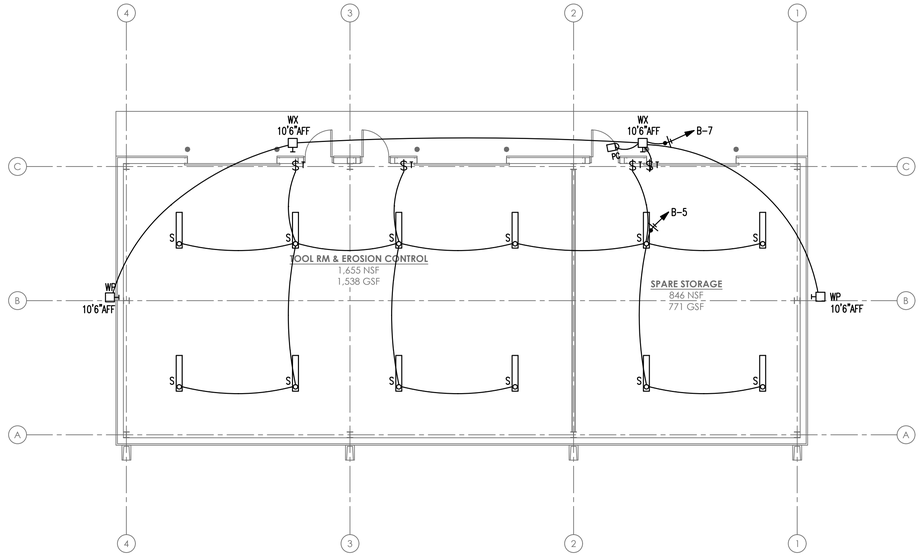
SHEET NAME:
BUILDING A ELECTRICAL PLANS

PHASE:
BID SET

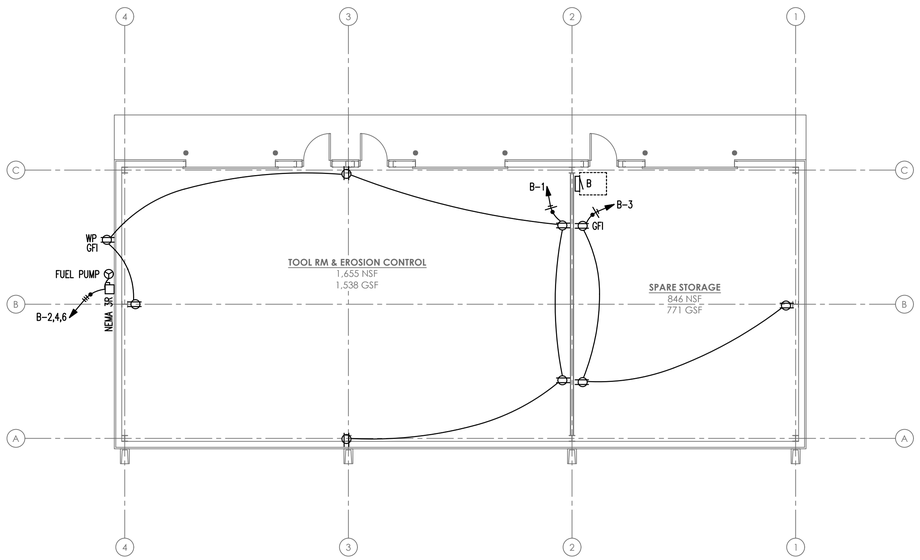
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E102

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1 E103 **BUILDING B - LIGHTING PLAN**
SCALE: 1/8" = 1'-0"



2 E103 **BUILDING B - POWER PLAN**
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
3. EXIT, EMERGENCY AND NIGHT LIGHTS (NL) SHALL BE CONNECTED "UNSWITCHED" TO LIGHTING CIRCUIT SERVING ROOM WHERE THEY ARE LOCATED (TYPICAL)
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REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING B ELECTRICAL PLANS

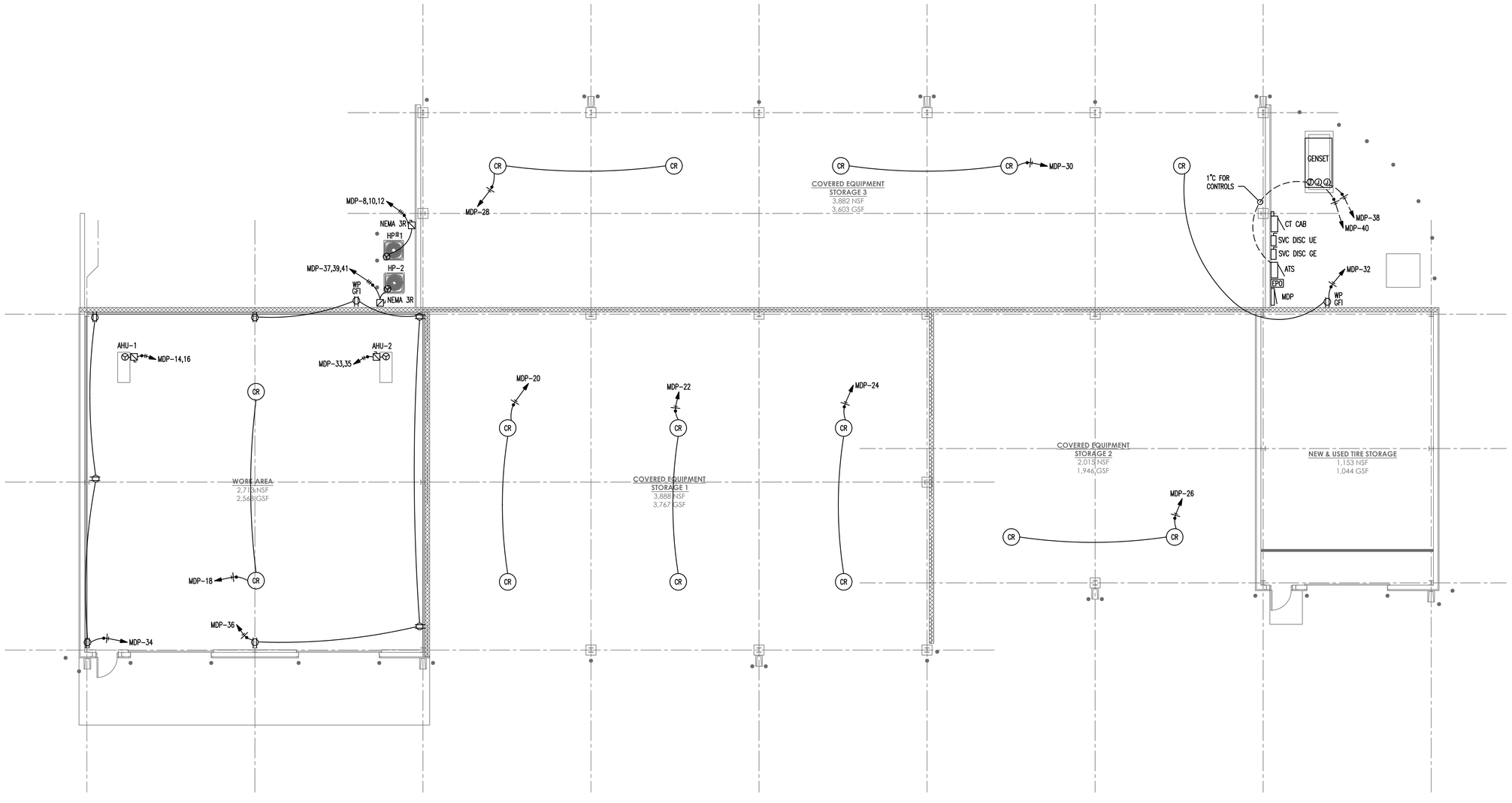
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E103

GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
3. EXIT, EMERGENCY AND NIGHT LIGHTS (NL) SHALL BE CONNECTED "UNSWITCHED" TO LIGHTING CIRCUIT SERVING ROOM WHERE THEY ARE LOCATED (TYPICAL)
4. RELOCATED LIGHT FIXTURES REMAIN CONNECTED TO EXISTING LIGHTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED AND REVISE SWITCHING AS SHOWN.
5. COORDINATE EXACT LOCATIONS & MOUNTING HEIGHTS OF EXTERIOR LIGHT FIXTURES WITH GC & ARCHITECT PRIOR TO ROUGH-INS.



1 E104 BUILDING C - POWER PLAN
SCALE: 1/8" = 1'-0"

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REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING A ELECTRICAL PLANS

PHASE:
BID SET

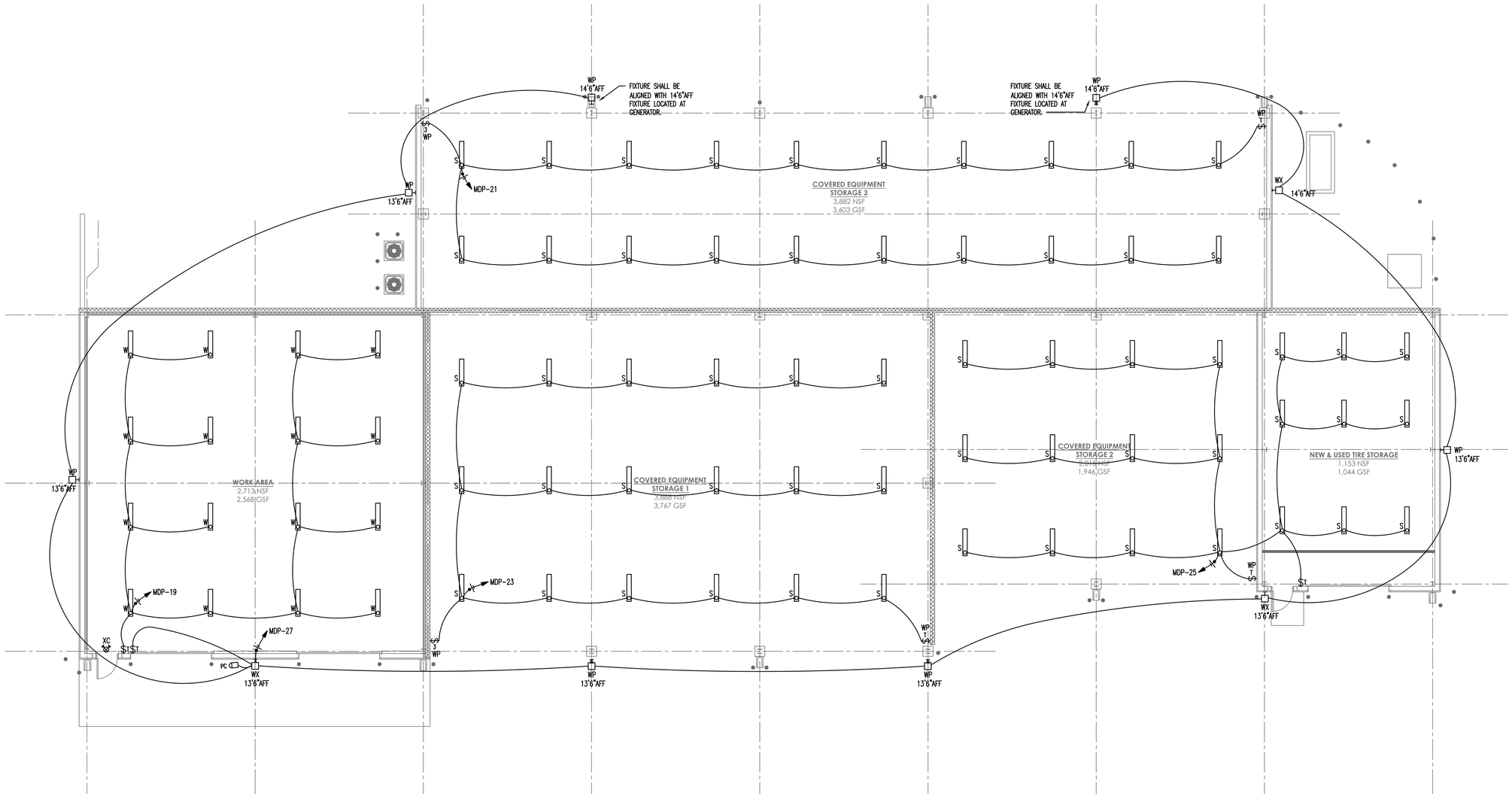
ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E104

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GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
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4. RELOCATED LIGHT FIXTURES REMAIN CONNECTED TO EXISTING LIGHTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED AND REVISE SWITCHING AS SHOWN.
5. COORDINATE EXACT LOCATIONS & MOUNTING HEIGHTS OF EXTERIOR LIGHT FIXTURES WITH GC & ARCHITECT PRIOR TO ROUGH-INS.



2 BUILDING C - LIGHTING PLAN
E105 SCALE: 1/8" = 1'-0"

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REVISIONS:

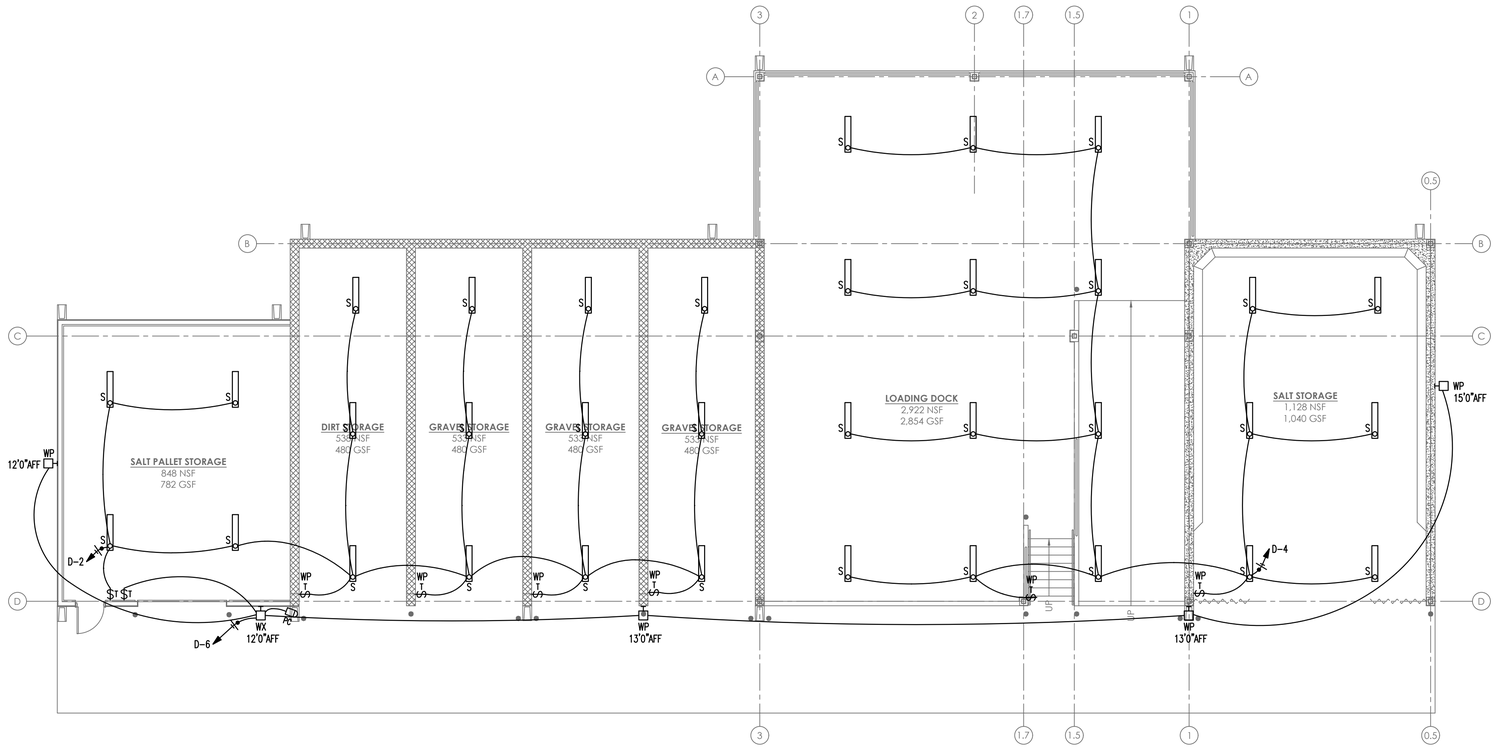
#	DESCRIPTION:	DATE

SHEET NAME:
BUILDING A ELECTRICAL PLANS

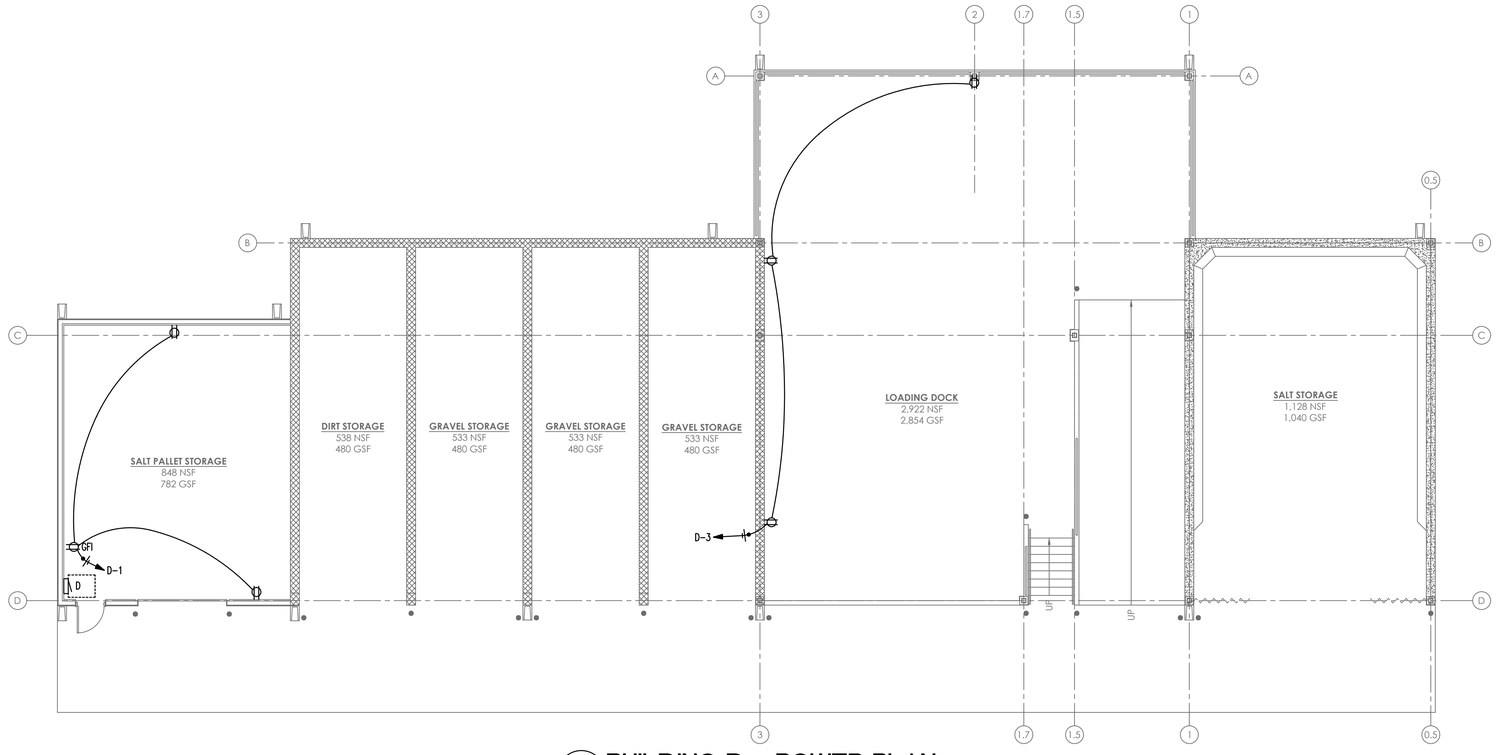
PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E105



1 E106 **BUILDING D - LIGHTING PLAN**
SCALE: 1/8" = 1'-0"



2 E106 **BUILDING D - POWER PLAN**
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL DEVICES WITH OWNER PRIOR TO ROUGH-IN (TYPICAL).
2. RELOCATED DEVICES TO REMAIN CONNECTED TO EXISTING CIRCUITS. EXTEND BRANCH CIRCUIT WIRING AS REQUIRED.
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#	DESCRIPTION:	DATE

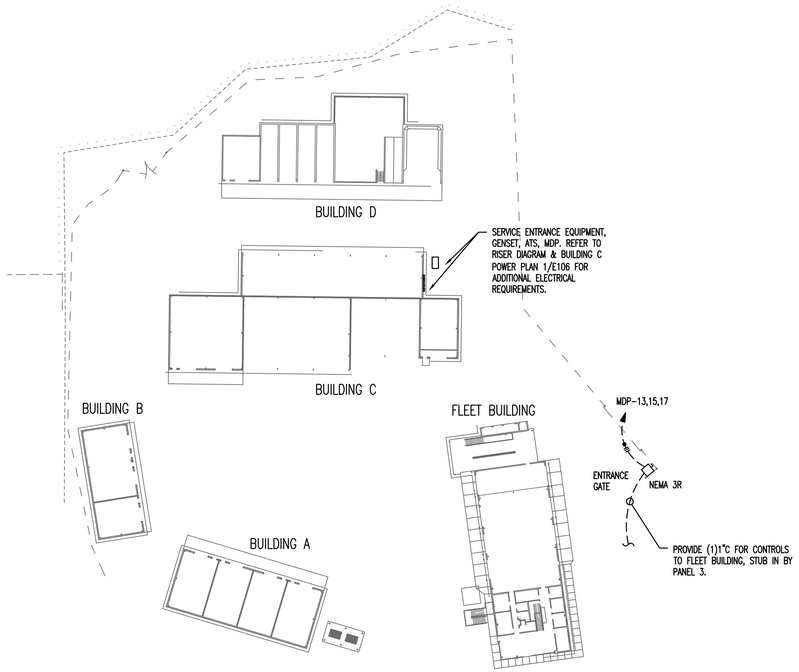
SHEET NAME:
BUILDING A ELECTRICAL PLANS

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E106

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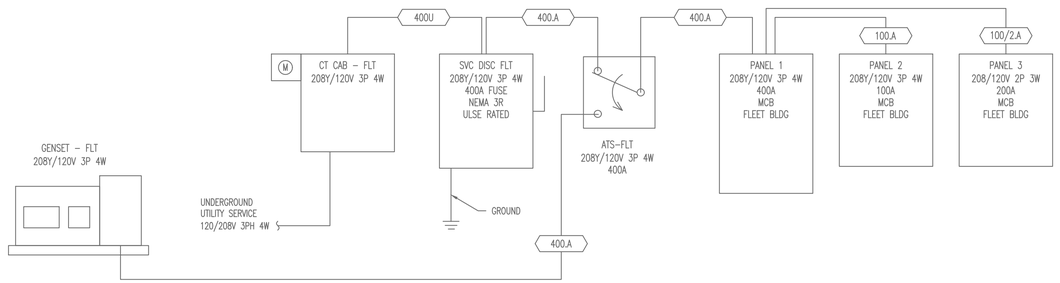
1 SITE PLAN
E201 SCALE: 1" = 50'

3

ROOM FLEET BUILDING – CORRIDOR	VOLTS 208/120V 2P 3W	AIC 22,000
MOUNTING SURFACE	BUS AMPS 200	MAIN BKR 200
FED FROM 1	NEUTRAL 100%	LUGS STANDARD
NOTE EXISTING TO REMAIN		

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B
1	20/2	EX LOAD	1.10		2	20/1	RECEPTACLE	0.54	
3	|			1.10	4	20/1	RECEPTACLE		1.08
5	20/1	SPARE	0.00		6	20/1	RECEPTACLE	0.36	
7	20/1	EX LOAD		0.18	8	20/1	EX LOAD		1.00
9	20/1	REFRIGERATOR	1.20		10	30/1	EX LOAD	1.20	
11	20/1	RECEPTACLE		0.36	12	20/1	SPARE		0.00
13	20/1	WATER COOLER	0.70		14	20/1	SPARE	0.00	
15	20/1	RECEPTACLE		0.18	16	20/1	SPARE		0.00
17	20/1	SPARE	0.00		18	20/1	SPARE	0.00	
19	20/1	GRH–1		0.25	20	20/1	SPARE		0.00
21	20/1	LIGHTING	0.25		22	20/1	SPARE	0.00	
23	20/1	LIGHTING		0.50	24	20/1	SPARE		0.00
25	40/2	*NB EUH–F1	2.50		26	20/1	SPARE	0.00	
27	|			2.50	28	20/1	SPARE		0.00
29	40/2	*NB EUH–F2	2.50		30	20/1	SPARE	0.00	
31	|			2.50	32	20/1	SPARE		0.00
33	20/1	SPARE	0.00		34	30/1	SPARE	0.00	
35	20/1	SPARE		0.00	36	20/1	SPARE		0.00
37	20/1	SPARE	0.00		38	20/1	SPARE	0.00	
39	20/1	SPARE		0.00	40	20/1	SPARE		0.00
							TOTAL CONNECTED KVA BY PHASE	10.35	9.65

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.76	0.95	(125%)	NONCONTINUOUS	2.15	2.15	(100%)
LARGEST MOTOR	2.20	0.55	(25%)	HEATING	12.20	12.20	(100%)
RECEPTACLES	4.90	4.90	(50%>10)	COOLING	2.20	0.00	(0%)
				TOTAL LOAD		20.75	
				BALANCED LOAD		99.74 A	



PANEL 1 - LOAD SUMMARY (225A OCP & FEEDER, REFER TO RISER)	
*EXISTING LOADS	
- PANEL 1	58.7 kVA
- PANEL 2	30.1 kVA
NEW LOADS	
- PANEL 3 (SEE SCHEDULE)	20.8 kVA
TOTAL	20.8 kVA
NEW TOTAL DEMAND LOAD	79.5 kVA
AMPS @ 208V/3Ø	221 A

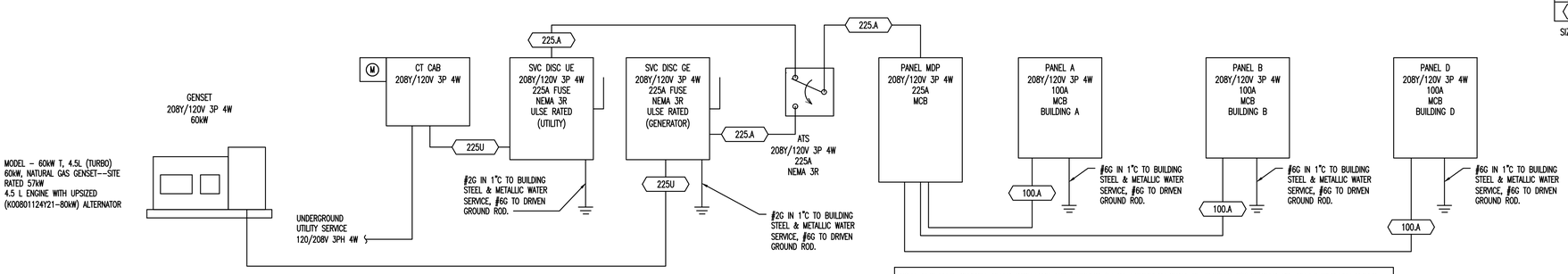
*BASED ON ENGINEER'S SITE VISIT & ESTIMATE.

ALL FEEDERS AND EQUIPMENT ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED AND ARE SHOWN FOR INFORMATION ONLY.

FLEET BUILDING – EXISTING TO REMAIN

FEEDER SCHEDULE		
ID	FEEDER AMPS	CONDUIT AND FEEDER
100/2.A	100	1–1/4"C,2#1,#1N,#8G
100.A	100	1–1/2"C,3#1,#1N,#8G
225.A	225	2–1/2"C,3#4/0,#4/0N,#4G
225U	225	2"C,3#4/0,#4/0N
400.A	400	(2)2"C,3#3/0,#3/0N,#2G
400U	400	(2)2"C,3#3/0,#3/0N

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE



BUILDINGS A, B, C & D – NEW WORK

NOTE: UPON PROJECT COMPLETION, THE EC SHALLL PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL NEW AND ALTERED PANELBOARDS WITH CIRCUIT DESIGNATIONS COMPLYING WITH THE REQUIREMENTS OF NEC 408.4(A).

2 RISER DIAGRAMS
E201 SCALE: NTS

NOTE: NEW ELEC. SERVICE, METER BASE TYPE AND LOCATION OF ALL EQUIPMENT SHALL BE CLOSELY COORDINATED BY THE EC WITH THE UTILITY COMPANY. CHANGES IN EXACT EQUIPMENT PLACEMENT, MOUNTING HEIGHTS AND CONNECTION MAY BE REQUIRED. EC SHALL FOLLOW UTILITY GUIDELINES, THE NEC AND ALL LOCAL REQUIREMENTS FOR SERVICE EQUIPMENT INSTALLATION. EC SHALL CONTACT UTILITY PRIOR TO BEGINNING ANY WORK AND SCHEDULE AN ON–SITE COORDINATION MEETING TO REVIEW UTILITY REQUIREMENTS AND THE PLANNED INSTALLATION. ADDITIONAL CONDUIT, WIRING, FEES OR WORK REQUIRED BY THE UTILITY NOT SHOWN ON THIS RISER SHALL BE COORDINATED BY THE EC AT THE BEGINNING OF THE PROJECT AND INCLUDED IN PRICING BY THE EC TO THE OWNER.

PER NEC 110.24, THE SERVICE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE AVAILABLE FAULT CURRENT. THE ELECTRICAL CONTRACTOR SHALL OBTAIN, FROM THE POWER COMPANY, THE ACTUAL AVAILABLE FAULT CURRENT AT THE POINT OF DELIVERY. THE CONTRACTOR SHALL CONTACT THE ENGINEER WITH THIS VALUE AND THE VERIFIED LENGTH OF CONDUCTORS RUN FROM THE POINT OF DELIVERY TO THE SERVICE ENCLOSURE FOR CALCULATIONS OF THE AVAILABLE FAULT CURRENT. THE RESULTING CALCULATED VALUE SHALL BE MARKED ON THE EXTERIOR OF THE SERVICE ENCLOSURE ON AN ENGRAVED PLACARD THAT SHALL READ AS FOLLOWS:

AVAIL. FAULT CURRENT _____
DATE CALCULATED _____

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NORTH CAROLINA PROFESSIONAL SEAL 13719 ENGINEER ANGUS M. CLARK

11/8/2024

HIGHWAY 86 PUBLIC WORKS
890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
RISER & SCHEDULES

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E201

MDP

ROOM BUILDING C – EXTERIOR
MOUNTING SURFACE
FED FROM ATS
NOTE ULSE RATED, NEMA 3R

VOLTS 208Y/120V 3P 4W
BUS AMPS 225
NEUTRAL 100%

AIC 22,000
MAIN BKR 225
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	100/3	PANEL A	1.08			2	100/3	PANEL D	1.21		
3	|			1.55		4	|			1.30	
5	|				0.65	6	|				0.15
7	100/3	PANEL B	2.02			8	20/3	HP–1	1.12		
9	|			1.37		10	|			1.12	
11	|				1.34	12	|				1.12
13	20/3	ENTRANCE GATE	0.83			14	45/2	AHU–1	3.59		
15	|			0.83		16	|			3.59	
17	|				0.83	18	20/1	CORD REEL			1.00
19	20/1	LIGHTING	1.36			20	20/1	CORD REEL	1.00		
21	20/1	LIGHTING		0.84		22	20/1	CORD REEL		1.00	
23	20/1	LIGHTING			0.76	24	20/1	CORD REEL			1.00
25	20/1	LIGHTING	0.88			26	20/1	CORD REEL	1.00		
27	20/1	LIGHTING		0.29		28	20/1	CORD REEL		1.00	
29	–/1	SPACE			0.00	30	20/1	CORD REEL			1.00
31	–/1	SPACE	0.00			32	20/1	CORD REEL, RECEPTACLE	0.68		
33	45/2	AHU–2		3.59		34	20/1	RECEPTACLE		0.54	
35	|				3.59	36	20/1	RECEPTACLE			0.90
37	20/3	HP–2	1.12			38	20/1	GEN BLOCK HEATER	0.50		
39	|			1.12		40	20/1	GEN BATTERY CHARGER		0.50	
41	|				1.12	42	–/1	SPACE			0.00
43	–/1	SPACE	0.00			44	–/1	SPACE	0.00		
45	–/1	SPACE		0.00		46	–/1	SPACE		0.00	
47	–/1	SPACE			0.00	48	–/1	SPACE			0.00
49	–/1	SPACE	0.00			50	–/1	SPACE	0.00		
51	–/1	SPACE		0.00		52	–/1	SPACE		0.00	
53	–/1	SPACE			0.00	54	–/1	SPACE			0.00
								TOTAL CONNECTED KVA BY PHASE	16.40	18.64	13.46

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	7.44	9.29	(125%)	RECEPTACLES	13.98	11.99	(50%>10)
LARGEST MOTOR	3.37	0.84	(25%)	NONCONTINUOUS	0.50	0.50	(100%)
MOTORS	4.99	4.99	(100%)	HEATING	21.59	21.59	(100%)
				COOLING	9.09	0.00	(0%)
				TOTAL LOAD		49.21	
				BALANCED 3–PHASE LOAD		136.59 A	

A

ROOM BUILDING A
MOUNTING SURFACE
FED FROM MDP
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 22,000
MAIN BKR 100
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	0.54			2	–/1	SPACE	0.00		
3	20/1	RECEPTACLE		0.54		4	–/1	SPACE		0.00	
5	20/1	RECEPTACLE			0.54	6	–/1	SPACE			0.00
7	20/1	RECEPTACLE	0.54			8	–/1	SPACE	0.00		
9	20/1	LIGHTING		1.01		10	–/1	SPACE		0.00	
11	20/1	LIGHTING			0.11	12	–/1	SPACE			0.00
13	–/1	SPACE	0.00			14	–/1	SPACE	0.00		
15	–/1	SPACE		0.00		16	–/1	SPACE		0.00	
17	–/1	SPACE			0.00	18	–/1	SPACE			0.00
19	–/1	SPACE	0.00			20	–/1	SPACE	0.00		
21	–/1	SPACE		0.00		22	–/1	SPACE		0.00	
23	–/1	SPACE			0.00	24	–/1	SPACE			0.00
25	–/1	SPACE	0.00			26	–/1	SPACE	0.00		
27	–/1	SPACE		0.00		28	–/1	SPACE		0.00	
29	–/1	SPACE			0.00	30	–/1	SPACE			0.00
31	–/1	SPACE	0.00			32	–/1	SPACE	0.00		
33	–/1	SPACE		0.00		34	–/1	SPACE		0.00	
35	–/1	SPACE			0.00	36	–/1	SPACE			0.00
37	–/1	SPACE	0.00			38	–/1	SPACE	0.00		
39	–/1	SPACE		0.00		40	–/1	SPACE		0.00	
41	–/1	SPACE			0.00	42	–/1	SPACE			0.00
								TOTAL CONNECTED KVA BY PHASE	1.08	1.55	0.65

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.12	1.40	(125%)	TOTAL LOAD	3.56
RECEPTACLES	2.16	2.16	(50%>10)	BALANCED 3–PHASE LOAD	9.88 A

B

ROOM BUILDING B
MOUNTING SURFACE
FED FROM MDP
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 22,000
MAIN BKR 100
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	1.08			2	20/3	FUEL PUMP	0.83		
3	20/1	RECEPTACLE		0.54		4	|			0.83	
5	20/1	LIGHTING			0.50	6	|				0.83
7	20/1	LIGHTING	0.11			8	–/1	SPACE	0.00		
9	–/1	SPACE		0.00		10	–/1	SPACE		0.00	
11	–/1	SPACE			0.00	12	–/1	SPACE			0.00
13	–/1	SPACE	0.00			14	–/1	SPACE	0.00		
15	–/1	SPACE		0.00		16	–/1	SPACE		0.00	
17	–/1	SPACE			0.00	18	–/1	SPACE			0.00
19	–/1	SPACE	0.00			20	–/1	SPACE	0.00		
21	–/1	SPACE		0.00		22	–/1	SPACE		0.00	
23	–/1	SPACE			0.00	24	–/1	SPACE			0.00
25	–/1	SPACE	0.00			26	–/1	SPACE	0.00		
27	–/1	SPACE		0.00		28	–/1	SPACE		0.00	
29	–/1	SPACE			0.00	30	–/1	SPACE			0.00
31	–/1	SPACE	0.00			32	–/1	SPACE	0.00		
33	–/1	SPACE		0.00		34	–/1	SPACE		0.00	
35	–/1	SPACE			0.00	36	–/1	SPACE			0.00
37	–/1	SPACE	0.00			38	–/1	SPACE	0.00		
39	–/1	SPACE		0.00		40	–/1	SPACE		0.00	
41	–/1	SPACE			0.00	42	–/1	SPACE			0.00
								TOTAL CONNECTED KVA BY PHASE	2.02	1.37	1.34

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.62	0.77	(125%)	MOTORS	2.49	2.49	(100%)
LARGEST MOTOR	2.49	0.62	(25%)	RECEPTACLES	1.62	1.62	(50%>10)
				TOTAL LOAD		5.51	
				BALANCED 3–PHASE LOAD		15.29 A	

D

ROOM BUILDING D
MOUNTING SURFACE
FED FROM MDP
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 22,000
MAIN BKR 100
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	RECEPTACLE	0.54			2	20/1	LIGHTING	0.67		
3	20/1	RECEPTACLE		0.54		4	20/1	LIGHTING		0.76	
5	–/1	SPACE			0.00	6	20/1	LIGHTING			0.15
7	–/1	SPACE	0.00			8	–/1	SPACE	0.00		
9	–/1	SPACE		0.00		10	–/1	SPACE		0.00	
11	–/1	SPACE			0.00	12	–/1	SPACE			0.00
13	–/1	SPACE	0.00			14	–/1	SPACE	0.00		
15	–/1	SPACE		0.00		16	–/1	SPACE		0.00	
17	–/1	SPACE			0.00	18	–/1	SPACE			0.00
19	–/1	SPACE	0.00			20	–/1	SPACE	0.00		
21	–/1	SPACE		0.00		22	–/1	SPACE		0.00	
23	–/1	SPACE			0.00	24	–/1	SPACE			0.00
25	–/1	SPACE	0.00			26	–/1	SPACE	0.00		
27	–/1	SPACE		0.00		28	–/1	SPACE		0.00	
29	–/1	SPACE			0.00	30	–/1	SPACE			0.00
31	–/1	SPACE	0.00			32	–/1	SPACE	0.00		
33	–/1	SPACE		0.00		34	–/1	SPACE		0.00	
35	–/1	SPACE			0.00	36	–/1	SPACE			0.00
37	–/1	SPACE	0.00			38	–/1	SPACE	0.00		
39	–/1	SPACE		0.00		40	–/1	SPACE		0.00	
41	–/1	SPACE			0.00	42	–/1	SPACE			0.00
								TOTAL CONNECTED KVA BY PHASE	1.21	1.30	0.15

	CONN KVA	CALC KVA			CALC KVA
LIGHTING	1.57	1.97	(125%)	TOTAL LOAD	3.05
RECEPTACLES	1.08	1.08	(50%>10)	BALANCED 3–PHASE LOAD	8.46 A

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13719 ANGUS M. CLARK

11/8/2024

HIGHWAY 86 PUBLIC WORKS

890 NC HIGHWAY 86 N.
HILLSBOROUGH, NORTH CAROLINA

REVISIONS:

#	DESCRIPTION:	DATE

SHEET NAME:
SCHEDULES

PHASE:
BID SET

ISSUE DATE: **11 NOV 2024**
PROJECT #: **21167**
DRAWN BY: **RW**

SHEET NUMBER
E202

ANGUS CLARK ENGINEERING PC
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LUMINAIRE SCHEDULE

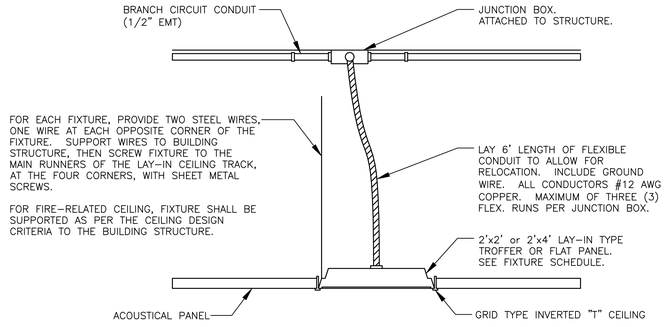
CALLOUT	SYMBOL	DESCRIPTION	MODEL	LAMP	INPUT WATTS	VOLTS	MOUNTING	NOTE 1
B		4' LENSED STRIPLIGHT (WET LISTED)	LITHONIA CSVT-L48-6000LM-MVOLT-4K	LED	49	120V 1P 2W	SURFACE	
C		6" ROUND LED DOWNLIGHT	HEW 6DR-L20-8-35-DIM-UNV-O-W-CS-MWT	LED	19	120V 1P 2W	RECESSED	
EXC		EXIT / EMERGENCY LIGHT	EXISTING TO REMAIN	LED	4	MULTIPLE	WALL/CEILING	UNSWITCHED
EXX		EMERGENCY LIGHT	EXISTING TO REMAIN	LED	1	MULTIPLE	WALL/CEILING	UNSWITCHED
RA		2'x4' FLAT PANEL	LED 3000-4000K FLAT PANEL	LED	60	MULTIPLE	RECESSED	
RX		EXIT SIGN	EXISTING TO BE REMOVED/RELOCATED	LED	2	MULTIPLE	WALL/CEILING	UNSWITCHED. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS.
S		4' LENSED STRIPLIGHT	COLUMBIA LCL-4-40-ML-ED-U	LED	42	120V 1P 2W	SURFACE	
W		4' LENSED STRIPLIGHT	COLUMBIA LCL-4-40-VL-ED-U	LED	85	120V 1P 2W	SURFACE	
WP		EXTERIOR WALL PACK	LITHONIA WSTLED-P3-40K-VF-MVOLT	LED	30	120V 1P 2W	WALL	
WX		EXTERIOR WALL PACK (EMERGENCY)	LITHONIA WSTLED-P3-40K-VF-MVOLT-E20WC	LED	26	120V 1P 2W	WALL	UNSWITCHED EMERGENCY
XC		EXIT / EMERGENCY LIGHT	COMPASS CCR	LED	4	MULTIPLE	WALL/CEILING	UNSWITCHED
XX		EMERGENCY LIGHT	LITHONIA ELM4L	LED	1	MULTIPLE	WALL/CEILING	UNSWITCHED
XXT		EXTERIOR EMERGENCY LIGHT	LITHONIA AFF-OEL-UVOLT-LTP-SRDT-FCT-CW	LED	12	MULTIPLE	WALL/CEILING	UNSWITCHED

GENERAL NOTES:
1. ALL FINAL FINISHES SHALL BE REVIEWED/APPROVED BY ARCHITECT PRIOR TO RELEASE.
2. ALL EXIT, EMERGENCY & NIGHT LIGHTS (NL) SHALL BE CONNECTED "UNSWITCHED" TO LIGHTING CIRCUIT SERVNG ROOM WHERE THEY ARE LOCATED.

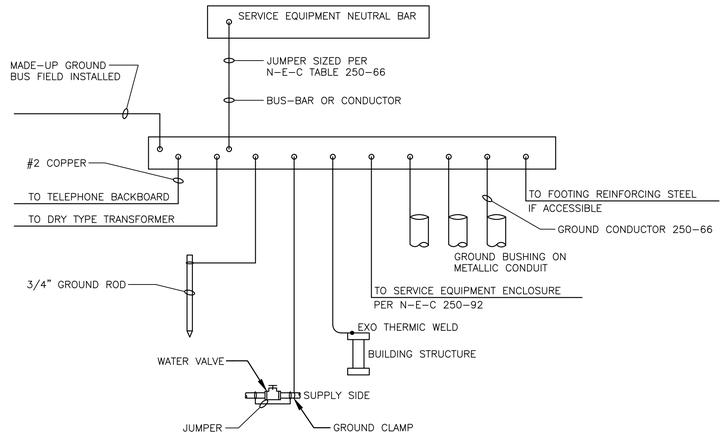
EQUIPMENT SCHEDULE

CALLOUT	SYMBOL	NEMA	VOLTAGE	BREAKER	CIRCUIT	MCA	MOCP	WIRING	NOTE 1
AHU-1			208V 2P	45/2	MDP-14,16	44.7	45	3/4"C,2#6,#10G	
AHU-2			208V 2P	45/2	MDP-33,35	44.7	45	3/4"C,2#6,#10G	
ENTRANCE GATE		NEMA 3R	208V 3P	20/3	MDP-13,15,17			3#1/0,#1/0G	
EUH-F1			208/120V 2P	40/2	3-25,27			3/4"C,2#8,#8N,#10G	
EUH-F2			208/120V 2P	40/2	3-29,31			3/4"C,2#8,#8N,#10G	
FUEL PUMP		NEMA 3R	208V 3P	20/3	B-2,4,6			3#10,#10G	
GRH-1			120V 1P	20/1	3-19			1#10,#10N,#10G	
HP-1		NEMA 3R	208V 3P	20/3	MDP-8,10,12	11.7	20	1/2"C,3#10,#10G	
HP-2		NEMA 3R	208V 3P	20/3	MDP-37,39,41	11.7	20	1/2"C,3#10,#10G	
VEF-1			208V 3P	20/3	2-38,40,42			3#10,#10G	

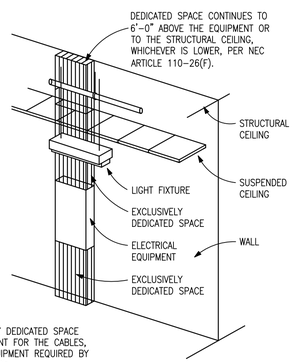
GENERAL NOTE: VERIFY BREAKER & WIRE SIZES WITH EQUIPMENT NAMEPLATES.



3 LIGHTING FIXTURE MOUNTING DETAIL
E203 SCALE: NTS



4 SERVICE EQUIPMENT GROUNDING DETAIL
E203 SCALE: NTS



NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ETC... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110.26(F) OF THE NATIONAL ELECTRICAL CODE.

1 DEDICATED SPACE FOR ELECTRICAL EQUIPMENT
E203 SCALE: NTS

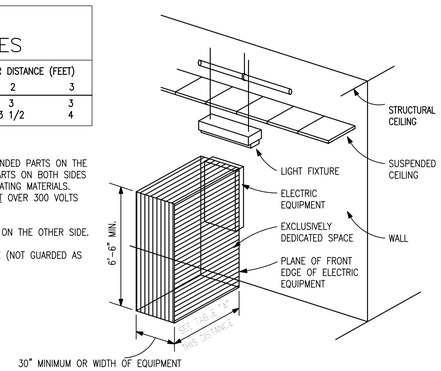
TABLE "A"
WORKING CLEARANCES

VOLTAGE TO GROUND, NOMINAL	MINIMUM CLEAR DISTANCE (FEET)		
CONDITION:	1	2	3
0-150	3	3	3
151-600	3	3 1/2	4

WHERE THE "CONDITIONS" ARE AS FOLLOWS:

1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT NOT OVER 300 VOLTS SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.

NOTE:
THIS FIGURE ILLUSTRATES THE WORKING SPACE IN FRONT OF ELECTRIC EQUIPMENT REQUIRED BY SECTION 110.26 OF THE NATIONAL ELECTRICAL CODE.



2 WORKING CLEARANCE FOR ELECTRICAL EQUIPMENT
E203 SCALE: NTS

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11/8/2024

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