

# PUBLIC WORKS / IT OFFICE RENOVATION

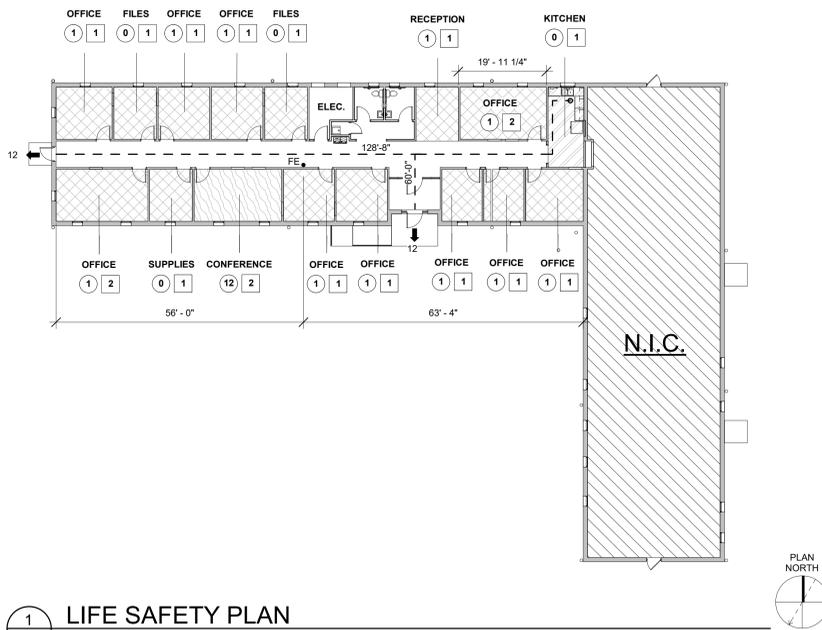
POWHATAN COUNTY  
2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

04/08/2020 BID DOCUMENTS



1840 WEST BROAD STREET  
SUITE 400  
RICHMOND, VA 23220  
v 804.788.4774

QUINNEVANS.COM



**1 LIFE SAFETY PLAN**  
G001 1/16" = 1'-0" REFERRED FROM A101

## PROJECT INFORMATION

### THE SCOPE OF THIS PROJECT INCLUDES:

1. TYPICAL EXTERIOR FINISHES MAINTENANCE FOR THE EXISTING FACILITY AS REQUIRED.
2. IN-KIND REPLACEMENT OF FLOOR, WALL, AND CEILING FINISH MATERIALS, TOILETS, LAVATORIES, SINKS, SELECT TOILET ACCESSORIES, AND CASEWORK.
3. DEMOLITION OF EXISTING INTERIOR PARTITIONS, DOORS, AND CASEWORK AS INDICATED.
4. NEW INTERIOR PARTITIONS AND DOORS AS INDICATED.
5. NEW EXTERIOR DOORS AND WALL ASSEMBLY INFILL AS INDICATED.
6. IN-KIND REPLACEMENT OF MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS TO MEET CURRENT CODE REQUIREMENTS.

## PROJECT DATA

THIS BUILDING IS DESIGNED TO BE COMPLIANT WITH THE 2015 EDITION OF THE VIRGINIA EXISTING BUILDING CODE, THE 2015 EDITION OF THE VIRGINIA CONSTRUCTION CODE, AND THE ADA'S 2010 ACCESSIBILITY STANDARDS.

### BUILDING SQUARE FOOTAGE

LEVEL 1: 3,641 SF

### BUILDING INFORMATION

BUILDING USE GROUP: B  
CONSTRUCTION TYPE (TABLE 601): IIIB  
SEISMIC DESIGN CATEGORY: B  
AUTOMATIC FIRE SUPPRESSION SYSTEM: NONE  
FIRE RESISTANCE RATING (TABLE 601):  
PRIMARY STRUCTURAL FRAME: 0 HOURS  
BEARING WALLS (INTERIOR): 0 HOURS  
BEARING WALLS (EXTERIOR): 2 HOURS  
NON-BEARING WALLS (INTERIOR): 0 HOURS  
NON-BEARING WALLS (EXTERIOR): 0 HOURS  
FLOOR CONSTRUCTION: 0 HOURS  
ROOF CONSTRUCTION: 0 HOURS  
SHAFT ENCLOSURES (2015 VCC 713): 1 HOUR

### MAXIMUM OCCUPANCY PER LEVEL

LEVEL 1: 26

## DESIGN OCCUPANT LOAD

### NOTES (PER TABLE 1004.1.2):

1. B BUSINESS AREAS = 100 GSF / OCCUPANT
2. B ASSEMBLY UNCONCENTRATED = 15 NSF / OCCUPANT
3. B KITCHEN = 200 GSF / OCCUPANT
4. B MECHANICAL = 300 GSF / OCCUPANT

USE GROUP	AREA	OCCUPANCY	HATCH PATTERN
<b>USE GROUP B</b>			
BUSINESS AREA	2,017	20	
ASSEMBLY UNCONCENTRATED	236	15	
KITCHEN	149	1	
MECHANICAL	0	0	
<b>OVERALL TOTAL</b>	<b>2,403</b>	<b>26*</b>	

NOTE: THE PROGRAM OCCUPANT LOAD OF 23 TOTAL OCCUPANTS IS LESS THAN THE TOTAL OCCUPANT LOAD CALCULATED PER CODE TABLE 1004.1.2. THE LARGER TOTAL OCCUPANT LOAD CALCULATION BY CODE TABLE 1004.1.2 WAS USED FOR THIS DESIGN.

## PROJECT TEAM

**QUINN EVANS**  
Architect

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POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

## FIRE SAFETY PLAN LEGEND

- GENERAL NOTES:  
1. MAX EXIT ACCESS TRAVEL DISTANCE FOR USE GROUP B WITHOUT SPRINKLER SYSTEM IS 200 FEET. (2015 VCC TABLE 1017.2)

Room name	CIRCLE: PROGRAM OCCUPANCY LOAD	SQUARE: TABULATED CODE OCCUPANCY LOAD
(24) 30		
TRAVEL DISTANCE = x' - x"	TRAVEL DISTANCE (PER VCC 2012 TABLE 1014.3 & 1016.2)	
→ 0	EGRESS CAPACITY (PER VCC 2012 TABLE 1008.1)	
FEC	FIRE EXTINGUISHER & FIRE EXTINGUISHER CABINET	
FE	FIRE EXTINGUISHER	

## DEMOLITION SYMBOLS / LEGEND

[Solid line]	EXISTING WALL TO REMAIN	[Diagonal hatching]	EXTENT OF SLAB/FLOOR REMOVAL (DEMO PLANS)
[Dashed line]	ELEMENTS TO BE REMOVED	[Wavy line]	DEMO DOOR

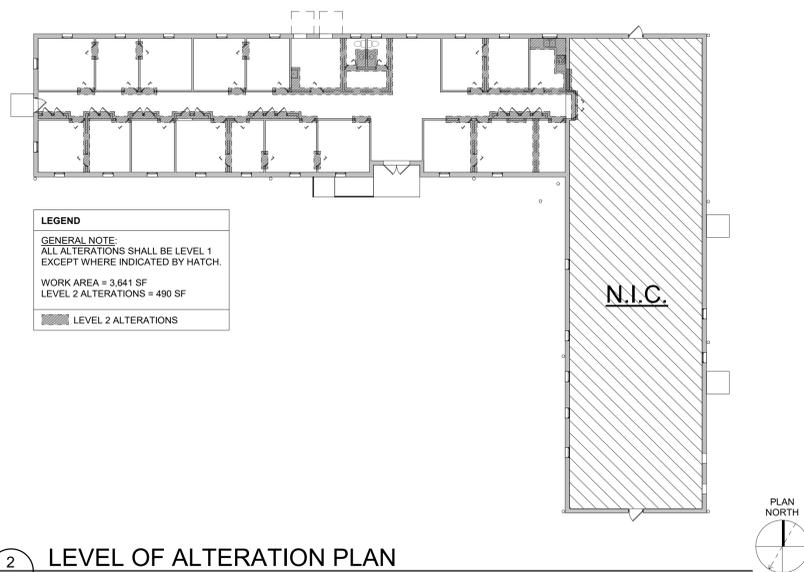
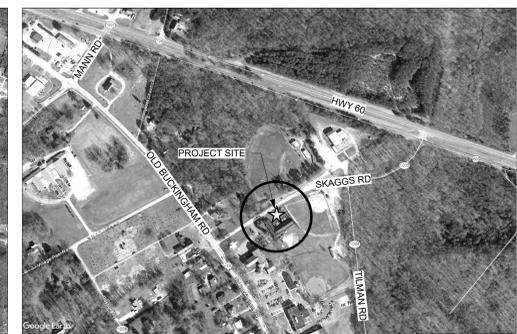
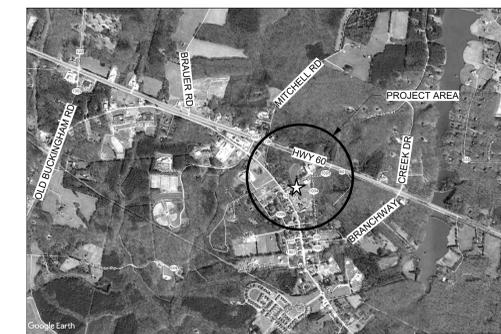
## NEW WORK SYMBOLS/ LEGEND

[Solid line]	EXISTING WALL TO REMAIN	[Wavy line]	EXISTING DOOR
[Dashed line]	GWB WALL	[Wavy line]	DOOR
[Diagonal hatching]	EXTENT OF CONC SLABS		

## DRAWING INDEX

01 GENERAL	G001 COVER SHEET	04 MECHANICAL	M001 MECHANICAL - LEGENDS, SCHEDULES & DETAILS
02 ARCHITECTURAL	A001 ABBREVIATIONS, SYMBOLS, LEGENDS & PARTITION TYPES	MD001	MECHANICAL - GROUND FLOOR PLAN - DEMOLITION
A002	GENERAL NOTES	M101	MECHANICAL - GROUND FLOOR PLAN - NEW WORK
A003	SCHEDULES AND DETAILS	M201	MECHANICAL - SPECIFICATIONS
AD001	DEMOLITION PLAN	05 ELECTRICAL	
A101	FLOOR PLAN	E001	ELECTRICAL - LEGEND & SCHEDULES
A201	REFLECTED CEILING PLAN	ED001	ELECTRICAL - GROUND FLOOR PLAN - DEMOLITION
03 PLUMBING		E101	ELECTRICAL - SITE PLAN
P001	PLUMBING - LEGENDS, SCHEDULES & DETAILS	E201	ELECTRICAL - GROUND FLOOR PLAN - POWER AND LIGHTING
PD001	PLUMBING - GROUND FLOOR PLAN - DEMOLITION	E301	ELECTRICAL - ATTIC FLOOR PLAN - POWER AND LIGHTING
P101	PLUMBING - GROUND FLOOR PLAN - SWV & DOMESTIC	E401	ELECTRICAL - PANEL SCHEDULES AND RISER DIAGRAM
P201	PLUMBING - SPECIFICATIONS	E501	ELECTRICAL - SPECIFICATIONS

## VICINITY MAPS



**2 LEVEL OF ALTERATION PLAN**  
G001 1/16" = 1'-0" REFERRED FROM A101

No. Date Description  
PROJECT MANAGER: RC  
DRAWN BY: KH

QE No. 41912630

BID DOCUMENTS  
04/08/2020

COVER SHEET

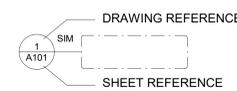
**G001**

ABBREVIATIONS

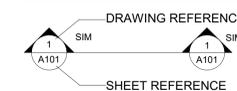
<b>A/C</b> AIR CONDITIONING	<b>ADJ</b> ADJACENT/ADJUST	<b>AD</b> AREA DRAIN	<b>ADA</b> AMERICANS WITH DISABILITIES ACT	<b>AGG</b> AGGREGATE	<b>ALT</b> ALTERNATE	<b>ALUM</b> ALUMINIUM	<b>APPROX</b> APPROXIMATE(LY)	<b>ARCH</b> ARCHITECT(URAL, URE)	<b>ASPH</b> ASPHALT(IC)	<b>ASSOC</b> ASSOCIATED	<b>AUTO</b> AUTOMATIC	<b>AVG</b> AVERAGE	<b>AWP</b> ACOUSTICAL WALL PANEL	<b>BBT</b> BIO-BASED TILE	<b>BC</b> BRICK COURSE	<b>BD</b> BOARD	<b>BIT</b> BITUMINOUS, BITUMEN	<b>BLDG</b> BUILDING	<b>BLKG</b> BLOCKING	<b>BLKHD</b> BULKHEAD	<b>BLW</b> BELOW	<b>BM</b> BEAM	<b>BOS</b> BOTTOM OF STEEL	<b>BOT</b> BOTTOM	<b>BRG</b> BEARING	<b>BTWN</b> BETWEEN	<b>BUR</b> BUILT-UP ROOF	<b>C-C</b> CENTER TO CENTER	<b>CAB</b> CABINET	<b>CEM</b> CEMENT	<b>CFS</b> COLD FORMED STEEL	<b>CIP</b> CAST-IN-PLACE	<b>CJ</b> CONTROL JOINT	<b>CL</b> CENTER LINE	<b>CLG</b> CEILING	<b>CLO</b> CLOSET	<b>CLR</b> CLEAR(ANCE)	<b>CMU</b> CONCRETE MASONRY UNIT	<b>COL</b> COLUMN	<b>COM</b> COMMUNICATIONS	<b>CONC</b> CONCRETE	<b>COND</b> CONDITION	<b>CONFIG(S)</b> CONFIGURATION(S)	<b>CONST</b> CONSTRUCTION	<b>CONT</b> CONTINUOUS	<b>COORD</b> COORDINATE	<b>CORR</b> CORRIDOR	<b>CPT</b> CARPET(ED)	<b>CT</b> CERAMIC TILE	<b>CTR</b> CENTER	<b>D</b> DEEP/DEPTH	<b>DBL</b> DOUBLE	<b>DEG</b> DEGREE	<b>DEMO</b> DEMOLISH, DEMOLITION	<b>DETER</b> DETERIORATING, DETERIORATED	<b>DF</b> DRINKING FOUNTAIN	<b>DIA</b> DIAMETER	<b>DIAG</b> DIAGONAL	<b>DIM(S)</b> DIMENSION(S)	<b>DIV</b> DIVIDE	<b>DN</b> DOWN	<b>DR</b> DOOR, DRAIN	<b>DS</b> DOWNSPOUT	<b>DTL</b> DETAIL	<b>DWG(S)</b> DRAWING(S)	<b>DWR</b> DRAWER	<b>E</b> EAST	<b>E-P</b> EPOXY PAINT	<b>EA</b> EACH	<b>EJ</b> EXPANSION JOINT	<b>EL</b> ELEVATION (TOPO)	<b>ELEC</b> ELECTRICAL	<b>ELEV</b> ELEVATION (ARCH), ELEVATOR	<b>EMER</b> EMERGENCY	<b>ENCL</b> ENCLOSURE(URE)	<b>ENGR</b> ENGINEER	<b>ENTR</b> ENTRANCE	<b>EOS</b> EDGE OF SLAB	<b>EPDM</b> ETHYLENE PROPYLENE DIENE MONOMER	<b>EPS</b> EXPANDED POLYSTYRENE BOARD	<b>EQ</b> EQUAL	<b>EQUIP</b> EQUIPMENT	<b>EST</b> ESTIMATE(D)	<b>EW</b> EACH WAY	<b>EWC</b> ELECTRIC WATER COOLER	<b>EXH</b> EXHAUST	<b>EXHB</b> EXHIBIT	<b>EXIST</b> EXISTING	<b>EXP</b> EXPOSED, EXPANSION	<b>EXT</b> EXTERIOR	<b>FA</b> FIRE ALARM	<b>FAS</b> FASTEN(ER)	<b>FD</b> FLOOR DRAIN	<b>FDC</b> FIRE DEPARTMENT CONNECTION	<b>FDTN</b> FOUNDATION	<b>FE</b> FIRE EXTINGUISHER	<b>FEC</b> FIRE EXTINGUISHER CABINET	<b>FF</b> FINISH(ED) FACE	<b>FF&amp;E</b> FURNITURE, FIXTURES & EQUIPMENT	<b>FGL</b> FIBERGLASS	<b>FH</b> FIRE HOSE, FIRE HYDRANT	<b>FHC</b> FIRE HOSE CABINET	<b>FIN(S)</b> FINISH(ES)	<b>FIXT</b> FIXTURE	<b>FL</b> FLOOR(ING)	<b>FLAM</b> FLAMMABLE	<b>FLUOR</b> FLUORESCENT	<b>FO</b> FINISHED OPENING	<b>FOS</b> FACE OF STUDS	<b>FP</b> FIRE PROTECTION	<b>FR</b> FRAME(D,ING), FIRE RATING, FIRE RESISTANT	<b>FT</b> FEET	<b>FTG</b> FOOTING	<b>FUR</b> FUR(ED,ING)	<b>FWC</b> FABRIC WALL COVERING	<b>G</b> NATURAL GAS	<b>GA</b> GAUGE	<b>GALV</b> GALVANIZED	<b>GB</b> GRAB BAR	<b>GC</b> GENERAL CONTRACT(OR)	<b>GEN</b> GENERATOR	<b>GFRCC</b> GLASS-FIBER-REINFORCED CONCRETE	<b>GFRGC</b> GLASS-FIBER-REINFORCED GYPSUM	<b>GFRP</b> GLASS-FIBER-REINFORCED POLYESTER, GLASS-FIBER-REINFORCED PLASTIC	<b>GL</b> GLASS, GLAZING	<b>GLU LAM</b> GLUE LAMINATED WOOD	<b>GOVT</b> GOVERNMENT	<b>GT</b> GROUT	<b>GWB</b> GYPSUM WALLBOARD	<b>H</b> HIGH	<b>HAZ MAT</b> HAZARDOUS MATERIAL	<b>HB</b> HOSE BIBB	<b>HC</b> HOLLOW CORE, HOSE CABINET	<b>HCWD</b> HOLLOW CORE WOOD DOOR	<b>HD</b> HEAVY DUTY	<b>HDR</b> HEADER	<b>HDWD</b> HARDWOOD	<b>HDWR</b> HARDWARE	<b>HID</b> HIGH INTENSITY DISCHARGE	<b>HM</b> HOLLOW METAL	<b>HORIZ</b> HORIZONTAL(LY)	<b>HP</b> HIGH POINT	<b>HSS</b> HOLLOW STRUCTURAL SECTION	<b>HT</b> HEIGHT	<b>HT</b> HEIGHT(S)	<b>HVAC</b> HEATING, VENTILATION & AIR CONDITIONING	<b>HW</b> HOT WATER	<b>ID</b> INSIDE DIAMETER	<b>ILO</b> IN LIEU OF	<b>IN</b> INCH(ES)	<b>INCAN</b> INCANDESCENT	<b>INCL</b> INCLUDE(S,D,ING)	<b>INFO</b> INFORMATION	<b>INSUL</b> INSULATION, INSULATED	<b>INT</b> INTERIOR	<b>INV</b> INVERT	<b>IRMA</b> INVERTED ROOF MEMBRANE ASSEMBLY	<b>J-BOX</b> JUNCTION BOX	<b>JAN</b> JANITOR	<b>JT(S)</b> JOINT(S)	<b>KIT</b> KITCHEN	<b>KO</b> KNOCK OUT	<b>L</b> ANGLE	<b>LAM</b> LAMINATE(D)	<b>LAV</b> LAVATORY	<b>LBL</b> LABEL	<b>LH</b> LEFT HAND	<b>LHR</b> LEFTHAND REVERSE	<b>LL</b> LIVE LOAD	<b>LLH</b> LONG LEG HORIZONTAL	<b>LLV</b> LONG LEG VERTICAL	<b>LP</b> LOW POINT	<b>LT GA</b> LIGHT GAUGE	<b>LTG</b> LIGHTING	<b>LV</b> LOW VOLTAGE	<b>LVT</b> LUXURY VINYL TILE	<b>LW</b> LIGHT WEIGHT	<b>MAS</b> MASONRY	<b>MATL</b> MATERIAL(S)	<b>MAX</b> MAXIMUM	<b>MDO</b> MEDIUM DENSITY OVERLAY	<b>MECH</b> MECHANICAL	<b>MED</b> MEDIUM	<b>MEMB</b> MEMBRANE	<b>MFR</b> MANUFACTURE(R)	<b>MIN</b> MINIMUM	<b>MISC</b> MISCELLANEOUS	<b>MO</b> MASONRY OPENING	<b>MOD BIT</b> MODIFIED BITUMEN	<b>MR</b> MLISTURE RESISTANT	<b>MTD</b> MOUNTED	<b>MTG</b> MOUNTING	<b>MTL</b> METAL	<b>N</b> NORTH	<b>NA</b> NOT APPLICABLE	<b>NA</b> NATURAL	<b>NC</b> NOISE CRITERIA, NORMALLY CLOSED	<b>NIC</b> NOT IN CONTRACT, NOISE ISOLATION CLASS	<b>NO(S)</b> NUMBER(S), NORMALLY OPEN	<b>NOM</b> NOMINAL	<b>NRC</b> NOISE REDUCTION COEFFICIENT	<b>NTS</b> NOT TO SCALE	<b>O-O</b> OUT TO OUT	<b>OC</b> ON CENTER	<b>OD</b> OUTSIDE DIAMETER	<b>OF/CI</b> OWNER FURNISHED / CONTRACTOR INSTALLED	<b>OFC</b> OFFICE	<b>OH</b> OPPOSITE HAND, OVERHEAD	<b>OPNG</b> OPENING(S)	<b>ORIG</b> ORIGINAL	<b>PA</b> PUBLIC ADDRESS	<b>PAR</b> PARALLEL	<b>PART</b> PARTITION(S), PARTIAL	<b>PC</b> PRECAST	<b>PERF</b> PERFORATE(D)	<b>PL</b> PLATE, PROPERTY LINE	<b>PLAM</b> PLASTIC LAMINATE	<b>PLAS</b> PLASTER	<b>PLWD</b> PLYWOOD	<b>PNL</b> PANEL(ED)	<b>POLY</b> POLYETHYLENE	<b>PR</b> PAIR	<b>PREP</b> PREPARE (SURFACE)	<b>PROV</b> PROVIDE(D)	<b>PSF</b> POUNDS PER SQUARE FOOT	<b>PSI</b> POUNDS PER SQUARE INCH	<b>PT</b> PAINT, POST-TENSIONED, PRESSURE TREATED	<b>PTD</b> PAINTED	<b>PVC</b> POLYVINYL CHLORIDE	<b>PVMT</b> PAVEMENT	<b>PWR</b> POWER	<b>QT</b> QUARRY TILE	<b>QTY</b> QUANTITY	<b>QUAD</b> QUADRANT	<b>QVT</b> QUARTZ VINYL TILE	<b>R</b> RADIUS, RISER, THERMAL RESISTANCE	<b>RB</b> RUBBER BASE	<b>RCP</b> REFLECTED CEILING PLAN	<b>RD</b> ROOF DRAIN	<b>REBAR</b> REINFORCING BAR	<b>REF</b> REFERENCE	<b>REG</b> REGISTER, REGULATION	<b>REINF</b> REINFORCED	<b>REPL</b> REPLACE	<b>REQ</b> REQUIRED	<b>RES</b> RESILIENT	<b>RET</b> RETAINING, RETURN	<b>REV</b> REVISION(S) / REVISE(D)	<b>RFG</b> ROOFING	<b>RFG</b> ROOFING	<b>RH</b> RIGHT HAND, RELATIVE HUMIDITY	<b>RHR</b> RIGHT HAND REVERSE	<b>RL</b> RAIN LEADER	<b>RM</b> ROOM	<b>RO</b> ROUGH OPENING	<b>RTF</b> RUBBER TILE FLOOR	<b>RTU</b> ROOF TOP UNIT	<b>RV</b> ROOF VENTILATOR	<b>S</b> SOUTH, SEAL	<b>SAB</b> SOUND ATTENUATION BATT	<b>SALV</b> SALVAGE	<b>SAN</b> SANITARY	<b>SB</b> SPLASH BLOCK	<b>SC</b> SOLID CORE	<b>SCHED</b> SCHEDULE	<b>SCT</b> STRUCTURAL CLAY TILE	<b>SCWD</b> SOLID CORE WOOD DOOR	<b>SEC</b> SECURE, SECURITY	<b>SECT</b> SECTION	<b>SF</b> SQUARE FEET	<b>SFS</b> STOREFRONT SYSTEM	<b>SHT</b> SHEET	<b>SIM</b> SIMILAR	<b>SLL</b> SOUND / LIGHT LOCK	<b>SPEC</b> SPECIFICATION	<b>SQ</b> SQUARE	<b>SS</b> STAINLESS STEEL	<b>STD</b> STANDARD	<b>STL</b> STEEL	<b>STN</b> STAIN	<b>STO</b> STORAGE	<b>STRUC</b> STRUCTURAL	<b>SUB</b> SUBSTITUTION	<b>SUSP</b> SUSPENDED	<b>SYS</b> SYSTEM	<b>T</b> THICK, TREAD, TOILET	<b>T&amp;G</b> TONGUE AND GROOVE	<b>T.O.</b> TOP OF	<b>TECH</b> TECHNOLOGY	<b>TEL</b> TELEPHONE	<b>TEMP</b> TEMPORARY, TEMPERED	<b>THRS</b> THRESHOLD	<b>THRU</b> THROUGH	<b>TOC</b> TOP OF CONCRETE	<b>TOF</b> TOP OF FOOTING	<b>TOJ</b> TOP OF JOIST	<b>TOM</b> TOP OF MASONRY	<b>TOP</b> TOP OF PARAPET	<b>TOS</b> TOP OF STEEL	<b>TOW</b> TOP OF WALL	<b>TRANS</b> TRANSPARENT	<b>TV</b> TELEVISION	<b>TYP</b> TYPICAL	<b>UC</b> UNDERCUT	<b>UH</b> UNIT HEATER	<b>UIO</b> UNLESS INDICATED OTHERWISE	<b>UL</b> UNDERWRITER'S LABORATORY	<b>UNFIN</b> UNFINISHED	<b>UR</b> URINAL	<b>VAR</b> VARIES	<b>VAT</b> VINYL ASBESTOS TILE	<b>VB</b> VINYL BASE	<b>VCT</b> VINYL COMPOSITION TILE	<b>VERT</b> VERTICAL	<b>VEST</b> VESTIBULE	<b>VIF</b> VERIFY IN FIELD	<b>VTR</b> VENT THROUHG ROOF	<b>VU</b> VENTILATION UNIT	<b>VWC</b> VINYL WALLCOVERING	<b>W</b> WEST, WIDE, WIDE FLANGE	<b>W-W</b> WALL TO WALL	<b>W</b> WITH	<b>W/O</b> WITHOUT	<b>WC</b> WATER CLOSET	<b>WD</b> WOOD	<b>WDW</b> WINDOW	<b>WH</b> WALL HEATER	<b>WP</b> WATERPROOFING, WORK POINT	<b>WT</b> WEIGHT	<b>WWF</b> WELDED WIRE FABRIC	<b>WWM</b> WELDED WIRE MESH	<b>X BRACE</b> CROSS BRACING	<b>XFER</b> TRANSFER	<b>YD</b> YARD, YARD DRAIN	<b>#</b> NUMBER, POUND & AND	<b>@</b> AT	<b>±</b> PLUS / MINUS
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GRAPHIC SYMBOLS

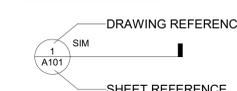
PLAN / DETAIL



BLDG SECTION CUT



DETAIL CUT



SYMBOLS

<b>Room name</b> 101	<b>ROOM NUMBER</b> 101	<b>FINISH TYPE</b> XX-XX	<b>KEYNOTE</b> XX-XX
<b>101</b>	<b>DOOR NUMBER</b> 101	<b>WALL TYPES</b> XX	<b>MATERIAL DESIGNATION</b> (REFER TO MATERIALS SCHED.) XX
<b>XX</b>	<b>WINDOW NUMBER</b> XX	<b>LOUVER TAG</b> XX	<b>REVISION CLOUD AND INDICATOR</b> XX
<b>XX</b>	<b>EXISTING ELEVATION</b> XX	<b>NEW ELEVATION</b> XX	<b>CONSTRUCTION ASSEMBLY</b> XX
<b>+</b>	<b>WORK POINT</b> +	<b>X/SHEET #</b> X/SHEET #	<b>MATCHLINE</b> X/SHEET #
		<b>EXISTING COLUMN LINE</b> A	<b>NEW COLUMN LINE</b> A

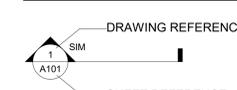
INTERIOR ELEVATION



EXTERIOR ELEVATION



WALL SECTION CUT



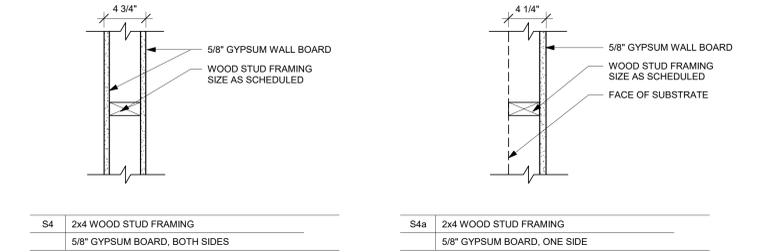
MATERIAL SYMBOLS

EARTH	FOAM INSULATION	BRICK	STEEL	PARTICLE BOARD
GRAVEL	CONCRETE-PLAN	CMU	ALUMINUM	DIMENSIONAL LUMBER (SIZE AS INDICATED)
BATT INSULATION	CONCRETE-SECTION	GROUT	WOOD	DISCONTINUOUS LUMBER (SIZE AS INDICATED)
RIGID INSULATION	PRECAST CONCRETE	STONE	PLYWOOD	GYPSUM BOARD / PLASTER
GLASS	SHIM	METAL STUD	ACOUSTICAL CEILING	
PLASTIC	SEALANT & BACKER ROD	METAL TRACK	CARPET	

PARTITION TYPES

GENERAL PARTITION NOTES:

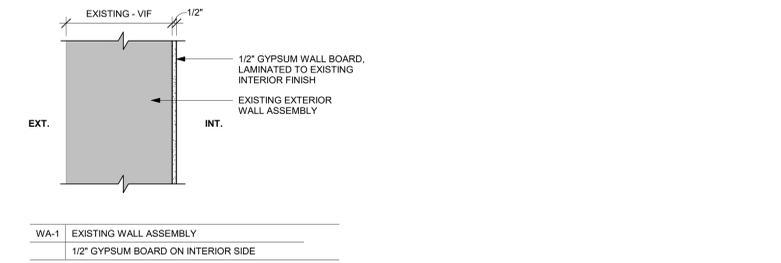
- ALL NEW INTERIOR PARTITIONS SHALL BE S4 UNLESS OTHERWISE NOTED. ALIGN FRAMING AND FINISH FACE OF NEW INTERIOR PARTITIONS WITH EXISTING INTERIOR PARTITIONS WHERE THE TWO JOIN / ABUT.
- AT EXISTING WOOD FRAMING TO REMAIN, APPLY ONE LAYER OF 5/8" GYPSUM BOARD TO EITHER SIDE OF STUD. PROVIDE MOISTURE RESISTANT GYPSUM BOARD WHERE APPLICABLE. SEE NOTE #4.
- ALL PARTITIONS SHEATHING LAYERS TO EXTEND TO STRUCTURE OR DECK ABOVE UNLESS NOTED OTHERWISE.
  - SEE PLANS FOR LEGEND & PARTITIONS WITH VARIED EXTENT
  - SEE LIFE SAFETY PLANS FOR LEGEND & FIRE RATING EXTENT/DEFINITION
- UTILIZE MOISTURE RESISTANT GYPSUM BOARD AT PARTITIONS IN THE FOLLOWING SPACE TYPES U.N.O.:
  - TOILET ROOMS
  - JANITORS CLOSETS
- PARTITION TYPES DO NOT DEPICT FINISHES TYPICALLY.
  - SEE FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR EXTENT OF FINISHES
  - SEE SPECIFIC PARTITION TYPES INCORPORATING FINISH AND BACKUP



WALL ASSEMBLY TYPES

GENERAL WALL ASSEMBLY NOTES:

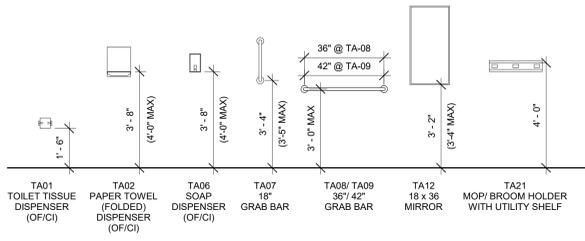
- AT ALL EXISTING EXTERIOR WALL ASSEMBLIES, EXISTING INTERIOR FINISHES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
- INTERIOR FACE OF ALL EXISTING EXTERIOR WALL ASSEMBLIES TO RECEIVE NEW GYPSUM WALL BOARD FINISH, LAMINATED TO INTERIOR FACE OF EXISTING FINISH (EXISTING WOOD PANELING, ETC.).
- WHERE EXISTING EXTERIOR OPENINGS ARE TO BE INFILLED, MATCH EXISTING EXTERIOR WALL ASSEMBLY WITH LIKE CONSTRUCTION. MASONRY INFILL TO INCLUDE FRAMING FOR NEW LOUVER.
- WHERE POSSIBLE, SALVAGE AND CLEAN EXISTING BRICK FOR REUSE AT INFILL LOCATIONS.



TYPICAL TOILET ACCESSORY MOUNTING HEIGHTS

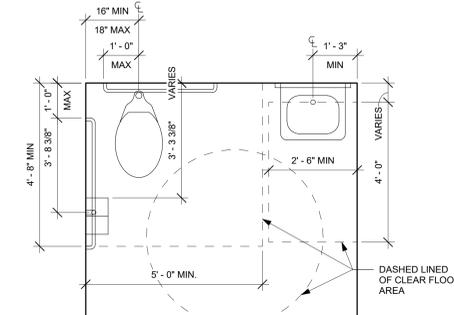
NOTES:

- THE FOLLOWING ACCESSORIES SHALL BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR: TA-01, TA-02, TA-06, AND FREE-STANDING WASTE RECEPACLES.
- ACCESSORIES SHALL BE INSTALLED AT LOCATIONS INDICATED ON PLANS AND IN ACCORDANCE WITH ICC ANS1 1017.1
- REFER TO A002 FOR PARTITION TYPE CONSTRUCTION
- PROVIDE PAPER TOWEL DISPENSERS IN TOILETS AND KITCHEN



TYPICAL TOILET LAYOUT

REFER TO TOILET SCHEDULE



QUINNEVANS.COM



PUBLIC WORKS / IT OFFICE RENOVATION

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

No.	Date	Description
PROJECT MANAGER:		DRAWN BY:
RC		KH

QE No.41912630

BID DOCUMENTS  
04/08/2020

ABBREVIATIONS, SYMBOLS, LEGENDS & PARTITION TYPES

A001

PATH:\FILENAME: C:\Revol\_Local\Skaggs Road Renovation\_R19\_10chimes.rvt  
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GENERAL NOTES

DIVISION 1 — GENERAL REQUIREMENTS

- 1.1 THE BUILDING CODE USED FOR THIS BASIS OF DESIGN IS THE 2015 EDITION OF THE VIRGINIA EXISTING BUILDING CODE (VBC) AND THE 2015 EDITION OF THE VIRGINIA CONSTRUCTION CODE (VCC 2015). CONFORM ALL WORK TO THE VBC 2015 AND VCC 2015, EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE SPECIFIED.
- 1.2 THE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT OF JUSTICE GUIDANCE ON THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
- 1.3 THESE GENERAL NOTES ARE IN PLACE OF A GENERAL SPECIFICATION.
- 1.4 SHOP DRAWINGS / PRODUCT DATA:
  - A. SUBMIT PRODUCT DATA FOR DOORS, HARDWARE, CASEWORK, TOILET ACCESSORIES, AND FLOOR, WALLS, AND CEILING FINISHES. SEE MEP DRAWINGS FOR REQUIRED MEP SUBMITTALS.
  - B. GENERAL CONTRACTOR MUST THOROUGHLY REVIEW SHOP DRAWINGS BEFORE SUBMISSION TO THE ARCHITECT / ENGINEER. SHOP DRAWINGS WITH OMISSIONS, CONFLICTS, LACK OF INCORPORATION OF SUPPLEMENTAL STRUCTURAL SKETCHES, OR LACK OF FIELD-VERIFIED DIMENSIONS WILL BE REJECTED.
  - C. MAKE ALL CORRECTIONS OR REVISIONS FOR ALL SHOP DRAWINGS BEFORE THEY ARE SENT OUT AS FIELD COPIES FOR CONSTRUCTION.
- 1.5 EXISTING CONDITIONS: ESTABLISH AND VERIFY ALL EXISTING WORK, EXISTING CONDITIONS, GRADES, AND ALL DIMENSIONS. MUST INCLUDE THE APPLICATION OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED DURING CONSTRUCTION.

- B. MATERIALS FOR SEMI-EXPOSED SURFACES:
  - 1. THERMOSET DECORATIVE PANELS FOR DRAWER SIDES AND BACKS, DRAWER BOTTOMS, AND SURFACES OTHER THAN DRAWER BODIES.
  - 2. EDGES OF PLASTIC-LAMINATE SHELVES: PVC TAPE, 0.018-INCH MINIMUM THICKNESS, MATCHING LAMINATE IN COLOR, PATTERN, AND FINISH.
  - 3. FOR SEMI-EXPOSED BACKS OF PANELS WITH EXPOSED PLASTIC-LAMINATE SURFACES, PROVIDE SURFACE OF HIGH-PRESSURE DECORATIVE LAMINATE, GRADE CLS.
- C. CONCEALED BACKS OF PANELS WITH EXPOSED PLASTIC LAMINATE SURFACES: HIGH-PRESSURE LAMINATE, GRADE BKL.
- D. COLORS, PATTERNS, FINISHES: PROVIDE THE FOLLOWING COLORS AND TEXTURES; LAMINATE COLOR LOCATIONS TO BE IDENTIFIED ON SHOP DRAWINGS.
  - 1. EXPOSED EXTERIOR FACE OF CABINETS: WILSONART SOLICOR DOVE GREY D92K-28, GLOSS LINE FINISH
  - 2. EXPOSED INTERIOR FACE OF CABINETS, DRAWERS, AND SHELVES: STANDARD WHITE MELAMINE WITH MATTE FINISH

- 9.3 INTERIOR GYPSUM WALL BOARD: COMPLYING WITH ASTM C 36 / C 36M OR ASTM C 1396 / C 1396M, AS APPLICABLE TO TYPE OF GYPSUM BOARD INDICATED AND WHICHEVER IS MORE STRINGENT.
  - A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
    - 1. G.P GYPSUM
    - 2. NATIONAL GYPSUM COMPANY
    - 3. USG CORPORATION
  - B. SIZE: PROVIDE MAXIMUM LENGTHS AND WIDTHS AVAILABLE THAT WILL MINIMIZE JOINTS IN EACH AREA AND THAT CORRESPOND WITH SUPPORT SYSTEM INDICATED.
  - C. 1/2 INCH THICKNESS: AT INTERIOR SIDE OF ALL EXTERIOR WALL ASSEMBLIES AND AT UNDERSIDE OF EXISTING ROOF TRUSSESS; U.N.O. GWB AT UNDERSIDE OF ROOF TRUSSES SHALL BE MANUFACTURED TO HAVE MORE SAG RESISTANCE THAN REGULAR-TYPE GYPSUM BOARD.
  - D. 5/8 INCH THICKNESS: AT ALL INTERIOR PARTITIONS, U.N.O.
  - E. UTILIZE MOISTURE RESISTANT GYPSUM BOARD AT PARTITIONS IN THE FOLLOWING SPACE TYPES U.N.O.:
    - 1. TOILET ROOMS
    - 2. JANITOR'S CLOSETS
  - F. COMPLY WITH ASTM C840 REQUIREMENTS OR GYPSUM BOARD MANUFACTURER'S WRITTEN RECOMMENDATIONS, WHICHEVER IS MORE STRINGENT. DO NOT INSTALL INTERIOR PRODUCTS UNTIL INSTALLATION AREAS ARE ENCLOSED AND CONDITIONED. DO NOT INSTALL PANELS THAT ARE WET, THOSE THAT ARE MOISTURE DAMAGED, AND THOSE THAT ARE MOLD DAMAGED. INDICATIONS THAT PANELS ARE WET OR MOISTURE DAMAGED INCLUDE, BUT ARE NOT LIMITED TO, DISCOLORATION, SAGGING, OR IRREGULAR SHAPE. INDICATIONS THAT PANELS ARE MOLD DAMAGED INCLUDE, BUT ARE NOT LIMITED TO, FUZZY OR SPOTCY SURFACE CONTAMINATION AND DISCOLORATION.

DIVISION 10 — SPECIALTIES

- 10.1 SIGNAGE: EXTERIOR AND INTERIOR SIGNAGE TO INCLUDE, BUT IS NOT LIMITED TO, REQUIRED BUILDING SIGNAGE PER VCC 2015 AND ADAS 2010 ACCESSIBILITY STANDARDS.
  - A. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING DESIGN-BUILD MANUFACTURERS:
    - 1. ACORN SIGN GRAPHICS
    - 2. ACE SIGN SYSTEMS, INC.
    - 3. ADVANCE CORPORATION; BRAILLE-TAC DIVISION
- 10.2 TOILET ACCESSORIES: ACCESSORIES SHALL BE INSTALLED AT LOCATIONS INDICATED ON PLANS AND IN ACCORDANCE WITH ICC ANSI 1017.1.
  - A. THE FOLLOWING ACCESSORIES SHALL BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR: TA-01 TOILET TISSUE DISPENSER, TA-02 PAPER TOWEL DISPENSER, TA-06 SOAP DISPENSER, AND FREE-STANDING WASTE RECEPTACLES.
    - B. TA-07 / TA-08 / TA-09: GRAB BARS (18", 36", 42")
      - 1. BASIS OF DESIGN PRODUCT: BOBRICK, B-5806 SERIES
      - 2. MOUNTING: FLANGES WITH CONCEALED FASTENERS
      - 3. MATERIAL: STAINLESS STEEL, 0.05 INCH THICK
      - 4. FINISH: SMOOTH, NO. 4, SATIN FINISH ON ENDS AND SLIP-RESISTANT TEXTURE IN GRIP AREA
      - 5. OUTSIDE DIAMETER: 1-1/4 INCHES
      - 6. CONFIGURATION AND LENGTH:
        - a. TA-07: 18 INCHES, MOUNTED VERTICALLY AS INDICATED ON DRAWINGS
        - b. TA-08: 36 INCHES, MOUNTED HORIZONTALLY AS INDICATED ON DRAWINGS
        - c. TA-09: 42 INCHES, MOUNTED HORIZONTALLY AS INDICATED ON DRAWINGS
  - C. TA-12: 18" x 36" MIRROR. COMPLY WITH ASTM C 1503, MIRROR GLAZING QUALITY CLEAR-GLASS MIRRORS, NOMINAL 6.0 MM THICK.
    - 1. BASIS OF DESIGN PRODUCT: BRADLEY CORPORATION MODEL 747-1836
    - 2. FRAME: FRAMELESS
    - 3. HANGERS: PRODUCE RIGID, TAMPER- AND THEFT-RESISTANT INSTALLATION, USING SECURE METAL MOUNTING CLIPS TO WALL WITH SCREWS AND ENGAGE MIRROR INTO CLIPS.
    - 4. SIZE: 18 INCHES BY 36 INCHES, AS INDICATED ON DRAWINGS
  - D. TA-21: MOP / BROOM HOLDER WITH UTILITY SHELF
    - 1. BASIS OF DESIGN PRODUCT: BOBRICK B-224
    - 2. DESCRIPTION: UNIT WITH SHELF, HOOKS, HOLDERS, AND ROD SUSPENDED BENEATH SHELF
    - 3. LENGTH: 36 INCHES
    - 4. DEPTH: 8 INCHES
    - 5. HOOKS: THREE
    - 6. MOP / BROOM HOLDERS: FOUR, SPRING-LOADED, RUBBER HAT, CAM TYPE
    - 7. LOCATION: PROVIDE ONE PER JANITOR'S CLOSET
    - 8. MATERIAL AND FINISH: STAINLESS STEEL, NO. 4 FINISH (SATIN)
      - a. SHELF: NOT LESS THAN 0.05-INCH THICK STAINLESS STEEL
      - b. ROD: APPROXIMATELY 1/4-INCH DIAMETER STAINLESS STEEL

DIVISION 4 — REPOINTING AND MASONRY PATCHING

- 4.1 BRICK MASONRY REPOINTING:
  - A. CONTRACTOR SHALL MATCH MORTAR COLOR AND HARDNESS OF EXISTING MORTAR AS POSSIBLE. PRODUCE SAMPLE MORTAR STRIPS 6" LONG x 1/2" WIDE SET IN ALUMINUM OR PLASTIC CHANNELS FOR ARCHITECT'S APPROVAL. MORTAR MIXING AND PREPARATION SHALL BE PER ASTM C270.
  - B. RAKE OUT ALL JOINTS OF AREAS REQUIRING REPOINTING AND ANY 1/8" OR WIDER CRACKS. REMOVE MORTAR TO A DEPTH OF NOT LESS THAN 3/4". UTILIZE HAND TOOLS IF POSSIBLE, AND A POWER CHISEL IF NEEDED. NO TECHNIQUE UTILIZED CAN SPALL EDGES OF BRICK OR WIDEN JOINTS. BRUSH, VACUUM OR FLUSH JOINTS TO REMOVE LOOSE DEBRIS.
  - C. MOISTEN JOINTS WITH WATER PRIOR TO REPOINTING TO REDUCE WATER ABSORPTION OF REPOINTING MORTAR JOINTS.
  - D. REPOINT BY MANUALLY INSERTING REPOINTING MORTAR INTO JOINTS, FILLING THE JOINTS IN THREE SUCCESSIVE LAYERS. COMPACT EACH LAYER AND ALLOW IT TO BECOME THUMBPRINT HARD BEFORE APPLYING NEXT LAYER.
  - E. CLEAN MORTAR DROPPINGS AND SPLATTERS FROM ADJACENT AND GROUND SURFACES.
  - F. TOOL MORTAR JOINT WHEN REPOINTING HAS ACHIEVED INITIAL SET. COMPRESS MORTAR JOINT SURFACE TO BE SLIGHTLY BELOW SURFACE OF MASONRY, NOT FLUSH, TO KEEP JOINTS FROM WIDENING.
  - G. CURE MORTAR AS REQUIRED, KEEPING IT IN DAMP CONDITION FOR AT LEAST 72 CONSECUTIVE HOURS. HAIRLINE CRACKING WITHIN MORTAR OR MORTAR SEPARATION AT EDGE OF JOINT IS UNACCEPTABLE AND REQUIRES JOINT TO BE REDONE.
  - H. WHEN FULLY HARDENED, CLEAN EXCESS MORTAR WITH WATER USING WOOD SCRAPERS AND FIBER BRUSHES. DO NOT USE METAL SCRAPERS OR BRUSHES, OR CHEMICAL CLEANERS.
- 4.2 MASONRY INFILL: RE-USE EXISTING SALVAGED BRICK MASONRY, CLEANED AS REQUIRED. MORTAR JOINTS TO MATCH EXISTING ADJACENT MASONRY COLOR AND HARDNESS.

DIVISION 7 — THERMAL AND MOISTURE PROTECTION

- 7.1 WHERE EXISTING EXTERIOR OPENINGS ARE TO BE INFILLED, MATCH EXISTING EXTERIOR WALL ASSEMBLY WITH LIKE CONSTRUCTION.
- 7.2 GUTTERS AND DOWNSPOUTS: PROVIDE ROOF GUTTER AND DOWNSPOUT TO MATCH EXISTING STYLE, COLOR, FINISH, AND GAUGE.
- 7.3 BATT INSULATION: PROVIDE R38 FACED, GLASS-FIBER BLANKET INSULATION ABOVE GWB CEILING AND BETWEEN EXISTING ROOF TRUSSES, 24 INCHES O.C., TO SEPARATE ATTIC FROM CONDITIONED SPACES. FILL ENTIRE WIDTH BETWEEN TRUSSES, AND FILL ENTIRE LENGTH OF ROOF TRUSSES FROM EXTERIOR WALL ASSEMBLY TO EXTERIOR WALL ASSEMBLY.
  - A. AVAILABLE MANUFACTURERS:
    - 1. EVERTRUE CRAFTSMAN 2-1/4 INCH X 7 FEET WOOD CASING, PRIMED PINE FINGER-JOINTED, MODEL #31670FJPM
    - 2. ALEXANDRIA MOULDING WM 327 2-1/4 INCH X 84 INCH WOOD CASING, PRIMED PINE FINGER-JOINTED, MODEL #0W327J-3084C-SW

- G. TRIM ACCESSORIES: DISCLOSE ALL REQUIRED TRIM ACCESSORIES IN COMPLIANCE WITH ASTM C 1047. TRIM ACCESSORIES SHALL BE GALVANIZED OR ALUMINUM-COATED STEEL SHEET OR ROLLED ZINC. SHAPES TO INCLUDE, BUT ARE NOT LIMITED TO, CORNERBEAD AND EXPANSION (CONTROL) JOINT. BASIS OF DESIGN: PITTCO INDUSTRIES, 6409 RHODE ISLAND AVENUE, RIVERDALE, MD 20737. PROVIDE CORROSION-RESISTANT PRIMER COMPATIBLE WITH JOINT COMPOUND AND FINISH MATERIAL SPECIFIED. PAINT IN FIELD TO MATCH ADJACENT WALL COLOR.
- H. JOINT TREATMENT MATERIALS: COMPLY WITH ASTM C 475 / C 475M. PROVIDE PAPER JOINT TAPE AT INTERIOR GYPSUM WALL BOARD. PROVIDE JOINT COMPOUND FOR EACH COAT USE FORMULATION THAT IS COMPATIBLE WITH OTHER COMPOUNDS APPLIED ON PREVIOUS SUCCESSIVE COATS. PREFILL OPEN JOINTS AND DAMAGED SURFACE AREAS USING SETTING-TYPE TAPING COMPOUND. FOR SECOND FILL COAT, USE SETTING-TYPE, SANDABLE TOPPING COMPOUND. FOR THIRD FINISH COAT, USE DRYING-TYPE, ALL-PURPOSE COMPOUND.
- J. LAMINATING ADHESIVE: PROVIDE AUXILIARY MATERIALS THAT COMPLY WITH REFERENCED INSTALLATION STANDARDS AND MANUFACTURER'S WRITTEN RECOMMENDATIONS. PROVIDE ADHESIVE OR JOINT COMPOUND FOR DIRECT CONTACT WITH EXISTING GYPSUM PANELS TO CONTINUOUS SUBSTRATE. USE ADHESIVES THAT HAVE A VOC CONTENT OF 50 g/L OR LESS WHEN CALCULATED ACCORDING TO 40 CFR 59, SUBPART B (EPA METHOD 24).
- K. STEEL DRILL SCREWS: COMPLY WITH ASTM C 1002, U.N.O.

- 9.4 RUBBER WALL BASE: PROVIDE BASIS OF DESIGN THERMOPLASTIC (TP) WALL BASE OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW. ARCHITECT TO SELECT COLOR FROM MANUFACTURER'S FULL RANGE. PROVIDE 20% ATTIC STOCK AND TURN OVER TO OWNER FOR FUTURE REPAIRS AND REPLACEMENTS. GLUE DOWN WITH LOW VOC ADHESIVE PER MANUFACTURER'S REQUIREMENTS.
  - A. BASIS OF DESIGN: JOHNSONITE TRADITIONAL DURACOVE THERMOPLASTIC WALL BASE, 29 MOON ROCK WG, 1/8" THICKNESS, 4" HIGH COVE WITH TOE
  - B. WARRANTY: MANUFACTURER'S STANDARD 2-YEAR LIMITED COMMERCIAL WARRANTY

- 10.3 FIRE EXTINGUISHER: PORTABLE, HAND-CARRIED FIRE EXTINGUISHER AND GALVANIZED STEEL MOUNTING BRACKETS TO WALL VERTICALLY, WITH PLATED OR RED BAKED-ENAMEL FINISH. FABRICATE AND LABEL FIRE EXTINGUISHER TO COMPLY WITH NFPA 10, "PORTABLE FIRE EXTINGUISHERS." PROVIDE FIRE EXTINGUISHER APPROVED, LISTED, AND LABELED BY FMQ. LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ARCHITECT.
  - A. WARRANTY: MANUFACTURER'S STANDARD 6-YEAR WARRANTY FOR FAILURE OF HYDROSTATIC TEST ACCORDING TO NFPA 10 AND FAULTY OPERATION OF VALVES OR RELEASE LEVERS.
- B. BASIS OF DESIGN: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE J.L. INDUSTRIES "COSMOS" SERIES OR COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:
  - 1. KIDDE RESIDENTIAL AND COMMERCIAL DIVISION; SUBSIDIARY OF KIDDE P.C.
  - 2. LARSEN'S MANUFACTURING COMPANY

DIVISION 6 — WOOD AND PLASTICS

- 6.1 ALL WORK MUST CONFORM TO THE REQUIREMENTS OF CHAPTER 23 OF VCC, THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION NDS 2013.
- 6.2 ALL DIMENSIONAL LUMBER MUST BE SOUTHERN PINE STAMPED BY A MEMBER OF THE SPIB AND KILN DRIED TO 19% MAXIMUM MOISTURE CONTENT. THE GRADES OF LUMBER TO BE USED MUST BE #1 OR #2 AS NOTED. F<sub>b</sub> FOR 2x10s: #2 = 1,050 PSF; #1 = 1,300 PSF. TREATMENT FOR EXPOSED TO WEATHER LUMBER AND SILLS: MUST BE COPPER AZOLE (CA) OR ALKALINE COPPER QUAT (ACQ) ACCORDING TO AWPA P31/32 AND P26/27, RESPECTIVELY. AND RATED FOR ABOVE GROUND USE. ALL TREATED LUMBER MUST BE "KILN DRIED AFTER TREATMENT" (KDAT) TO 19% MAXIMUM.
- 6.3 FLOOR PLYWOOD MUST BE APA RATED FLOORING, EXPOSURE EXTERIOR, NOT OSB OR PARTICLE BOARD, AND 1/2" MIN THICKNESS. GAPS OF 1/8" MUST BE PROVIDED AT ENDS BETWEEN AND 1x DECKING. PLYWOOD MUST BE NAILED WITH GALVANIZED 10d RING SHANKED NAILS AT 6" AT EDGES AND 6" AT INTERMEDIATE.
- 6.4 SILL PLATES MUST BE 2x" TREATED S.P. NO. 2 (KDAT). REPLACEMENT SILL PLATES ON WALLS MUST BE FASTENED TO EXISTING ANCHOR BOLTS OR AT UNSUPPORTED ENDS WITH 3/4" DIAMETER (HDG) ADHESIVE BONDED ANCHORS SPACED AT 48" O.C. WITH 8" EMBEDMENT. LOCATE ANCHOR BOLTS A MAXIMUM OF 12" FROM EACH END OF PLATE.
- 6.5 REFER TO TABLE 2304.9.1 IN THE VCC FOR NAILING SCHEDULE (U.N.O.) ALL FASTENERS AND CONNECTORS USED WITH CA OR ACC TREATED LUMBER MUST BE HOT-DIPPED GALVANIZED.
- 6.7 ALL REPLACEMENT FASCIA BOARDS MUST BE 1x (KDAT) LUMBER.
- 6.8 INTERIOR ARCHITECTURAL WOODWORK: PROVIDE WORK FROM CERTIFIED SHOP AND SKILLED WORKERS WHO PARTICIPATE IN AWW'S QUALITY CERTIFICATION PROGRAM. ENGAGE QUALIFIED WOODWORKING FIRM TO ASSUME UNDIVIDED RESPONSIBILITY FOR PRODUCTION OF INTERIOR ARCHITECTURAL WOODWORK WITH SEQUENCE-MATCHED WOOD VENEERS. VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION AND INSTALLATION OF THE WORK. COORDINATE SIZES AND LOCATIONS OF FRAMING, BLOCKING, FURRING, AND REINFORCEMENTS TO ENSURE THAT INTERIOR ARCHITECTURAL WOODWORK CAN BE SUPPORTED AND INSTALLED AS INDICATED.
  - A. PROVIDE MATERIALS THAT COMPLY WITH REQUIREMENTS OF AWW'S STANDARD FOR EACH TYPE OF WOODWORK AND QUALITY GRADE. U.N.O. USE LOW-EMITTING MATERIALS, ADHESIVES, SEALANTS, COMPOSITE WOODS, AGRIFIBER PRODUCTS AND LAMINATING ADHESIVES.
- 6.9 CABINET HARDWARE: PROVIDE CABINET HARDWARE AND ACCESSORY MATERIALS WITH ARCHITECTURAL CABINETS.
  - A. HINGES: BLUM "MODUL" 170 CONCEALED SELF-CLOSING HINGE, #91A6500 WITH #195H7 SERIES MOUNTING PLATE, ONE PAIR PER DOOR TO 48 INCH HEIGHT
  - B. PULLS: HAFELE 116.07.619, BACK MOUNTED WIRE PULL HANDLE, STEEL, BRUSHED NICKEL #1028T23, 3-1/2 INCH CTC
  - C. SHELF RESTS: HAFELE #282.47.402 CLEAR PLASTIC, HEAVY DUTY DOUBLE PIN SYSTEM LOCKS SHELF IN PLACE.
  - D. DRAWER SLIDES: COMPLY WITH BHMA A156.9, B05091, DRAWERS UP TO 6 INCHES HIGH, PROVIDE ACCURIDE 2632 BY LENGTH REQUIRED, ZINC-PLATED, FULL EXTENSION, STEEL BALL BEARING, SILENCED IN AND OUT, MINIMUM 65 LB. LOAD RATING.
- 6.10 COUNTERTOP BRACKETS: HAFELE #287.77.002, 15 BY 18 INCHES FOR 24 INCH DEEP COUNTERTOPS.
- 6.11 ANCHORS: SELECT MATERIAL, TYPE, SIZE, AND FINISH REQUIRED FOR EACH SUBSTRATE FOR SECURE ANCHORAGE. PROVIDE NONFERROUS-METAL OR HOT-DIP GALVANIZED ANCHORS AND INSERTS ON INSIDE FACE OF EXTERIOR WALLS AND ELSEWHERE AS REQUIRED FOR CORROSION RESISTANCE. PROVIDE TOOTHED-STEEL OR LEAD EXPANSION SLEEVES FOR DRILLED-IN-PLACE ANCHORS.
- 6.12 PLASTIC-LAMINATE CABINETS: FLUSH OVERLAY AWM CABINET CONSTRUCTION.
  - A. LAMINATE CLADDING FOR EXPOSED SURFACES:
    - 1. HORIZONTAL SURFACES OTHER THAN TOPS: GRADE HGS
    - 2. VERTICAL SURFACES: GRADE VGS
    - 3. EDGES: GRADE VGS PVC TAPE, 0.018-INCH MINIMUM THICKNESS, MATCHING LAMINATE IN COLOR, PATTERN, AND FINISH.

DIVISION 8 — DOORS AND WINDOWS

- 8.1 WINDOWS: ALL EXISTING WINDOWS TO REMAIN. PAINT EXTERIOR AND INTERIOR FACES OF EXISTING WOODS PER 9.1 AND 9.2.
- 8.2 ALUMINUM STOREFRONT SYSTEM: N.I.C. — CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR.
  - A. FG2 DOOR PANEL: N.I.C. — CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR.
  - B. F DOOR PANEL: N.I.C. — CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR.
  - C. GLAZING: N.I.C. — CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR.

- 9.5 RUBBER TRANSITION STRIP: PROVIDE BASIS OF DESIGN TWO-PART (TRACK AND FINISHING PIECE) T-MOULDINGS OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW. ARCHITECT TO SELECT COLOR FROM MANUFACTURER'S FULL RANGE. PROVIDE 20% ATTIC STOCK AND TURN OVER TO OWNER FOR FUTURE REPAIRS AND REPLACEMENTS. GLUE DOWN WITH LOW VOC ADHESIVE PER MANUFACTURER'S REQUIREMENTS.
  - A. BASIS OF DESIGN PRODUCT: JOHNSONITE TWO-PART T-MOULDING, 29 MOON ROCK WG
  - B. PROFILE SIZE: PROFILE SIZE AS REQUIRED TO PROVIDE APPROPRIATE TRANSITION BETWEEN DISSIMILAR MATERIALS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE DEPARTMENT OF JUSTICE GUIDANCE ON THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
  - C. WARRANTY: MANUFACTURER'S STANDARD 2-YEAR LIMITED COMMERCIAL WARRANTY

DIVISION 12 — FURNISHINGS

- 12.1 ROLLER WINDOW SHADES: INTERIOR SOLAR ROLLER SHADES, MANUALLY OPERATED WITH BALL AND CHAIN UTILIZING A BIDIRECTIONAL WRAP SPRING CLUTCH. COMPLY WITH WDMA A 100.1.
  - A. WARRANTY: MANUFACTURER'S STANDARD 6-YEAR LIMITED WARRANTY PROVIDING COVERAGE FOR REPAIR OR REPLACEMENT OF DEFECTIVE COMPONENTS.
  - B. BASIS OF DESIGN: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE WT SHADE HELIARISE OR A COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:
    - 1. MECHOSHADE SYSTEMS INC.
    - 2. LUTRON SHADING SOLUTIONS BY VIMCO
  - C. SHADE MATERIAL: SHADE BAND TO BE PVC-COATED FIBERGLASS AND POLYESTER BLENDS. SOLAR SHADING FABRIC TO BE ECOFABRIX 251 SERIES, COLOR 18 WHITE/GREY, MATERIAL OPENNESS FACTOR OF 1%.
    - FURNITURE: N.I.C. — OWNER FURNISHED.

DIVISION 9 — FINISHES

- 9.1 INTERIOR PAINT: ALL EXISTING AND NEW WOOD SURFACES AND ALL EXTERIOR DOORS AND WINDOWS TO RECEIVE PRIMER AND 2 COATS LATEX EXTERIOR SEMI-GLOSS PAINT. PROPERLY PREP EXISTING WOOD TO RECEIVE NEW PAINT. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE FOR UP TO THREE (3) EXTERIOR PAINT COLORS.
- 9.2 INTERIOR PAINT: ALL INTERIOR GWB SURFACES TO RECEIVE PRIMER AND 2 COATS OF LATEX INTERIOR PAINT. SEE BELOW FOR PAINT FINISH TYPES AND LOCATIONS. PROVIDE FOR UP TO THREE (3) INTERIOR PAINT COLORS.
  - A. SEMI-GLOSS FINISH: AT ALL INTERIOR WOOD TRIM AND CASINGS.
  - B. SATIN FINISH: AT ALL EXPOSED INTERIOR GWB SURFACES.

- 8.3 INTERIOR WOOD DOORS: SEE DOOR SCHEDULE FOR LOCATIONS AND SIZES. PROVIDE BASIS OF DESIGN PRODUCT OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW.
  - A. SLAB TYPE SOLID CORE WOOD DOORS WITH FACTORY PRIMED PAINTABLE FINISH. SINGLE DOOR, BASIS OF DESIGN PRODUCTS:
    - 1. MASONITE LINCOLN PARK 1-PANEL SOLID CORE MOLDED COMPOSITE SLAB DOOR, MODEL #1164085
    - 2. JELD-WEN MODA PRIMED PMP10111 SOLID CORE WOOD INTERIOR SLAB DOOR, MODEL #THDZW2110003
  - B. SUBMITTALS: PROVIDE PRODUCT DATA, INCLUDING DETAILS OF CORE AND EDGE CONSTRUCTION, TRIM FOR OPENINGS, WDMA I.S.1-A CLASSIFICATIONS, AND FACTORY FINISHING SPECIFICATIONS.
  - C. SHOP DRAWINGS SHALL INCLUDE:
    - 1. INDICATE LOCATION, SIZE, AND HAND OF EACH DOOR.
    - 2. INDICATE DIMENSIONS AND LOCATIONS OF MORTISES AND HOLES FOR HARDWARE.
    - 3. INDICATE DIMENSIONS AND LOCATIONS OF CUTOUTS.
    - 4. INDICATE REQUIREMENTS FOR VENEER MATCHING.
    - 5. INDICATE LOCATION AND EXTENT OF HARDWARE BLOCKING.
    - 6. INDICATE CONSTRUCTION DETAILS NOT COVERED IN PRODUCT DATA.
    - 7. INDICATE DOORS TO BE FACTORY FINISHED AND FINISH REQUIREMENTS.
    - 8. INDICATE FIRE PROTECTION RATINGS FOR FIRE RATED DOORS.

- 9.6 CARPET FLOORING
  - A. OPT-1: OFCI. THE PRODUCT TO BE PROVIDED TO CONTRACTOR BY OWNER FOR INSTALLATION IS APPLAUSE III 02803, A 24"x24" BACKED CARPET TILE BY TANDUS. GLUE DOWN WITH LOW VOC ADHESIVE PER MANUFACTURER'S REQUIREMENTS.
  - B. OPT-2: PROVIDE THE FOLLOWING WALK-OFF CARPET OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW. ARCHITECT TO SELECT COLOR AND PATTERN FROM MANUFACTURER'S FULL RANGE. PROVIDE 20% ATTIC STOCK AND TURN OVER TO OWNER FOR FUTURE REPAIRS AND REPLACEMENTS. GLUE DOWN WITH LOW VOC ADHESIVE PER MANUFACTURER'S REQUIREMENTS. BASIS OF DESIGN PRODUCT:
 

MANUFACTURER .....	SHAW CONTRACT
STYLE .....	WELCOME II TILE 5T031
SIZE .....	24"x24" TILE
BACKING .....	ECOWORX WALK-OFF
DYE SOLUTION .....	100% SOLUTION DYED
TUFTED WEIGHT .....	49.0 oz./y <sup>2</sup>
WARRANTY .....	15-YEAR LIFETIME COMMERCIAL LIMITED
INSTALLATION .....	MONOLITHIC

- 12.2 FURNITURE: N.I.C. — OWNER FURNISHED.
- 12.3 THE COUNTY HAS HAD THE BUILDING INSPECTED FOR ASBESTOS AND HAS CONDUCTED ABATEMENT PROCESSES, PRIMARILY THE REMOVAL OF FLOORING AND RELATED MASTIC, AND BELIEVES THE BUILDING TO BE ASBESTOS FREE.

- 9.7 RESILIENT FLOORING
  - A. LVT: PROVIDE THE FOLLOWING HIGH PERFORMANCE LUXURY VINYL TILE OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW. ARCHITECT TO SELECT COLOR AND PATTERN FROM MANUFACTURER'S FULL RANGE. PROVIDE 20% ATTIC STOCK AND TURN OVER TO OWNER FOR FUTURE REPAIRS AND REPLACEMENTS. GLUE DOWN WITH LOW VOC ADHESIVE PER MANUFACTURER'S REQUIREMENTS. BASIS OF DESIGN PRODUCT:
 

MANUFACTURER .....	MILLIKEN
STYLE .....	LVT STONE CHARLOTTE
COLORWAY .....	CHT12
SIZE .....	18"x18" TILE
WEAR LAYER THICKNESS .....	28 MIL (0.7 MM)
OVERALL THICKNESS .....	0.100 INCH (2.5 MM)
EDGE PROFILE .....	MICRO BEVEL
WARRANTY .....	12-YEAR LIMITED COMMERCIAL WEAR
INSTALLATION .....	MONOLITHIC
  - B. QVT: PROVIDE THE FOLLOWING HIGH PERFORMANCE COMPRESSED QUARTZ VINYL TILE OR...
 

MANUFACTURER .....	UFORFLOOR
STYLE .....	QUARTZ MOSAIC
COLORWAY .....	619301 / 9301
SIZE .....	24"x24" TILE
THICKNESS .....	2.0 MM
WARRANTY .....	MANUFACTURER'S STANDARD
INSTALLATION .....	MONOLITHIC

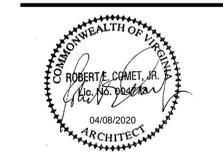
- 9.8 CONCRETE FLOORS: PROVIDE A TWO-COAT SEALER FOR EXPOSED CONCRETE FLOORS.
  - A. 1ST COAT: H&C CONCRETE WET LOOK CLEAR FLOOR SEALER
  - B. 2ND COAT: H&C CONCRETE WET LOOK CLEAR FLOOR SEALER

- 9.9 ACOUSTIC CEILING TILE (ACT): PROVIDE THE FOLLOWING ACOUSTIC CEILING TILE SYSTEM OR SUBMIT A COMPARABLE PRODUCT FOR ARCHITECT'S REVIEW. ARCHITECT TO SELECT COLOR AND PATTERN FROM MANUFACTURER'S FULL RANGE. PROVIDE 20% ATTIC STOCK AND TURN OVER TO OWNER FOR FUTURE...
 

MANUFACTURER .....	ARMSTRONG CEILINGS
STYLE .....	ULTIMA LAY-IN
COLOR .....	WHITE (WH)
SIZE .....	24"x24" CEILING TILE
NRG .....	0.75 NRC
CAC .....	35 CAC
EDGE PROFILE .....	SQUARE LAY-IN 15/16
WARRANTY .....	30-YEAR LIMITED SYSTEM WARRANTY



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PUBLIC WORKS / IT OFFICE RENOVATION

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

No.	Date	Description
PROJECT MANAGER:		DRAWN BY:
RC		KH

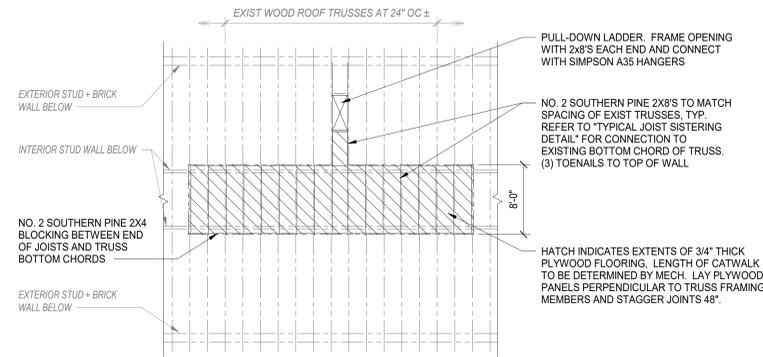
QE No. 41912630  
 BID DOCUMENTS  
 04/08/2020

GENERAL NOTES

A002

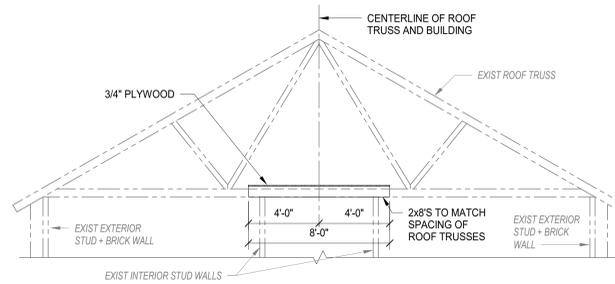
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FRAMING DETAILS



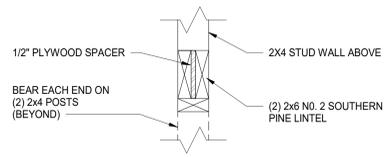
1 ATTIC CATWALK PLAN

1/8" = 1'-0" REFERRED FROM:



2 TYPICAL CATWALK SECTION

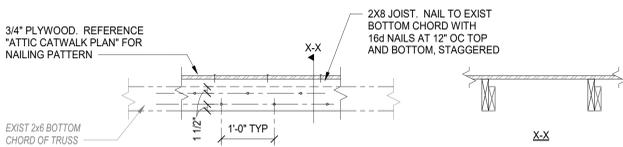
1/4" = 1'-0" REFERRED FROM:



NOTE: PROVIDE THIS DETAIL AT ALL NEW OPENINGS LESS THAN 5'-0" WIDE IN BEARING STUD WALLS. NOTIFY DESIGN TEAM IF EXISTING OPENINGS ARE OBSERVED TO NOT HAVE STRUCTURAL LINTELS.

3 TYPICAL INTERIOR OPENING LINTEL

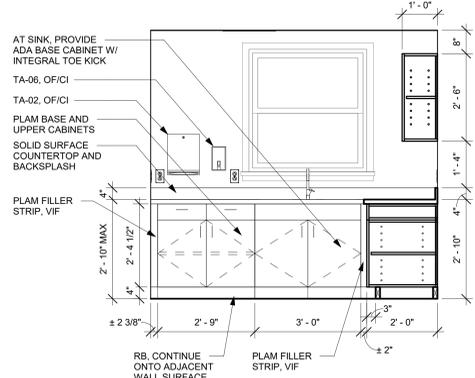
1 1/2" = 1'-0" REFERRED FROM:



4 TYPICAL JOIST SISTERING DETAIL

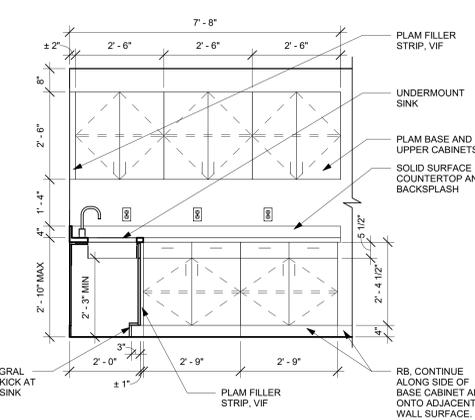
3/4" = 1'-0" REFERRED FROM:

CASEWORK ELEVATIONS



5 CASEWORK ELEVATION

1/2" = 1'-0" REFERRED FROM:A101



6 CASEWORK ELEVATION

1/2" = 1'-0" REFERRED FROM:A101

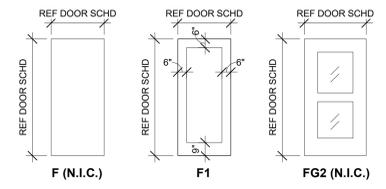
DOOR SCHEDULE

GENERAL NOTES:  
 1. CONTRACTOR SHALL COORDINATE ALL DOOR HARDWARE AND ACCESS CONTROL REQUIREMENTS WITH OWNER'S VENDOR(S) AND OWNER'S STANDARD REQUIREMENTS.  
 2. CONTRACTOR SHALL COORDINATE AND INSTALL DOOR HARDWARE IN ACCORDANCE WITH:  
 A. ALL APPLICABLE BUILDING CODES AND REQUIREMENTS FOR SAFE MEANS OF EGRESS  
 B. ADA'S 2010 ACCESSIBILITY STANDARDS

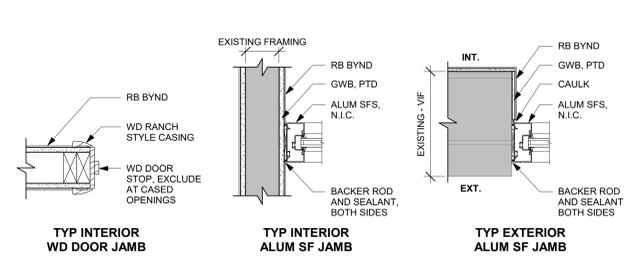
DOOR NUMBER	LOCATION	DOOR			FRAME			HWD SET	NOTES			
		W	H	T	TYPE	MATL	FINISH			TYPE	MATL	FINISH
FIRST FLOOR												
101a	VESTIBULE	3'-0"	6'-8"	2 1/4"	FG2	ALUM	N.I.C.	AS1	ALUM	N.I.C.	SET 1	ALUM SFS, N.I.C. COORD. W/ OWNER'S ACCESS CONTROL VENDOR
101b	VESTIBULE	3'-0"	6'-8"	2 1/4"	FG2	ALUM	N.I.C.	AS2	ALUM	N.I.C.	SET 1	ALUM SFS, N.I.C. COORD. W/ OWNER'S ACCESS CONTROL VENDOR
102	CORRIDOR	3'-0"	6'-8"	1 3/4"	F	ALUM	N.I.C.	AS3	ALUM	N.I.C.	SET 1	ALUM SFS, N.I.C. COORD. W/ OWNER'S ACCESS CONTROL VENDOR
104	CORRIDOR	6'-8"	6'-8"	1 3/4"	-	-	-	A	WD	PTD	-	CASED OPENING
105	TOILET	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 3	
106	TOILET	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 4	
107	CORRIDOR	2'-6"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 4	
108	ELEC.	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 4	
109	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
110	FILES	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
111	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
112	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
113	CONFERENCE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
114	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
115	SUPPLIES	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
116	FILES	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
117	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
118	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
119	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
120	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
121	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	
122	KITCHEN	4'-0"	6'-8"	1 3/4"	-	-	-	A	WD	PTD	-	CASED OPENING
123	OFFICE	3'-0"	6'-8"	1 3/4"	F1	WD	PTD	A	WD	PTD	SET 2	

DOOR PANEL TYPES

GENERAL NOTES:  
 1. REFER TO A002 GENERAL NOTES FOR DOOR INFORMATION.  
 2. F AND FG2 DOOR TYPES N.I.C. CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR.

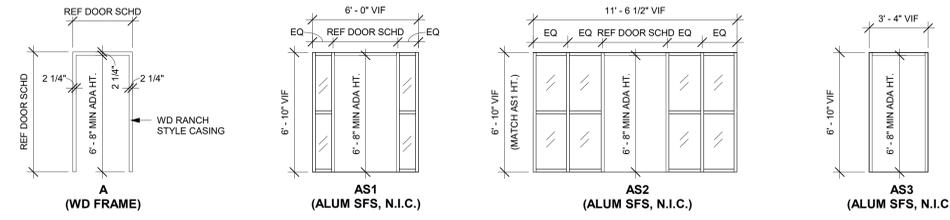


TYPICAL JAMB DETAILS



DOOR FRAME TYPES

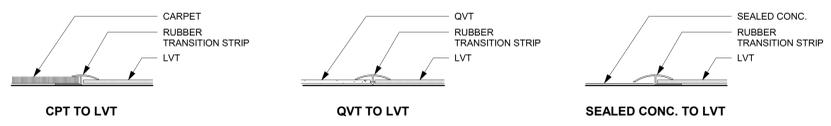
GENERAL NOTES:  
 1. ALUMINUM STOREFRONT SYSTEM AND STOREFRONT GLAZING N.I.C. CONTRACTOR SHALL COORDINATE ALUMINUM STOREFRONT SYSTEM WITH OWNER'S ACCESS CONTROL VENDOR.  
 2. REFER TO DOOR SCHEDULE FOR DOOR SIZE, FRAME TYPES AND MATERIALS. CONTRACTOR SHALL VERIFY IN FIELD THE DIMENSIONS OF ALL ROUGH OPENINGS.



FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS	DOOR		CEILING	NOTES
					DOOR	FRAME		
101	VESTIBULE	CPT-2	RB	PTD	N.I.C.	N.I.C.	GWB	
102	CORRIDOR	LVT	RB	PTD	N.I.C.	N.I.C.	ACT / GWB	REFER TO REFLECTED CEILING PLAN
103	RECEPTION	LVT	RB	PTD	PTD	PTD	GWB	
104	CORRIDOR	LVT	RB	PTD	-	PTD	ACT	
105	TOILET	QVT	RB	PTD	PTD	PTD	GWB	
106	TOILET	QVT	RB	PTD	PTD	PTD	GWB	
107	JAN.	LVT	RB	PTD	PTD	PTD	GWB	
108	ELEC.	SEALED CONC	RB	PTD	PTD	PTD	GWB	
109	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
110	FILES	CPT-1	RB	PTD	PTD	PTD	ACT	
111	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
112	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
113	CONFERENCE	CPT-1	RB	PTD	PTD	PTD	ACT	
114	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
115	SUPPLIES	CPT-1	RB	PTD	PTD	PTD	ACT	
116	FILES	CPT-1	RB	PTD	PTD	PTD	ACT	
117	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
118	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
119	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
120	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
121	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	
122	KITCHEN	QVT	RB	PTD	-	PTD	ACT	
123	OFFICE	CPT-1	RB	PTD	PTD	PTD	ACT	

FLOORING TRANSITION DETAILS



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PUBLIC WORKS / IT OFFICE RENOVATION

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

No. Date Description  
 PROJECT MANAGER: RC DRAWN BY: KH

QE No. 41912630  
 BID DOCUMENTS  
 04/08/2020

SCHEDULES AND DETAILS

A003

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**GENERAL DEMO. NOTES**

1. COORDINATE ALL DEMOLITION WORK WITH OWNERS ENVIRONMENTAL REPORT. LIMIT AND SCOPE OF HAZARDOUS MATERIAL REMEDIATION IS NOT DEFINED IN CONTRACT DRAWINGS OR PROJECT MANUAL.
2. AT ALL LOCATIONS WHERE THE EXTERIOR ELEMENTS ARE BEING DEMOLISHED, CONTRACTOR SHALL PROVIDE SECURITY ENCLOSURE AND WEATHER PROTECTION IN ORDER TO SECURE THE BUILDING AND PROTECT IT AGAINST WEATHER AND THE ELEMENTS.
3. DASHED LINES INDICATE EXISTING CONSTRUCTION TO BE REMOVED U.N.O. REMOVAL OF PARTITIONS INCLUDES REMOVAL OF ALL ITEMS FIXED TO PARTITIONS (DOORS, CASEWORK, ELECTRICAL, PLUMBING, DEVICES, ALARMS, SENSORS, SURFACE RACEWAYS, RECEPTACLE AND SWITCH PLATES, DOOR STOPS, SHELVEING, WALL MOUNTED LIGHT FIXTURES, WINDOW TREATMENTS AND BRACKETS, ETC.) EXTENT OF SELECTIVE DEMOLITION SHALL BE AS REQUIRED FOR INSTALLATION OF NEW WORK. EXISTING WORK TO REMAIN, IF DAMAGED BY DEMOLITION OPERATIONS, SHALL BE REPAIRED TO MATCH ORIGINAL SURFACE CONDITION OR AS INDICATED IN THE DRAWINGS.
4. PRIOR TO REMOVAL OR MODIFICATION OF WALLS OR OTHER LOAD BEARING ELEMENTS, THE ACTUAL SIZE AND LOCATION OF THE STRUCTURAL COMPONENTS AND LOAD BEARING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR BY MEANS OF SELECTIVE DEMOLITION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY UNUSUAL OR HAZARDOUS CONDITION INCLUDING BUT NOT LIMITED TO CRACKS, ABSENCE OF BRACING, OR LOOSE ELEMENTS AND COMPONENTS.
5. CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO SAFELY SUPPORT ALL LOADS, INCLUDING ROOF LOADS, AND TO MAINTAIN EXISTING FRAMING TO REMAIN IN ITS EXISTING LOCATION WHILE MAKING MODIFICATIONS REQUIRED UNDER THIS CONTRACT.
6. REFERENCE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR REMOVAL OF ALL EQUIPMENT, FIXTURES, WIRING, PIPING, ETC. ABANDONED PIPING AND CONDUIT SHALL BE CAPPED IN CONCEALED LOCATIONS AFTER BEING SECURED IN PLACE.
7. COORDINATE REMOVAL OF SLAB AS REQUIRED FOR INSTALLATION OF NEW PLUMBING, ELECTRICAL, AND STRUCTURAL ELEMENTS.
8. TYPICAL DEMOLITION, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
  - A. **CEILING:** ALL CEILING SYSTEMS AND FINISHES ARE TO BE REMOVED AND DISPOSED OF UNLESS NOTED OTHERWISE, INCLUDING LIGHTING FIXTURES, CEILING FANS, DEVICES, ALARMS, SENSORS, ETC.
  - B. **ATTIC INSULATION:** REMOVE AND DISPOSE OF ALL EXISTING BATT INSULATION ABOVE CEILING.
  - C. **INTERIOR DOORS:** REMOVE AND DISPOSE OF ALL EXISTING INTERIOR WOOD DOORS, FRAMES, AND CASED OPENINGS INCLUDING INTERIOR CASING TRIM. WHERE INDICATED, PREPARE OPENING TO RECEIVE NEW DOOR. COORDINATE WITH DOOR SCHEDULE AND DOOR HARDWARE REQUIREMENTS.
  - D. **INTERIOR PARTITIONS:** FOR EXISTING INTERIOR PARTITIONS TO REMAIN, REMOVE AND DISPOSE OF ALL EXISTING FINISHES, DOWN TO THE EXISTING WOOD STUD FRAMING, INCLUDING EXISTING WOOD PANELING AND GYPSUM WALL BOARD.
  - E. **EXTERIOR WALL ASSEMBLIES:** AT ALL EXISTING EXTERIOR WALL ASSEMBLIES, EXISTING INTERIOR FINISHES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
  - F. **WALL BASE:** REMOVE BASE MATERIAL FROM ALL WALLS/PARTITIONS INCLUDING ALL OF THOSE EXISTING TO REMAIN. PATCH EXISTING SURFACES AS REQUIRED TO RECEIVE NEW BASE MATERIAL.
  - G. **WINDOWS:** ALL EXISTING WINDOWS TO REMAIN. AT EXISTING WINDOWS, REMOVE, PROTECT AND STORE EXISTING INTERIOR CASING AND TRIM FOR REUSE. REPLACE ANY DAMAGED INTERIOR CASING AND TRIM AS PART OF THE NEW WORK.
  - H. **EXTERIOR DOORS:** REMOVE AND DISPOSE OF ALL EXISTING EXTERIOR DOORS, INCLUDING DOORS, FRAMES, CASING AND TRIM. PREPARE OPENING TO RECEIVE NEW DOOR. COORDINATE WITH DOOR SCHEDULE AND DOOR HARDWARE REQUIREMENTS.
  - I. **FLOORING:** REMOVE AND DISPOSE OF EXISTING FLOORING IN RESTROOMS AND KITCHEN. ALL EXISTING FLOORS TO RECEIVE NEW FINISHES SHALL BE PREPARED AS REQUIRED (STRIPPING, SANDING, PATCHING, REMOVAL OF DEBRIS, ETC) TO RECEIVE NEW FINISHES. COORDINATE WITH FINISH SCHEDULE.

**SHEET KEYNOTES**

D1	MODIFY EXISTING DOOR OPENING IN PREPARATION FOR INSTALLATION OF WIDER DOOR. REFER TO DOOR SCHEDULE.
D2	DEMOLISH PORTION OF EXISTING INTERIOR PARTITION IN PREPARATION FOR NEW DOOR. REFER TO DOOR SCHEDULE.
D3	REMOVE AND DISPOSE OF EXISTING TOILET, LAVATORY AND VANITY CASEWORK, AND TOILET ACCESSORIES (INCLUDING MIRROR, TOILET TISSUE DISPENSER, AND PAPER TOWEL DISPENSER).
D4	REMOVE AND DISPOSE OF EXISTING KITCHEN CASEWORK, COUNTERTOP, AND SINK.
D5	REMOVE AND DISPOSE OF EXISTING RESILIENT WALL FINISH AT WALLS/PARTITIONS WITH KITCHEN CASEWORK. STRIP, SAND, PATCH, AND REPAIR SURFACE TO RECEIVE PAINTED FINISH.
D6	REMOVE EXISTING RANGE AND EXHAUST FAN AND TURN OVER TO OWNER. REMOVE AND TERMINATE EXISTING EXHAUST VENT.
D7	REMOVE AND DISPOSE OF EXISTING UTILITY SINK AND WATER HEATER.
D8	REMOVE EXISTING IT RACK FRAMING WITHOUT DAMAGING AND TURN OVER TO OWNER. TURN OVER ANY EXISTING IT EQUIPMENT OVER TO OWNER. PATCH AND REPAIR EXISTING CONCRETE SLAB.
D9	DEMOLISH EXISTING MECHANICAL UNIT PLATFORM. REMOVE AND DISPOSE OF CONCRETE TOP. SALVAGE AND CLEAN EXISTING BRICK FOR REUSE AS PART OF THE NEW WORK.

**DEMOLITION LEGEND**

- EXISTING WALL TO REMAIN
- ELEMENTS TO BE REMOVED
- EXTENT OF SLAB/FLOOR REMOVAL (DEMO PLANS)
- DEMO DOOR

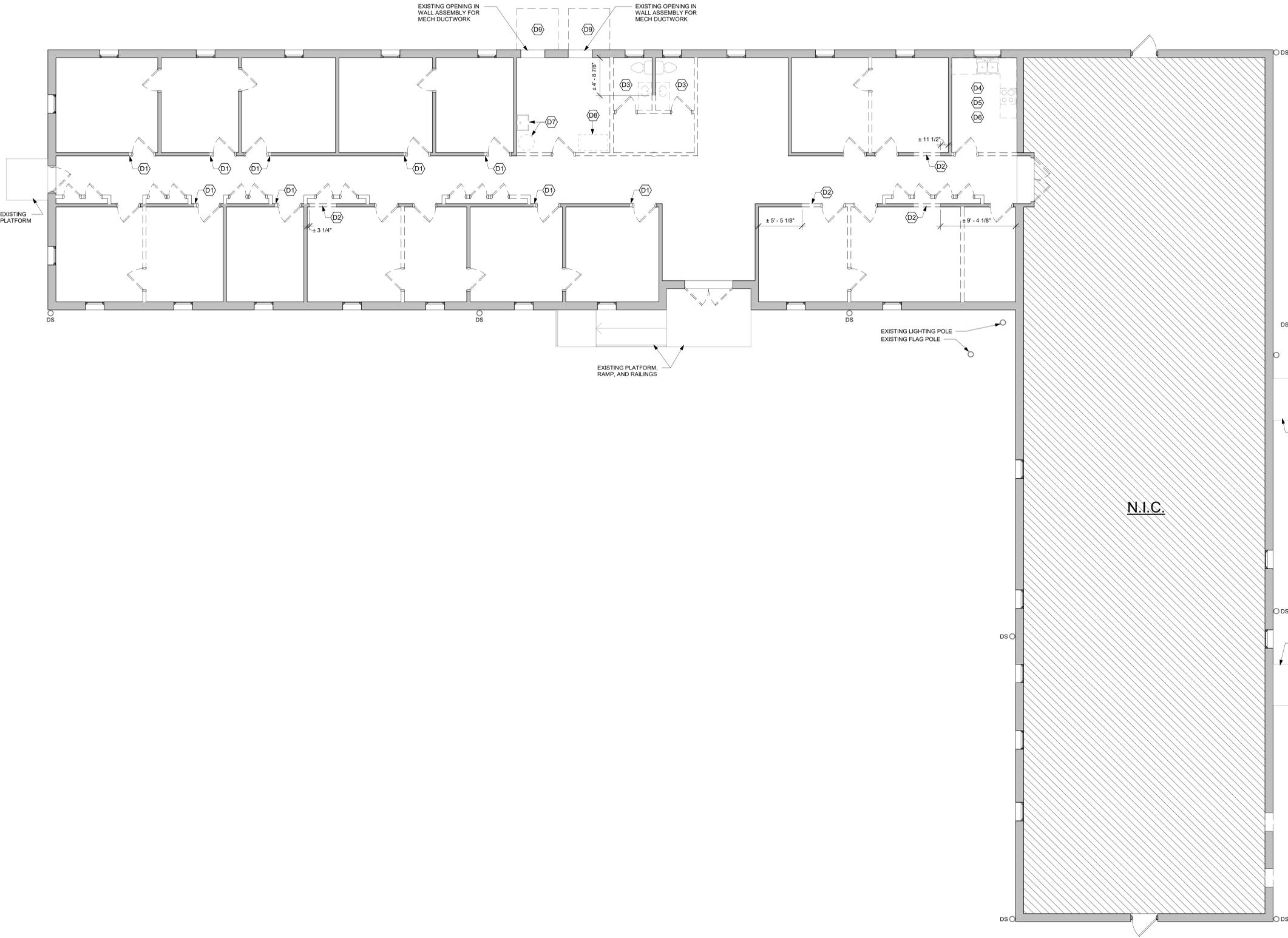
No.	Date	Description
PROJECT MANAGER:		DRAWN BY:
RC		KH

QE No. 41912630

BID DOCUMENTS  
04/08/2020

DEMOLITION PLAN

**AD001**



**1 LEVEL 1 - DEMOLITION**  
AD001 3/16" = 1'-0" REFERRED FROM: A101

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**GENERAL SHEET NOTES**

- FIELD VERIFY ALL CONDITIONS AND DIMENSIONS. REVIEW CONTRACT DOCUMENTS. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR OMISSIONS IN WRITING PRIOR TO COMMENCEMENT OF THE WORK. PROCEED AFTER RECEIPT OF DIRECTION FROM THE ARCHITECT.
- DIMENSIONS ARE TO THE FINISH FACE UNLESS OTHERWISE NOTED.
- ALL WORK IS NEW UNLESS INDICATED OTHERWISE. REFER TO NEW WORK AND DEMOLITION LEGENDS.
- REFER TO SHEET A001 FOR TYPICAL WALL ASSEMBLY AND INTERIOR PARTITION TYPES AND GENERAL NOTES.
- TYPICAL EXTERIOR MAINTENANCE, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
  - SHUTTERS: REPLACE ALL PLASTIC SHUTTERS AND PAINT.
  - EXTERIOR TRIM: REPAINT ALL EXTERIOR WOOD TRIM. REPLACE MISSING OR ROTTEN PIECES AS REQUIRED. REATTACH ANY SAGGING PIECES AS REQUIRED.
  - WINDOWS AND DOORS: RECAULK AROUND EXISTING WINDOWS AND DOORS, AND PAINT.
  - WINDOW LINTELS: ALL WINDOW LINTELS WHICH SHOW SIGNS OF RUSTING AND SPALLING, REMOVE AND REPLACE FAILED MORTAR AND PAINT. PAINT ALL EXPOSED METAL LINTELS.
  - BRICK MASONRY: REPOINT ALL CRACKED LOOSE MORTAR IN EXTERIOR MASONRY. MAJOR REPAIRS AS NOTED ON DRAWINGS.
  - GUTTERS AND DOWNSPOUTS: REHANG ANY LOOSE SECTIONS OF EXISTING GUTTERS OR DOWNSPOUTS — HANG SO THERE ARE NO LOW SPOTS TO RESTRICT DRAINAGE. REPLACE, REHANG, OR PROVIDE NEW GUTTERS AND DOWNSPOUTS AS NOTED ON DRAWINGS. NEW MATERIALS TO MATCH EXISTING GUTTER/DOWNSPOUT STYLE AND FINISH. EXISTING GUTTERS AND DOWNSPOUTS TO REMAIN SHALL BE CLEANED AND REPAINTED AS REQUIRED.

**SHEET KEYNOTES**

1	DRINKING FOUNTAIN, REF PLUMBING DRAWINGS
2	MOP SINK, REF PLUMBING DRAWINGS. SHELF AT 5'-6" AFF ABOVE MOP SINK WITH WATER HEATER ABOVE, REF PLUMBING DRAWINGS
3	INSULATED ATTIC ACCESS LADDER HATCH ABOVE, REF REFLECTED CEILING PLAN.
4	SOFFIT PARTITION ABOVE, REF REFLECTED CEILING PLAN.
5	NEW CASEWORK AND COUNTERTOP, REF CASEWORK ELEVATIONS ON A002.
6	REHANG PORTION OF GUTTER TO BE STRAIGHT AND DRAIN PROPERLY.
7	REPOINT BRICK PAVEMENT AS NEEDED IN PLATFORM
8	REPAIR OR REPLACE DAMAGED DOWNSPOUT
9	REPAIR DAMAGED EAVE, AND REPAIR OR REPLACE DAMAGED GUTTER
10	RECAULK AROUND ALL SIDES OF EXISTING DOOR, AND REPAINT.
11	INFILL EXISTING OPENING IN MASONRY WALL WITH SALVAGED BRICK, AND PREPARE FOR NEW LOUVER, TOOTH IN BRICK. MASONRY INFILL TO INCLUDE FRAMING FOR NEW LOUVER, REFER TO A001 FOR ALL OTHER WALL ASSEMBLY NOTES.
12	INFILL EXISTING OPENING IN MASONRY WALL WITH SALVAGED BRICK, TOOTH IN BRICK. REFER TO A001 FOR ALL OTHER WALL ASSEMBLY NOTES.
13	REPLACE ROTTEN EAVE BOARDS
14	REPOINT CRACKED MASONRY
15	INSULATED ATTIC LADDER HATCH. INSTALL BETWEEN EXISTING ROOF TRUSSES PER MANUFACTURER'S STANDARD REQUIREMENTS. PROVIDE BLOCKING AS REQUIRED, REF REFLECTED CEILING PLAN.
16	3/8" GWB ATTACHED DIRECTLY TO THE BOTTOM CHORD OF EXISTING W/DF ROOF TRUSSES
17	BATT INSULATION BETWEEN TRUSSES. FILL ENTIRE WIDTH BETWEEN TRUSSES.
18	NEW GUTTER TO MATCH EXISTING
19	NEW DOWNSPOUT TO MATCH EXISTING
20	ALUMINUM STOREFRONT SYSTEM AND DOOR, N.I.C. CONTRACTOR SHALL COORDINATE WITH OWNER'S ACCESS CONTROL VENDOR, REFER TO SHEET A003.

**NEW WORK LEGEND**

- EXISTING WALL TO REMAIN
- GWB WALL
- EXTENT OF CONC SLABS
- EXISTING DOOR
- DOOR

**PUBLIC WORKS / IT OFFICE RENOVATION**

POWHATAN COUNTY

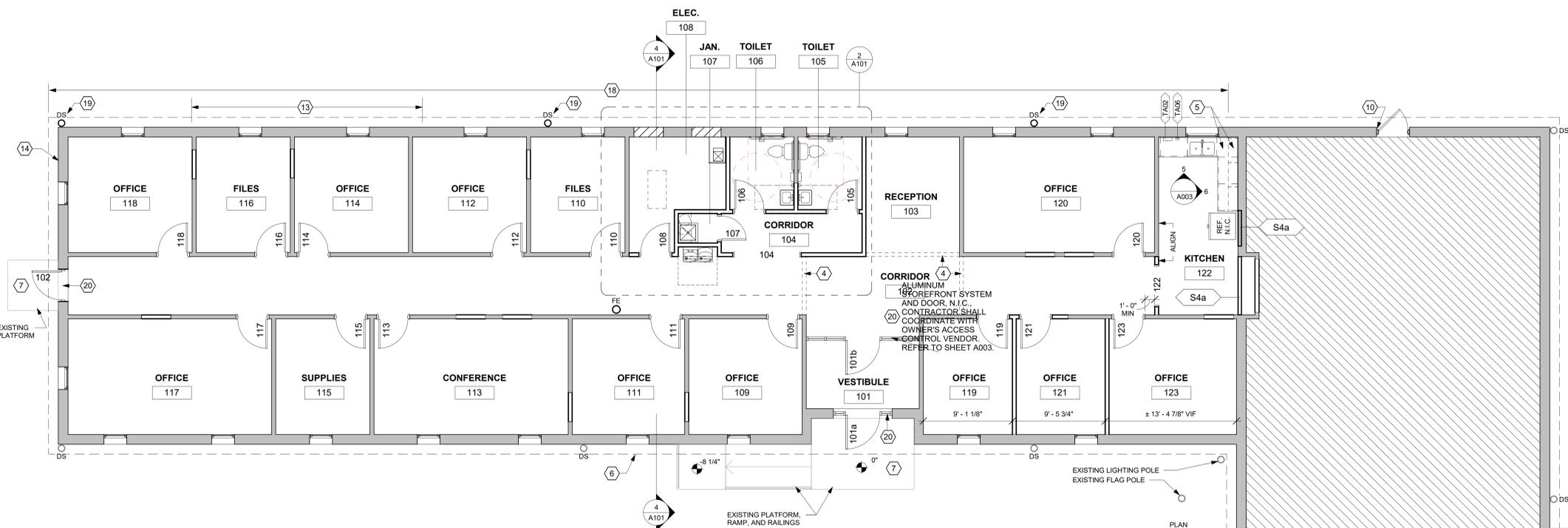
2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

No. Date Description  
PROJECT MANAGER: RC DRAWN BY: KH

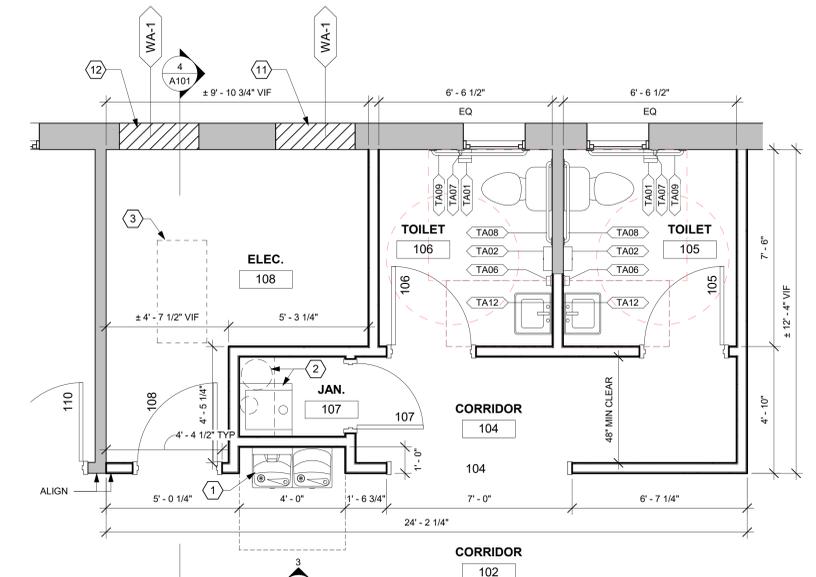
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04/08/2020

FLOOR PLAN

**A101**

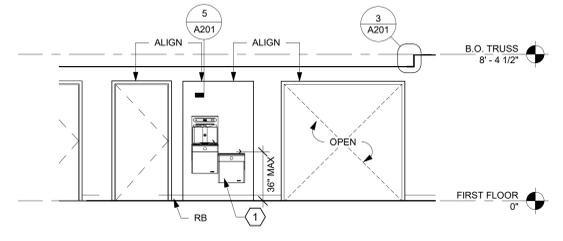


**1 FLOOR PLAN**  
3/16" = 1'-0" REFERRED FROM A101

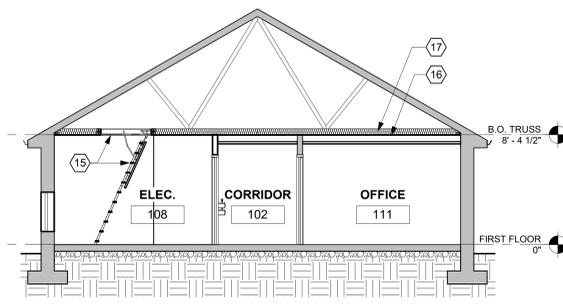


**2 ENLARGED PLAN**  
3/8" = 1'-0" REFERRED FROM A101

- GENERAL NOTES:**
- ALL NEW INTERIOR PARTITIONS SHALL BE S4 U.N.O.
  - REFER TO SHEET A001 FOR TYPICAL TOILET ACCESSORY MOUNTING HEIGHTS AND FOR TYPICAL TOILET LAYOUT AND DIMENSIONS.
  - THE FOLLOWING ACCESSORIES SHALL BE O.F.C.I: TA-01, TA-02, TA-06, AND FREE-STANDING WASTE RECEPTACLES.



**3 INTERIOR ELEVATION**  
1/4" = 1'-0" REFERRED FROM A101



**4 BUILDING SECTION**  
3/16" = 1'-0" REFERRED FROM A101

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**GENERAL SHEET NOTES**

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- DIMENSIONS ARE TO THE FINISH FACE UNLESS OTHERWISE NOTED.
- ALL WORK IS NEW UNLESS INDICATED OTHERWISE. REFER TO NEW WORK AND DEMOLITION LEGENDS.
- REFER TO SHEET A001 FOR TYPICAL WALL ASSEMBLY AND INTERIOR PARTITION TYPES AND GENERAL NOTES.
- TYPICAL CEILINGS, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
  - GWB AT TRUSSES: FOR ENTIRE WORK AREA, ATTACHED 1/2" GWB DIRECTLY TO THE BOTTOM CHORD OF EXISTING WD ROOF TRUSSES. PROVIDE BATT INSULATION ABOVE GWB CEILING, BETWEEN EXISTING WD ROOF TRUSSES. FILL ENTIRE WIDTH BETWEEN TRUSSES. REF BUILDING SECTION.
  - GWB AT NICHE: PROVIDE FRAMED GWB CEILING AT DRINKING FOUNTAIN NICHE IN CORRIDOR 102.
  - ACT: PROVIDE ACOUSTIC CEILING PANEL SYSTEM AS NOTED ON DRAWINGS.
- INSULATED ATTIC LADDER HATCH PROVIDED SOLELY FOR OWNER MAINTENANCE AND REPAIR ACCESS.

**SHEET KEYNOTES**

- INSULATED ATTIC ACCESS LADDER HATCH, FLUSH WITH FACE OF GWB CEILING. INSTALL BETWEEN EXISTING ROOF TRUSSES PER MANUFACTURER'S STANDARD REQUIREMENTS. PROVIDE BLOCKING AS REQUIRED. REF BUILDING SECTION.

**RCP LEGEND**

- EXISTING WALL TO REMAIN
- GWB WALL
- 2' x 2' ACOUSTIC PANEL (ACT)
- GWB CEILING
- GRILLE OR DIFFUSER
- 2' x 2' RECESSED LIGHT
- RECESSED DOWN LIGHT
- SURFACE MTD LIGHT

**PUBLIC WORKS / IT OFFICE RENOVATION**

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

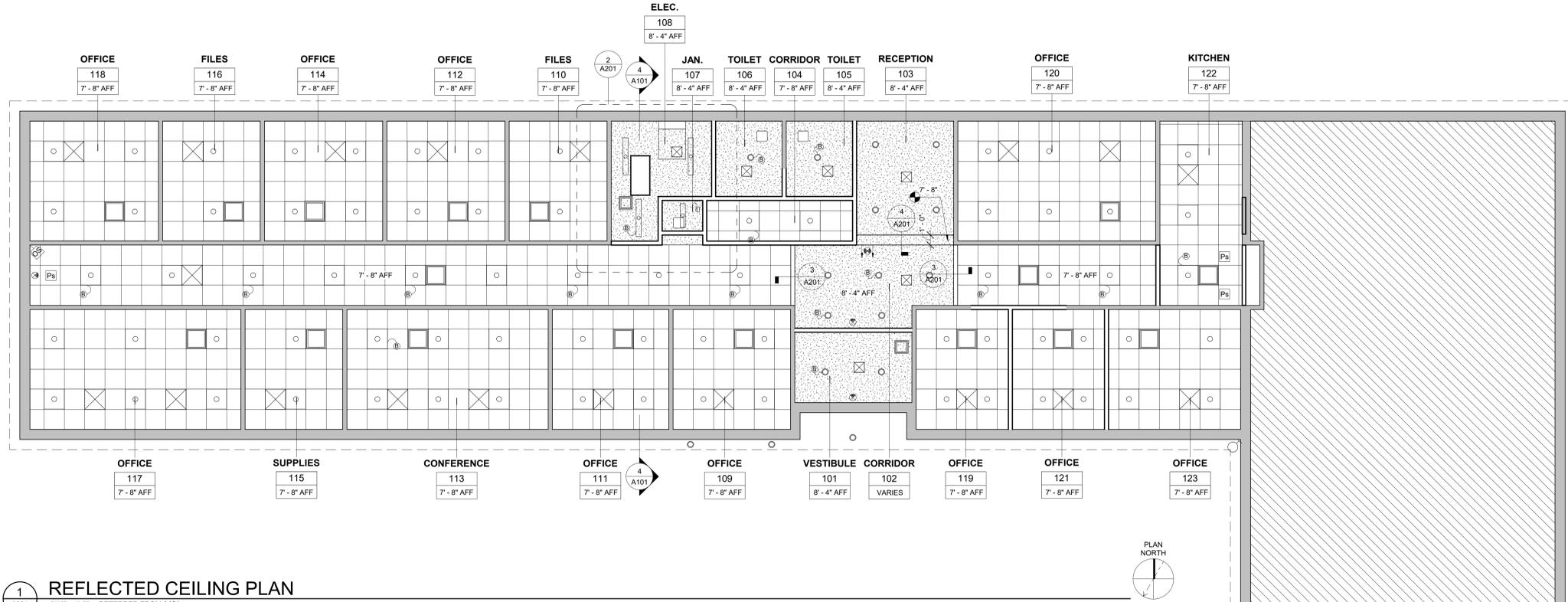
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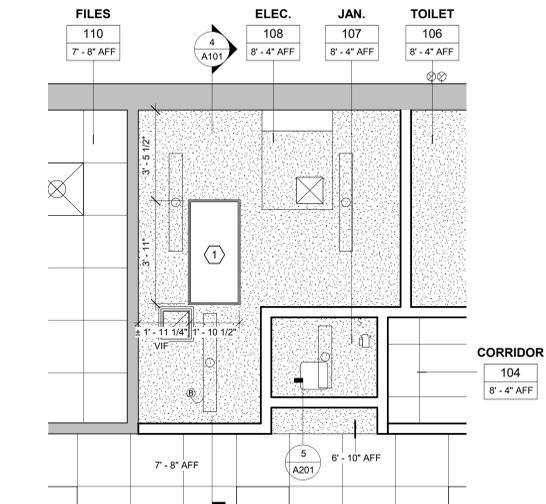
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04/08/2020

**REFLECTED CEILING PLAN**

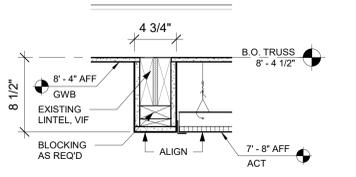
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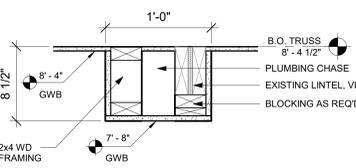
**1 REFLECTED CEILING PLAN**  
3/16" = 1'-0" REFERRED FROM A101



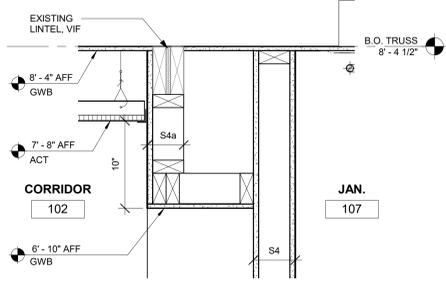
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3/8" = 1'-0" REFERRED FROM A201



**3 DETAIL - GWB TO ACT**  
1 1/2" = 1'-0" REFERRED FROM A101



**4 DETAIL - GWB TO GWB**  
1 1/2" = 1'-0" REFERRED FROM A201



**5 DETAIL - GWB AT NICHE**  
1 1/2" = 1'-0" REFERRED FROM A101

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PLUMBING PIPING SCHEDULE:				
SERVICE	SIZE RANGE	SLOPE	MATERIAL	STANDARD
ABOVEGROUND DOMESTIC WATER	2" AND SMALLER	-	CPVC PIPE AND FITTINGS, CTS OR TYPE L COPPER W/ WROUGHT FITTINGS	ASTM D 2846 OR ASTM B 88
SANITARY / WASTE / VENT	2" AND SMALLER	2%	PVC SCHEDULE 40 W/ DWV FITTINGS	ASTM D 2665
SANITARY / WASTE / VENT	3" AND LARGER	1%	PVC SCHEDULE 40 W/ DWV FITTINGS	ASTM D 2665
CONDENSATE DRAIN	ALL	1%	PVC SCHEDULE 40 W/ DWV FITTINGS	ASTM D 2665

PLUMBING PIPING INSULATION SCHEDULE:				
SERVICE	SIZE RANGE	THICKNESS	MATERIAL	MAXIMUM THERMAL CONDUCTIVITY
ABOVEGROUND DOMESTIC COLD WATER	ALL	1"	MINERAL OR GLASS FIBER PRE-FORMED PIPE INSULATION WITH FACTORY APPLIED VAPOR BARRIER JACKET OR FLEXIBLE ELASTOMERIC TUBULAR PIPE INSULATION WITH FIELD FINISH	0.25 BTU/(IN*HR*FT <sup>2</sup> *F)
ABOVEGROUND DOMESTIC HOT WATER	ALL	1"	MINERAL OR GLASS FIBER PRE-FORMED PIPE INSULATION WITH FACTORY APPLIED VAPOR BARRIER JACKET OR FLEXIBLE ELASTOMERIC TUBULAR PIPE INSULATION WITH FIELD FINISH	0.25 BTU/(IN*HR*FT <sup>2</sup> *F)
ABOVEGROUND AC COND. DRAIN INDOOR	ALL	1"	MINERAL OR GLASS FIBER PRE-FORMED PIPE INSULATION WITH FACTORY APPLIED VAPOR BARRIER JACKET OR FLEXIBLE ELASTOMERIC TUBULAR PIPE INSULATION WITH FIELD FINISH	0.25 BTU/(IN*HR*FT <sup>2</sup> *F)

PLUMBING FIXTURE SCHEDULE:									
MARK	DESCRIPTION	WASTE	VENT	C.W.	H.W.	BASIS OF DESIGN			
						MANUFACTURER	MODEL NUMBER	NOTES	
EW-1	ELECTRIC WATER COOLER, WALL MOUNTED BI-LEVEL WITH BOTTLE FILLING STATION, ADA COMPLIANT	1-1/2"	1-1/2"	1/2"	-	ELKAY	EZSTL8W5LX	1 - 3	
IMB-1	WALL MOUNTED REFRIGERATOR ICE MAKER VALVE BOX	-	-	1/2"	-	GUY GRAY	MB1HAAB	11	
LAV-1	LAVATORY, 20"x18" VITREOUS CHINA, WALL MOUNTED, WALL HANGER SUPPORT, SINGLE HOLE FAUCET 0.5 GPM, GRID DRAIN, TAILPIECE AND P-TRAP, ADA COMPLIANT	1-1/4"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD	0355.012	1, 4 - 5	
MS-1	MOP SINK, 24" x 24" x 10" DEEP, FLOOR MOUNTED	3"	1-1/2"	1/2"	1/2"	FIAT	5328	7 - 9	
S-1	KITCHEN SINK, 33"x22"x8" DOUBLE BOWL, 18 GA. TYPE 304 STAINLESS STEEL, DUAL MOUNT, DECK MOUNTED SINGLE HOLE FAUCET 2.2 GPM, (2) 3 1/2" DRAIN BASKETS, TAILPIECE AND P-TRAP, ADA COMPLIANT	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY	ECTSRAD33226TBG	1, 6	
WC-1	WATER CLOSET, FLOOR MOUNTED, FLOOR OUTLET, ELONGATED BOWL, VITREOUS CHINA, PRESSURE ASSISTED TANK, 1.6 GPF, ADA COMPLIANT	4"	2"	1/2"	-	AMERICAN STANDARD	2467.016	1, 10	

NOTES:  
1. MOUNTING HEIGHTS OF ALL ACCESSIBLE FIXTURES SHALL BE IN ACCORDANCE WITH ICC A117.1 "ACCESSIBLE AND USABLE BUILDING AND FACILITIES".  
2. WATER COOLER SHALL PROVIDE 8 GPH OF 50°F WATER AT 90°F AMBIENT AND 80°F INLET WATER TEMPERATURES.  
3. BOTTLE FILLING STATION SHALL HAVE A MINIMUM 1.0 GPM FLOW ACTIVATED BY AN ELECTRONIC SENSOR AND INCLUDE A 20 SECOND SHUT OFF TIMER AND BOTTLE COUNTER.  
4. LAVATORY FAUCET SHALL BE SINGLE LEVER MIXING, SINGLE HOLE DECK MOUNT, 0.5 GPM FLOWRATE, ADA COMPLIANT, SIMILAR TO AMERICAN STANDARD MODEL 7385.053.  
5. INSULATE EXPOSED TRAP AND SUPPLIES IN ACCORDANCE WITH ICC A117.1 "ACCESSIBLE AND USABLE BUILDING AND FACILITIES".  
6. SINK FAUCET SHALL BE SINGLE LEVER MIXING, SINGLE HOLE DECK MOUNT, PULL-DOWN SPRAYHEAD, 2.2 GPM FLOWRATE, ADA COMPLIANT, SIMILAR TO ELKAY LKHA4031.  
7. ONE PIECE COMPOSITE MOP SINK WITH INTEGRAL DRAIN AND STRAINER.  
8. PROVIDE MOP SINK WITH HOSE AND HOSE BRACKET AND MANUFACTURER'S STAINLESS STEEL WALL GUARDS.  
9. PROVIDE CHROME PLATED SERVICE-SINK FAUCET WITH VACUUM BREAKER, INTEGRAL STOPS, 8" CENTERS, PAIL HOOK, WALL BRACE AND 3/4" HOSE THREAD ON SPOUT SIMILAR TO FIAT 830-AA.  
10. BOWL RIM HEIGHT 16.5", SEAT HEIGHT 17" AFF. PROVIDE WITH OPEN FRONT SEAT SIMILAR TO AMERICAN STANDARD 5901.100.  
11. PROVIDE VALVE BOX WITH QUARTER TURN VALVES AND WATER HAMMER ARRESTER.

ELECTRIC STORAGE WATER HEATER SCHEDULE:										
MARK	DESCRIPTION	AREA SERVED	TANK VOLUME (GALLONS)	GPH RECOVERY AT 80°F RISE	ELECTRICAL		BASIS OF DESIGN		OPERATING WEIGHT (LBS)	NOTES
					KW	V / PH / HZ	MANUFACTURER	MODEL NO		
DWH-1	ELECTRIC WATER HEATER	LAVS AND SINKS	6	8	1.5	208 / 1 / 60	AD SMITH	DEL-6	85	1 - 2

NOTES:  
1. ELECTRICAL DISCONNECT TO BE PROVIDED BY DIVISION 26.  
2. INSTALL UNIT PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

THERMOSTATIC MIXING VALVE SCHEDULE:										
MARK	FLOW MIN GPM	CAPACITY GPM	PRESSURE DROP PSI	ELECTRICAL		BASIS OF DESIGN		TEMPERATURE SETTING	STANDARD	NOTES
				V	PH	MANUFACTURER	MODEL NO			
TMV-1	0.5	2.5	5	120	1	WATTS-POWERS	LFMMV-M1	120°F	ASSE 1017 & 1070	1
TMV-2	0.25	0.5	8	120	1	WATTS	LFUSG-B	105°F	ASSE 1070	2

NOTES:  
1. PROVIDE TMV-1 AT DWH-1, INSTALL AS INDICATED IN DETAIL THIS SHEET.  
2. PROVIDE TMV-2 AT EACH LAVATORY, INSTALL AS INDICATED IN DETAIL THIS SHEET ON WALL BELOW LAVATORY MOUNTING, CONCEALED FROM VIEW.

DOMESTIC HOT WATER RECIRCULATION PUMP SCHEDULE:									
MARK	CAPACITY GPM	HEAD FT-H2O	HP	ELECTRICAL		BASIS OF DESIGN		SYSTEM / AREA SERVED	NOTES
				V	PH	MANUFACTURER	MODEL NO		
DHWP-1	2	10	1/25	120	1	TACO	008-BC6	120°F RETURN	1

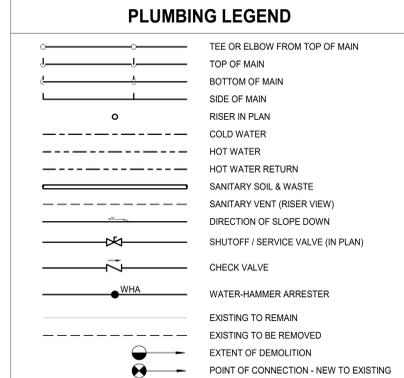
NOTES:  
1. PROVIDE ELECTRONIC TIMER TO CONTROL RECIRCULATION PUMP. COORDINATE SCHEDULE WITH OWNER.

POTABLE WATER EXPANSION TANK SCHEDULE:						
MARK	TANK VOLUME	ACCEPTANCE VOLUME	DIMENSIONS		BASIS OF DESIGN	
	GAL	GAL	DIA IN	LENGTH IN	MANUFACTURER	MODEL NO
ET-1	2	0.9	8	12-5/8	BELL & GOSSETT	PT-5

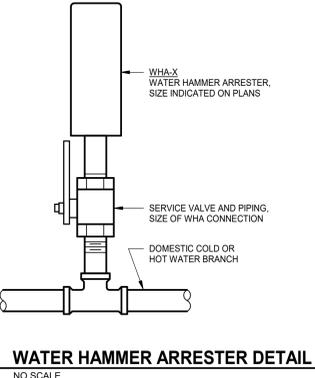
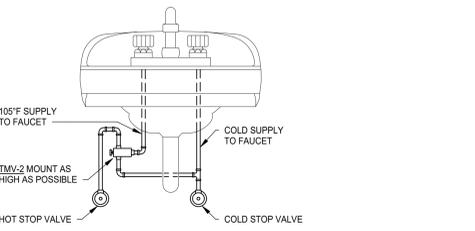
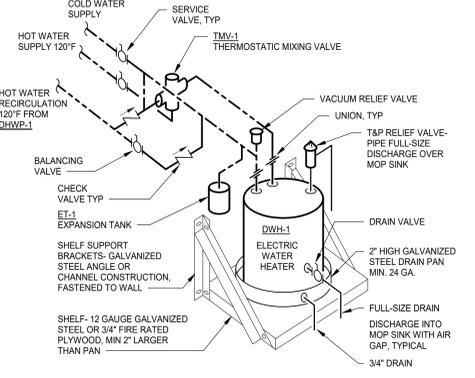
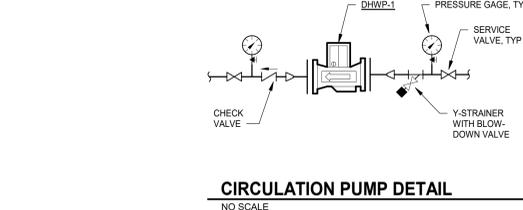
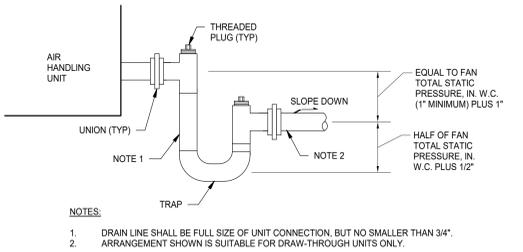
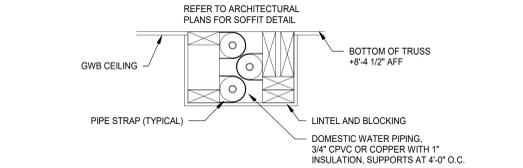
ABBREVIATIONS		
ABV - ABOVE	EX - EXISTING	
AD - ACCESS DOOR	EL - ELEVATION	
BEL - BELOW	FL - FLOOR	
DN - DOWN	INV - INVERT	
DFU - DRAINAGE FIXTURE UNIT	SFU - SUPPLY FIXTURE UNIT	

PLUMBING PIPING SYSTEMS		
C - COLD WATER	S - SANITARY	
CD - CONDENSATE DRAIN	TW - TEMPERED WATER	
H - HOT WATER	V - VENT	
DHR - HOT WATER RECIRCULATING	VTR - VENT-THRU-ROOF	
	W - WASTE	

FIXTURE & EQUIPMENT MARKS		
AAV - AIR ADMITANCE VALVE	LAV - LAVATORY	
CO - CLEANOUT	MS - MOP SINK	
DHWP - DOMESTIC HOT WATER PUMP	OSD - OPEN SITE DRAIN	
DWH - DOMESTIC WATER HEATER	P&T - PRESSURE & TEMPERATURE RELIEF VALVE	
EFD - EMERGENCY FLOOR DRAIN	S - SINK	
ET - EXPANSION TANK	TMV - THERMOSTATIC MIXING VALVE	
EW - ELECTRIC WATER COOLER	WC - WATER CLOSET	
FCCO - FLOOR CLEANOUT	WCO - WALL CLEANOUT	
FD - FLOOR DRAIN	WH - WALL HYDRANT	
HB - HOSE BIBB	WHA - WATER-HAMMER ARRESTER	
IMB - ICE MAKER BOX		



- GENERAL PLUMBING INSTALLATION NOTES**
- MAKE PROPER SUPPLY AND DRAINAGE PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH EVERY BRANCH PIPE AND FITTING MAY NOT BE GRAPHICALLY INDICATED.
  - VERIFY FIXTURE LOCATIONS WITH ARCHITECTURAL WORKING DRAWINGS BEFORE ROUGHING-IN PLUMBING FIXTURES.
  - PIPING SLOPES AND INVERT ELEVATIONS OF SEWERS, MANHOLES, SEPTIC TANKS, ETC. SHALL BE ESTABLISHED AND VERIFIED BY THE PLUMBING CONTRACTOR PRIOR TO PIPING INSTALLATION IN ORDER THAT PROPER SLOPES ARE MAINTAINED AND NECESSARY INVERT ELEVATIONS MET.
  - COORDINATE THE LOCATIONS OF ALL PIPING WITH ELECTRICAL WORK AND LIGHTING FIXTURES, HVAC PIPING AND DUCTWORK, FIRE PROTECTION PIPING, STRUCTURAL ELEMENTS AND CEILING CONSTRUCTION, ETC.
  - PROVIDE ALL FLOOR DRAINS WITH STANDARD SEAL P-TRAP, UNLESS OTHERWISE NOTED. FLOOR DRAIN TRAP SEALS SUBJECT TO LOSS BY EVAPORATION SHALL BE EQUIPPED WITH WATERLESS IN-LINE DRAIN TRAP SEAL MODEL SURESEAL AS MANUFACTURED BY RECTORSSEAL.
  - ALL SHUTOFF / SERVICE VALVES, WATER-HAMMER ARRESTERS, ETC. IN CONCEALED LOCATIONS SHALL BE ACCESSIBLE. PROVIDE ACCESS DOOR OR PANEL AS REQUIRED.
  - CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL POINTS OF CONNECTION FOR NEW-TO-EXISTING WORK PRIOR TO NEW WORK BEING INSTALLED.
  - PROVIDE CLEANOUT AT THE BASE OF ALL NEW SOIL OR WASTE STACKS.



- PLUMBING GENERAL NOTES**
- WORK INCLUDES PROVIDING A FIRST CLASS WORKING SYSTEM, TESTED AND READY FOR OPERATION, COMPLETE WITH LABOR, MATERIALS, APPARATUS, TRANSPORTATION, AND TOOLS REQUIRED FOR THE INSTALLATION, AS INDICATED.
  - ALL WORK SHALL COMPLY WITH 2015 VIRGINIA CONSTRUCTION CODE AND LOCAL BUILDING CODES, THE VIRGINIA PLUMBING AND MECHANICAL CODES (VMC 2015, VPC 2015, VFGC 2015, VECC 2015), NFPA CODES AND ALL OTHER APPLICABLE CODES. OBTAIN PERMITS, INSPECTIONS, LICENSES AND TESTS REQUIRED FOR THIS WORK AND PAY ALL FEES IN CONNECTION THEREWITH.
  - COORDINATE WORK CLOSELY WITH OTHER TRADES. ALL DIMENSIONS SHOWN ARE FOR THE CONVENIENCE OF THE CONTRACTOR, AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD PRIOR TO INSTALLATION. FAILURE TO COORDINATE WORK WILL NOT BE CONSIDERED AS A BASIS FOR EXTRA PAYMENTS.
  - THESE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EXACT LOCATIONS OF FIXTURES, PIPING AND EQUIPMENT. DO NOT SCALE DRAWINGS. ALL OFFSETS AND FITTINGS FOR COMPLETE INSTALLATION MAY NOT BE INDICATED ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AT THE BUILDING AND ANY CHANGES NECESSARY FOR COORDINATION WITH EXISTING CONDITIONS. PLUMBING SYSTEMS AND EQUIPMENT SHALL BE INSTALLED AND COORDINATED WITH OTHER WORK. IF CONFLICTS CANNOT BE RESOLVED THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT / ENGINEER.
  - THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY THE CONTRACTOR OR OF THE SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE WORK OF THE CONTRACTOR. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE FAILURE OF THE CONTRACTOR TO PERFORM THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
  - ALL MATERIALS SHALL BEAR THE MANUFACTURER'S NAME, TRADE NAME AND BE U.L. LABELED IF REQUIRED. UNLESS NOTED OTHERWISE, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. ALL EQUIPMENT OF A SIMILAR TYPE SHALL BE OF THE SAME MANUFACTURER.
  - GUARANTEE / WARRANTY: ALL PLUMBING EQUIPMENT, MATERIALS AND LABOR REQUIRED BY THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS SHALL BE GUARANTEED TO BE FREE FROM DEFECTIVE MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT EXCEPT EXTENDED WARRANTIES, AS SPECIFIED ELSEWHERE IN THESE DOCUMENTS ON SPECIFIC ITEMS OF EQUIPMENT. WILL BE FURNISHED BY THE TRADE PROVIDING THE EQUIPMENT.
  - CONTRACTOR SHALL FURNISH LOCATION AND SIZE OF OPENINGS REQUIRED FOR PLUMBING FIXTURES, EQUIPMENT AND PIPING TO THE GENERAL CONTRACTOR IN TIME NOT TO DELAY BUILDING CONSTRUCTION.
  - PIPE SIZES SHOWN ARE NPS INSIDE DIMENSIONS. COPPER TUBE SIZES ARE FOR NOMINAL TYPE L.

PLUMBING DRAWING INDEX	
SHEET NUMBER	SHEET NAME
P001	PLUMBING - LEGENDS, SCHEDULES & DETAILS
PD001	PLUMBING - GROUND FLOOR PLAN - DEMOLITION
PF01	PLUMBING - GROUND FLOOR PLAN - SWV & DOMESTIC
P201	PLUMBING - SPECIFICATIONS



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POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

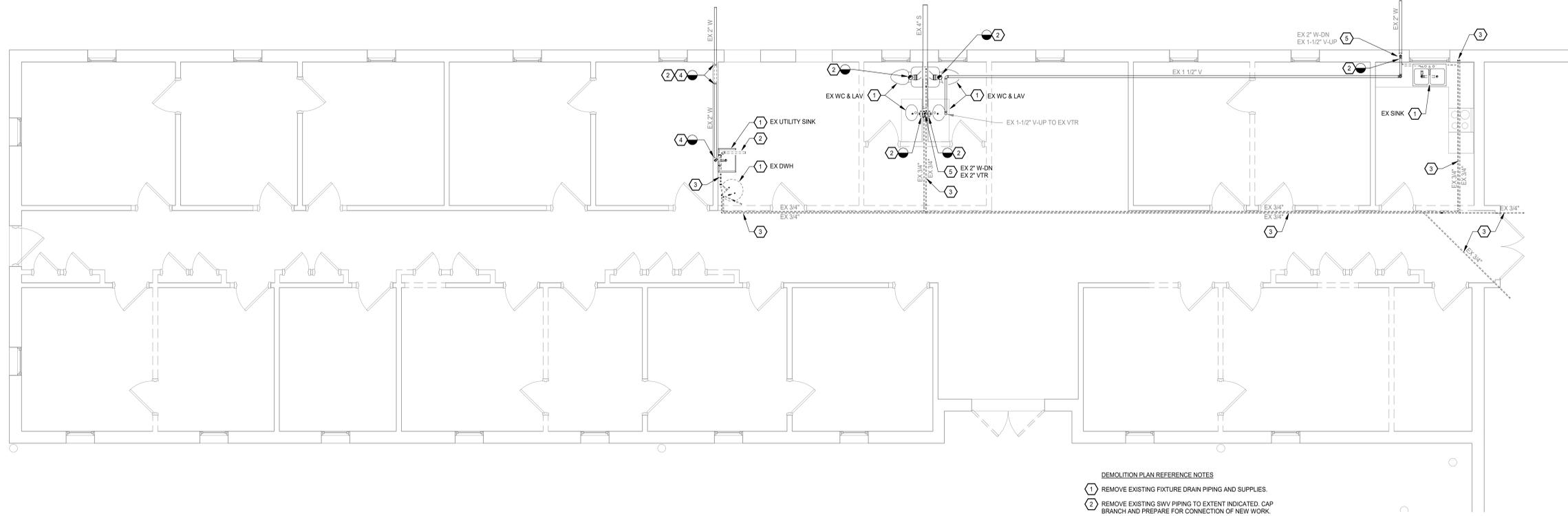
No.	Date	Description
PROJECT MANAGER:		DRAWN BY:
RAP		JAF

QEA No.41912630  
BID DOCUMENTS  
04/08/2020

PLUMBING - LEGENDS, SCHEDULES & DETAILS

**P001**

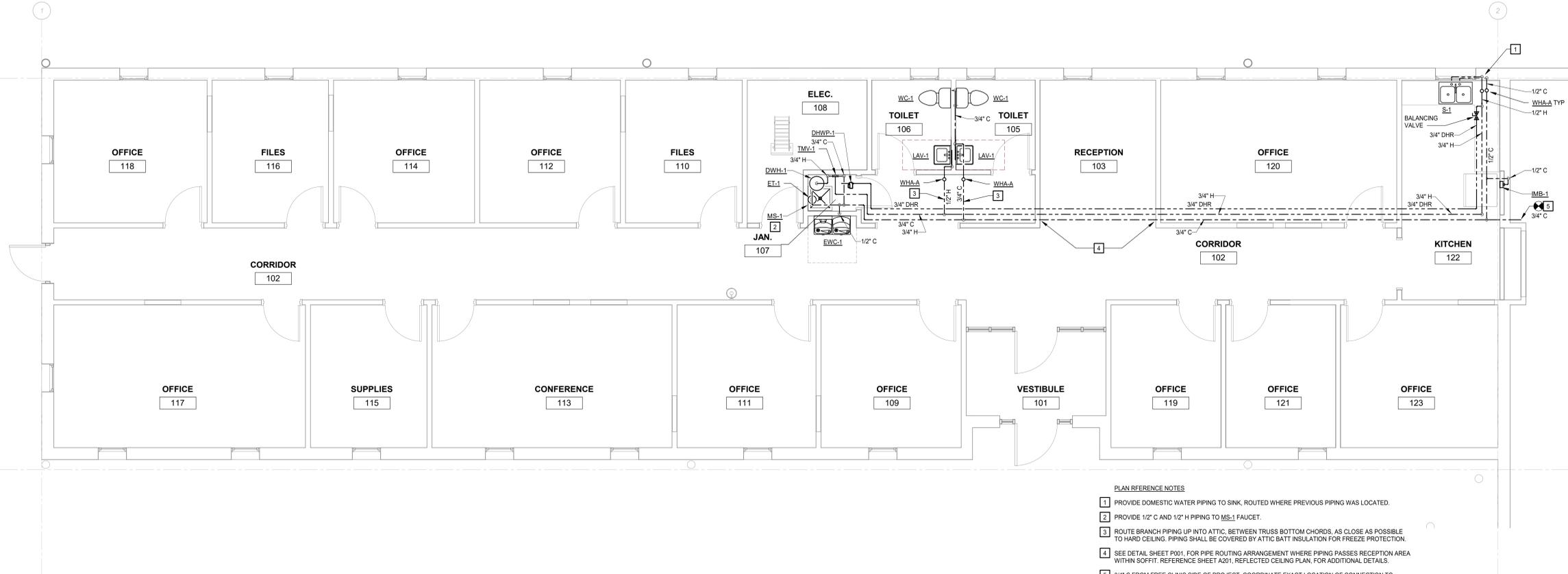
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- DEMOLITION PLAN REFERENCE NOTES**
- ① REMOVE EXISTING FIXTURE DRAIN PIPING AND SUPPLIES.
  - ② REMOVE EXISTING SWV PIPING TO EXTENT INDICATED. CAP BRANCH AND PREPARE FOR CONNECTION OF NEW WORK.
  - ③ REMOVE EXISTING DOMESTIC WATER PIPING.
  - ④ REMOVE EXISTING FLOOR SLAB AND SANITARY BRANCH PIPING AS REQUIRED TO PLUG AND ABANDON IN PLACE.
  - ⑤ EXISTING WASTE AND VTR TO REMAIN. PREPARE FOR CONNECTION OF NEW WORK.

**1 PLUMBING - GROUND FLOOR PLAN - DEMOLITION**  
1/4" = 1'-0"

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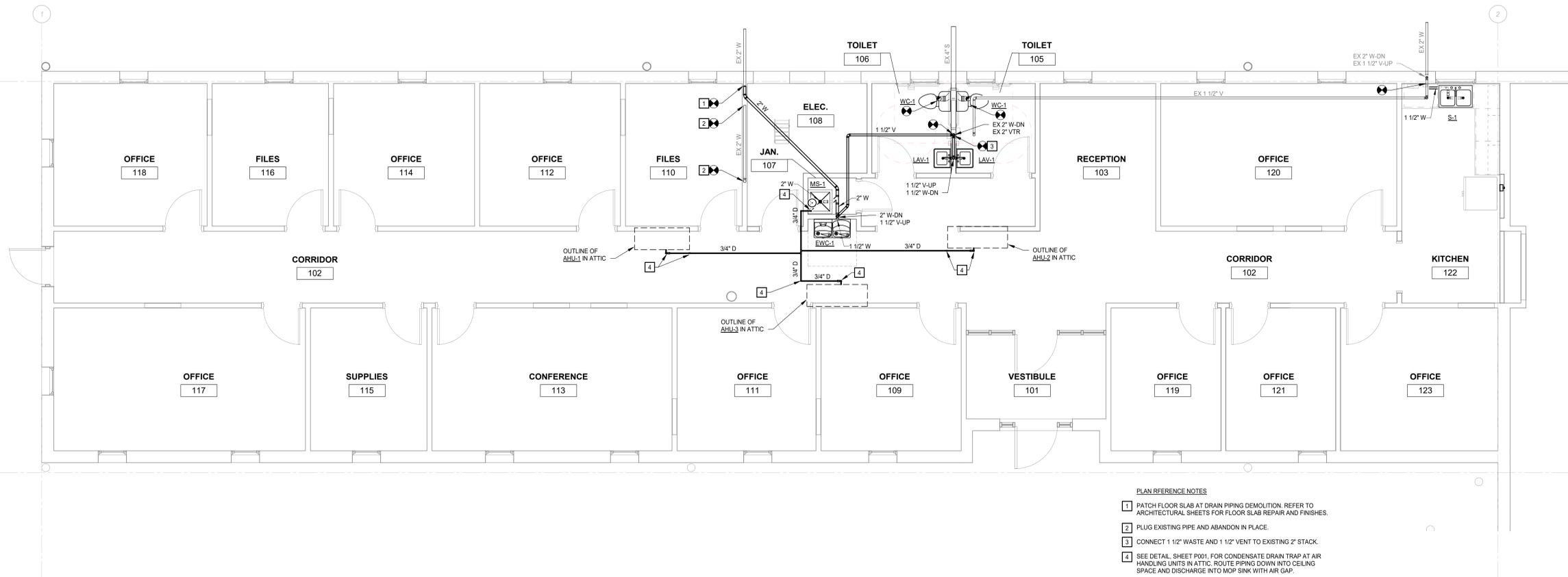


**PLAN REFERENCE NOTES**

- 1 PROVIDE DOMESTIC WATER PIPING TO SINK, ROUTED WHERE PREVIOUS PIPING WAS LOCATED.
- 2 PROVIDE 1/2" C AND 1/2" H PIPING TO MS-1 FAUCET.
- 3 ROUTE BRANCH PIPING UP INTO ATTIC, BETWEEN TRUSS BOTTOM CHORDS, AS CLOSE AS POSSIBLE TO HARD CEILING. PIPING SHALL BE COVERED BY ATTIC BATT INSULATION FOR FREEZE PROTECTION.
- 4 SEE DETAIL SHEET P001, FOR PIPE ROUTING ARRANGEMENT WHERE PIPING PASSES RECEPTION AREA WITHIN SOFFIT. REFERENCE SHEET A201, REFLECTED CEILING PLAN, FOR ADDITIONAL DETAILS.
- 5 3/4" C FROM FREE CLINIC SIDE OF PROJECT. COORDINATE EXACT LOCATION OF CONNECTION TO EXISTING WITH FREE CLINIC PLANS.

**1 PLUMBING - GROUND FLOOR PLAN - DOMESTIC WATER**

P101 1/4" = 1'-0"



**PLAN REFERENCE NOTES**

- 1 PATCH FLOOR SLAB AT DRAIN PIPING DEMOLITION. REFER TO ARCHITECTURAL SHEETS FOR FLOOR SLAB REPAIR AND FINISHES.
- 2 PLUG EXISTING PIPE AND ABANDON IN PLACE.
- 3 CONNECT 1 1/2" WASTE AND 1 1/2" VENT TO EXISTING 2" STACK.
- 4 SEE DETAIL SHEET P001, FOR CONDENSATE DRAIN TRAP AT AIR HANDLING UNITS IN ATTIC. ROUTE PIPING DOWN INTO CEILING SPACE AND DISCHARGE INTO MOP SINK WITH AIR GAP.

**2 PLUMBING - GROUND FLOOR PLAN - SANITARY, WASTE AND VENT**

P101 1/4" = 1'-0"

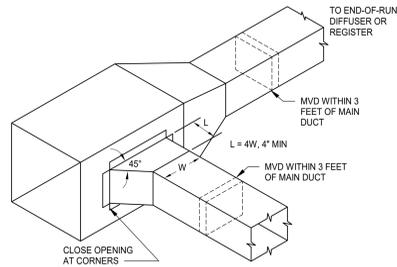


HVAC SPLIT-SYSTEM SCHEDULE			TRANE										
MARK	OUTDOOR UNIT	SPACE SERVED	MODEL	TYPE	NOMINAL CAPACITY (BTU/H)		AIRFLOW (CFM)	AIRFLOW BALANCING (CFM)	ELECTRICAL			WEIGHT (LBS)	NOTES
					COOLING	HEATING			VOLTAGE / PHASE	MCA (AMPS)	MOP (AMPS)		
INDOOR UNITS - S SERIES													
AHU-1	HP-1	OFFICE 118, 114, 110; FILES 116 & 110; ELEC 108; TOILET 106 & 105	TPVFP036AM141A	MULTIPOSITION - HORIZONTAL LEFT DUCTED	36,000	40,000	767-931-1095	1090	208 / 1	4.13	15	141	1-4
AHU-2	HP-2	RECEPTION 103; OFFICE 119 - 121; KITCHEN 122; VESTIBULE 101; EAST CORRIDOR 102	TPVFP048AM141A	MULTIPOSITION - HORIZONTAL RIGHT DUCTED	48,000	54,000	980-1190-1400	1385	208 / 1	5.63	15	172	1-4
AHU-3	HP-3	WEST CORRIDOR 102; CONFERENCE 113; SUPPLIES 115; OFFICE 117, 111, 109	TPVFP048AM141A	MULTIPOSITION - HORIZONTAL RIGHT DUCTED	48,000	54,000	980-1190-1400	1390	208 / 1	5.63	15	172	1-4
OUTDOOR UNIT - S SERIES													
HP-1	N/A	VRF ZONE 1	TUMYP0381AK42NA	VRF HEAT PUMP	36,000	40,000	N/A	N/A	208 / 1	29	44	267	1-3
HP-2	N/A	VRF ZONE 2	TUMYP0481AK42NA	VRF HEAT PUMP	48,000	54,000	N/A	N/A	208 / 1	29	44	267	1-3
HP-3	N/A	VRF ZONE 3	TUMYP0481AK42NA	VRF HEAT PUMP	48,000	54,000	N/A	N/A	208 / 1	29	44	267	1-3

AIR DISTRIBUTION TERMINAL DEVICE SCHEDULE:			KRUEGER							
MARK	SERVICE	TYPE	AIR PATTERN	MOUNTING	MATERIAL	FINISH	DAMPER	MODEL NUMBER	NOTES	
A	SUPPLY	DIFFUSER	4-WAY SQUARE PLAQUE	CEILING, LAY-IN, 2x2 PANEL	ALUMINUM	WHITE	SBD	SPLQ	1-3	
A1	SUPPLY	DIFFUSER	4-WAY SQUARE PLAQUE	CEILING, SURFACE, 1x1 PANEL	ALUMINUM	WHITE	SBD	SPLQ	1-4	
B	RETURN	GRILLE	35° FIXED BLADES, 3/4" O.C., HORIZONTAL FRONT BLADES	CEILING, SURFACE	ALUMINUM	WHITE	N/A	S580H	1-3, 5	

EXHAUST FANS:		GREENHECK										
MARK	CAP. CFM	E.S.P. IN H2O	MAX. FAN RPM	DRIVE	MOTOR				MODEL NO.	MAX WEIGHT (LBS)	SERVICE	NOTES
					VOLTS	PH	HZ	H.P.				
EF-1	50	0.35	700	DIRECT	120	1	60	21 WATTS	SP-B90	10	JANITOR 107	1-2
EF-2	75	0.40	750	DIRECT	120	1	60	80 WATTS	SP-B110	20	TOILET 106	1-2
EF-3	75	0.40	750	DIRECT	120	1	60	80 WATTS	SP-B110	20	TOILET 105	1-2

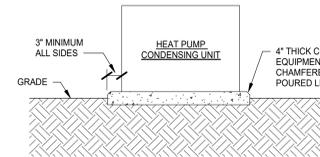
INTAKE LOUVER:		GREENHECK									
MARK	MAX CFM	SERVICE	SIZE		MAX PD. IN. H2O	MODEL	WEIGHT (LBS.)	BLADE ORIENTATION	COMMENTS		
			WIDTH/LENGTH (IN.)	FREE AREA (SQFT)							
IL-1	420	INTAKE	16 / 20	0.90	500	0.05	ESD-435	8	HORIZONTAL	1-2	



NOTE: PROVIDE MVD IN EACH CONNECTION OF DIVIDED FLOW BRANCHES IN SIMILAR FASHION.

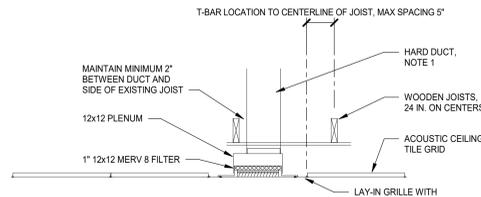
#### DUCT BRANCH CONNECTION DETAIL

NO SCALE



#### CONDENSING UNIT SUPPORT DETAIL

NO SCALE

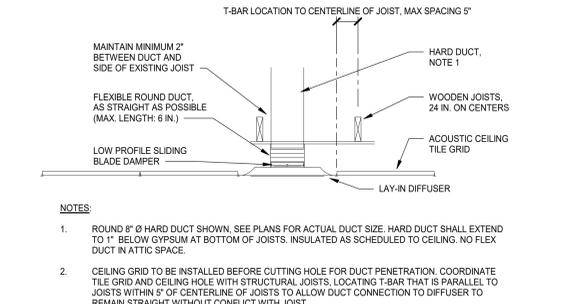
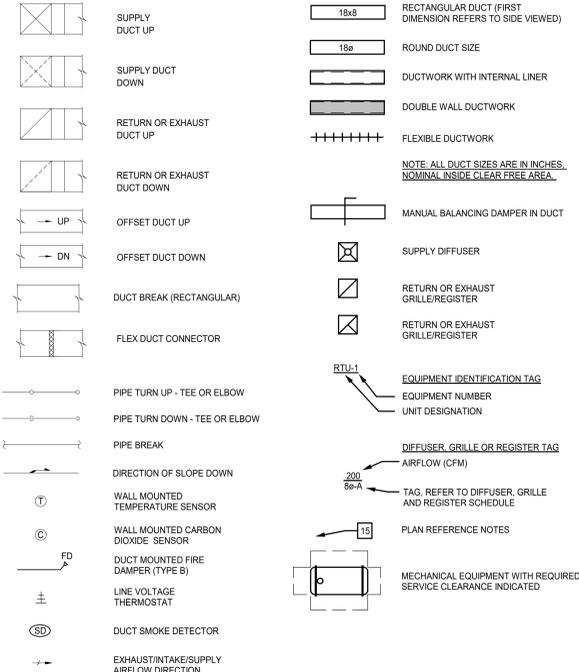


NOTES:  
 1. ROUND 8" Ø HARD DUCT SHOWN, SEE PLANS FOR ACTUAL DUCT SIZE. HARD DUCT SHALL EXTEND TO TOP OF 12x12 PLENUM AT RETURN GRILLE. NO FLEX DUCT IN ATTIC SPACE.  
 2. CEILING GRID TO BE INSTALLED BEFORE CUTTING HOLE FOR DUCT PENETRATION. COORDINATE TILE GRID AND CEILING HOLE WITH STRUCTURAL JOISTS, LOCATING T-BAR THAT IS PARALLEL TO JOISTS WITHIN 5" OF CENTERLINE OF JOISTS TO ALLOW DUCT CONNECTION TO DIFFUSER TO REMAIN STRAIGHT WITHOUT CONFLICT WITH JOIST.

#### LAY-IN RETURN DIFFUSER CONNECTION DETAIL

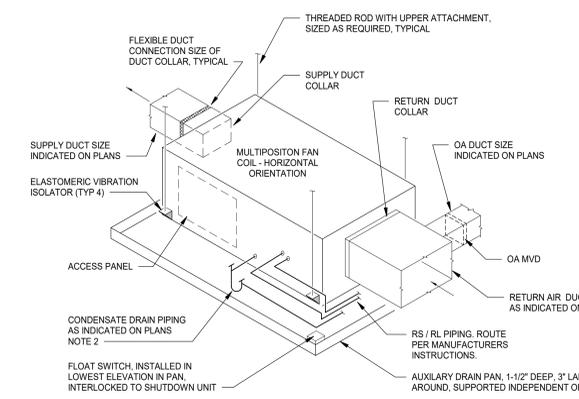
NO SCALE

#### MECHANICAL LEGEND



#### LAY-IN SUPPLY DIFFUSER CONNECTION DETAIL

NO SCALE



NOTES:  
 1. ALL UNITS SHALL HAVE MANUFACTURER RECOMMENDED SERVICE CLEARANCES MAINTAINED. COORDINATE LOCATION OF PIPING, DUCTWORK, POWER CONNECTIONS, CONTROL WIRE CONNECTIONS, ETC. AS TO NOT RESTRICT ACCESS TO THE UNIT IN ANY WAY.  
 2. PROVIDE EXTERNALLY TRAPPED CONDENSATE DRAIN IF NOT INTERNALLY TRAPPED.

#### VERTICAL FAN COIL UNIT - HORIZONTAL ARRANGEMENT

NO SCALE

MECHANICAL DRAWING INDEX	
SHEET NUMBER	SHEET NAME
M001	MECHANICAL - LEGENDS, SCHEDULES & DETAILS
M0001	MECHANICAL - GROUND FLOOR PLAN - DEMOLITION
M101	MECHANICAL - GROUND FLOOR PLAN - NEW WORK
M201	MECHANICAL - SPECIFICATIONS



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No. Date Description  
 PROJECT MANAGER: RAP  
 DRAWN BY: TAF

QEA No.41912630  
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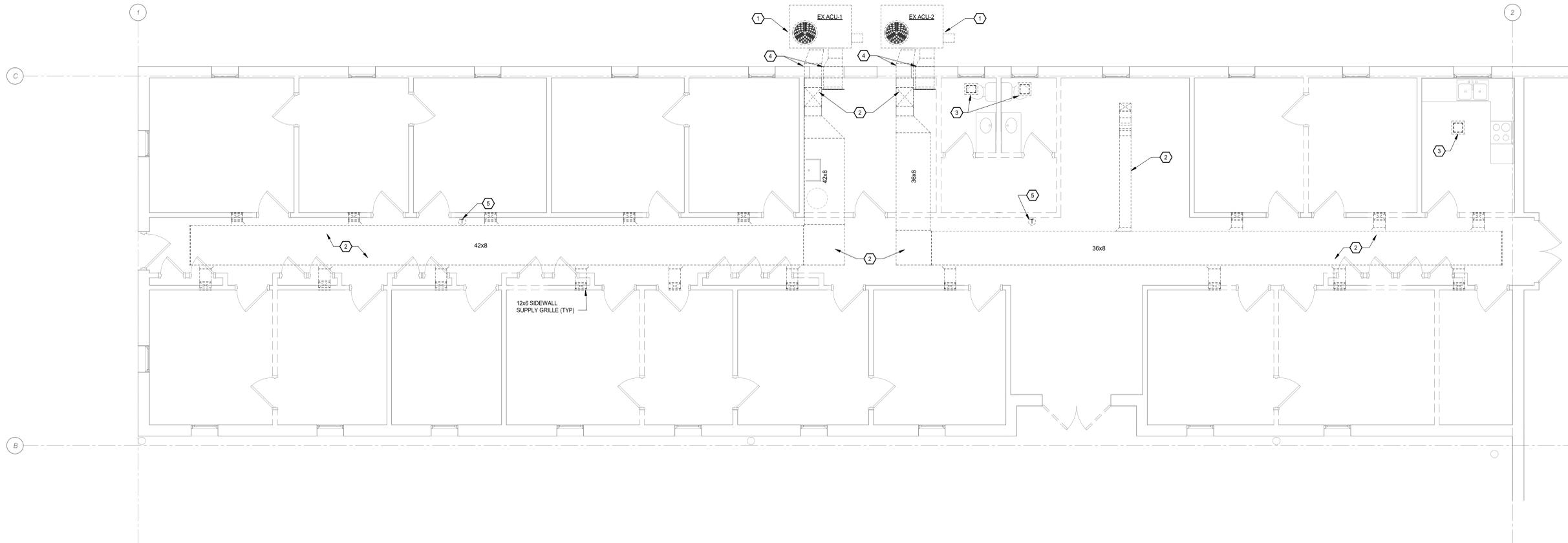
MECHANICAL -  
LEGENDS, SCHEDULES  
& DETAILS

M001

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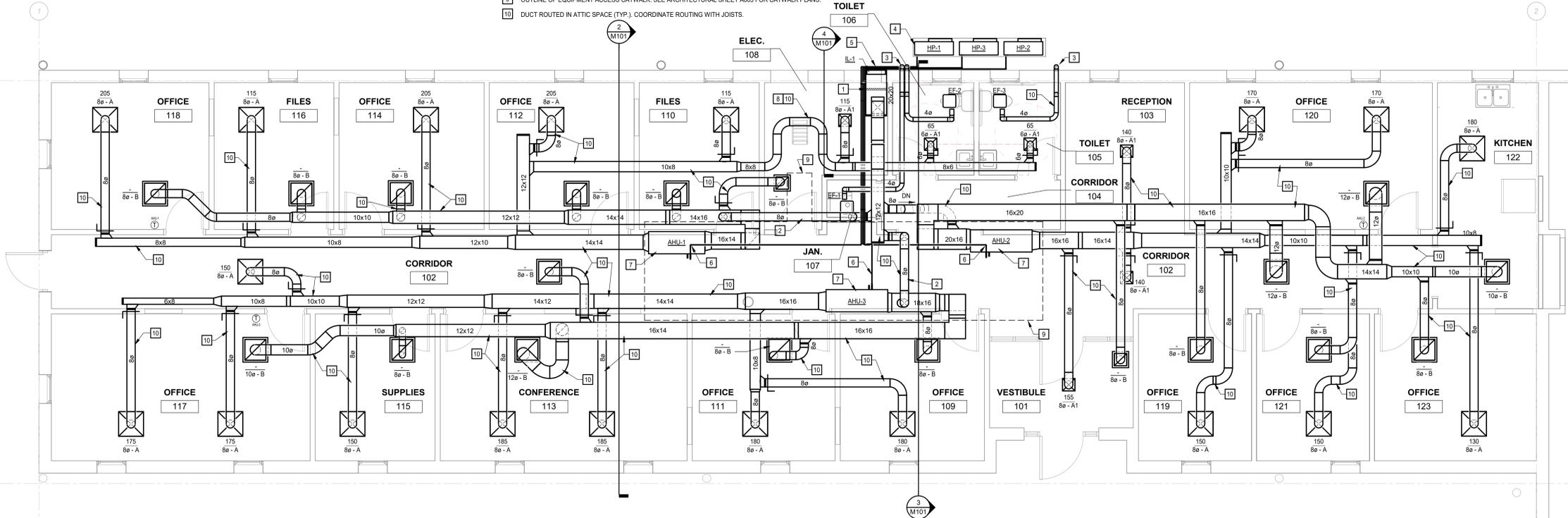
**DEMOLITION PLAN REFERENCE NOTES**

- 1 REMOVE AND DISPOSE OF EXISTING PACKAGED HEAT PUMP AND ALL CONNECTED COMPONENTS. REMOVE EXISTING EQUIPMENT PAD/SUPPORT WALL.
- 2 REMOVE AND DISPOSE OF EXISTING DUCTWORK, SUPPORTS, DIFFUSERS, AND MISCELLANEOUS APPURTENANCES. DUCT IS ROUTED BELOW ROOF TRUSSES.
- 3 REMOVE AND DISPOSE OF EXISTING EXHAUST FAN, DUCTWORK, SUPPORTS, EXHAUST GRILLES, AND MISCELLANEOUS APPURTENANCES.
- 4 REPAIR DUCT PENETRATION THROUGH WALL TO MATCH EXISTING. REFER TO ARCHITECTURAL PLANS.
- 5 REMOVE AND DISPOSE OF EXISTING THERMOSTATS, THERMOSTAT WIRING, ETC.



**1 MECHANICAL - GROUND FLOOR PLAN - DEMOLITION**  
MD001 1/4" = 1'-0"

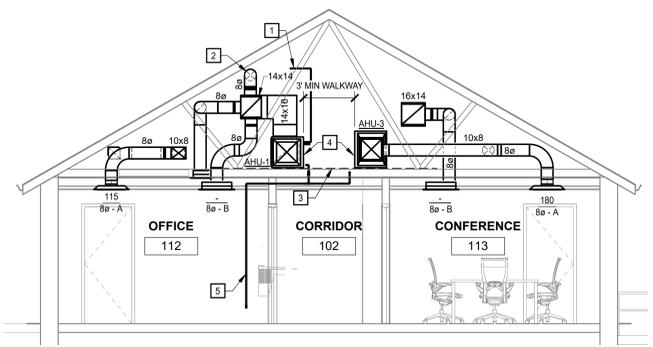
- PLAN GENERAL NOTES:**
- UNLESS INDICATED OTHERWISE, ALL DUCTWORK SHALL BE ROUTED CONCEALED IN ATTIC SPACE COORDINATED WITH EXISTING STRUCTURE. SEE SECTIONS FOR PROPOSED ROUTING AND ELEVATIONS OF DUCTWORK.
  - COORDINATE LOCATION OF DIFFUSERS & GRILLES WITH ARCHITECTURAL CEILING GRID AND STRUCTURAL JOISTS IN SPACE. NO FLEX DUCT SHALL BE USED IN ATTIC SPACE. SEE DETAIL ON SHEET M001 FOR PROPOSED AIR TERMINAL CONNECTIONS.
- PLAN REFERENCE NOTES:**
- PROVIDE FILTER BANK IN OUTSIDE AIR DUCT WITH 2" THICK, 20x20 MERV 8 FILTER.
  - ROUTE DUCTWORK AS HIGH AS POSSIBLE, MAINTAIN MINIMUM 5' ELEVATION FROM BOTTOM OF DUCT TO CATWALK. PROVIDE UNOBSTRUCTED ACCESS PATHWAY WITHIN ATTIC SPACE.
  - ROUTE EXHAUST DUCTWORK TO SOFFIT AT EDGE OF ROOF. PROVIDE WITH DISCHARGE CAP.
  - PROPOSED INSTALLATION LOCATION FOR HP-1, HP-2, AND HP-3. COORDINATE EXACT LOCATION TO MAINTAIN CLEARANCE FROM ADJACENT ELECTRICAL EQUIPMENT. COORDINATE ELEVATION OF UNIT WITH RESTROOM WINDOWS. IF UNIT HEIGHT RESULTS IN TOP OF UNIT ABOVE BOTTOM OF BUILDING WINDOWS, UNIT LOCATIONS MAY NEED TO BE ADJUSTED. COORDINATE FINAL LOCATION WITH ARCHITECT AND ENGINEER. PROVIDE SUPPORT PER DETAIL ON SHEET M001. PROVIDE REFRIGERANT PIPING FROM AHU-1, AHU-2, AND AHU-3 TO HP-1, HP-2, AND HP-3 RESPECTIVELY. MAINTAIN EQUIPMENT ACCESS CLEARANCES PER MANUFACTURER'S INSTRUCTIONS. FAN DISCHARGES AWAY FROM BUILDING. KEEP UNITS ALIGNED.
  - REFRIGERANT PIPING FOR AHU-1, AHU-2, AND AHU-3. REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. INSULATE LIQUID AND SUCTION LINES.
  - ROUTE REFRIGERANT PIPING AS HIGH AS POSSIBLE ABOVE ACCESS CATWALK.
  - AHU-1, AHU-2, AND AHU-3 SHALL BE PROVIDED AT LOCATION INDICATED. SEE SECTIONS FOR PROPOSED INSTALLATION ELEVATION. SEE DETAIL ON SHEET M001 FOR INSTALLATION METHODS. UNITS SHALL BE SUPPORTED PER DETAIL.
  - ROUTE DUCTWORK AROUND ATTIC ACCESS IN ELEC ROOM TO MAINTAIN UNOBSTRUCTED ACCESS PATHWAY WITHIN ATTIC SPACE.
  - OUTLINE OF EQUIPMENT ACCESS CATWALK. SEE ARCHITECTURAL SHEET A003 FOR CATWALK PLANS.
  - DUCT ROUTED IN ATTIC SPACE (TYP.), COORDINATE ROUTING WITH JOISTS.



**1 MECHANICAL - GROUND FLOOR PLAN - NEW WORK**  
M101 1/4" = 1'-0"

**PLAN REFERENCE NOTES:**

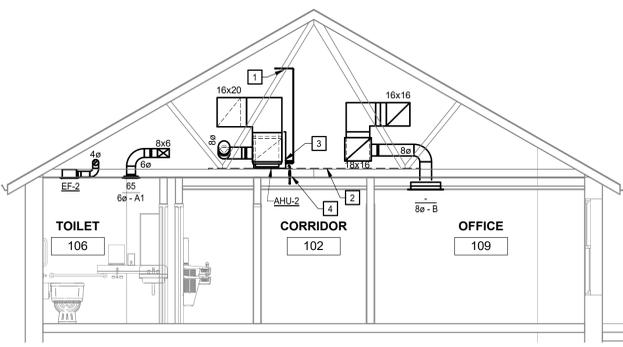
- PROPOSED REFRIGERANT PIPING FOR AHU-1. REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- ROUTE DUCTWORK AS HIGH AS POSSIBLE, MAINTAIN MINIMUM 5' ELEVATION FROM BOTTOM OF DUCT TO CATWALK. PROVIDE UNOBSTRUCTED ACCESS PATHWAY WITHIN ATTIC SPACE.
- MAINTENANCE CATWALK FOR AIR HANDLING UNITS INSTALLED IN ATTIC SPACE. SEE ARCHITECTURAL SHEET A003 FOR CATWALK PLANS.
- AHU-1 AND AHU-3 SHALL BE PROVIDED AT LOCATION INDICATED. SEE DETAIL ON SHEET M001 FOR INSTALLATION METHODS. UNITS SHALL BE SUPPORTED FROM THE STRUCTURE PER DETAIL.
- CONDENSATE DRAIN FROM AHU-1 AND AHU-3 ROUTED TO MOP SINK. SEE SHEET P101 FOR ROUTING. MAINTAIN PIPE SLOPE AS SPECIFIED.



**2 BUILDING AND CATWALK SECTION - AHU-1 AND AHU-3**  
M101 1/4" = 1'-0"

**PLAN REFERENCE NOTES:**

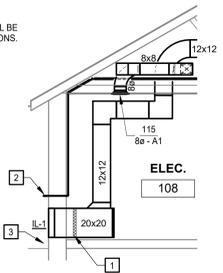
- PROPOSED REFRIGERANT PIPING FOR AHU-2. REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- MAINTENANCE CATWALK FOR AIR HANDLING UNITS INSTALLED IN ATTIC SPACE. SEE ARCHITECTURAL SHEET A003 FOR CATWALK PLANS.
- AHU-2 SHALL BE PROVIDED AT LOCATION INDICATED. SEE DETAIL ON SHEET M001 FOR INSTALLATION METHODS. UNIT SHALL BE SUPPORTED FROM THE STRUCTURE PER DETAIL.
- CONDENSATE DRAIN FROM AHU-2 ROUTED TO MOP SINK. SEE SHEET P101 FOR ROUTING. MAINTAIN PIPE SLOPE AS SPECIFIED.



**3 BUILDING AND CATWALK SECTION - AHU-2**  
M101 1/4" = 1'-0"

**PLAN REFERENCE NOTES:**

- PROVIDE FILTER BANK IN OUTSIDE AIR DUCT TO SUPPORT 2" THICK, 20x20 MERV 8 FILTER.
- PROPOSED REFRIGERANT PIPING FOR AHU-1, AHU-2, AND AHU-3. REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- INTAKE LOUVER SHALL BE MINIMUM 8" ABOVE GRADE, PREFERRED 12" OR GREATER.



**4 ELEC ROOM OUTSIDE AIR INTAKE SECTION**  
M101 1/4" = 1'-0"

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No.	Date	Description
PROJECT MANAGER:		RAP
DRAWN BY:		TAF

QEA No.41912630  
BID DOCUMENTS  
04/08/2020

MECHANICAL -  
GROUND FLOOR PLAN -  
NEW WORK

**M101**

**MECHANICAL SPEC NOTES:**

**MATERIAL AND WORKMANSHIP:** ALL EQUIPMENT AND MATERIALS USED IN THE PROJECT SHALL BE NEW AND UNDAMAGED. THE INSTALLATION SHALL FIT INTO THE SPACE ALLOTTED AND SHALL ALLOW ADEQUATE AND ACCEPTABLE CLEARANCES FOR ENTRY, SERVICING AND MAINTENANCE. SIMILAR TYPES OF EQUIPMENT SHALL BE THE PRODUCTS OF THE SAME MANUFACTURER UNLESS SPECIFIED OTHERWISE. WORK SHALL BE PERFORMED BY MECHANICS OR TRADESMEN SKILLED IN THE TRADE INVOLVED. ALL DUCTWORK, PIPING AND CONDUIT SHALL BE INSTALLED IN A NEAT AND ORGANIZED MANNER, PARALLEL TO OTHER WORK AND THE NEAREST BUILDING ELEMENTS, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS. EQUIPMENT AND MATERIALS SHALL BE SUITABLE FOR USE IN THE ENVIRONMENT IN WHICH THEY ARE INSTALLED. EQUIPMENT EXPOSED TO OUTSIDE CONDITIONS SHALL BE ADEQUATELY PROTECTED FROM THE WEATHER. MANUFACTURED FROM MATERIALS SUITABLE FOR OUTDOOR USE, AND DESIGNED SPECIFICALLY FOR USE IN OUTDOOR ENVIRONMENTS.

**GUARANTEE / WARRANTY:** ALL MECHANICAL EQUIPMENT, MATERIALS AND LABOR REQUIRED BY THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS SHALL BE GUARANTEED TO BE FREE FROM DEFECTIVE MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE PROJECT EXCEPT EXTENDED WARRANTIES AS SPECIFIED ELSEWHERE IN THESE DOCUMENTS ON SPECIFIC ITEMS OF EQUIPMENT WILL BE FURNISHED BY THE TRADE PROVIDING THE EQUIPMENT.

**ELECTRICAL WIRING AND EQUIPMENT:** WIRING, LOW VOLTAGE (100 VOLTS OR LESS) CONTROL WIRING SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR IN STRICT ACCORDANCE WITH NEC STANDARDS AND SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO COMPLY WITH THE SEQUENCE OF CONTROL INDICATED. VERIFY THAT WIRING OF ALL MOTORS AND CONTROLS REQUIRED BY EQUIPMENT FURNISHED IS ACCOMPLISHED FOR THE CORRECT SEQUENCE OF OPERATION. WIRING, LINE VOLTAGE (101 VOLTS OR HIGHER), POWER WIRING SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. DISCONNECTS FOR EACH ITEM OF EQUIPMENT SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFIED OTHERWISE. MISCELLANEOUS MANUAL OR AUTOMATIC CONTROL AND PROTECTIVE OR SIGNAL DEVICES REQUIRED FOR THE SEQUENCE OF OPERATION INDICATED FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR WHERE THE ITEM OF EQUIPMENT IS SPECIFIED UNLESS INDICATED OTHERWISE.

**IDENTIFICATION FOR HVAC EQUIPMENT:** EACH ITEM OF MECHANICAL EQUIPMENT AND EQUIPMENT CONTROL DEVICES SUCH AS MOTOR STARTERS, DISCONNECT SWITCHES, ETC. SHALL BE PROPERLY MARKED WITH LAMINATED ENGRAVED PLASTIC NAMEPLATES FASTENED WITH SHEET METAL SCREWS, BOLTS OR PERMANENT ADHESIVE. EQUIPMENT IDENTIFICATION SHALL MATCH EQUIPMENT MARKS AS SCHEDULED ON THE DRAWINGS. PIPING SYSTEM MARKERS SHALL BE PROVIDED FOR ALL HVAC PIPING AT MAXIMUM 20 FOOT SPACING. PIPE MARKERS SHALL BE PRESSURE SENSITIVE VINYL, 1/2 INCHES LONG WITH 1-1/4 INCH HIGH LETTERS. ATTACH TO PIPING WITH 2 INCH WIDE TAPE WITH INTEGRAL CLEAR PROTECTIVE COATING AND DIRECTIONAL ARROWS. PIPE MARKERS AND TAPE SHALL BE IN ANSI COLORS.

**TESTING AND BALANCING:** FOR THE AIR CONDITIONING, HEATING AND VENTILATION SYSTEMS, THE CONTRACTOR SHALL PROVIDE ALL SERVICES (IF QUALIFIED) OR SHALL OBTAIN THE SERVICES OF QUALIFIED INDEPENDENT TESTING ORGANIZATION FOR TOTAL SYSTEM AIR TESTING AND BALANCING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING CHANGES IN PULLEYS, BELTS AND DAMPERS WHERE NECESSARY TO OBTAIN THE REQUIRED AIR VOLUME. THE CONTRACTOR SHALL PROVIDE ALL LABOR, ENGINEERING AND TEST EQUIPMENT REQUIRED TO ADJUST, TEST AND BALANCE ALL HEATING, VENTILATING, AIR CONDITIONING AS SPECIFIED. ALL PERSONNEL INVOLVED IN THE WORK SHALL BE EXPERIENCED AND TRAINED SPECIFICALLY IN THE TOTAL BALANCING OF MECHANICAL SYSTEMS. TEST DATA SHALL BE SUBMITTED FOR ALL EQUIPMENT AND SYSTEMS WHERE SPECIFICALLY REQUIRED BY THIS SPECIFICATION. DUCTWORK SHALL BE THOROUGHLY BLOWN OUT OR FLUSHED AND CLEANED OF ALL FOREIGN MATTER BEFORE CONNECTIONS ARE MADE TO EQUIPMENT. AFTER COMPLETION OF TEST AND BALANCING, NEW FILTERS SHALL BE INSTALLED IN ALL HVAC UNITS THAT ARE PART OF THIS PROJECT.

**TESTING AND BALANCING PROCEDURES:**  
DUCTS SHALL BE TESTED AND MADE SUBSTANTIALLY AIR TIGHT AT SMACNA PRESSURE CLASS VALUE INDICATED FOR THE SYSTEM DUCT CONSTRUCTION. SUBSTANTIALLY AIR TIGHT SHALL BE CONSTRUED TO MEAN ACHIEVING INDICATED SMACNA LEAKAGE CLASS INDICATED. PLACE ALL RELATED SUPPLY, EXHAUST AND RETURN AIR SYSTEMS IN OPERATION WITH FANS RUNNING AT DESIGN RPM.

MEASURE SUPPLY AIR VOLUMES BY MEANS OF AIR FLOW HOOD.

ADJUST BALANCING DAMPERS FOR REQUIRED BRANCH DUCT AIR QUANTITIES. DUCTS WITH MULTIPLE BRANCHES SHALL HAVE AT LEAST ONE BRANCH WITH VOLUME DAMPER(S) COMPLETELY OPEN.

ADJUST GRILLES AND DIFFUSERS TO WITHIN 10% OF INDIVIDUAL REQUIREMENTS SPECIFIED. RESTRICTION IMPOSED BY FLOW REGULATING DEVICES IN OR AT TERMINALS SHALL BE MINIMAL. FINAL MEASUREMENT OF AIR QUANTITY SHALL BE MADE AFTER OPTIMUM AIR PATTERN HAS BEEN ACHIEVED.

**DUCTWORK:** DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR FREE AREA DIMENSIONS.

DELEGATED DUCT DESIGN: DUCT CONSTRUCTION, INCLUDING SHEET METAL THICKNESS, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS, AND HANGERS AND SUPPORTS, SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" AND PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED IN "DUCT SCHEDULE" ARTICLE.

STRUCTURAL PERFORMANCE: DUCT HANGERS AND SUPPORTS SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS DESCRIBED IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE"

ASHRAE COMPLIANCE: APPLICABLE REQUIREMENTS IN ASHRAE 62.1, SECTION 5 - "SYSTEMS AND EQUIPMENT" AND SECTION 7 - "CONSTRUCTION AND SYSTEM START-UP" AND IN ASHRAE 90.1, SECTION 6.4.4 - "HVAC SYSTEM CONSTRUCTION AND INSULATION"

RECTANGULAR AND ROUND DUCTS AND FITTINGS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" AND CHAPTER 3 "ROUND, OVAL, AND FLEXIBLE DUCT" FOR ACCEPTABLE MATERIALS, MATERIAL THICKNESS, AND DUCT CONSTRUCTION METHODS, BASED ON INDICATED STATIC-PRESSURE CLASS.

SHEET METAL MATERIALS: SHEET METAL MATERIALS SHALL BE FREE OF PITTING, SEAM MARKS, ROLLER MARKS, STAINS, DISCOLORATIONS, AND OTHER IMPERFECTIONS.

GALVANIZED SHEET STEEL: ASTM A 653, COATING DESIGNATION G90. FINISHES FOR SURFACES EXPOSED TO VIEW: MILL PHOSPHATIZED.

SEALANT AND GASKETS: SURFACE-BURNING CHARACTERISTICS FOR SEALANTS AND GASKETS SHALL BE A MAXIMUM FLAME-SPREAD INDEX OF 25 AND A MAXIMUM SMOKE-DEVELOPED INDEX OF 50 WHEN TESTED ACCORDING TO UL 723, CERTIFIED BY AN NRTL.

WATER-BASED JOINT AND SEAM SEALANT: BRUSH ON. SOLIDS CONTENT: MINIMUM 65 PERCENT. SHORE A HARDNESS: MINIMUM 20. WATER RESISTANT, MOLD AND MILDEW RESISTANT, VOC: MAXIMUM 75 G/L (LESS WATER); MAXIMUM STATIC PRESSURE CLASS: 10-INCH WG. POSITIVE AND NEGATIVE, INDOOR OR OUTDOOR. COMPATIBLE WITH GALVANIZED SHEET STEEL (BOTH PVC COATED AND BARE), STAINLESS STEEL, OR ALUMINUM SHEETS.

HANGERS AND SUPPORTS: STRAP HANGERS: GALVANIZED SHEET STEEL ASTM A 653, COATING DESIGNATION G90.

HANGER RODS: CADMIUM-PLATED STEEL ALL-THREAD RODS AND NUTS; STRAP AND ROD SIZES: SMACNA TABLE 5-1 "RECTANGULAR DUCT HANGERS MINIMUM SIZE," AND TABLE 5-2, "MINIMUM HANGER SIZES FOR ROUND DUCT."

STEEL CABLES: GALVANIZED STEEL, COMPLYING WITH ASTM A 603. CADMIUM-PLATED STEEL ASSEMBLIES WITH BRACKETS, SWIVEL, AND BOLTS DESIGNED FOR DUCT HANGER SERVICE, WITH AN AUTOMATIC-LOCKING AND CLAMPING DEVICE. DUCT ATTACHMENTS: SHEET METAL SCREWS, BLIND RIVETS, OR SELF-TAPPING METAL SCREWS; COMPATIBLE WITH DUCT MATERIALS, TRAPPEZ AND RISER SUPPORTS: GALVANIZED-STEEL SHAPES AND PLATES.

**LOW PRESSURE DUCTWORK:** STATIC PRESSURE RATING TO 2" W.G. AND VELOCITIES LESS THAN 1500 FPM.

**RECTANGULAR DUCT:** SMACNA FIGURE 4-2, "RECTANGULAR ELBOWS."

VELOCITY 1000 FPM OR LOWER:  
RADIUS TYPE RE 1 WITH MINIMUM 1.0 RADIUS-TO-DIAMETER RATIO.  
MITERED TYPE RE 4 WITHOUT VANES.

VELOCITY ABOVE 1000 FPM:  
RADIUS TYPE RE 1 WITH MINIMUM 1.5 RADIUS-TO-DIAMETER RATIO.  
MITERED TYPE RE 2 WITH VANES, SMACNA FIGURE 4-3, "VANES AND VANE RUNNERS," AND FIGURE 4-4, "VANE SUPPORT IN ELBOWS."

**ROUND DUCT:**

SMACNA RL-8 SNAP-LOCK TYPE PIPE OR FACTORY SEALED PIPE AND FITTINGS, SIMILAR TO GREENSEAM PLUS PIPE SYSTEM, 26 GAUGE G-90 GALVANIZED STEEL.

VELOCITY 1000 OR LOWER: NOMINAL 1.0 RADIUS-TO-DIAMETER RATIO, ADJUSTABLE 90-DEGREE ELBOW, 24 GAUGE G-90 GALVANIZED STEEL.

**BRANCH CONFIGURATION:**

RECTANGULAR DUCT: SMACNA FIGURE 2-6 "BRANCH CONNECTION."  
RECTANGULAR MAIN TO RECTANGULAR BRANCH: 45-DEGREE ENTRY.  
RECTANGULAR MAIN TO ROUND BRANCH: 45-DEGREE ENTRY SQUARE-TO-ROUND OR HIGH EFFICIENCY TAKE-OFF (HETO) 24 GAUGE G-90 GALVANIZED STEEL.  
ROUND DUCT: SMACNA FIGURE 3-5, "90 DEGREE TEES AND LATERALS," AND FIGURE 3-6, "CONICAL TEES."  
VELOCITY 1000 FPM OR LOWER: 90-DEGREE TAP WITH DAMPER AND LOCKING QUADRANT.

**DUCT SCHEDULE:**

LOW PRESSURE SUPPLY DUCTS, DOWNSTREAM OF UNITS TO DIFFUSERS:  
PRESSURE CLASS: POSITIVE, 2-INCH WG.  
MINIMUM SMACNA SEAL CLASS: A  
SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12  
SMACNA LEAKAGE CLASS FOR ROUND: 3.

LOW PRESSURE RETURN DUCTS AND OUTSIDE AIR INTAKE DUCTS, FROM INLET TO UNIT:  
PRESSURE CLASS: NEGATIVE, 1-INCH WG.  
MINIMUM SMACNA SEAL CLASS: B  
SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12  
SMACNA LEAKAGE CLASS FOR ROUND: 3.

LOW PRESSURE EXHAUST DUCTS, FROM FAN TO OUTLET:  
PRESSURE CLASS: POSITIVE, 1-INCH WG.  
MINIMUM SMACNA SEAL CLASS: B  
SMACNA LEAKAGE CLASS FOR RECTANGULAR: 12  
SMACNA LEAKAGE CLASS FOR ROUND: 3.

**MECHANICAL SPECIFICATION NOTES:**

**FLEXIBLE ROUND DUCT:** SHALL BE EQUAL TO FLEXMASTER TYPE 9M OR THERMAFLEX TYPE M4E. DUCT SHALL INCORPORATE ACOUSTIC RATED CPB INNER LINER, 1" THICK FIBERGLASS INSULATION, AND REINFORCED METALIZED VAPOR BARRIER. MAXIMUM C FACTOR SHALL BE 0.24 BTU/HR/SQ FT /F AT 75°F MEAN TEMPERATURE. DUCT SHALL HAVE A WORKING PRESSURE OF NOT LESS THAN 6 INCHES W.G. FOR POSITIVE PRESSURE AND 1 INCH W.G. FOR NEGATIVE PRESSURE AND SUITABLE FOR VELOCITIES UP TO 4000 FPM. VAPOR TRANSMISSION SHALL BE LESS THAN 0.05 PERM WHEN TESTED IN ACCORDANCE WITH ASTM E96. PROCEDURE A. THE ENTIRE ASSEMBLY SHALL BE RATED AND MARKED AS UL 181 CLASS. FLEXIBLE DUCT SHALL BE PROPERLY SUPPORTED TO PREVENT ANY SHORT RADIUS BENDS OR KINKS. FLEXIBLE DUCT SHALL NOT PENETRATE ANY TYPE OF WALL CONSTRUCTION.

**DUCTWORK ACCESSORIES:**

**APPARATUS CONNECTIONS:** AT POINTS WHERE SHEET METAL CONNECTIONS ARE MADE TO FANS OR WHERE DUCTS OF DISSIMILAR METAL ARE CONNECTED, PROVIDE A FLEXIBLE CONNECTION OF NEOPRENE COATED CANVAS OF SUFFICIENT LENGTH TO ELIMINATE TRANSMISSION OF VIBRATION. FLEXIBLE CONNECTIONS SHALL BE SECURELY FASTENED AND AIR-TIGHT.

**INSULATION:** ALL INSULATION MATERIALS, JACKETS AND FITTING COVERS SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING 25, AND SMOKE DEVELOPED RATING NOT EXCEEDING 50 AS TESTED UNDER PROCEDURE ASTM E-84. NFPA 255 AND UL 723. DUCT COVERINGS AND LININGS SHALL NOT FLAME, GLOW, SMOLDER OR SMOKE WHEN TESTED IN ACCORDANCE WITH ASTM D411.

**EXTERNAL DUCT INSULATION:** SHALL BE OWENS CORNING SERIES SOFTR AL SERVICE DUCT WRAP OR APPROVED EQUAL. PROVIDE FLEXIBLE FIBROUS GLASS INSULATION, 1.0 LB. DENSITY, 0.27 BTUIN./SQ FT./F.HR. MAXIMUM "K" VALUE AT 75°F, WITH FACTORY APPLIED FRK JACKET, REINFORCED ALUMINUM FOL VAPOR BARRIER, ASTM C 1136, TYPE II. PROVIDED WITH A MINIMUM 2" FACING FLAP OVERLAPPING ADJACENT AND CONNECTING INSULATION. SECURE WITH ADHESIVE, 50% COVERAGE. SEAMS SHALL BE STAPLED APPROXIMATELY 6" ON CENTER WITH 1/2" OUTWARD CLINCHING STAPLES AND SEALED WITH VAPOR BARRIER MASTIC. ALL INSULATION JOINTS SHALL BE TIGHTLY BUTTED. ALL JOINTS, VOIDS AND PUNCTURES IN FACING SHALL BE SEALED VAPOR TIGHT WITH MASTIC OR TAPE.

**DUCT INSULATION SCHEDULE:**

CONCEALED AND EXPOSED HEATING / COOLING SUPPLY AND RETURN AIR DUCTWORK: 2" THICK.  
OUTSIDE AIR DUCTWORK: 2" THICK.  
EXHAUST AIR DUCTWORK: 0", UNINSULATED.

**CEILING MOUNTED EXHAUST FAN (EF-1, EF-2 & EF-3)**  
SHALL BE GREENHECK MODEL SP-800 AND SP-810 OR APPROVED EQUAL. SEE SCHEDULE ON DRAWINGS FOR DESIGN SIZE, CAPACITY AND PERFORMANCE. UL LISTED, GALVANIZED STEEL, SCROLL AND HOUSING, WHITE DESIGNER NON-YELLOWING GRILLE, ROUND OUTLET DUCT COLLAR WITH INTEGRAL BACKDRAFT DAMPER, SINGLE INLET FORWARD CURVED POLYPROPYLENE WHEEL, PLUG TYPE DISCONNECT, ADJUSTABLE MOUNTING BRACKETS, SOLID STATE SPEED CONTROLLER, MOTOR RATED FOR CONTINUOUS DUTY, 40°C AMBIENT, WITH THERMAL OVERLOAD, CSA APPROVAL.

**INTAKE LOWER (IL-1)**  
SHALL BE GREENHECK MODEL ESD-435 OR APPROVED EQUAL. SEE SCHEDULE ON DRAWINGS DESIGN SIZE, CAPACITY AND PERFORMANCE. FRAME AND BLADES CONSTRUCTION OF MECHANICALLY FASTENED HEAVY GAUGE EXTRUDED 6063-T5 ALUMINUM, BLADE AND HEAD DESIGN WITH DRAIN GUTTERS TO CHANNEL WATER TO VERTICAL DOWNSPOUTS AND OUT AT SILL. EXPANDED ALUMINUM INSECT SCREEN IN REMOVABLE FRAME, AAMA 2603 BAKED ENAMEL FINISH, COLOR SELECTION BY ARCHITECT.

**SPLIT SYSTEM HVAC HEAT PUMP UNITS: (AHU-1/HP-1, AHU-2/HP-2, & AHU-3/HP-3)**

**BASIS OF DESIGN MANUFACTURER:** TRANE MITSUBISHI ELECTRIC SPLIT SYSTEM WITH VARIABLE SPEED INVERTER COMPRESSOR TECHNOLOGY. THE SYSTEM SHALL CONSIST OF A HORIZONTAL DISCHARGE, SINGLE PHASE OUTDOOR UNIT, A MATCHED CAPACITY MULTIPOSITION INDOOR CONVERTIBLE AIR HANDLING UNIT THAT SHALL BE EQUIPPED WITH A WIRED WALL MOUNTED REMOTE CONTROLLER. INDOOR AND OUTDOOR UNITS SELECTION AND CAPACITY AS SCHEDULED.

**SPECIAL WARRANTY:** MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF SPLIT SYSTEM AIR-CONDITIONING UNITS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD. FOR COMPRESSOR, SEVEN YEARS FROM DATE OF INSTALLATION. FOR PARTS, TWO YEARS FROM DATE OF INSTALLATION. FOR LABOR, TWO YEARS FROM DATE OF INSTALLATION.

**INDOOR UNIT: (AHU-1, AHU-2 & AHU-3)**

**GENERAL:** EQUAL TO TRANE MITSUBISHI MODEL TPV7V. THE UNIT SHALL BE A MULTIPOSITION INDOOR FAN COIL DESIGN WITH A FIXED BOTTOM RETURN, A FIXED VERTICAL DISCHARGE SUPPLY, AND A MODULATING LINEAR EXPANSION DEVICE. THE UNIT SHALL HAVE THE CAPABILITY TO BE MOUNTED IN EITHER THE VERTICAL OR HORIZONTAL (LEFT OR RIGHT). UNITS SHALL HAVE ABILITY TO OUTPUT FAN SPEED VIA A RELAY KIT. THE UNIT SHALL BE TESTED IN ACCORDANCE WITH ANSI/ASHRAE 193 AND HAVE LESS THAN 2% AIR LEAKAGE AT MAXIMUM AIRFLOW SETTING.

UNIT SHALL BE FACTORY ASSEMBLED, WIRED AND RUN TESTED. CONTAINED WITHIN THE UNIT SHALL BE ALL FACTORY WIRING, PIPING, ELECTRONIC MODULATING LINEAR EXPANSION DEVICE, CONTROL CIRCUIT BOARD AND FAN MOTOR. THE UNIT SHALL HAVE A SELF-DIAGNOSTIC FUNCTION, 3-MINUTE TIME DELAY MECHANISM, AND AN AUTO RESTART FUNCTION. INDOOR UNIT AND REFRIGERANT PIPES SHALL BE CHARGED WITH DEHYDRATED AIR BEFORE SHIPMENT FROM THE FACTORY.

UNIT CABINET: THE CABINET SHALL BE PRE-PAINTED, PRE-INSULATED, 22 GAUGE GALVANIZED STEEL.

FAN: THE INDOOR UNIT FAN SHALL BE AN ASSEMBLY WITH A SINGLE DIRECT DRIVE FAN WITH A HIGH EFFICIENCY DC MOTOR. THE INDOOR FAN SHALL BE STATICALLY AND DYNAMICALLY BALANCED AND RUN ON A MOTOR WITH PERMANENTLY LUBRICATED BEARINGS. THE INDOOR UNIT SHALL HAVE A DUCTED AIR OUTLET SYSTEM AND DUCTED RETURN AIR SYSTEM. THE FAN SHALL HAVE 3-SPEEDS WITH THE CAPABILITY TO OPERATE BETWEEN 0.3-0.8 IN.W.G. SELECTABLE.

COIL: THE INDOOR COIL SHALL BE OF NONFERROUS CONSTRUCTION WITH SMOOTH PLATE FINS ON COPPER TUBING. THE TUBING SHALL HAVE INNER GROOVES FOR HIGH EFFICIENCY HEAT EXCHANGE. ALL TUBE JOINTS SHALL BE BRAZED WITH PHOS-COPPER OR SILVER ALLOY. THE COILS SHALL BE PRESSURE TESTED AT THE FACTORY. A CONDENSATE PAN AND DRAIN SHALL BE PROVIDED UNDER THE COIL. THE CONDENSATE SHALL BE GRAVITY DRAINED FROM THE FAN COIL. BOTH REFRIGERANT LINES TO THE INDOOR UNITS SHALL BE INSULATED IN ACCORDANCE WITH THE INSTALLATION MANUAL.

ELECTRICAL: THE INDOOR UNIT ELECTRICAL POWER SHALL BE 208 VOLTS, 1-PHASE, 60 HERTZ.

WIRED WALL MOUNTED CONTROLLER: THE WALL MOUNTED UNIT CONTROLLER SHALL BE COMPACT IN SIZE, APPROXIMATELY 3" X 5" AND HAVE LIMITED USER FUNCTIONALITY. THE BACKLIT CONTROLLER SHALL SUPPORTS TEMPERATURE DISPLAY SELECTION OF FAHRENHEIT OR CELSIUS. THE CONTROLLER SHALL ALLOW THE USER TO CHANGE ON/OFF, MODE (COOL, HEAT, AUTO), TEMPERATURE SETTING, AND FAN SPEED SETTING. THE CONTROLLER SHALL BE CAPABLE OF NIGHT SETBACK CONTROL WITH UPPER AND LOWER SET TEMPERATURE SETTINGS. THE ROOM TEMPERATURE SHALL BE SENSED AT CONTROLLER OR THE INDOOR UNIT DEPENDENT ON THE INDOOR UNIT DISHWICH SETTING. THE CONTROLLER SHALL DISPLAY A FOUR-DIGIT ERROR CODE IN THE EVENT OF SYSTEM ABNORMALITY/ERROR.

**OUTDOOR UNIT: (HP-1, HP-2 & HP-3)**

**GENERAL:** EQUAL TO TRANE MITSUBISHI MODEL TUMYP. THE OUTDOOR UNIT SHALL BE COMPLETELY FACTORY ASSEMBLED, PIPED AND WIRED. EACH UNIT SHALL BE RUN TESTED AT THE FACTORY. OUTDOOR UNIT SHALL HAVE A SOUND RATING NO HIGHER THAN 59 DB(A). BOTH REFRIGERANT LINES FROM THE OUTDOOR UNIT TO INDOOR UNITS SHALL BE INDIVIDUALLY INSULATED. THE OUTDOOR UNIT SHALL HAVE AN ACCUMULATOR WITH REFRIGERANT LEVEL SENSORS AND CONTROLS. THE OUTDOOR UNIT SHALL HAVE A HIGH PRESSURE SAFETY SWITCH, LOW PRESSURE SAFETY SWITCH AND OVER-CURRENT PROTECTION AND DC BUS PROTECTION. THE OUTDOOR UNIT SHALL HAVE THE ABILITY TO OPERATE WITH A MAXIMUM HEIGHT DIFFERENCE OF 98 FEET AND TOTAL LENGTH NOT TO EXCEED 262 FEET BETWEEN THE OUTDOOR UNIT AND THE INDOOR UNITS AND SHALL NOT REQUIRE LINE SIZE CHANGES NOR TRAPS. THE OUTDOOR UNIT SHALL HAVE RATED PERFORMANCE FOR HEAT OPERATION AT 0°F LOW AMBIENT TEMPERATURE WITHOUT ADDITIONAL LOW AMBIENT CONTROLS. THE OUTDOOR UNIT SHALL HAVE A HIGH EFFICIENCY OIL SEPARATOR PLUS ADDITIONAL LOGIC CONTROLS TO ENSURE ADEQUATE OIL VOLUME IN THE COMPRESSOR IS MAINTAINED.

UNIT CABINET: THE CASING SHALL BE FABRICATED OF GALVANIZED STEEL, BONDERIZED AND FINISHED WITH A POWDER COATED BAKED ENAMEL.

FAN: THE UNIT SHALL BE FURNISHED WITH TWO DIRECT DRIVE, VARIABLE SPEED MOTORS. THE FANS WILL BE FORWARD CURVED TYPE BLADES FOR QUIET OPERATION. THE FAN MOTOR SHALL HAVE INHERENT PROTECTION, HAVE PERMANENTLY LUBRICATED BEARINGS, AND BE COMPLETELY VARIABLE SPEED. THE FAN MOTOR SHALL BE MOUNTED FOR QUIET OPERATION. THE FAN SHALL BE PROVIDED WITH A RAISED GUARD TO PREVENT CONTACT WITH MOVING PARTS. THE OUTDOOR UNIT SHALL HAVE HORIZONTAL DISCHARGE AIRFLOW.

REFRIGERANT: R410A REFRIGERANT SHALL BE REQUIRED.

COIL: THE OUTDOOR COIL SHALL BE OF NONFERROUS CONSTRUCTION WITH LANCED OR CORRUGATED FINS ON COPPER TUBING. THE COIL FINS WILL HAVE A FACTORY APPLIED CORROSION RESISTANT BLUE-FIN FINISH. THE COIL SHALL BE PROTECTED WITH AN INTEGRAL METAL GUARD. REFRIGERANT FLOW FROM THE OUTDOOR UNIT SHALL BE CONTROLLED BY MEANS OF AN INVERTER DRIVEN COMPRESSOR.

COMPRESSOR: THE COMPRESSOR SHALL BE A SINGLE HIGH PERFORMANCE, INVERTER DRIVEN, MODULATING CAPACITY SCROLL COMPRESSOR. THE OUTDOOR UNIT COMPRESSOR SHALL HAVE AN INVERTER TO MODULATE CAPACITY. THE CAPACITY SHALL BE COMPLETELY VARIABLE DOWN TO 41% OF RATED CAPACITY FOR THE 3-TON UNIT AND 33% FOR THE 4-TON UNIT. THE COMPRESSOR SHALL BE EQUIPPED WITH AN INTERNAL THERMAL OVERLOAD. THE COMPRESSOR SHALL BE MOUNTED TO AVOID THE TRANSMISSION OF VIBRATION.

ELECTRICAL: THE OUTDOOR UNIT ELECTRICAL POWER SHALL BE 208 VOLTS, 1-PHASE, 60 HERTZ.

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PUBLIC WORKS / IT  
OFFICE RENOVATION

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN,  
VIRGINIA 23139

No. Date Description  
PROJECT MANAGER: RHP DRAWN BY: TAF

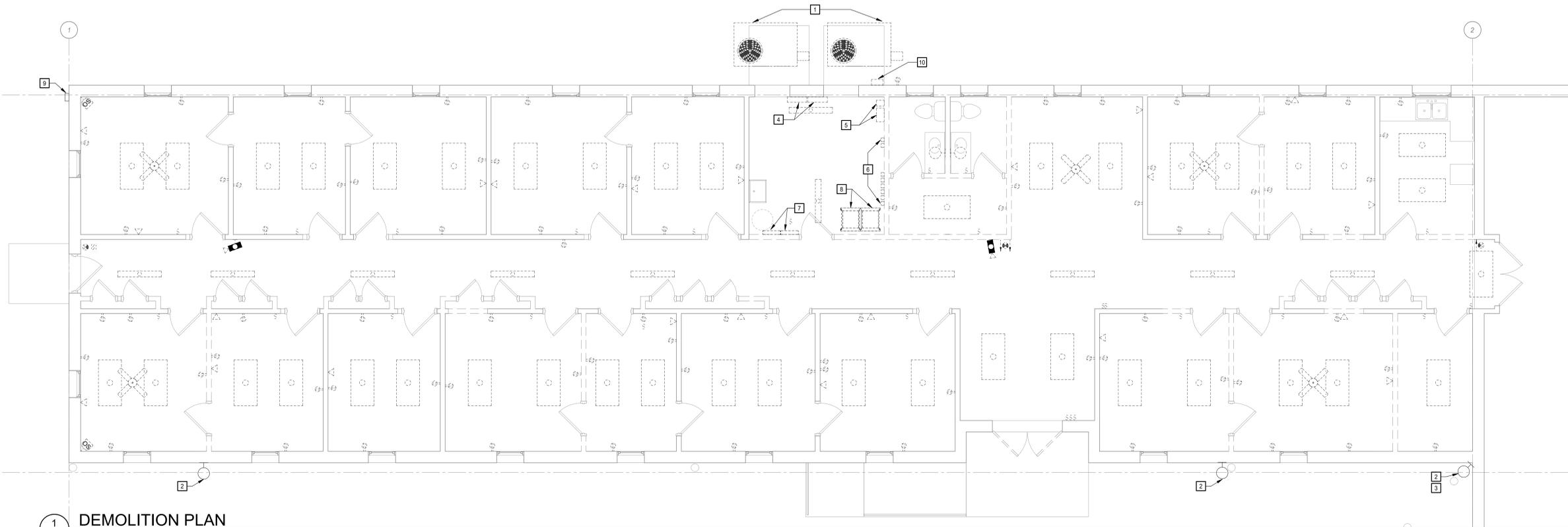
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BID DOCUMENTS  
04/08/2020

MECHANICAL -  
SPECIFICATIONS

M201





**1 DEMOLITION PLAN**  
ED001  
1/4" = 1'-0"

- PLAN REFERENCE NOTES:**
- 1 DISCONNECT MECHANICAL EQUIPMENT FOR REMOVAL BY THE DIVISION 23 CONTRACTOR. REMOVE ALL ASSOCIATED DISCONNECTS AND CONTROLS.
  - 2 FIXTURE TO REMAIN AS IS. REMOVE EXISTING CIRCUIT AND PROVIDE NEW CIRCUIT AS SHOWN ON SHEET E201.
  - 3 FIXTURE MOUNTED TO EXISTING POLE.
  - 4 ELECTRICAL PANELS TO BE REMOVED.
  - 5 TELEPHONE DEMARCATION DEVICES TO BE REMOVED.
  - 6 TELEPHONE WIRING BLOCKS TO BE REMOVED.
  - 7 FIRE ALARM/SECURITY PANELS TO BE REMOVED.
  - 8 TELECOMMUNICATIONS RACKS TO BE REMOVED.
  - 9 INCOMING FIBER TO BE SAVED AND PROTECTED DURING CONSTRUCTION.
  - 10 REMOVE EXISTING TELECOMMUNICATIONS BOX AND ASSOCIATED CONDUIT. VERIFY WITH OWNER THAT SERVICE IN BOX IS NO LONGER IN USE PRIOR TO REMOVAL.

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**PUBLIC WORKS / IT  
OFFICE RENOVATION**

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN,  
VIRGINIA 23139

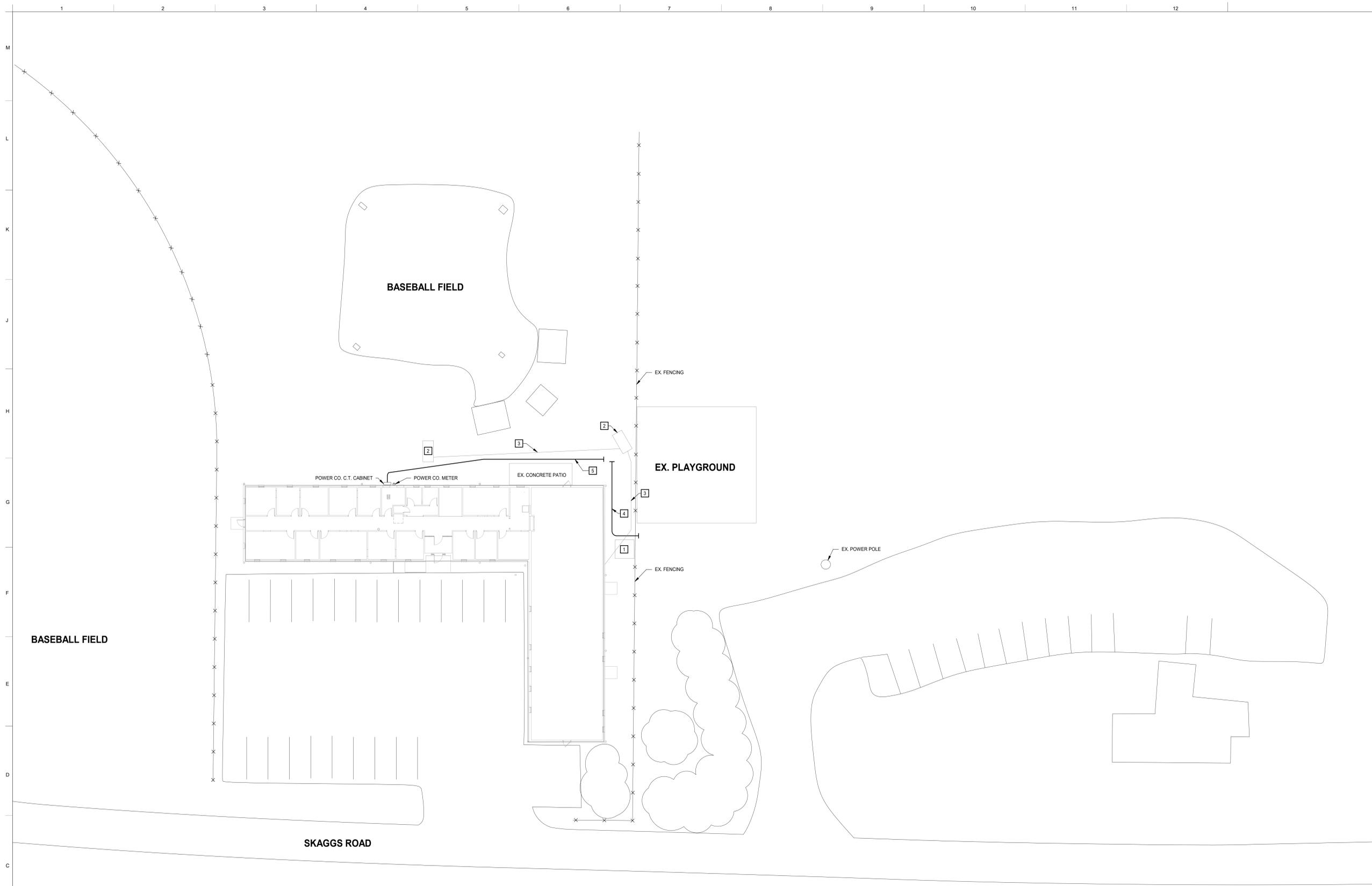
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PROJECT MANAGER:	DEM	DRAWN BY: MMS

QEA No.41912630

BID DOCUMENTS  
04/08/2020

**ELECTRICAL - SITE  
PLAN**

**E101**

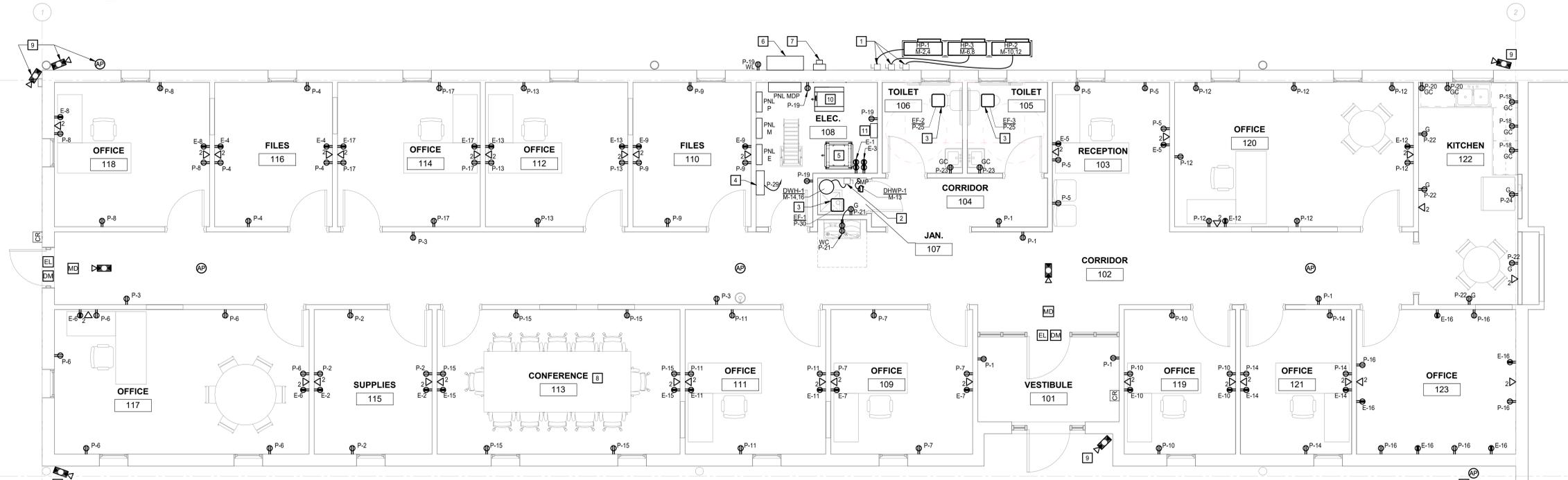
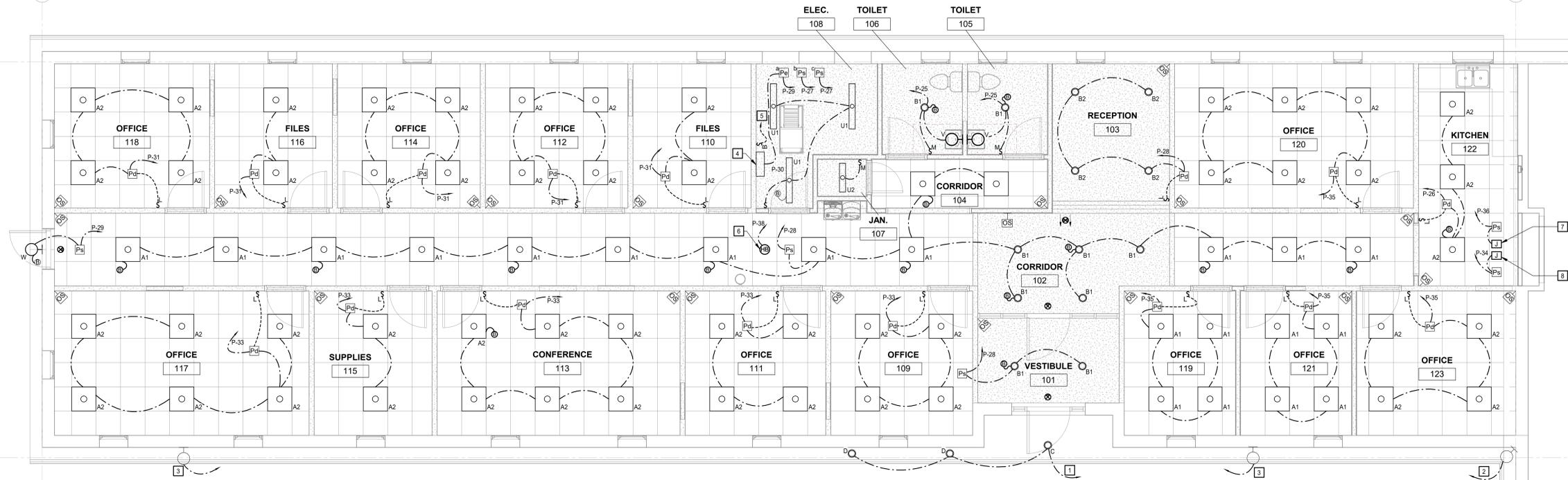


**1 SITE PLAN**  
1/16" = 1'-0"

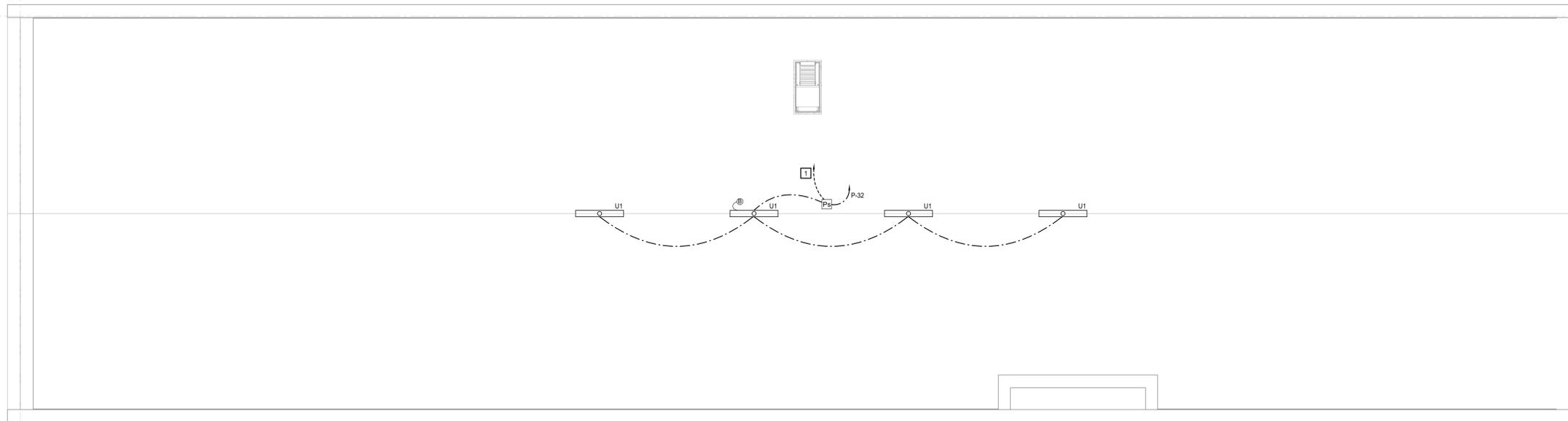
- PLAN REFERENCE NOTES:**
- EXISTING ABANDONED AND FILLED UNDERGROUND SEPTIC TANK.
  - EXISTING UNDERGROUND SEPTIC TANK.
  - EXISTING SEPTIC LINE.
  - INSTALL THREE (3) 4" EMPTY SCHEDULE 40 PVC UNDERGROUND CONDUIT SLEEVES TO ASSIST THE POWER CO. IN THE INSTALLATION OF THE SECONDARY SERVICE CONDUCTORS. STUBS JUST PAST FENCING TOWARDS POWER CO. POLE AND TO APPROXIMATE LOCATION SHOWN ON THE OTHER END.
  - INSTALL THREE (3) 4" EMPTY SCHEDULE 40 PVC UNDERGROUND CONDUIT SLEEVES FROM POWER CO. C.T. CABINET TO APPROXIMATE LOCATION SHOWN TO ASSIST THE POWER CO. IN THE INSTALLATION OF THE SECONDARY SERVICE CONDUCTORS.

- GENERAL NOTES:**
- COORDINATE EXACT REQUIREMENTS/LOCATION OF SLEEVES FOR POWER CO. USE WITH THE POWER CO. (DOMINION ENERGY). DOMINION SHALL FURNISH CONDUIT TO DIVISION 26 FOR INSTALLATION BY DIVISION 26. DOMINION ENERGY CONTACT IS JOSH DOUGETT AT (804) 365-2704.
  - DOMINION ENERGY WILL INSTALL DIRECT BURY RATED SECONDARY CONDUCTORS FROM THE EXISTING POWER CO. POLE SHOWN TO THE METER. DOMINION ENERGY WILL USE THE CONDUIT SLEEVES TO ASSIST IN THE INSTALLATION WHERE SLEEVES ARE SHOWN, AND DIRECT BURY THE REMAINDER OF THE RUN INCLUDING TO THE POLE AND TO NAVIGATE THE TURN BETWEEN THE TWO (2) SETS OF SLEEVES.
  - SEE SPECIFICATIONS, SHEET E501, FOR A DELINEATION OF RESPONSIBILITIES BETWEEN DOMINION ENERGY AND DIVISION 26 FOR THE POWER CO. SERVICE.
  - COORDINATE INSTALLATION/LOCATION OF CONDUIT WITH EXISTING SITE UTILITIES INCLUDING SEPTIC TANKS AND SEPTIC LINES UNDER THE JURISDICTION OF THE POWHATAN COUNTY UTILITY DEPT. CONFIRM ROUTING OF CONDUIT SLEEVES WITH THE OWNER'S REPRESENTATIVE (POWHATAN COUNTY) PRIOR TO INSTALLATION. DIVISION 26 SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO IDENTIFY THE LOCATIONS OF SUCH UNDERGROUND UTILITY LINES AND EQUIPMENT INCLUDING SITE SURVEY, HAND DIGGING, ETC. AS REQUIRED.
  - THE LOCATIONS OF SITE FEATURES, UTILITY EQUIPMENT, AND UTILITY LINES AS SHOWN ON THE SITE PLAN ABOVE ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED BY DIVISION 26 IN THE FIELD.

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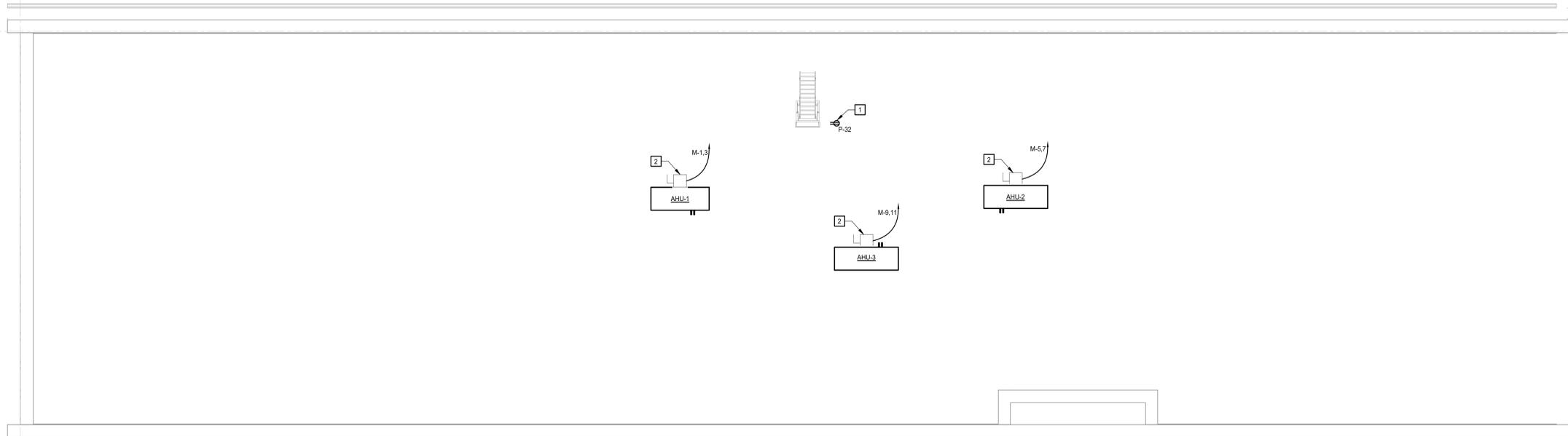


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**1 ATTIC LIGHTING PLAN**  
E301 1/4" = 1'-0"

PLAN REFERENCE NOTE:  
1 LIGHTING CONTROL WALLSTATION LOCATED IN MAIN ELECTRIC ROOM 108.



**2 ATTIC POWER PLAN**  
E301 1/4" = 1'-0"

PLAN REFERENCE NOTES:  
1 MOUNT ON TRUSS ACCESSIBLE FROM CATWALK AREA NEAR THE ATTIC ENTRANCE.  
2 PROVIDE 2P-30A DISCONNECT SWITCH IN NEMA-1 ENCLOSURE, FUSED PER AIR HANDLER MANUFACTURER'S SPECIFICATIONS.

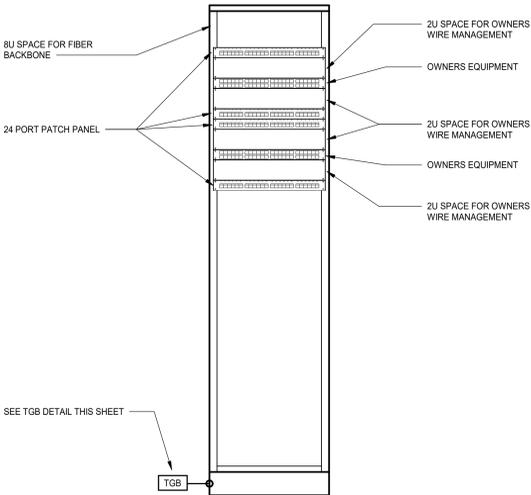
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PANELBOARD SCHEDULE PNL MDP LOCATION: ELEC. 108 FED FROM: PNL MDP												
600 A MCB		120/208 Wye		3 PH 4 W		MOUNT: Surface		PANEL ASSEMBLY RATED (KAIC): 65				
CKT	BRKR	POLE	LOAD		A	B	C	LOAD		POLE	BRKR	CKT
1	225 A	3	PANEL P		6.8	18.2		9.9	17.5			2
3												4
5												6
7	225 A	3	PANEL M		7.3	22.3		7.2	22.5			8
9												10
11												12
13	50 A	2	EATON UPS / BYPASS		2.2	0.0		2.7	0.0			14
15												16
17			SPACE ONLY									18
SPD: 240kA per Phase/120kA per Mode.					477 A	60 kVA		503 A	53 kVA			
MANF: Square D by Schneider Electric Panel shall be service entrance rated and labeled. Branch circuit breakers shall be J-Frame Type.												
Load Classification			Connected Load	Demand Factor	Estimated Demand		Panel Totals					
INTERIOR LIGHTING			2208 VA	100.00%	2208 VA		Total Conn. Load: 169.3 kVA					
EXTERIOR LIGHTING			3097 VA	100.00%	3097 VA		Total Est. Demand: 162.3 kVA					
REC			24120 VA	73.70%	17360 VA		Total Conn. Current: 470 A					
AC / HEAT PUMP			21285 VA	100.00%	21285 VA		Total Est. Demand: 470 A					
ELECTRIC HEAT			0 VA	0.00%	0 VA							
KITCHEN			0 VA	0.00%	0 VA							
MISCELLANEOUS			118525 VA	100.00%	118525 VA							

PANELBOARD SCHEDULE P LOCATION: ELEC. 108 FED FROM: PNL MDP												
225 A MLO		120/208 Wye		3 PH 4 W		MOUNT: Surface		PANEL ASSEMBLY RATED (KAIC): 10kA				
CKT	BRKR	POLE	LOAD		A	B	C	LOAD		POLE	BRKR	CKT
1	20 A	1	REC - VEST/CORR		0.9	0.7			REC - RM115 SUPPLIES	1	20 A	2
3	20 A	1	REC - CORR			0.5	0.7		REC - RM116 FILES	1	20 A	4
5	20 A	1	REC - RM103 RECEPTION				0.9	1.1	REC - RM117 OFFICE	1	20 A	6
7	20 A	1	REC - RM109 OFFICE		0.7	0.7			REC - RM118 OFFICE	1	20 A	8
9	20 A	1	REC - RM110 FILES			0.7	0.7		REC - RM119 OFFICE	1	20 A	10
11	20 A	1	REC - RM111 OFFICE				0.7	1.3	REC - RM120 OFFICE	1	20 A	12
13	20 A	1	REC - RM112 OFFICE		0.7	0.7			REC - RM121 OFFICE	1	20 A	14
15	20 A	1	REC - RM113 CONFERENCE			1.1	0.9		REC - RM123 OFFICE	1	20 A	16
17	20 A	1	REC - RM114 OFFICE				0.7	0.5	REC - KITCHEN #1	1	20 A	18
19	20 A	1	REC - ELEC/JUAN		0.7	0.4			REC - KITCHEN #2	1	20 A	20
21	20 A	1	REC - JAN/WATER COOLER			0.5	0.7		REC - KITCHEN #3	1	20 A	22
23	20 A	1	REC - BATHROOMS				0.4	0.2	REC - REFRIGERATOR	1	20 A	24
25	20 A	1	LTS - FAN - BATHROOMS		0.3	0.1			LTS - KITCHEN	1	20 A	26
27	20 A	1	LTS - EXTERIOR #1			1.5	0.4		LTS - CORR/RECEP	1	20 A	28
29	20 A	1	LTS - EXTERIOR #2				0.1	0.2	LTS - ELECTRIC/JUAN	1	20 A	30
31	20 A	1	LTS - OFFICES - NORTH EAST		0.4	0.3			ATTIC LTS AND RECS	1	20 A	32
33	20 A	1	LTS - OFFICES - SOUTH EAST			0.6	1.5		PWR - TENANT LIGHTS #1	1	20 A	34
35	20 A	1	LTS - OFFICES - WEST				0.4	0.3	PWR - TENANT LIGHTS #2	1	20 A	36
37	20 A	1	SPARE		0.0	0.1			LUTRON VIVE HUB	1	20 A	38
39	20 A	1	SPARE			0.0	0.0		SPARE	1	20 A	40
41	20 A	1	SPARE				0.0	0.0	SPARE	1	20 A	42
					7 kVA	10 kVA		7 kVA				
					56 A	82 A		56 A				
MANF: Square D by Schneider Electric MODEL: NQ												
Load Classification			Connected Load	Demand Factor	Estimated Demand		Panel Totals					
INTERIOR LIGHTING			2208 VA	100.00%	2208 VA		Total Conn. Load: 23.4 kVA					
EXTERIOR LIGHTING			3097 VA	100.00%	3097 VA		Total Est. Demand: 19.6 kVA					
REC			17480 VA	78.64%	13730 VA		Total Conn. Current: 65 A					
AC / HEAT PUMP			360 VA	100.00%	360 VA		Total Est. Demand: 55 A					
ELECTRIC HEAT			0 VA	0.00%	0 VA							
KITCHEN			0 VA	0.00%	0 VA							
MISCELLANEOUS			250 VA	100.00%	250 VA							

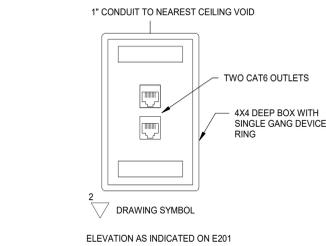
PANELBOARD SCHEDULE M LOCATION: ELEC. 108 FED FROM: PNL MDP												
225 A MLO		120/208 Wye		3 PH 4 W		MOUNT: Surface		PANEL ASSEMBLY RATED (KAIC): 10kA				
CKT	BRKR	POLE	LOAD		A	B	C	LOAD		POLE	BRKR	CKT
1	15 A	2	AHU-1		0.4	2.7			HP-1	2	40 A	2
3						0.4	2.7		HP-3	2	40 A	4
5	15 A	2	AHU-2		0.6	2.7		0.6	2.7			6
7								0.6	2.7			8
9	15 A	2	AHU-3					0.6	2.7			10
11								0.6	2.7			12
13	20 A	1	DHW-1		0.1	0.8						14
15	20 A	1	SPARE				0.0	0.8				16
17	20 A	1	SPARE				0.0	0.0				18
19	20 A	1	SPARE		0.0	0.0		0.0	0.0			20
21	20 A	1	SPARE				0.0	0.0				22
23	20 A	1	SPARE				0.0	0.0				24
25	20 A	1	SPARE		0.0	0.0		0.0	0.0			26
27	20 A	1	SPARE				0.0	0.0				28
29	20 A	1	SPARE				0.0	0.0				30
31	--	--	SPACE ONLY		0.0	0.0		0.0	0.0			32
33	--	--	SPACE ONLY				0.0	0.0				34
35	--	--	SPACE ONLY					0.0	0.0			36
37	--	--	SPACE ONLY					0.0	0.0			38
39	--	--	SPACE ONLY		0.0	0.0		0.0	0.0			40
41	--	--	SPACE ONLY				0.0	0.0				42
					7 kVA	7 kVA		7 kVA				
					61 A	61 A		55 A				
MANF: Square D by Schneider Electric MODEL: NQ												
Load Classification			Connected Load	Demand Factor	Estimated Demand		Panel Totals					
INTERIOR LIGHTING			0 VA	0.00%	0 VA		Total Conn. Load: 21.0 kVA					
EXTERIOR LIGHTING			0 VA	0.00%	0 VA		Total Est. Demand: 21.1 kVA					
REC			0 VA	0.00%	0 VA		Total Conn. Current: 58 A					
AC / HEAT PUMP			20925 VA	100.00%	20925 VA		Total Est. Demand: 58 A					
ELECTRIC HEAT			0 VA	0.00%	0 VA							
KITCHEN			0 VA	0.00%	0 VA							
MISCELLANEOUS			0 VA	0.00%	0 VA							

PANELBOARD SCHEDULE E LOCATION: ELEC. 108 FED FROM: UPS/TRANSFER SWITCH												
50 A MCB		120/208 Single		1 PH 3 W		MOUNT: Surface		PANEL ASSEMBLY RATED (KAIC): 10kA				
CKT	BRKR	POLE	LOAD		A	B	C	LOAD		POLE	BRKR	CKT
1	20 A	1	REC - IT RACK #1		0.4	0.4			REC - RM115 SUPPLIES	1	20 A	2
3	20 A	1	REC - IT RACK #2			0.4	0.4		REC - RM116 FILES	1	20 A	4
5	20 A	1	REC - RM103 RECEPTION		0.0	0.0			REC - RM117 OFFICE	1	20 A	6
7	20 A	1	REC - RM109 OFFICE			0.0	0.0		REC - RM118 OFFICE	1	20 A	8
9	20 A	1	REC - RM110 FILES		0.0	0.0			REC - RM119 OFFICE	1	20 A	10
11	20 A	1	REC - RM111 OFFICE			0.4	0.4		REC - RM120 OFFICE	1	20 A	12
13	20 A	1	REC - RM112 OFFICE		0.4	0.4			REC - RM121 OFFICE	1	20 A	14
15	20 A	1	REC - RM113 CONFERENCE			0.4	0.9		REC - RM123 OFFICE	1	20 A	16
17	20 A	1	SPARE		0.0	0.0		0.0	0.0			18
19	20 A	1	SPARE					0.0	0.0			20
21	20 A	1	SPARE		0.0	0.0		0.0	0.0			22
23	20 A	1	SPARE				0.0	0.0	0.0			24
25	--	--	SPACE ONLY		0.0	0.0		0.0	0.0			26
27	--	--	SPACE ONLY				0.0	0.0				28
29	--	--	SPACE ONLY		0.0	0.0		0.0	0.0			30
					2 kVA	3 kVA		3 kVA				
					21 A	25 A						
MANF: Square D by Schneider Electric MODEL: NQ												
Load Classification			Connected Load	Demand Factor	Estimated Demand		Panel Totals					
INTERIOR LIGHTING			0 VA	0.00%	0 VA		Total Conn. Load: 6.7 kVA					
EXTERIOR LIGHTING			0 VA	0.00%	0 VA		Total Est. Demand: 6.7 kVA					
REC			6660 VA	100.00%	6660 VA		Total Conn. Current: 32 A					
AC / HEAT PUMP			0 VA	0.00%	0 VA		Total Est. Demand: 32 A					
ELECTRIC HEAT			0 VA	0.00%	0 VA							
KITCHEN			0 VA	0.00%	0 VA							
MISCELLANEOUS			0 VA	0.00%	0 VA							

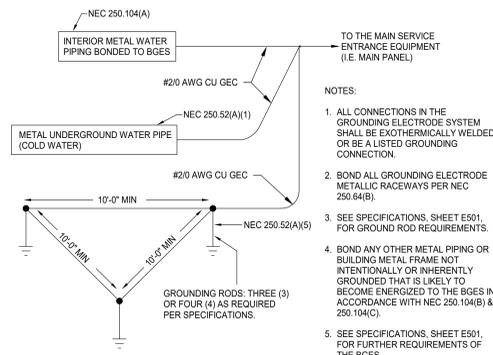


- NOTES:**
- RACK LAYOUTS ARE DIAGRAMMATIC AND MEANT AS A GUIDELINE FOR THE ACTUAL RACK ARRANGEMENTS.
  - VERIFY WITH OWNERS I.T. DEPARTMENT FOR EXACT RACK LAYOUT AND ARRANGEMENTS.
  - VERIFY WITH OWNER FOR SPACING REQUIREMENTS FOR OWNER PROVIDED ELECTRONIC EQUIPMENT.

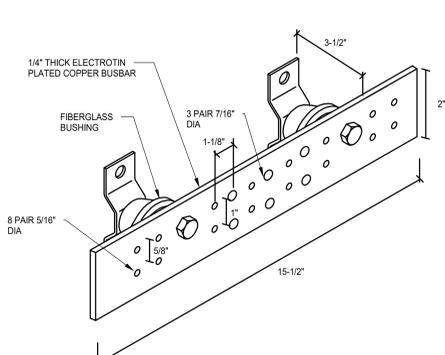
**TELECOMMUNICATIONS RACK DETAIL**  
NO SCALE



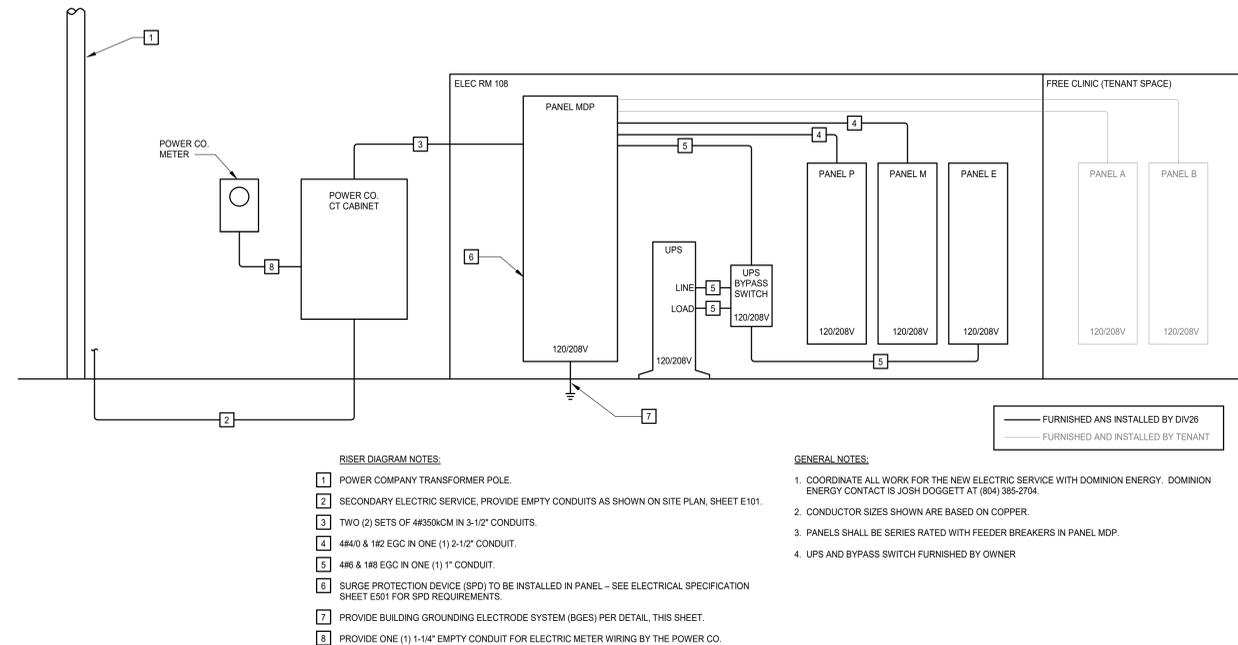
**TELECOMMUNICATIONS OUTLET DETAILS**  
NO SCALE



**BUILDING GROUNDING ELECTRODE SYSTEM (BGES)**  
NO SCALE



**TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)**  
NO SCALE



**POWER RISER DIAGRAM**  
NO SCALE

- RISER DIAGRAM NOTES:**
- POWER COMPANY TRANSFORMER POLE.
  - SECONDARY ELECTRIC SERVICE, PROVIDE EMPTY CONDUITS AS SHOWN ON SITE PLAN, SHEET E101.
  - TWO (2) SETS OF 4#350KCM IN 3-1/2" CONDUITS.
  - 4#40 & 1#2 EGC IN ONE (1) 2-1/2" CONDUIT.
  - 4#6 & 1#8 EGC IN ONE (1) 1" CONDUIT.
  - SURGE PROTECTION DEVICE (SPD) TO BE INSTALLED IN PANEL - SEE ELECTRICAL SPECIFICATION SHEET E501 FOR SPD REQUIREMENTS.
  - PROVIDE BUILDING GROUNDING ELECTRODE SYSTEM (BGES) PER DETAIL, THIS SHEET.
  - PROVIDE ONE (1) 1-1/4" EMPTY CONDUIT FOR ELECTRIC METER WIRING BY THE POWER CO.

- GENERAL NOTES:**
- COORDINATE ALL WORK FOR THE NEW ELECTRICAL SERVICE WITH DOMINION ENERGY. DOMINION ENERGY CONTACT IS JOSH DOGGETT AT (804) 385-2704.
  - CONDUCTOR SIZES SHOWN ARE BASED ON COPPER.
  - PANELS SHALL BE SERIES RATED WITH FEEDER BREAKERS IN PANEL MDP.
  - UPS AND BYPASS SWITCH FURNISHED BY OWNER



**PUBLIC WORKS / IT OFFICE RENOVATION**

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN, VIRGINIA 23139

No.	Date	Description
PROJECT MANAGER:	DEW	DRAWN BY: MMS

B:\1600\1600\Shaggs Road\1600\_Shaggs Road\_MEP.rvt  
4/7/2020 4:32:47 PM  
PATH: FILENAME  
PLOTING DATE & TIME

A

B

C

D

E

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K

L

M

**ELECTRICAL SPECIFICATIONS:**

1. ALL ELECTRICAL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2015 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2015 VIRGINIA ENERGY CONSERVATION CODE, AND THE 2014 NATIONAL ELECTRICAL CODE (NEC).
2. ALL ELECTRICAL EQUIPMENT AND MATERIAL USED SHALL BEAR THE UNDERWRITER'S LABORATORY (UL) LABEL FOR THE INTENDED APPLICATION.
3. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS REQUIRED TO PROVIDE COMPLETE WORKING ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND ACQUIRE ALL PERMITS NECESSARY TO PERFORM WORK. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER (A/E) AND OWNER. THE CONTRACTOR SHALL WARRANT FOR A PERIOD OF ONE YEAR ALL WORK PROVIDED UNDER THE CONTRACT TO INCLUDE, BUT NOT NECESSARILY LIMITED TO, ALL SYSTEMS, EQUIPMENT, MATERIALS, AND WORKMANSHIP. THIS SHALL NOT BE CONSTRUED TO LIMIT ANY EXTENDED WARRANTY PERIODS OF LONGER THAN ONE YEAR FOR SPECIFIC ITEMS AS CALLED FOR IN THESE SPECIFICATIONS. THE WARRANTY PERIOD SHALL COMMENCE ON THE DATE OF ACCEPTANCE BY THE OWNER AND SHALL COVER ALL PARTS AND LABOR AS REQUIRED TO FULFILL THE WARRANTY AT NO COST TO THE OWNER.
4. THE ELECTRICAL TRADE IS ENCOURAGED TO VISIT THE JOB SITE AND SURVEY ALL EXISTING CONDITIONS WHICH MAY AFFECT HIS WORK PRIOR TO CONTRACT PRICE AGREEMENT (CONTACT KELLEY HOLMES, QUINN EVANS ARCHITECTS AT (804) 533-1070 TO ARRANGE A VISIT). FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO ACCURATELY ESTIMATE THE DIFFICULTIES AND COST TO PERFORM WORK. THE ELECTRICAL TRADE SHALL COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. CONFLICTS DUE TO FAILURE OF THE ELECTRICAL TRADE TO COORDINATE WORK WILL BE CORRECTED AT THE EXPENSE OF THE ELECTRICAL TRADE, INCLUDING COSTS FOR REPAIRS TO WORK OF OTHER TRADES.
5. THE ELECTRICAL TRADE SHALL SUBMIT ALL ELECTRICAL MATERIALS REQUIRED BY THESE SPECIFICATIONS FOR REVIEW BY A/E IN ACCORDANCE WITH SUBMITTAL PROCEDURES. SUBMITTALS ARE REQUIRED FOR ALL EQUIPMENT AND MATERIALS INDICATED WITH AN (S) BEHIND THE PRODUCT TITLE. THIS SHALL INCLUDE SUBMISSION OF THE SPECIFIED PRODUCTS EQUIPMENT AND MATERIALS. ALL SUBMITTAL DATA SHALL BE CORRECTLY IDENTIFIED TO SHOW PROJECT NAME, AND THE EXACT MODEL, STYLE, OR SIZE OF ITEM BEING SUBMITTED AND SHALL BEAR THE SUBCONTRACTOR'S STAMP WHICH STATES THAT THEY HAVE REVIEWED THE SUBMISSION, IT IS COMPLETE, AND THAT IN THEIR OPINION IT MEETS THE CONTRACT REQUIREMENTS. THE CONTRACTOR'S STAMP SHALL CLEARLY INDICATE THE NAME OF THE REVIEWING CONTRACTOR. REFER TO THE GENERAL CONDITIONS OF IN THE ARCHITECT'S SPECIFICATIONS FOR ALL SUBMITTAL REQUIREMENTS.
6. AT COMPLETION OF PROJECT, THE ELECTRICAL TRADE SHALL SUBMIT IN ACCORDANCE WITH ARCHITECT'S SUBMITTAL PROCEDURE, OPERATION AND MAINTENANCE DATA (OM) FOR ALL ELECTRICAL ITEMS WHICH WILL REQUIRE SERVICING BEFORE THE DURATION OF THEIR USEFUL LIFE HAS BEEN REACHED. OM MANUALS SHALL INCLUDE A COMPLETE PRODUCT INDEX, INSTALLATION AND MAINTENANCE DATA, SEQUENCE OF CONTROLS, PARTS LISTS, AND THE NAME, ADDRESS, AND TELEPHONE NUMBER OF SUPPLIER OR NEAREST REPRESENTATIVE.
7. ALL WIRING FOR CIRCUITRY 120 VOLT OR GREATER SHALL BE COPPER THWN OR THHN IN METALLIC CONDUIT, OR LISTED METAL-CLAD (MC) CABLE. NON-METALLIC SHEATHED CABLE IS NOT PERMITTED FOR THIS PROJECT. ALL 120V CIRCUIT WIRING SHALL BE #12 OR LARGER. ALL WIRE #8 AWG OR LARGER SHALL BE STRANDED. ALL CIRCUITS SHALL BE PROVIDED WITH A SEPARATE NEUTRAL. ON 120/208V SYSTEMS, COLOR SCHEME SHALL BE AS FOLLOWS: PHASE A - BLACK, PHASE B - RED, PHASE C - BLUE, NEUTRAL - WHITE, GROUND - GREEN.
8. METAL CLAD (MC) CABLING MAY BE USED FOR BRANCH CIRCUITRY AS PERMITTED BY THE NEC AND SHALL BE CONCEALED IN WALLS OR CEILINGS, OR INSTALLED IN ATTIC SPACE, AND SHALL BE SUBJECT TO ALL NEC INSTALLATION REQUIREMENTS. IT SHALL NOT BE PERMITTED TO BE INSTALLED EXPOSED IN FINISHED AND NORMALLY OCCUPIED AREAS. ALL FEEDERS SHALL BE RUN IN CONDUIT.
9. ALL POWER LIMITED SHIELDED TWISTED PAIR CABLE SHALL BE AS MANUFACTURED BY BELDEN, ALPHA, WEST PENN OR ANXTER. FURNISH NUMBER OF CONTROL WIRING PAIRS, SHIELDING, INSULATION, ETC. AS REQUIRED BY CONTROLLED SYSTEM MANUFACTURER.
10. GROUNDING: ALL GROUNDING SHALL BE IN ACCORDANCE WITH NEC. ALL CIRCUITRY SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR (EGC). PROVIDE NEW BUILDING GROUNDING ELECTRODE SYSTEM (BGES) PER DETAIL ON SHEET E001. GROUND RODS FOR THE BGES SHALL BE 3/4" X 10' COPPER-CLAD STEEL WITH A MINIMUM THICKNESS OF 0.013 INCH AT ANY POINT ON THE ROD. THE BGES SHALL BE TESTED TO INSURE A RESISTANCE OF 25 OHMS OR LESS.
11. ALL CONDUIT SHALL BE RIGID HEAVY WALL CONDUIT (GRS), INTERMEDIATE METAL CONDUIT (IMC), OR ELECTRICAL METALLIC TUBING (EMT) AS PERMITTED BY NEC. MINIMUM SIZE SHALL BE 3/4" EXCEPT FOR FLEXIBLE CONDUIT. CONDUIT SHALL BE BY REPUBLIC, STEEL-DUCT, ALLED TUBING, WHEATLAND, OR OTHER ACCEPTABLE MANUFACTURER. PVC CONDUIT IS NOT PERMITTED FOR THIS PROJECT EXCEPT FOR USE IN UNDERGROUND INSTALLATIONS OUTSIDE OF THE BUILDING.
12. FLEXIBLE METAL CONDUIT SHALL BE USED FOR ALL FLEXIBLE CONNECTIONS, PLUS ALL SHORT MOTOR CONNECTIONS, AND ALL EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION. FLEXIBLE METAL CONDUIT MAY ALSO BE USED AS THE FLEXIBLE CONNECTION TO RECESSED LIGHTING FIXTURE ASSEMBLIES AND IN EXISTING WALL VOIDS. FLEXIBLE METAL CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC AND ALL LIMITATIONS THEREIN AND SHALL BE LIMITED TO 6' MAXIMUM LENGTH. LIQUIDTIGHT FLEXIBLE METAL CONDUIT SHALL BE USED IN EXTERIOR APPLICATIONS AND ALL INTERIOR WET LOCATIONS.
13. FURNISH AND INSTALL CONDUIT RUNS TO PRODUCE SWITCHING AND CIRCUIT CONTROL, INDICATED ON THE DRAWINGS, ALLOW FOR MAKING CONNECTIONS TO ALL OUTLETS, LIGHT FIXTURES, ETC. INDICATED AND CHECK PLANS TO INSURE ALL OUTLETS, ETC., HAVE A DESIGNATED CIRCUIT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND. CIRCUITS SHALL BE IN INDIVIDUAL HOMERUNS. MULTI-WIRE BRANCH CIRCUITS ARE NOT PERMITTED.
14. OUTLET BOXES:
  - A. ALL OUTLET BOXES SHALL BE ONE-PIECE CONSTRUCTION WITH PROPER CONDUIT KNOCKOUTS AS REQUIRED, AND EQUAL TO STEEL CITY OR RACO. PROVIDE PROPER DEVICE COVER AS REQUIRED FOR DEVICES AND WALL FINISH. ALL BOXES SHALL BE RIGIDLY AND SECURELY FASTENED IN PLACE IN ACCORDANCE WITH NEC.
  - B. ALL CEILING OUTLET BOXES SHALL HAVE ADJUSTABLE BAR HANGERS AND PROPER FIXTURE ADAPTER COVER.
  - C. ALL OUTLET BOX COVER PLATES SHALL BE HIGH IMPACT THERMOPLASTIC OR POLYCARBONATE WITH SMOOTH FINISH UNLESS OTHERWISE INDICATED. PLATE COLOR SHALL BE AS DIRECTED BY THE ARCHITECT. "JUMBO" COVERS ARE NOT ACCEPTABLE.
  - D. ALL UNUSED KNOCKOUTS IN BOXES SHALL BE PLUGGED WITH STEEL SNAP-IN KNOCKOUT BLANKS. BLANKS SHALL BE BY SAME MANUFACTURER AS OUTLET BOX.
15. WIRING DEVICES (S):
  - A. LINE VOLTAGE TOGGLE SWITCHES: SPECIFICATION GRADE HUBBELL HBL SERIES, COOPER AC QUIET SERIES, OR PASS & SEYMOUR (P&S) PS SERIES, SINGLE, THREE-WAY, FOUR-WAY, ETC. AS REQUIRED. DEVICE COLOR SHALL BE CHOSEN BY THE ARCHITECT.
  - B. SWITCH WITH BUILT-IN OCCUPANCY SENSOR: SHALL BE SINGLE POLE, DUAL TECHNOLOGY (INFRARED AND ULTRASONIC) OCCUPANCY WALL SWITCH WITH 180 DEGREE FIELD OF VIEW. SWITCH SHALL BE LUTRON RMS-A102 MAESTRO SERIES OR ACCEPTABLE EQUAL BY WAIT-STOPPER, SENSORSWITCH, OR HUBBELL/LENGCO. TIME DELAY SHALL BE SET FOR 30 MINUTES.
  - C. RECEPTACLES: HEAVY DUTY SPECIFICATION GRADE HUBBELL HBL SERIES, COOPER 5362 SERIES OR P&S 5362 SERIES, DUPLEX, GFCI, ETC. AS REQUIRED WITH SPECIFIED COVER PLATES. PROVIDE COVER RATED AS WEATHERPROOF "WHILE-IN-USE" FOR ALL RECEPTACLES INSTALLED ON THE EXTERIOR. DEVICE COLOR SHALL BE CHOSEN BY THE ARCHITECT. RECEPTACLES THAT ARE CONNECTED TO THE UPS PANELBOARD (PANEL E) SHALL BE RED.
16. LIGHTING FIXTURES (S): LIGHTING FIXTURES SHALL BE AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE OR ACCEPTABLE EQUALS. FOR SUBSTITUTIONS OF LIGHTING FIXTURES THAT ARE PART OF THE EMERGENCY EGRESS PATH, SUBMIT POINT-BY-POINT FOOTCANDLE CALCULATIONS. PROVIDE LIGHTING FIXTURES COMPLETE WITH ALL REQUIRED LAMPS, PLATES, RINGS, HANGERS, TRIM AND ALL ACCESSORIES NECESSARY FOR A COMPLETE AND SECURE INSTALLATION. ALL FIXTURES SHALL BE ADEQUATELY SUPPORTED BY FIXTURE STUDS, CONDUIT STEMS, STEEL RODS, OR BAR HANGERS. RECESSED FIXTURES IN ACT CEILINGS SHALL BE PROVIDED WITH A MINIMUM OF TWO (2) AUXILIARY SUPPORT WIRES AT THE DIAGONAL CORNERS OF THE FIXTURE. THE AUXILIARY SUPPORT WIRES SHALL BE ATTACHED TO THE STRUCTURE AND CAPABLE OF SUPPORTING THE FIXTURE IF THE CEILING SYSTEM SUPPORT WIRES ARE COMPROMISED. FIXTURES SHALL NOT BE MOUNTED TO OR SUSPENDED FROM ANY MECHANICAL SYSTEM.
17. PANELBOARDS (S): PANELBOARDS SHALL BE CIRCUIT BREAKER TYPE SQUARE D (AS CALLED FOR ON DRAWINGS) OR ACCEPTABLE EQUAL BY GE, CUTLER-HAMMER, OR SIEMENS, AND SHALL MEET ALL REQUIREMENTS GIVEN IN THE PANELBOARD SCHEDULES. PANELBOARDS SHALL HAVE SILVER OR TIN PLATED COPPER BUS, FULL NEUTRAL, GROUND BAR, AND ALL CIRCUIT PROTECTIVE DEVICES INDICATED. ALL BRANCH PANELBOARDS SHALL HAVE FAULT CURRENT RATING EQUAL TO THE UPSTREAM MAIN PANELBOARD BREAKER SUPPLYING THE BOARD. RATING MAY BE ACHIEVED BY SERIES RATING BRANCH CIRCUIT BREAKERS TO THE FEEDER BREAKER. CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE, ONE, TWO, OR THREE POLE AS INDICATED WITH COMMON TRIP ON MULTIPOLE BREAKERS. MOUNT PANELBOARDS CABINETS LEVEL AND PLUMB, 72" TO TOP ABOVE FLOOR WHERE POSSIBLE. LOAD DESIGNATIONS SHALL BE FILLED OUT FOR ALL CIRCUITS. PANELBOARDS SHALL INCLUDE ARC-FLASH WARNING LABEL AS REQUIRED BY NEC 110.10. BRANCH PANELBOARDS SHALL BE SERIES RATED WITH THE UPSTREAM CIRCUIT BREAKER SUPPLYING THEM IN THE MAIN PANELBOARD AS REQUIRED TO MAINTAIN FAULT CURRENT RATING OF THE ENTIRE DISTRIBUTION SYSTEM.
18. SURGE PROTECTIVE DEVICE (SPD) (S): SURGE PROTECTIVE DEVICE SHALL BE A HYBRID HIGH-ENERGY POWER CONDITIONING FILTER INCORPORATING SURGE PROTECTIVE DEVICE AND HIGH-FREQUENCY ELECTRICAL LINE NOISE FILTERING. THE UNIT SHALL PROVIDE EFFECTIVE HIGH-ENERGY TRANSIENT VOLTAGE SUPPRESSION, SURGE CURRENT DIVERSION, HIGH FREQUENCY ATTENUATION, AND LINE CONTROL ON THE LOAD SIDE OF THE FACILITY'S WIRING AND COMPLETE WITH THE FOLLOWING FEATURES:
  - A. MAXIMUM CONTINUOUS OPERATING VOLTAGE SHALL NOT BE LESS THAN 125% OF THE FACILITY'S NOMINAL VOLTAGE.
  - B. PROTECTION MODE IN WYE CONFIGURATION SHALL BE L-N, N-G, L-G, AND L-L. MAXIMUM VOLTAGE PROTECTION RATING SHALL BE 700 VOLTS.
  - C. RATED SINGLE PULSE SURGE CURRENT CAPACITY IN AMPS SHALL BE NO LESS THAN 120 KA PER MODE OR 240 KA PER PHASE.
  - D. UNIT SHALL CONTAIN THERMALLY PROTECTED MOVs AND FUSE ARRAYS FOR OVERCURRENT PROTECTION AND SHALL BE CAPABLE OF WITHSTANDING THE FULL SINGLE PULSE SURGE OF EVERY MODE WITHOUT FAILURE OF THE OVERCURRENT PROTECTION OR FUSES.
  - E. MANUFACTURER SHALL PROVIDE A FULL TEN (10) YEAR WARRANTY.
  - F. UNIT MAY BE EXTERNALLY OR INTERNALLY MOUNTED IN THE MAIN PANELBOARD. INTERNAL MOUNTING IS SHOWN ON THE DRAWINGS. FOR EITHER MOUNTING OPTION, THE SPD SHALL BE PROVIDED WITH A DISCONNECTION MEANS THAT WILL ALLOW THE SPD TO BE TAKEN OUT OF SERVICE FOR MAINTENANCE WITHOUT REQUIRING SHUTDOWN OF THE CONNECTED PANELBOARD OR ANY OTHER EQUIPMENT. INTERNAL MOUNTED SPD SHALL BE FACTORY INSTALLED AND CERTIFIED BY THE PANELBOARD MANUFACTURER.
  - G. SPD SHALL BE PROVIDED WITH TWO (2) SETS OF FORM "C" DRY CONTACTS (ONE NORMALLY OPEN AND ONE NORMALLY CLOSED) FOR REMOTE MONITORING. THE SPD SHALL INCLUDE DISPLAY EVENT COUNTER, BATTERY POWERED AUDIBLE ALARM, AND LED INDICATORS.
  - H. BASIS OF DESIGN IS SURGEOLOGIC (SQUARE D) WITH ACCEPTABLE EQUALS BY THOR, SIEMENS, EATON, AND G.E.
19. DISCONNECT SWITCHES (S): DISCONNECT SWITCHES SHALL BE HEAVY DUTY, VISIBLE BLADE TYPE, FUSIBLE SWITCHES WITH GROUNDING KIT, SQUARE D 3130 SERIES OR ACCEPTABLE EQUAL, AND RATED FOR THE VOLTAGE ENCOUNTERED, POLES AND AMPERAGE AS REQUIRED, WITH PROPER NEMA ENCLOSURE AS REQUIRED BY NEC (NEMA 3R ON EXTERIOR AND NEMA 1 INTERIOR). PROVIDE NEUTRAL ASSEMBLY WHERE REQUIRED. DISCONNECT SWITCHES SERVING MECHANICAL EQUIPMENT MAY BE AIR CONDITIONING TYPE WITH FUSED FULLOUTS AND METALLIC ENCLOSURES, CUTLER-HAMMER EATON DFF SERIES OR EQUAL.
20. FUSES (S): FUSES SHALL BE REJECTION-TYPE, DUAL-ELEMENT, TIME DELAY TYPE, CLASS RK-1. FUSES FOR HVAC EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS MAXIMUM OVERCURRENT PROTECTION (MOP) RATING. ALL OTHER FUSES SHALL BE SIZED IN ACCORDANCE WITH NEC.
21. MOTOR PROTECTIVE SWITCHES (MPS) (S): MOTOR PROTECTIVE SWITCHES, FURNISH AND INSTALL MANUAL TYPE WITH OVERLOAD RELAY FOR EACH PHASE, WITH POLES AS REQUIRED AND SEPARATELY WIRED NEON OR LED PILOT LIGHT. MP SWITCH AND PILOT SHALL BE MOUNTED ON ONE (1) SINGLE OR MULTI-GANG PLATE.
22. COORDINATE EXACT LOCATIONS AND REQUIREMENTS OF MECHANICAL AND PLUMBING EQUIPMENT WITH THE PROVIDERS/INSTALLERS OF THE EQUIPMENT. FURNISH ALL CONTROL DEVICES AS CALLED FOR BY ALL MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
23. ELECTRIC SERVICE (S):
  - A. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH DOMINION ENERGY (DE) NECESSARY FOR INSTALLATION OF THE NEW ELECTRIC SERVICE CALLED FOR IN THESE DRAWINGS. WORK SHALL BE SCHEDULED WITH DE TO MAINTAIN CONSTRUCTION SCHEDULE. THE SECONDARY FOR THE NEW SERVICE SHALL BE 208Y/120 VOLTS, 3-PHASE, 4-WIRE. DE SHALL FURNISH THE C.T. CABINET AND CTS, METER BASE, AND UNDERGROUND SECONDARY CONDUITS TO THE CONTRACTOR FOR INSTALLATION BY THE CONTRACTOR. DE WILL INSTALL THE SECONDARY CONDUCTORS FROM THE POWER CO. POLE WITH POLE-MOUNTED TRANSFORMERS AND MAKE CONNECTIONS AT THE C.T. CABINET. THE CONTRACTOR SHALL PROVIDE THE LOAD SIDE CONDUITS AND CONDUCTORS FROM THE C.T. CABINET TO THE MAIN PANELBOARD. LINE SIDE AND LOAD SIDE CONDUITS MUST EXIT THE C.T. CABINET AT OPPOSITE ENDS. THE CONTRACTOR SHALL PROVIDE AN EMPTY CONDUIT BETWEEN THE C.T. CABINET AND THE METER, AND THE POWER COMPANY SHALL MAKE THE CONNECTIONS BETWEEN THE TWO. THE CONTRACTOR SHALL FURNISH ANY MATERIALS AND PROVIDE ANY WORK NOT SPECIFICALLY PERFORMED BY DE FOR A COMPLETE INSTALLATION. SEE SITE PLAN, SHEET E101 FOR ADDITIONAL REQUIREMENTS.
  - B. THE OWNER WILL PAY DIRECTLY TO THE POWER COMPANY ALL POWER COMPANY CHARGES AND FEES FOR INSTALLATION OF THE POWER COMPANY PORTION OF THE WORK.
  - C. THE CONTRACTOR SHALL OBTAIN A FAULT LETTER FROM DE INDICATING THE AVAILABLE FAULT CURRENT AT THE SERVICE ENTRANCE. THE CONTRACTOR SHALL INSURE THAT THE RATINGS OF THE SWITCHGEAR SHOWN ON THE DRAWINGS ARE SUFFICIENT FOR THE AVAILABLE FAULT CURRENT PRIOR TO SUBMITTING SWITCHGEAR FOR SHOP DRAWING REVIEW.
24. LIGHTING CONTROL SYSTEM (S): PROVIDE WIRELESS CONTROL SYSTEM WHERE WIRELESS SYSTEM COMPONENTS ARE SHOWN ON THE DRAWINGS. SYSTEM SHALL BE COMPLETE WITH ALL REQUIRED SYSTEM COMPONENTS, WIRING, PROGRAMMING, ETC. THE SYSTEM SHALL BE BASED ON LUTRON VIVE, WHOSE NUMBERS ARE USED HEREIN, OR ACCEPTABLE EQUAL MANUFACTURER PROVIDED THE SUBSTITUTE MANUFACTURER CAN DEMONSTRATE FUNCTIONALITY AND QUALITY EQUAL TO THE LUTRON SYSTEM.
  - A. WIRELESS MANUAL DIMMING STATION: THE WIRELESS MANUAL DIMMING STATION SHALL BE 3-BUTTON RAISE/LOWER LUTRON PICO SERIES WITH ON, OFF, AND RAISE/LOWER AND INDICATOR LED. STATION SHALL USE CLEAR CONNECT RF WIRELESS TECHNOLOGY AND SHALL BE PROVIDED WITH A 10-YEAR BATTERY. SWITCH SHALL CHOOSE COLOR FROM STANDARD MANUFACTURER OFFERINGS. UNLESS FIELD CONDITIONS REQUIRE OTHERWISE, DIMMING STATIONS SHALL NOT REQUIRE IN-WALL OUTLET BOXES. STATIONS SHALL BE WALL-MOUNTED USING SURFACE MOUNTING KIT AND INCLUDE WALLPLATE.
  - B. THE OCCUPANCY/VACANCY SENSORS SHALL BE PASSIVE INFRARED AND SHALL BE SET FOR MANUAL-ON/AUTO OFF IN ALL OFFICES, CONFERENCE ROOMS, STORAGE ROOMS, ETC., AND AUTO-ON/AUTO-OFF IN CORRIDORS. STATION SHALL USE CLEAR CONNECT RF WIRELESS TECHNOLOGY AND SHALL BE PROVIDED WITH A 10-YEAR BATTERY. WALL MOUNT SENSORS SHALL BE MODEL #LRF2-OWLB-P-WH, CORNER MOUNT SENSORS SHALL BE MODEL #LRF2-OKLB-P-WH, AND HALLWAY SENSORS SHALL BE MODEL #LRF2-CHLB-P-WH. WALL-MOUNT SENSORS SHALL HAVE A 180 DEGREE FIELD OF VIEW AND CORNER MOUNT SENSORS SHALL HAVE A 90 DEGREE FIELD OF VIEW. WALL-MOUNT SENSORS SHALL HAVE A COVERAGE AREA OF 3000 SQUARE FEET FOR MINOR MOTION AND CORNER MOUNT SENSOR SHALL HAVE A COVERAGE AREA OF 2500 SQUARE FEET FOR MAJOR MOTION AT A MOUNTING HEIGHT OF 7 FEET. HALLWAY SENSORS SHALL HAVE A COVERAGE AREA OF 50 FEET FOR A HALL WIDTH OF 6 FEET. TIME DELAYS ON ALL OCCUPANCY/VACANCY SENSORS SHALL BE SET AT 30 MINUTES.
  - C. POWER PACKS: POWER PACKS SHALL BE LUTRON POWPAK SERIES. MODULES SERVING LOADS REQUIRING DIMMING SHALL BE MODEL #RMUS-87N-DV-6, RATED FOR 120-277V, 8 AMPS, SHALL INCLUDE A 0-10V DIMMING MODULE AND LED INDICATOR, AND SHALL COMMUNICATE USING CLEAR CONNECT RF WIRELESS TECHNOLOGY. MODULES SERVING SWITCHED LOADS SHALL BE MODEL #RMUS-7R-DV-8 (5 OR 10 AMP AS NEEDED) RATED FOR 120-277V AND SHALL COMMUNICATE USING CLEAR CONNECT RF WIRELESS TECHNOLOGY. PROVIDE EMERGENCY TYPE POWER PACKS FOR THOSE USED IN CONJUNCTION WITH A BATTERY INVERTER OR OTHER REMOTE BACKUP POWER SOURCE. POWER PACKS SHALL BE MOUNTED ABOVE THE ACCESSIBLE CEILING. DIMMING POWER PACKS SHALL BE CONFIGURED SUCH THAT IF AN OCCUPANCY SENSOR TURNS OFF THE LIGHTS, PRESS OF THE MANUAL CONTROL SHALL RETURN LIGHTS TO FULL POWER REGARDLESS OF LIGHTING LEVEL PRIOR TO ACTIVATION OF OCCUPANCY SENSOR.
  - D. WIRELESS HUB: PROVIDE A WIRELESS HUB TO ALLOW FOR PROGRAMMING OF LIGHTING CONTROL SYSTEM WITH WI-FI ENABLED DEVICES AND FOR USING SCHEDULE BASED CONTROLS. PROVIDE 120V CIRCUIT AND DATA CONNECTION.
  - E. THE WIRELESS CONTROL SYSTEM MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE ALL CONFIGURATION, PROGRAMMING, AND TESTING REQUIRED TO INSURE PROPER OPERATION OF THE LIGHTING CONTROL SYSTEM. THE MANUFACTURER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL SENSORS AND CONTROLS FOR PROPER OPERATION OF THE SYSTEM. PRIOR TO PERFORMING CONFIGURATION, THE MANUFACTURER'S REPRESENTATIVE SHALL MEET WITH THE OWNER'S REPRESENTATIVE TO DISCUSS DESIRED OPERATION, SETTINGS OF TIME DELAYS, TIME SCHEDULES FOR POWER PACKS CONTROLLING EXTERIOR FIXTURES, ETC. AFTER COMPLETION OF SETUP, THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE TRAINING TO DESIGNATED OWNER'S PERSONNEL ON OPERATION AND MAINTENANCE OF THE SYSTEM INCLUDING PROGRAMMING PERSONNEL ON OPERATION AND CELL PHONE APPLICATIONS.
  - F. CONTROL SEQUENCE: IN GENERAL, SPACES SUCH AS OFFICES, CONFERENCE ROOMS, STORAGE ROOMS, ETC. SHALL OPERATE AS A SINGLE ROOM WITH THE MANUAL CONTROL STATION AND OCCUPANCY SENSOR CONTROLLING THE LIGHTS WITHIN THE SPACE. WHEN THE LIGHTS ARE OFF, ACTIVATION OF THE OCCUPANCY SENSOR SHALL TURN THE LIGHTS ON AUTOMATICALLY TO NO MORE THAN 50% POWER AS REQUIRED BY THE EMERGENCY CODE (ECCO). EXTERIOR LIGHTS SHALL BE CONTROLLED ON A TIME SCHEDULE BASIS. EACH POWER PACK SERVING EXTERIOR LIGHTS MAY BE SET TO OPERATE ON A DIFFERENT TIME SCHEDULE. CORRIDOR LIGHTING SHALL BE SET TO STAY ON CONTINUOUSLY DURING NORMAL BUSINESS HOURS AND OCCUPANCY SENSORS SHALL BE ACTIVATED TO CONTROL THE CORRIDOR LIGHTING AFTER HOURS. ATTIC LIGHTS SHALL BE TURNED ON BY THE MANUAL CONTROL STATION AND REMAIN ON UNLESS TURNED OFF AT THE CONTROL STATION. AT A DESIGNATED TIME AFTER-HOURS, THE ATTIC LIGHTS SHALL BE SWEEP AND TURNED OFF IF LEFT ON.
25. DATA NETWORK SYSTEM (S): FURNISH AND INSTALL ONE (1) COMPLETE DATA NETWORK AS DESCRIBED HEREIN AND AS SHOWN ON THE PLANS. TO BE WIRED, CONNECTED, AND LEFT IN FIRST CLASS OPERATING CONDITION. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST TIA/EIA STANDARDS. COORDINATE ALL WORK WITH THE OWNER'S INFORMATION TECHNOLOGY (I.T.) DEPARTMENT.
  - A. DATA NETWORK TRADE: ALL COMPONENTS SHALL BE INSTALLED BY ONE (1) SINGLE DATA NETWORK TRADE OF ESTABLISHED REPUTATION AND EXPERIENCE IN DATA NETWORK INSTALLATION. THEY SHALL HAVE AT LEAST FIVE (5) YEARS OF EXPERIENCE PERFORMING SIMILAR TYPE OF WORK. THEY SHALL BE A TRAINED AND AUTHORIZED TECHNICAL REPRESENTATIVE OF THE MANUFACTURERS WHOSE EQUIPMENT THEY ARE PROPOSING FOR INSTALLATION. THEY SHALL EMPLOY ON THEIR STAFF A REGISTERED COMMUNICATION DISTRIBUTION DESIGNER (RCDD) CURRENTLY REGISTERED AND CERTIFIED BY BUILDING INDUSTRIES CONSULTING SERVICES (BICS).
  - B. HORIZONTAL LAN CABLING: THE HORIZONTAL LAN CABLES SHALL BE CATEGORY 6 WITH EACH CABLE INSTALLED AS A HOMERUN FROM STATION DEVICE TO THE RESPECTIVE PATCH PANEL IN THE DATA CABINET LOCATED IN THE MAIN ELECTRICAL ROOM. ALL CABLE SHALL CONSIST OF ONE 4 PAIR (8 WIRES), 23 GAUGE, CATEGORY 6 CABLE IN ONE SHEATH. THE UTP CABLE SHALL HAVE A CMP RATED JACKET AND BE MARKED AT REGULAR INTERVALS WITH THE MANUFACTURER'S NAME, PART NUMBER, CATEGORY RATING, AND UL LISTING. UTP CABLE SHALL BE 19 GAUGE, CATEGORY 6 WITH 4 PAIR (8 WIRES) CABLES TWISTED TOGETHER IN SUCH A MANNER AS TO LIMIT CROSSTALK BETWEEN THE CABLES, WITH A CORE SEPARATOR THAT ISOLATES PAIRS THROUGHOUT THE LENGTH OF THE CABLE. UTP CABLE SHALL BE PANDUIT #RUP604WH-U OR ACCEPTABLE EQUAL. CABLE COLOR SHALL BE WHITE.
  - C. STATION TERMINATION DEVICES: DEVICES SHALL BE CATEGORY 6/CLASS E 8-POSITION KEYSTONE JACK MODULE WITH 110 STYLE PUNCHDOWN. MULTIPLES JACKS MAY BE PROVIDED IN AN INDIVIDUAL OUTLET (SEE DRAWINGS FOR QUANTITIES OF CABLES AND JACKS AT EACH OUTLET). DATA OUTLET FACEPLATES SHALL BE BY THE SAME MANUFACTURER AS THE JACKS AND CERTIFIED FOR USE WITH THE PARTICULAR JACK MODULE. WHERE MULTIPLET OUTLET FACEPLATES ARE PROVIDED, PROVIDE BLANK INSERT ON ALL UNUSED INSERTS. JACK MODULES SHALL BE PANDUIT #N688M OR ACCEPTABLE EQUAL. COLOR SHALL BE WHITE.
  - D. PATCH PANELS: PATCH PANELS SHALL BE 24 PORT, CATEGORY 6, CLASS E FLAT 110 STYLE PUNCHDOWN PATCH PANELS AND SHALL MOUNT TO STANDARD EIA 19" RACKS. PATCH PANELS SHALL BE PANDUIT #N6PPG24Y OR ACCEPTABLE EQUAL.
  - E. DATA CABINET: PROVIDE DATA CABINET IN MAIN ELECTRICAL ROOM PER DETAIL AS SHOWN ON THE DRAWINGS. CABINET SHALL CONSIST OF 4-POST FRAME IN ANODIZED ALUMINUM FINISH, ADJUSTABLE MOUNTING RAILS, LOCKING EAST-TO-REMOVE SILD SIDE PANELS, LOCKING REVERSIBLE VENTED PLEXIGLASS FRONT DOOR, LOCKING REVERSIBLE PERFORATED METAL REAR DOOR, VENTED TOP PANEL WITH CABLE ACCESS PORTS, VERTICAL HALF-HEIGHT CABLE MANAGERS, VERTICAL PDU MOUNTING BRACKET KIT, LEVELING FEET, AND FLOOR ANCHOR CLAMPS. CABINET SHALL BE 76" TALL (42 RU) AND SHALL SUPPORT 19" EIA WIDE EQUIPMENT (CABINET WIDTH OF 27.32" BY 27.62" DEEP DOOR FACE TO DOOR FACE). CABINET SHALL BE CHATSWORTH PRODUCTS INC. (CPI) M-SERIES MEGAFRAME #M1123-731 SERIES OR ACCEPTABLE EQUAL.
  - F. CABLE SUPPORTS: PROVIDE WALL OR CEILING MOUNTED CABLE SUPPORTS IN THE CORRIDOR FOR INSTALLATION OF CAT 6 CABLE ABOVE THE ACCESSIBLE (ACT) CEILING. CABLES SHALL NOT BE LAYED ON OR SUPPORTED BY THE ACT CEILING. CABLE SUPPORTS SHALL HAVE PROPER CAPACITY AS PUBLISHED BY THE MANUFACTURER FOR THE QUANTITY OF CABLES TO BE SUPPORTED. CABLES SHALL BE SUPPORTED AT DISTANCES AS RECOMMENDED BY EIA/TIA STANDARDS AND THE MANUFACTURER. CABLE SUPPORTS SHALL BE PANDUIT J-PRO SERIES OR OTHER ACCEPTABLE EQUAL.
  - G. TELECOMMUNICATIONS GROUNDING BUSBAR (TGB): PROVIDE A TELECOMMUNICATIONS GROUNDING BUSBAR (TGB) IN THE DATA CABINET PER DETAIL ON SHEET E401. PROVIDE A SEPARATE INSULATED GROUNDING CONDUCTOR (#2 AWG) FROM THE TGB TO THE BGES.
  - H. OWNER-PROVIDED EQUIPMENT: THE OWNER WILL PROVIDE ALL FIBEROPTIC CABLING AND CONNECTIONS FOR INCOMING DATA SERVICE, ALL ETHERNET SWITCHES, ALL JUMPERS BETWEEN PATCH PANELS AND ETHERNET SWITCHES, ANY REQUIRED RACK-MOUNTED UPS, AND ANY REQUIRED CONNECTIONS TO THE DATA SYSTEM IN THE FREE CLINIC SIDE OF THE BUILDING.
  - I. LABELING: ALL CABLING SHALL BE LABELED AND RECORDED. LABELING METHOD SHALL BE APPROVED BY THE OWNER'S I.T. DEPARTMENT. A COPY OF THE WIRING TABLE SHALL BE TURNED OVER TO THE OWNER.
  - J. TESTING: ALL CAT 6 CABLING SHALL BE TESTED. THE TESTING OF ALL CABLES SHALL CONFORM TO TIA/EIA AND INDUSTRY TEST STANDARDS FOR CAT 6 CABLES AND CONNECTORS. TEST RESULTS SHALL BE RECORDED AND PROVIDED TO THE OWNER AND ENGINEER. EACH CABLE SHALL BE TESTED FOR CONTINUITY, PAIR REVERSALS, SHORTS, OPENS, AND CABLE PERFORMANCE CRITERIA SUCH AS NEAR END CROSSTALK (NEXT), ATTENUATION, AMBIENT NOISE, AND ATTENUATION TO CROSSTALK TALK (ACTR). CABLES SHALL BE TESTED FROM PATCH PANEL TO OUTLET.
  - K. WARRANTY: THE DATA TRADE SHALL PROVIDE A STRUCTURED CABLING SYSTEMS WARRANTY OF THE PROVIDED AND SPECIFIED CABLE PLANT FOR A MINIMUM OF TWENTY-FIVE (25) YEARS FROM DATE OF ACCEPTANCE BY OWNER AND SHALL PROVIDE PARTS AND LABOR TO FULFILL THIS WARRANTY AT NO COST TO THE OWNER. MATERIALS SHALL INCLUDE ALL CABLE AS WELL AS ALL CONNECTORS AND OTHER ASSOCIATED MATERIALS.



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OFFICE RENOVATION

POWHATAN COUNTY

2320 SKAGGS ROAD, POWHATAN,  
VIRGINIA 23139

No.	Date	Description
PROJECT MANAGER:		DRAWN BY:
DEM		MMS

QEA No.41912630

BID DOCUMENTS  
04/08/2020

ELECTRICAL -  
SPECIFICATIONS

E501