TALAWANDA SCHOOL DISTRICT

MAINTENANCE AND BUS GARAGE

5302 University Park Blvd.
City of Oxford, Ohio 45056

ARCHITECT

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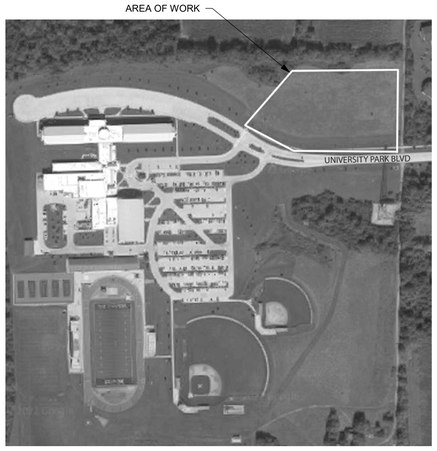
VICINITY MAP



CODE INFORMATION (OBC 2017)

PROJECT DESCRIPTION

PROJECT CONSISTS OF A NEW 7800 SF MAINTENANCE AND BUS GARAGE FOR TALAWANDA CITY SCHOOL DISTRICT

USE GROUP CLASSIFICATION

OBC (302) USE GROUP = B: BUSINESS - SUPPORT SPACES
S-1: STORAGE - MOTOR VEHICLE REPAIR GARAGE

OBC (508.3) MIXED OCCUPANCIES : NON SEPARATED MIXED USE

CONSTRUCTION TYPE CLASSIFICATION

OBC (602) CONSTRUCTION TYPE = VB

BUILDING DESCRIPTION = CONCRETE SLAB WITH WOOD FRAMED LOAD BEARING WALLS WITH METAL SIDING

HEIGHT AND AREA LIMITATIONS

OBC (503) BUILDING AREA AND HEIGHT ALLOWABLE BASE TABULAR AREA
= B - 2 STORIES/9,000 SF - STORY
= S-1 - 1 STORY/9000 SF - STORY

S-1 IS MOST RESTRICTIVE USE GROUP AT 9,000 SF ALLOWABLE

BUILDING DESCRIPTION:

FLOOR AREA: FIRST FLOOR = 7800 SF
MEZZANINES = EAST 771 SF AND WEST 866 SF

OBC (505.2) EACH MEZZANINE IS NOT GREATER THAN ONE-THIRD OF THE FLOOR AREA

OCCUPANT LOAD

OBC (1004) ALLOWABLE = B : 1664 SF/100 = 17 OCCUPANTS
= S-1: 6,136 SF/100 = 61 OCCUPANTS

DECLARED OCCUPANT LOAD

GROUND FLOOR = B: 15
= S-1: 15
TOTAL = 30 OCCUPANTS

FIRE PROTECTION

BUILDING DESCRIPTION: NON SUPPRESSED

OBC (903.2.9.1) FIRE AREAS DO NOT EXCEED 5000 S.F. (BUILDING IS SEPARATED INTO TWO FIRE AREAS.)

PLUMBING FIXTURES REQUIRED

USE GROUP	WC	LAVS	SHOWERS	EYEWASH	D.F.	SERVICE SINK
B	1	1	0	0	1	1
S1	1	1	0	0	0	1
TOTAL	2	2	0	0	1*	2

PLUMBING FIXTURES PROPOSED

USE GROUP	WC	LAVS	SHOWERS	EYEWASH	D.F.	SERVICE SINK
B	5	4	0	2	0	2

*REQUIREMENT FOR 1 DRINKING FOUNTAIN WILL BE MET WITH THE ADDITION OF 1 REFRIGERATED DRINKING WATER COOLER WITH REPLACEABLE WATER BOTTLES.

DRAWING INDEX

CIVIL DRAWINGS

CIVIL DRAWINGS, AS PREPARED AND STAMPED BY BAYER BECKER CIVIL ENGINEERS, ARE BOUND AND ATTACHED AT THE BACK OF THIS SET FOR REVIEW AND PERMIT.

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NOT FOR CONSTRUCTION

TALAWANDA SCHOOL DISTRICT
MAINTENANCE AND BUS GARAGE
5302 University Park Blvd.
City of Oxford, Ohio 45056

ISSUE

NO.	DATE	DESCRIPTION
	04/08/2022	FOR BIDDING

DATE	04/08/2022
JOB NO.	3977.00
DRAWN	MLG
CHECKED	RFW

TITLE
COVER SHEET

SHEET NO.
G0.1

5/23/2022 2:24:48 PM

ARCHITECTURAL SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 011000 - SUMMARY

1. PROJECT IDENTIFICATION:
   A. PROJECT NAME: NEW MAINTENANCE AND BUS GARAGE
   B. PROJECT LOCATION: 5301 UNIVERSITY PARK BLVD. CITY OF OXFORD, OHIO 45056
   C. OWNER: TALAWANDA CITY SCHOOL DISTRICT
2. TYPE OF CONTRACT: SINGLE PRIME CONTRACT

SECTION 013300 - SUBMITTAL PROCEDURES

1. TRANSMITTAL FORM: AIA G810 OR APPROVED EQUAL.
2. PRODUCT SUBMITTALS:
   A. PRODUCT DATA: 1 COPY - ELECTRONIC
   B. SHOP DRAWINGS: 1 COPY - ELECTRONIC
   C. SAMPLES: 2 SETS.

SECTION 014000 - QUALITY REQUIREMENTS

1. TESTING AGENCY: LICENSED LABORATORY; OBTAINED BY OWNER SELECTED BY CONTRACTOR AND APPROVED BY OWNER.
2. TESTS AND INSPECTIONS REQUIRED:
   A. SOILS:
   B. CONCRETE:
   C. LOADING:
3. SEE ALSO STRUCTURAL DRAWINGS.

SECTION 014200 - REFERENCES

1. APPLICABILITY OF INDUSTRY STANDARDS: UNLESS THE CONTRACT DOCUMENTS INCLUDE MORE STRINGENT REQUIREMENTS, APPLICABLE CONSTRUCTION INDUSTRY STANDARDS HAVE THE SAME FORCE AND EFFECT AS IF BOUND OR COPIED DIRECTLY INTO THE CONTRACT DOCUMENTS TO THE EXTENT REFERENCED. SUCH STANDARDS ARE MADE PART OF THE CONTRACT DOCUMENTS BY REFERENCE.
2. PUBLICATION DATES OF INDUSTRY STANDARDS: COMPLY WITH STANDARDS IN EFFECT AS OF DATE OF CONTRACT DOCUMENTS.

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

1. TEMPORARY UTILITY INSTALLATION AS FOLLOWS:
   A. GENERAL: INSTALL TEMPORARY SERVICE OR CONNECT TO EXISTING SERVICE.
   B. SEWERS AND DRAINAGE: PROVIDE TEMPORARY UTILITIES TO REMOVE EFFLUENCE LAWFULLY.
   C. WATER SERVICE: INSTALL WATER SERVICE AND DISTRIBUTION PIPING IN SIZES AND PRESSURES ADEQUATE FOR CONSTRUCTION. (USE OWNER'S EXISTING WATER SERVICE FACILITIES.
   D. SANITARY FACILITIES: PROVIDE TEMPORARY TOILETS, WASH FACILITIES, AND DRINKING WATER FOR CONSTRUCTION PERSONNEL. (USE OWNER'S EXISTING TOILET FACILITIES.)
   E. HEATING AND COOLING: PROVIDE TEMPORARY HEATING AND COOLING REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING AND PROTECTION OF COMPLETED INSTALLATION OF MATERIALS AND EQUIPMENT.
   F. VENTILATION AND HUMIDITY CONTROL: PROVIDE TEMPORARY VENTILATION REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING AND PROTECTION OF COMPLETED INSTALLATION OF MATERIALS AND EQUIPMENT.
   G. ELECTRIC POWER SERVICE: PROVIDE ELECTRIC POWER SERVICE AND DISTRIBUTION SYSTEM OF SUFFICIENT SIZE, CAPACITY, AND POWER CHARACTERISTICS REQUIRED FOR CONSTRUCTION ACTIVITIES. (USE OWNER*S EXISTING POWER SERVICE AND DISTRIBUTION SYSTEM.
   H. LIGHTING: PROVIDE TEMPORARY LIGHTING WITH LOCAL SWITCHING THAT PROVIDES ADEQUATE ILLUMINATION FOR CONSTRUCTION OPERATIONS, OBSERVATIONS, INSPECTIONS, AND TRAFFIC CONDITIONS.
   I. TELEPHONE SERVICE: INSTALL TEMPORARY TELEPHONE SERVICE IN COMMON-USE AREA FOR USE BY ALL CONSTRUCTION PERSONNEL.
2. TEMPORARY FACILITIES INCLUDES THE FOLLOWING:
   A. GENERAL FIELD OFFICE.
3. TEMPORARY EQUIPMENT INCLUDES THE FOLLOWING:
   A. FIRE EXTINGUISHERS: PORTABLE, UL RATED; WITH CLASS AND EXTINGUISHING AGENT AS REQUIRED BY LOCATIONS AND CLASSES OF FIRE EXPOSURES.
   B. HEATING EQUIPMENT: UNLESS OWNER AUTHORIZES USE OF PERMANENT HEATING SYSTEM, PROVIDED VENTED, SELF-CONTAINED, LIQUID-PROPANE-GAS OR FUEL-OIL HEATERS WITH INDIVIDUAL SPACE THERMOSTATIC CONTROL.
4. TEMPORARY SECURITY AND PROTECTION FACILITIES AS FOLLOWS:
   A. EROSION AND SEDIMENTATION CONTROL: PROVIDE MEASURES TO PREVENT SOIL EROSION AND SOIL BEARING WATER RUN-OFF AND AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.
   B. SITE ENCLOSURE FENCE: INSTALLED TO PREVENT PEOPLE AND ANIMALS FROM EASILY ENTERING SITE EXCEPT BY LOCKED ENTRANCE GATES.
   C. BARRICADES, WARNING SIGNS, AND LIGHTS: COMPLY WITH AUTHORITIES HAVING LOCAL JURISDICTION.
5. TEMPORARY SUPPORT FACILITIES AS FOLLOWS:
   A. ROADS AND PAVED AREAS:
   B. DEWATERING FACILITIES AND DRAINS:
   C. PROJECT IDENTIFICATION SIGN:
   D. WASTE DISPOSAL FACILITIES:

SECTION 016000 - PRODUCT REQUIREMENTS

1. PRODUCT SUBSTITUTIONS: CONSIDERED IF APPROVED BY OWNER AND ARCHITECT.
2. GENERAL PRODUCTS REQUIREMENTS: PROVIDE PRODUCTS COMPLYING WITH CONTRACT DOCUMENTS, UNDAMAGED, AND, UNLESS OTHERWISE INDICATED, ARE NEW AT TIME OF INSTALLATION.
3. PRODUCT DELIVERY, STORAGE, AND HANDLING: USE MEANS AND METHODS THAT WILL PREVENT PRODUCT DAMAGE, DETERIORATION, AND LOSS, INCLUDING THEFT.

SECTION 017700 - CLOSEOUT PROCEDURES

1. SUBMIT LIST OF ITEMS TO BE COMPLETED AND CORRECTED AND WRITTEN REQUEST FOR AN INSPECTION. COMPLETE AND CORRECT ITEMS ON PUNCH LIST.
2. FINAL CLEANING: CLEAN EACH SURFACE OR UNIT TO CONDITION EXPECTED IN AN AVERAGE COMMERCIAL BUILDING CLEANING AND MAINTENANCE PROGRAM. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. REMOVE DEBRIS AND SURFACE DUST, CLEAN GLASS, REMOVE SOILS AND STAINS, CLEAN LIGHT LENSES AND DUCTWORK, AND REPLACE AIR FILTERS AND LIGHT BULBS USED DURING CONSTRUCTION.
3. WARRANTIES: SUBMIT WRITTEN WARRANTIES FOR DESIGNATED PORTIONS OF WORK.

SECTION 017823 - OPERATION AND MAINTENANCE DATA

1. OPERATION AND MAINTENANCE MANUALS: 1 SETS BINDERS WITH TABLE OF CONTENTS FOR SYSTEMS, SUBSYSTEMS, AND EQUIPMENT AND 1 ELECTRONIC.

SECTION 017839 - PROJECT RECORD DOCUMENTS

1. RECORD DRAWINGS: 1 SET MARKED TO SHOW ACTUAL INSTALLATION WHERE VARIES FROM ORIGINAL.

DIVISION 03 - CONCRETE

1. **SECTION 033000 - CAST-IN-PLACE CONCRETE** WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST "AMERICAN CONCRETE INSTITUTE" RECOMMENDATIONS.
2. CONCRETE MIXES FOR BUILDING ELEMENTS:
   A. FOOTINGS: (3000) PSI.
   B. SLABS-ON-GRADE: (4000) PSI.
   C. SUPPORTED SLABS, BEAMS, JOISTS: (4000) PSI.
   D. (EXTERIOR CONCRETE 4 TO 6% AIR CONTENT.)
   E. SLUMP LIMIT: (4") (PLUS OR MINUS 1").
3. STEEL REINFORCEMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST A.I.S.C. RECOMMENDATIONS.
4. REINFORCING BARS: ASTM A 615, GRADE 60.
5. FINISHING FORMED SURFACES: EXPOSED WALLS AND OTHER SURFACES SHALL RECEIVE SMOOTH-FORMED FINISH.
6. UNDER-SLAB VAPOR BARRIER: ASTM E 1745, CLASS A, 15-MIL THICK, 0.018 PERMS. INSTALL PER ASTM E 1643 WITH TAPE.
7. FINISHING FLOORS AND SLABS: APPLY TROWEL FINISH TO SURFACES EXPOSED TO VIEW AND TO BE COVERED WITH FINISH FLOORING MATERIAL. APPLY CURING AND SEALING COMPOUND UNIFORMLY TO FLOORS.
8. REFER TO STRUCTURAL DRAWINGS, S0.1 FOR ADDITIONAL INFORMATION.

SECTION 054000 - COLD-FORMED METAL FRAMING

1. COLD-FORMED METAL FRAMING GENERAL: COMPLY WITH AISI'S "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND ITS "STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS." ENGINEERING IS RESPONSIBILITY OF QUALIFIED PROFESSIONAL ENGINEER.
2. SHEET STEEL: ASTM A 1003, STRUCTURAL GRADE, TYPE H, METALLIC COATED, GRADE AS REQUIRED BY STRUCTURAL PERFORMANCE, G90 COATING.
3. LOAD-BEARING WALL FRAMING:
   A. STEEL STUDS: C-SHAPED, MINIMUM 0.0538" THICKNESS, 1-5/8" FLANGE WIDTH.
   B. STEEL TRACK: U-SHAPED, MINIMUM 0.0538" THICKNESS, 1-1/4" FLANGE WIDTH.
   C. STEEL BOX OR BACK-TO-BACK HEADERS: C-SHAPES, MINIMUM 0.0538" THICKNESS, 1-5/8" FLANGE WIDTH.
4. EXTERIOR NON-LOAD-BEARING WALL FRAMING:
   A. STEEL STUDS: C-SHAPED, MINIMUM 0.0538" THICKNESS, 1-5/8" FLANGE WIDTH.
   B. STEEL TRACK: U-SHAPED, MINIMUM 0.0538" THICKNESS, 1-1/4" FLANGE WIDTH.
   C. VERTICAL DEFLECTION CLIPS: MANUFACTURER'S STANDARD BYPASS HEAD CLIP.
   D. SINGLE DEFLECTION TRACK: MANUFACTURER'S STANDARD DEEP LEG, U-SHAPED, MINIMUM 0.0538" THICKNESS, 1" PLUS TWICE THE DESIGN GAP FLANGE WIDTH.
5. FRAMING ACCESSORIES: ANCHORS, CLIPS, AND BOLTS.
   A. STEEL SHAPES AND CLIPS: ASTM A 36.
   B. ANCHOR BOLTS: ASTM F1554.
   C. EXPANSION ANCHORS: ASTM E 488.
   D. MECHANICAL FASTENERS: ASTM C 1513.
   E. WELDING ELECTRODES: AWS STANDARDS.

SECTION 055213 - PIPE AND TUBE RAILINGS - STAIRS

1. STRUCTURAL PERFORMANCE REQUIREMENTS FOR HANDRAILS AND TOP RAILS OF GUARDS:
   A. UNIFORM LOAD OF 50 LBF/FT (ANY DIRECTION).
   B. CONCENTRATED LOAD OF 200 LBF (ANY DIRECTION).
   C. LOADS NEED NOT BE ASSUMED TO ACT CONCURRENTLY.
2. QUALITY ASSURANCE: WELDING ACCORDING TO AWS A1.1 "STRUCTURAL WELDING CODE-STEEL".
3. STEEL AND IRON:
   A. TUBING: ASTM A 500 (COLD FORMED).
   B. PIPE: ASTM A 53, TYPE F OR TYPE S, GRADE A, STANDARD WEIGHT (SCHEDULE 40) UNLESS NOTED OTHERWISE).
   C. PLATES, SHAPES, AND BARS: ASTM A 36.
   D. CASTINGS: GRON IRON ASTM A 48, CLASS 30; MALLEABLE IRON ASTM A 47.
   E. SHOP (ZINC-RICH) PRIMER: SSPC-20.
   F. BITUMINOUS PAINT: COLD-APPLIED ASPHALT EMULSION, ASTM D 1187.L. NONSHRINK, NONMETALLIC GROUT: ASTM C 1107.
4. FABRICATION: COMPLY WITH PERFORMANCE REQUIREMENTS, MINIMIZE FIELD SPLICING AND ASSEMBLY, CUT DRILL AND PUNCH CLEANLY AND ACCURATELY, WELDED CONNECTIONS, WALL RETURNS, WALL BRACKETS AND FITTINGS, AND INSERTS AND ANCHORS.
5. INSTALLATION: SET RAILINGS ACCURATELY IN LOCATION, ALIGNMENT, AND ELEVATION. FASTEN TO IN-PLACE CONSTRUCTION. USE MECHANICAL TO CONNECT RAILING.) /USE FULLY WELDED JOINTS TO CONNECT RAILING.) SET ANCHORPOSTS IN FORM OR CORE-DRILLED HOLES. ANCHOR RAILING ENDS AND ATTACH HANDRAILS TO WALL WITH WALL BRACKETS.

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

SECTION 061000 - ROUGH CARPENTRY

1. LUMBER REQUIREMENTS AND TREATMENTS:
   A. LUMBER: DOC PS 20 AND APPLICABLE RULES OF GRADING AGENCIES INDICATED S4S.
   B. WOOD-PRESERVATIVE-TREATED LUMBER (WPT): AWPA C2 OR AWFA C31 IF NOT IN CONTACT WITH GROUND.
2. DIMENSION LUMBER FOR FRAMING AND MISCELLANEOUS LUMBER: 19% MAXIMUM MOISTURE CONTENT, CONSTRUCTION OR NO. 2 GRADE, AND MIXED SOUTHERN PINE; SPIB.
3. TIMBER FRAMING: SOUTHERN PINE, NO. 1 GRADE; SPIB 20% MAXIMUM MOISTURE CONTENT.
4. ENGINEERED WOOD PRODUCTS:
   A. PARALLEL-STRAND LUMBER: ASTM D 5456 AND ASTM D 2559 ADHESIVE
   B. WOOD I-JOISTS: ASTM D 5055 AND DOC PS 1 WEB MATERIAL.
5. PLYWOOD BACKING PANELS: DOC PS 1, EXPOSURE 1, C-D PLUGGED, 1/2" THICK.
6. FASTENERS: SIZE AND TYPE APPROPRIATE TO BOTH UNIT AND SUBSTRATE. PROVIDE METAL FRAMING ANCHORS FOR CONNECTIONS IN LOAD-BEARING FRAMING.

SECTION 061600 - SHEATHING

1. WALL PANEL PRODUCTS REQUIREMENTS AND TREATMENTS:
   A. PLYWOOD: DOC PS 1 AND APPLICABLE RULES OF GRADING AGENCIES INDICATED.
   B. ORIENTED STRAND BOARD: DOC PS 2.
   C. PRESERVATIVE-TREATED PLYWOOD WPT: AWPA C9.
   D. FIRE-RETARDANT-TREATED PLYWOOD WFT: AWPA C27. (MECHANICAL ROOM ONLY)
2. WALL SHEATHING:
   A. PLYWOOD: EXPOSURE 1, STRUCTURAL EXPOSURE 1, 24/0 SPAN RATING, NOT LESS THAN 3/8" NOMINAL THICKNESS.
   B. ORIENTED-STRAN-BOARD: EXPOSURE 1, STRUCTURAL EXPOSURE 1, 24/0 SPAN RATING, 3/8" MINIMUM THICKNESS.
   C. PAPER-SURFACED GYPSUM: ASTM C 79 OR ASTM C 1396, TYPE X, 5/8".
   D. EXTRUDED-POLYSTYRENE-FOAM: ASTM C 578, TYPE IV.
3. ROOF SHEATHING:
   A. PLYWOOD: EXPOSURE 1, STRUCTURAL 1 EXPOSURE, 24/0 SPAN RATING, 1/2" NOMINAL THICKNESS.
   B. ORIENTED-STRAN-BOARD: EXPOSURE 1, STRUCTURAL 1 EXPOSURE 1, 1/2" NOMINAL THICKNESS.
4. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
5. FASTENERS: SIZE AND TYPE REQUIRED FOR UNITS AND SUBSTRATES.
6. BUILDING WRAP: ASTM E 1677, TYPE 1 AIR RETARDER: 152 G PER ASTM E 96.
7. FLEXIBLE FLASHING: 0.040" COMPOSITE, SELF-ADHESIVE, PLIABLE, RUBBERIZED-ASPHALT COMPOUND, BONDED TO HIGH-DENSITY, CROSS-LAMINATED POLYETHYLENE FILM.
8. INSTALLATION: WITH MINIMUM NUMBER OF JOINTS, FITTING TIGHTLY AGAINST OTHER CONSTRUCTION, AND SECURELY ATTACHED TO SUBSTRATE BY POWER-DRIVEN FASTENERS.
   A. WOOD STRUCTURAL PANELS: APA FORM NO. E30S.
   B. GYPSUM SHEATHING: GA-253.
   C. FIBERBOARD SHEATHING: ASTM C 846.
   D. FOAM-PLASTIC SHEATHING: MANUFACTURER.
   E. PARTICLEBOARD UNDERLAYMENT: NPA.
   F. HARDBOARD UNDERLAYMENT: AHA.

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

1. FABRICATOR AND INSTALLER QUALIFICATIONS: CERTIFIED PARTICIPANT IN AWI'S QUALITY CERTIFICATION PROGRAM.
2. MATERIALS: COMPLY WITH AWI'S QUALITY STANDARD FOR EACH TYPE OF WOODWORK AND QUALITY GRADE.
   A. HARDBOARD: AHA MA135.4.
   B. MEDIUM-DENSITY BOARD: ANSI A208.2, GRADE MD.
   C. PARTICLEBOARD: ANSI GRADE 208.1, GRADE (M-2) M-2-EXTERIOR GLUE.
   D. SOFTWOOD PLYWOOD: DOC PS 7 MEDIUM DENSITY OVERLAY.
   E. VENEER-FACED PANEL PRODUCTS HARDWOOD PLYWOOD: HPVA HP-1.
   F. THERMOSET DECORATIVE PANELS: PARTICLE BOARD OR MEDIUM-DENSITY FIBERBOARD WITH FUSED, MELMANINE- IMPREGNATED DECORATIVE PAPER, LMA SAT-1.
   G. HIGH-PRESSURE DECORATIVE LAMINATE PL: NEMA LD 3, GRADES AS INDICATED; WILSON ART, NEVAMAR, OR APPROVED EQUAL.
   H. SOLID SURFACING SS: HOMOGENEOUS SOLID SHEETS OF FILLED PLASTIC RESIN, ISSFA-2; LG.
   J. CABINET HARDWARE:
      a. HINGES: 2 1/2 INCH, 5-KNUCKLE STEEL HINGES MADE FROM 0.093 INCH THICK METAL AS FOLLOWS:
         - PRODUCT: ROCKFORD PROCESS CONTROL (RPC) MODEL NO. 376-101 WITH HOSPITAL TIP NON-REMOVABLE PIN.
         - SEMICONCEALED HINGES FOR FLUSH OVERLAY DOORS: BAMA A156.9.
         - FINISH: 26D DULL CHROME
      b. DOOR AND DRAWER PULLS: BACK MOUNTED, SOLID METAL, 6 INCHES LONG, 5/16" IN DIAMETER, LANSA BY IKEA.
      c. ADJUSTABLE SHELF STANDARDS AND SUPPORTS: KNAPE AND VOGT #255 STEEL STANDARDS AND #256 STEEL SUPPORTS.
      d. CLOSET SHELF STANDARDS AND SUPPORTS: KNAPE AND VOGT KV185 HEAVY DUTY DOUBLE SLOTTED SHELF BRACKETS AND KV85 HEAVY DUTY DOUBLE SLOTTED SHELF STANDARDS
      e. DRAWER SLIDES: BHMA A156.9, B05091
         - (KITCHEN ONLY) HEAVY DUTY (GRADE 1HD-100 AND GRADE 1HD-200); CONCEALED UNDERMOUNT; FULL-OVERTRAVEL-EXTENSION TYPE; ZINC-PLATED STEEL BALL-BEARING SLIDES; INTEGRATED SOFT-CLOSE; AIR DAMPENING.
      f. EXPOSED HARDWARE FINISHES: FOR EXPOSED HARDWARE, PROVIDE FINISH THAT COMPLIES WITH BHMA A156.9 FOR BHMA FINISH NUMBER INDICATED.
         - SATIN CHROMIUM PLATED: BHMA 626 FOR BRASS OR BRONZE BASE; BHMA 652 FOR STEEL BASE.
   K. FURRING, BLOCKING, SHIMS, AND HANG STRIPS: (FIRE-RETARDANT-TREATED SOFTWOOD LUMBER, KILN DRIED TO LESS THAN 15% MOISTURE CONTENT.
3. FABRICATION: PREMIUM-GRADE INTERIOR WOODWORK COMPLYING WITH REFERENCED QUALITY STANDARDS. FABRICATE TO DIMENSIONS, PROFILES, AND DETAILS INDICATED. COMPLETE FABRICATION, INCLUDING ASSEMBLY, FINISHING, AND HARDWARE APPLICATION, TO MAXIMUM EXTENT POSSIBLE BEFORE SHIPMENT. TRIAL FIT ASSEMBLIES AT SHOP THAT CANNOT BE SHIPPED COMPLETELY.
4. PLASTIC-LAMINATE CABINETS: PREMIUM GRADE, FLUSH OVERLAY REVEAL OVERLAY FLUSH INSET AWI CONSTRUCTION, GRADE VGS SURFACES, AND GRADE VGS PVC T-MOLD EDGES.
5. PLASTIC-LAMINATE COUNTERTOPS: PREMIUM GRADE WITH HGP LAMINATE GRADE, MEDIUM-DENSITY FIBERBOARD CORE EXTERIOR GRADE PLYWOOD AT SINKS, AND PLASTIC-LAMINATE BACKER SHEET.
6. SOLID-SURFACING-MATERIAL COUNTERTOPS AND STOOLS: PREMIUM GRADE, 3/4" THICK, WITH LOOSE BACKSPLASHES - WOMEN'S RESTROOM.
7. TRANSPARENT SHOP FINISH: PREMIUM GRADE, AWI TO MATCH APPROVED SAMPLE.
8. INSTALL WOODWORK LEVEL, PLUMB, TRUE, AND STRAIGHT AND SHIM WITH CONCEALED SHIMS. INSTALL LEVEL AND PLUMB TO 1/8" IN 96" TOLERANCE. SCRIBE AND CUT TO FIT ADJOINING WORK, REFINISH CUT SURFACES, AND REPAIR DAMAGED FINISH.

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

SECTION 072100 - THERMAL INSULATION

1. INSULATION MATERIALS:
   A. EXTRUDED-POLYSTYRENE BOARD: ASTM C 578, TYPE IV, 1.60 LB/CU. FT. WITH MAXIMUM 75 FLAME AND 450 SMOKE.
   B. UNFACED, GLASS-FIBER BLANKET: ASTM C 655, TYPE I, WITH MAXIMUM 25 FLAME AND 50 SMOKE, ASTM E 136.
   C. FACED, GLASS-FIBER BLANKET: ASTM C 655, TYPE III, CLASS A, CATEGORY 1, FACED WITH FOIL-SCRIM-POLYETHYLENE VAPOR RETARDER MEMBRANE ON 1 FACE.
2. VAPOR RETARDERS:
   A. POLYETHYLENE: ASTM D 4397, 6 MILS, WITH MAXIMUM PERMEANCE RATING OF 0.13 PERM.
3. AUXILIARY MATERIALS AND FASTENERS: VAPOR-RETARDER TAPE AND ADHESIVES, EAVE TROUGHS, SPINDLE-TYPE ANCHORS, INSULATION-RETAINING WASHERS, INSULATION STANDOFF SPACERS, AND ANCHOR ADHESIVE AS REQUIRED TO MEET APPLICATION STANDARDS FOR INSTALLATION.
4. INSTALLATION: IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS APPLICABLE TO PRODUCTS AND APPLICATION. EXTEND INSULATION IN THICKNESS INDICATED TO ENVELOP ENTIRE AREA AND CUT TO FIT TIGHTLY AROUND OBSTRUCTIONS AND SURROUNDINGS MATERIALS.

SECTION 074113.16 STANDING SEAM - METAL ROOF PANELS

1. MATERIALS:
   A. GENERAL: PROVIDE FACTORY-FORMED METAL ROOF PANELS DESIGNED TO BE INSTALLED BY LAPPING AND INTERCONNECTING RAISED SIDE EDGES OF ADJACENT PANELS WITH JOINT TYPE INDICATED AND MECHANICALLY ATTACHING PANELS TO SUPPORTS USING CONCEALED CLIPS IN SIDE LAPS. INCLUDE CLIPS, CLEATS, PRESSURE PLATES, AND ACCESSORIES REQUIRED FOR WEATHERTIGHT INSTALLATION.
      a. STEEL PANEL SYSTEMS: UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED, COMPLY WITH ASTM E 1514.
   B. VERTICAL-RIB, SNAP-LOCK, STANDING-SEAM METAL ROOF PANELS: FORMED WITH VERTICAL RIBS AT PANEL EDGES AND INTERMEDIATE STIFFENING RIBS SYMMETRICALLY SPACED BETWEEN RIBS; DESIGNED FOR SEQUENTIAL INSTALLATION BY MECHANICALLY ATTACHING PANELS TO SUPPORTS USING CONCEALED CLIPS LOCATED UNDER ONE SIDE OF PANELS, ENGAGING OPPOSITE EDGE OF ADJACENT PANELS, AND SNAPPING PANELS TOGETHER.
   C. SELF-ADHERING SHEET UNDERLAYMENT GRANULAR SURFACED: ASTM D 1970, 55 MIL., GLASS-FIBER-MAT-REINFORCED.
   D. RIDGE VENT: RIGID SECTION, HIGH-DENSITY POLYPROPYLENE WITH FILTER STRIPS; FOR USE UNDER RIDGE SHINGLES.
   E. ACCESSORIES: ASPHALT ROOFING CEMENT, ROOFING NAILS, AND FELT UNDERLAYMENT NAILS.
   F. SHEET METAL FLASHING AND TRIM: ALUMINUM, MILL FINISHED FABRICATED TO FORM DRIP EDGES AND APRON, STEP, CRICKET, AND OPEN VALLEY FLASHINGS.
   G. VENT PIPE FLASHING: ASTM B 749, TYPE L51121, 1/16" THICK, WITH LEAD SLEEVE AND EXTENDING 4" ONTO ROOF.
2. INSTALLATION:
   A. EXAMINE SUBSTRATES FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK.
   B. SELF ADHERING UNDERLAYMENT SHEET INSTALLATION: INSTALL SINGLE LAYER OF FELT IN PARALLEL COURSES PERPENDICULAR TO ROOF SLOPE
   C. INSTALL METAL FLASHINGS AND OTHER SHEET METAL IN ACCORDANCE WITH ARMA'S "RESIDENTIAL ASPHALT ROOFING MANUAL" AND NRCA'S "THE NRCA ROOFING AND WATERPROOFING MANUAL".
   D. INSTALL METAL SHINGLES IN ACCORDANCE WITH ARMA'S "RESIDENTIAL ASPHALT ROOFING MANUAL" AND NRCA'S "THE NRCA ROOFING AND WATERPROOFING MANUAL".
   E. INSTALL RIDGE VENTS, RIDGE AND HIP METAL CAP SHINGLES.

SECTION 076200 - SHEET METAL FLASHING AND TRIM

1. PROVIDE MANUFACTURED AND FORMED SHEET METAL FLASHING AND TRIM AS SHOWN ON DRAWINGS AND AS FOLLOWS:
   a. GUTTER.
   b. DOWNSPOUTS
2. SHEET MATERIALS:
   A. PREPAINTED METALLIC-COATED STEEL SHEET HOT-DIP PROCESS: ASTM A 755.
3. MISCELLANEOUS MATERIALS: FASTENERS, SOLDER, SEALING TAPE, ELASTOMERIC SEALANT, BITUMINOUS COATING, AND ASPHALT ROOFING CEMENT.
4. FABRICATION: CUSTOM FABRICATE TO COMPLY WITH RECOMMENDATIONS IN SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" THAT APPLY TO DESIGN, DIMENSIONS, METAL, AND OTHER CHARACTERISTICS; SHOP FABRICATE WHERE PRACTICAL; OBTAIN FIELD MEASUREMENTS BEFORE FABRICATION. USE THICKNESS OR WEIGHT REQUIRED, AVOID EXCESSIVE OIL CANNING AND BUCKLING, FORM HEMMED EXPOSED EDGES, PROVIDE SEALED AND EXPANSION JOINTS, AND SECURE WITH CONCEALED FASTENERS WHERE POSSIBLE.
5. INSTALLATION: EXAMINE SUBSTRATE CONDITIONS PRIOR TO INSTALLATION. ANCHOR COMPONENTS SECURELY IN PLACE, WITH PROVISIONS FOR THERMAL AND STRUCTURAL MOVEMENT. PAINT SURFACES TO PROTECT AGAINST GALVANIC ACTION. AVOID EXCESSIVE OIL CANNING, BUCKLING, AND TOOL MARKS. INSTALL TRUE TO LINE AND LEVELS INDICATED AND PROVIDE UNIFORM, NEAT SEAMS. FIT TO SUBSTRATES TO RESULT IN WATERTIGHT PERFORMANCE.

SECTION 074213.13 - FORMED METAL FLUSH PANELS (INTERIOR WALLS - CEILINGS)

1. MATERIALS:
   A. GENERAL: PROVIDE FACTORY-FORMED METAL PANELS DESIGNED TO BE FIELD ASSEMBLED BY LAPPING AND INTERCONNECTING SIDE EDGES OF ADJACENT PANELS AND MECHANICALLY ATTACHING THROUGH PANEL TO SUPPORTS USING CONCEALED FASTENERS AND FACTORY-APPLIED SEALANT IN SIDE LAPS.
   B. REVEAL-JOINT, CONCEALED-FASTENER METAL WALL PANELS: FORMED WITH VERTICAL PANEL EDGES AND INTERMEDIATE STIFFENING RIBS SYMMETRICALLY SPACED, A FLAT PAN BETWEEN PANEL EDGES WITH NARROW REVEAL JOINT BETWEEN PANELS. HIGH BEAD PATTERN.
2. INSTALLATION:
   A. EXAMINE SUBSTRATES, AREAS, AND CONDITIONS WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, METAL PANEL SUPPORTS, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF THE WORK.
      a. EXAMINE WALL FRAMING TO VERIFY THAT GIRTS, ANGLES, CHANNELS, STUDS, AND OTHER STRUCTURAL PANEL SUPPORT MEMBERS AND ANCHORAGE HAVE BEEN INSTALLED WITHIN ALIGNMENT TOLERANCES REQUIRED BY METAL WALL PANEL MANUFACTURER.
      b. EXAMINE WALL SHEATHING TO VERIFY THAT SHEATHING JOINTS ARE SUPPORTED BY FRAMING OR BLOCKING AND THAT INSTALLATION IS WITHIN FLATNESS TOLERANCES REQUIRED BY METAL WALL PANEL MANUFACTURER.

SECTION 079200 - JOINT SEALANTS

1. MAINTAIN WATERTIGHT AND AIRTIGHT CONTINUOUS SEALS WITHOUT STAINING OR DETERIORATING ADJOINING SUBSTRATES.
2. MATERIALS: COMPATIBLE WITH ONE ANOTHER AND WITH SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATIONS AS FOLLOWS:
   A. EXTERIOR ELASTOMERIC SEALANT: MULTICOMPONENT NONSAG POLYSULFIDE, ASTM C920, TYPE M, GRADE NS, CLASS 25 PECORA SYNTHACALK GC-2+ OR SONNEBORN SONOLASTIC POLYSULFIDE SEALANT.
   B. INTERIOR LATEX SEALANT: ASTM C 834, TYPE OP, GRADE NF BOSTIC CHEM-CALK 600, PECORA AC-20 +, SONNEBORN SONOLAC, OR TREMCO TREMFLEX 834.
   C. INTERIOR ACOUSTICAL JOINT SEALANT: NONSAG, PAINTABLE, NONSTAINING LATEX SEALANT, ASTM 834 PECORA AC-20 FTR ACOUSTICAL AND INSULATION SEALANT AND USG SHEETROCK ACOUSTICAL SEALANT.
   D. JOINT SEALANT BACKING: CYLINDRICAL, ASTM C 1330, TYPE C AND POLYETHYLENE BOND-BREAKER TAPE.
   E. MISCELLANEOUS: PRIMER, CLEANERS, AND MASKING TAPE.
3. INSTALLATION: EXAMINE JOINTS AND PREPARE BY CLEANING, PRIMING WHERE RECOMMENDED, AND MASKING ADJOINING SURFACES. COMPLY WITH MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND ASTM C 1193. INSTALL BACKING AND BOND-BREAKERS AND PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET SUBSTRATES. TOOL TO PRODUCE SMOOTH, UNIFORM CROSS-SECTIONAL SHAPES AND DEPTHS.

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SPECIFICATIONS

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ARCHITECTURAL SPECIFICATIONS

DIVISION 08 - OPENINGS

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

1. DOORS STANDARD: FABRICATE WITH SMOOTH SURFACES, WITHOUT VISIBLE JOINTS OR SEAMS ON EXPOSED FACES. COMPLY WITH ANSI A250.8 AND SDI 108 RECOMMENDATIONS WITH FLUSH PANEL DESIGN, AND MANUFACTURER'S STANDARD CORE INSULATION FOR THERMAL-RATED DOORS. FACTORY PRIME, ANSI A250.10 FOR FIELD PAINTING.
   A. EXTERIOR DOORS AND WHERE NOTED: LEVEL 3 AND PHYSICAL PERFORMANCE LEVEL (A) (EXTRA HEAVY DUTY), MODEL 2 SEAMLESS WITH METALLIC-COATED FACE SHEETS. CORE CONSTRUCTION: POLYSTYRENE THERMAL RATED. R-VALUE 2.8 OR BETTER.
   B. INTERIOR DOORS: FLUSH PANEL, MANUFACTURERS STANDARD KRAFT-PAPER HONEYCOMB OR ONE PIECE POLYSTYRENE CORE. COMPLIES WITH ASTM A 1008/A 1008M.
   C. HARDWARE REINFORCEMENT: ANSI/SDI A250.6.
2. FRAMES STANDARD: FABRICATE WITH MITERED AND WELDED FACE CORNERS (AND SEAMLESS FACE JOINTS). COMPLY WITH ANSI A250.8. FACTORY PRIME, ANSI A250.10, FOR FIELD PAINTING.
   A. EXTERIOR FRAMES: 0.067" (14 GAUGE) THICK METALLIC-COATED STEEL SHEET.
   B. INTERIOR FRAMES: 0.053" (16 GAUGE) THICK STEEL SHEET.
   C. HARDWARE REINFORCEMENT: ANSI/SDI A250.6.
   D. JAMB AND FLOOR ANCHORS: 0.042" (18 GAUGE) THICK, ADJUSTABLE WHERE NECESSARY.
3. HARDWARE PREPARATION: FACTORY PREPARE TO RECEIVE TEMPLATED MORTISED HARDWARE INCLUDING CUTOUTS, REINFORCEMENT, DRILLING TAPPING.
4. INSTALL DOORS AND FRAMES PLUMB, RIGID, PROPERLY ALIGNED, AND SECURELY FASTENED.
   A. FRAMES: COMPLY WITH SDI A250.11. BRACE SECURELY UNTIL PERMANENT ANCHORS ARE SET.
   B. DOORS: FIT ACCURATELY IN FRAMES, WITHIN SPECIFIED CLEARANCES: 1/8" +/- 1/16" AT JAMBS, HEAD, AND BETWEEN DOORS; 3/8" MAXIMUM BETWEEN DOOR AND THRESHOLD; AND 3/4" BETWEEN DOOR AND FINISH FLOOR. SHIM AS NECESSARY (INSTALL FIRE-RATED DOORS WITH CLEARANCES ACCORDING TO NFPA 80.)
   C. GLAZING: SECURE STOPS WITH COUNTERSUNK MACHINE SCREWS AT 9" O.C. AND 2" FROM CORNERS.

SECTION 083613 OVERHEAD DOORS

1. SECTIONAL OVERHEAD DOORS OF THE FOLLOWING TYPES: FLUSH STEEL DOORS, THERMALLY-BROKEN, POLYSTYRENE INSULATED. ELECTRIC DOOR OPENERS.
2. REFERENCES
   A. ASTM A 653/A 653M - SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANEALED) BY THE HOT DIP PROCESS.
   B. ASTM B 209/209M - SPECIFICATION FOR ALUMINUM AND ALUMINUM-ALLOY SHEET AND PLATE.
3. WIND PERFORMANCE REQUIREMENTS
   A. DESIGN DOORS TO WITHSTAND POSITIVE AND NEGATIVE WIND LOADS AS CALCULATED IN ACCORDANCE WITH APPLICABLE BUILDING CODE. DESIGN WIND LOAD: 20 LBS/SF. SAFETY FACTOR: 1.5 TIMES DESIGN WIND LOAD.
4. DOOR CONSTRUCTION
   A. PANELS:SANDWICH CONSTRUCTION OF EXTERIOR AND INTERIOR STEEL SKINS PRESSURE BONDED TO AN EXPANDED CORE, WITH SKINS SEPARATED BY A CONTINUOUS SILICONE FILLING FORMING A THERMAL BREAK.
   B. STEEL SKINS" FORMED FROM ROLL FORMED COMMERCIAL OR DRAWING QUALITY STEEL SHEET, HOT-DIP GALVANIZED PER ASTM A924//A 924M AND ASTM A 653/A 653M, PREPAINTED WITH PRIMER AND BAKED-ON POLYESTER TOPCOAT; SECTIONS FORMED TO CREATE WEATHER TIGHT TONGUE- IN-GROOVE MEETING JOINT, UNLESS OTHERWISE SPECIFIED.
5. ELECTRIC DOOR OPERATORS
   A. GENERAL: PROVIDE ELECTRIC DOOR OPERATOR PROVIDED BY DOOR MANUFACTURER FOR DOOR WITH OPERATION LIFE SPECIFIED COMPLETE WITH ELECTRIC MOTOR AND FACTORY PRE-WIRED CONTROLS, STARTER, GEAR-REDUCTION UNIT, CLUTCH, REMOTE-CONTROL STATIONS, CONTROL DEVICES, INTEGRAL GEARING FOR LOCKING DOOR, AND ACCESSORIES REQUIRED FOR PROPER OPERATION. COMPLY WITH NFPA 70. SOLENOID-OPERATED BRAKE.
   B. ELECTRIC MOTOR: PROVIDE HIGH-STARTING TORQUE, REVERSIBLE, CONTINUOUS-DUTY, CLASS A INSULATED, ELECTRIC MOTOR, COMPLYING WITH NEMA MG 1, WITH OVERLOAD PROTECTION, SIZED TO START, ACCELERATE, AND OPERATE DOOR IN EITHER DIRECTION.
      a. TYPE: JACKSHAFT
      b. HP
         - 3/4HP (559 W)
         - 1 HP (746 W)
      c. POWER CHARACTERISTICS:
         - 120 V.
6. EXAMINATION
   A. EXAMINE WALL AND OVERHEAD AREAS, INCLUDING OPENING FRAMING AND BLOCKING, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES, CLEARANCES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK IN THIS SECTION.

SECTION 085113 - ALUMINUM WINDOWS

1. WINDOW MATERIALS:
   A. PERFORMANCE: AAMA/WDMA 101/1.5.2/NAFS.
   B. TYPE: (FIXED).
   C. MANUFACTURER: KAWNEER SEALAIR ARCHITECTURAL WINDOWS OR EQUAL.
   D. GLAZING: BEAD AND WEDGE. INSULATING GLASS: LOW-E INSULATING , ASTM E 774 FOR CLASS CBA UNITS WITH 10 YEAR WARRANTY, AS FOLLOWS: OVERALL THICKNESS: (1"): (EACH LITE 1/4"). SPACER AND SEAL: MANUFACTURER'S STANDARD. INDOOR LITE: (TYPE I, CLASS 1, CLEAR FLOAT GLASS). OUTDOOR LITE: (TYPE I, CLASS 2, TINTED FLOAT GLASS).
   E. ACCESSORIES: NONCORROSIVE FASTENERS, REINFORCEMENT, ANCHORS, AND CLIPS.
   F. FINISHES: CLASS I, COLOR ANODIC.
   G. COLOR TO BE SELECTED BY ARCHITECT.
2. WINDOW FABRICATION: COMPLY WITH AAMA/NWWDA 101.I.S.2 PERFORMANCE REQUIREMENTS. INCLUDE COMPLETE SYSTEM FOR ASSEMBLING COMPONENTS AND ANCHORING WINDOWS. FACTORY-GLAZE WITH SNAP-ON INTERIOR GLAZING STOPS.
3. WINDOW INSTALLATION: COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLING WINDOWS, HARDWARE, ACCESSORIES, AND OTHER COMPONENTS. PROTECT AGAINST GALVANIC ACTION. INSTALL COMPONENTS PLUMB AND TRUE IN ALIGNMENT WITH ESTABLISHED LINES AND GRADES AND TO DRAIN CONDENSATION AND PENETRATING WATER. SET SILLS IN FULL SEALANT BED. ADJUST OPERATING SASHES AND VENTILATORS, HARDWARE, AND OPERATORS FOR TIGHT FIT AND SMOOTH OPERATION.

SECTION 087100 - DOOR HARDWARE

1. SUPPLIER QUALIFICATIONS: EMPLOYEE CURRENTLY CERTIFIED BY DHI AS AN ARCHITECTURAL HARDWARE CONSULTANT AND RESPONSIBLE FOR PREPARATION OF DOOR HARDWARE AND KEYING SCHEDULES (AND DISTRIBUTION OF TEMPLATES).
2. MANUFACTURER AND SERIES:
   A. HINGES: (IVES 5BB1 4-1/2 X 4-1/2).
   B. LOCKSETS (HEAVY DUTY COMMERCIAL), (BORED, GRADE 1), (SARGENT 7-LINE CYLINDRICAL LEVER LOCK).
   C. EXIT DEVICES: (VON DUPRIN 99).
   D. CLOSERS: (LCN 4040).
   E. WALL STOPS: (IVES 407)
   F. THRESHOLDS: (NATIONAL GUARD 896).
   G. PUSH-PULL PLATES: (ROCKWOOD 70 6" X 16") AND (107 X 70C 4" X 16").
   H. FLUSH BOLTS: (ROCKWOOD 1942).
   I. KICK PLATES: (INPRO .060 HIGH IMPACT).
   J. WEATHERSTRIPPING: (NATIONAL GUARD 133NDKB).
   K. KEYING SYSTEM: (MASTER KEY SYSTEM) COORDINATE WITH OWNER.
3. FINISHES: BHMA (619) EXCEPT ALUMINUM CLOSERS, INPRO KICKPLATES, AND BMHA (630) HARDWARE ON TOILET ROOM DOORS.
4. INSTALLATION: MOUNT UNITS AT HEIGHTS PER DHI'S ("RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR STANDARD STEEL DOORS AND FRAMES") ("RECOMMENDED LOCATIONS FOR ARCHITECTURAL HARDWARE FOR WOOD FLUSH DOORS"). ADJUST AND CHECK EACH OPERATING ITEM TO ENSURE PROPER FUNCTION.
5. HARDWARE SETS:

A.	SET 1 - OFFICE / CONFERENCE ROOM			
a.	3 EA HINGE	5BB1 4.5 X 4.5	652	IVE
b.	1 EA OFFICE LOCK	L057G05	619	SAR
c.	1 EA WALLS STOP	WS407CCV	630	IVE
d.	3 EA DOOR SILENCERS			
B.	SET 2 - RESTROOM			
a.	3 EA HINGE	5BB1 4.5 X 4.5	652	IVE
b.	1 EA CLOSER	4041	689	LCN
c.	1 EA PRIVACY SET	L 11U465	619	SAR
d.	1 EA KICK PLATE	8400 8 X 35	US15	IVE
e.	3 EA DOOR SILENCERS			
C.	SET 3 - MECHANICAL			
a.	3 EA HINGE	5BB1 4.5 X 4.5	652	IVE
b.	1 EA STORERM. LOCK	L047G04	619	SAR
c.	1 EA KICK PLATE	8400 8 X 35	630	IVE
d.	1 EA WALL STOP	WS407CCV	630	IVE
e.	3 EA DOOR SILENCERS			
f.	1 EA CLOSER	4041	689	LCN
g.	1 EA THRESHOLD	520S	ALU	HAG
h.	1 SET WEATHER GASKETING			
D.	SET 4 - BREAK/TRAINING			
a.	3 EA HINGE	5BB1 4.5 X 4.5	652	IVE
b.	1 EA PASSAGE	L157U15	619	SAR
c.	1 EA KICK PLATE	8400 8 X 35	630	IVE
d.	1 EA WALL STOP	WS407CCV	630	IVE
e.	3 EA DOOR SILENCERS			
E.	SET 5 - EXIT			
a.	3 EA HINGE	5BB1 4.5 X 4.5	652	IVE
b.	1 EA CLOSER	4041	689	LCN
c.	1 EA EXIT HARDWARE	99L-FX06	626	VON
d.	1 EA KICK PLATE	8400 8 X 2 LDW	630	IVE
e.	1 EA THRESHOLD	520S	ALU	HAG
f.	1 SET WEATHER GASKETING			
F.	SET 6 - MULTI USER RESTROOM			
a.	4 EA HINGE	5BB1 4.5 X 4.5	606	IVE
b.	1 EA CLOSER	4041	689	LCN
c.	1 EA PUSH PLATE	8200 4 X 16	US4	IVE
d.	1 EA PULL PLATE	8190 3-1/4 X 12	US4	IVE
e.	1 EA KICK PLATE	8400 8 X 35	US4	IVE
f.	3 EA DOOR SILENCERS			

SECTION 088000 - GLAZING

1. GLASS PRODUCTS:
   A. ANNEALED FLOAT GLASS: ASTM C 1036, TYPE I, QUALITY Q3, CLASS I.
   B. HEAT-TREATED (FULLY TEMPERED) FLOAT GLASS: ASTM C 1048, TYPE I, QUALITY-Q3, CLASS I, KIND FT.
   C. INSULATING GLASS: FACTORY-ASSEMBLED, SEEDED LITES OF LOW-E GLASS SEPARATED BY DEHYDRATED INNERSPACE, ASTM E 774 FOR CLASS CBA AND AS FOLLOWS: OVERALL THICKNESS: (1"); (EACH LITE 1/4"). SPACER AND DUAL SEAL: MANUFACTURER'S STANDARD. INDOOR LITE: (TYPE I, CLASS 1, CLEAR FLOAT GLASS). OUTDOOR LITE: (TYPE I, CLASS 2, TINTED FLOAT GLASS).
   D. GLAZING GASKETS: NEOPRENE, ASTM C 864.
   E. GLAZING SEALANTS: NEUTRAL-CURING SILICONE, CLASS 50, TYPE S, GRADE NS (DOW 791 OR PECORA 865).
   F. GLAZING TAPES: PREFORMED, BUTLY-BASED ELASTOMERIC, ASTM C 1281 AND AAMA 800.
   G. ACCESSORIES: PRIMERS, SEALERS, SETTING BLOCKS, SPACERS, AND EDGE BLOCKS.
2. INSTALLATION: COMPLY WITH COMBINED WRITTEN INSTRUCTIONS OF MANUFACTURERS OF GLASS, SEALANTS, GASKETS, AND OTHER GLAZING MATERIALS. PROVIDE NECESSARY BITE, MINIMUM EDGE AND FACE CLEARANCES, ADEQUATE SEALANT THICKNESS, AND REASONABLE TOLERANCES. INSTALL SETTING BLOCKS AND PROVIDE PRIMERS, SPACERS, AND EDGE BLOCKS WHERE REQUIRED. SET GLASS UNITS BY (DRY GASKET GLAZING) (WET SEALANT GLAZING) (TAPE GLAZING).

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DIVISION 09 - FINISHES

1. **SECTION 092216 - NON-STRUCTURAL METAL FRAMING** MEMBERS, GENERAL: COMPLY WITH ASTM C 754 FOR CONDITIONS INDICATED.
   A. STEEL SHEET COMPONENTS: ASTM C 645.
   B. PROTECTIVE COATING: ASTM A 653/A 653M G40, HOT-DIP GALVANIZED.
2. SUSPENSION SYSTEM COMPONENTS:
   A. TIE WIRE: ASTM A 641/A, CLASS 1, ZINC COATING, 0.0625".
   B. WIRE HANGERS: ASTM A 641/A, CLASS 1, ZINC COATING, 0.162".
   C. CARRYING CHANNELS: COLD-ROLLED, STEEL SHEET, 0.0538" WITH MINIMUM 1/2" FLANGES.
   D. FURRING CHANNELS: COLD-ROLLED, STEEL SHEET, 0.0538" WITH MINIMUM 1/2" FLANGES, 3/4" DEEP.
   E. HAT-SHAPED RIGID FURRING CHANNELS: ASTM C 645, 7/8".
3. STEEL FRAMING FOR FRAMED ASSEMBLIES:
   A. STEEL STUDS AND RUNNERS: ASTM C 645, (0.0312, 20 GAUGE), (3-5/8") DEPTH (AND SLIP-TYPE HEAD JOINTS).
   B. RESILIENT FURRING CHANNELS: 1/2" DEEP, ASYMMETRICAL OR HAT SHAPED.
   C. COLD-ROLLED FURRING CHANNELS: 0.053", WITH 1/2" FLANGES AND 3/4" DEEP (UNLESS OTHERWISE INDICATED).
4. INSTALLATION STANDARD: ASTM C 754 AND (ASTM C 840 FOR GYPSUM BOARD ASSEMBLIES). INSTALL FRAMING AND BLOCKING TO SUPPORT FIXTURES, EQUIPMENT SERVICES, GRAB BARS, TOILET ACCESSORIES, OR SIMILAR CONSTRUCTION. INSTALL STUDS AT (16") (24") O.C.

SECTION 092900 - GYPSUM BOARD

1. INTERIOR GYPSUM BOARD: ASTM A 36.
   A. TYPICAL CONDITIONS: 5/8" TYPE X.
   B. WET AREAS AND GARAGES: 5/8" MOISTURE/MOLD RESISTANT TYPE.
   C. CEILINGS: 1/2" CEILING TYPE.
   D. INTERIOR WALLS: 5/8" TYPE X.
2. AUXILIARY MATERIALS:
   A. JOINT TREATMENT: JOINT TAPE AND COMPOUND FOR APPROPRIATE MATERIALS & APPLICATION.
   B. TRIM ACCESSORIES: CONTROL JOINTS, CORNER BEADS;BULLNOSE BEADS, AND EDGE BEADS.
   C. FASTENERS: STEEL DRILL SCREWS, ASTM C 100 (LAMINATING ADHESIVE FOR DIRECT ADHERENCE).
   D. SOUND ATTENUATION BLANKETS: (2') ASTM C 665, TYPE I.
3. APPLICATION AND FINISH: COMPLY WITH ASTM C 840. (SINGLE-LAYER) APPLICATION WITH EDGE AND END JOINTS OVER SUPPORTS AND VERTICAL JOINTS STAGGERED ON OPPOSITE SIDES OF PARTITIONS. ATTACH TRIM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. FINISH BOARD IN CONCEALED AREAS TO LEVEL 1 AND TO LEVEL 4 IN EXPOSED AREAS.

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

1. ACOUSTICAL PANELS: CLASS A, COMPLYING WITH ASTM E 1264 CLASSIFICATIONS FOR TYPES, PATTERNS, ACOUSTICAL RATINGS AND LIGHT REFLECTANCE.
   A. ACOUSTICAL PANEL: 24" X 24" X 3/4", ARMSTRONG "MESA", ANGLED TEGULAR LAY-IN SECOND LOOK, #686.
2. METAL SUSPENSION SYSTEM: NARROW-FACE, CAPPED, DOUBLE-WEB, STEEL, INTERMEDIATE-DUTY, WITH PAINTED WHITE ALUMINUM CAP AND COMPLYING WITH ASTM A 653. MANUFACTURERS: ARMSTRONG, CHICAGO METALLIC, AND USG.
3. METAL EDGE MOLDINGS AND TRIM: ROLL-FORMED SHEET-METAL, OF SAME MATERIAL, FINISH , AND COLOR AS GRID.
4. INSTALL TO COMPLY WITH ASTM C 636, PER MANUFACTURER'S WRITTEN INSTRUCTIONS, AND CISCA'S "CEILING SYSTEM HANDBOOK". SUPPORT LIGHT FIXTURES AT FOUR CORNERS WITH WIRE HANGERS.

SECTION 096513 - RESILIENT WALL BASE AND ACCESSORIES

1. RESILIENT WALL BASE: ASTM F 1861, TYPE TS, GROUP I, COVED STYLE, 4" 6" IN TOILETS HIGH X 1/8" THICK, WITH (PRE-FORMED OUTSIDE CORNERS). MANUFACTURER/COLOR: JOHNSONITE
2. PREPARE AND INSTALL COMPLYING WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION.

SECTION 096516.13 LINOLEUM FLOORING

1. MCT - MARMOLEUM COMPOSITE TILE: ASTM F 1700. 13 x 13 INCHES. 0.080 INCH THICKNESS. MANUFCATURER/TYPE/COLOR: FORBO FLOORING.
2. PREPARE AND LAY COMPLYING WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION.
   A. PREPARE CONCRETE SUBSTRATES ACCORDING TO ASTM F 710. USE TROWELABLE LEVELING AND PATCHING COMPOUND TO FILL CRACKS, HOLES, AND DEPRESSIONS AND TO TRANSITION SMALL CHANGES IN ELEVATION OF SUBSTRATE.
   B. INSTALLATION: LAY TILES (SQUARE WITH ROOM), (WITH ALTERNATING GRAIN DIRECTION), AND WITH EQUAL WIDTH TILES AT OPPOSITE ENDS OF THE ROOM.

SECTION 099100 - PAINTING

1. PRODUCTS: COMPLY WITH "MPI APPROVED PRODUCTS LIST". APPROVED MANUFACTURERS: SHERWIN-WILLIAMS, BENJAMIN MOORE.
2. INTERIOR PAINTING WITH PREMIUM GRADE SYSTEMS:
   A. STEEL SUBSTRATES:
      a. PRIME COAT: ALKYD METAL PRIMER (MPI # 76).
      b. TOPCOAT: INTERIOR ALKYD (SEMIGLOSS) (MPI #47).
   B. STEEL SUBSTRATES:ALKYD SYSTEM (STEEL HANDRAILS)
      a. PRIME COAT: PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER.
      b. INTERMEDIATE COAT: MATCHING TOPCOAT.
      c. TOPCOAT: PRE-CATALYZED WATERBOASED EPOXY EG-SHEL.
   C. GYPSUM BOARD SUBSTRATES:
      a. PRIMER: INTERIOR LATEX PRIMER/SEALER (MPI #50).
      b. TOPCOAT:INTERIOR LATEX (SATIN) (MPI #43). (NOTE: PREMIUM GRADE REQUIRES INTERMEDIATE COAT MATCHING TOPCOAT).
3. STAINING AND TRANSPARENT FINISHING WITH CUSTOM (PREMIUM) GRADE SYSTEMS:
   A. EXTERIOR FINISH CARPENTRY SUBSTRATES: SOLID-COLOR LATEX STAIN SYSTEM (MPI EXT 6.3K).
      a. PRIME COAT: EXTERIOR ALKYD WOOD PRIMER.
      b. TWO STAIN COATS: EXTERIOR SOLID-COLOR LATEX STAIN.
1. PREPARE AND APPLY COMPLYING WITH REQUIREMENTS IN "MPI ARCHITECTURAL PAINT SPECIFICATIONS MANUAL" AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
   A. APPLY ONLY WHEN SURFACE AND AIR TEMPERATURES ARE BETWEEN 50 & 95 DEG F.
   B. CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BONDING, INCLUDING DIRT, OIL, GREASE, RUST, AND INCOMPATIBLE PAINT.
   C. COUNTERSINK STEEL NAILS AND PUTTY (TINTED).
   D. APPLY BY BRUSH UNLESS OTHERWISE NOTED OR APPROVED.
   E. APPLY ADDITIONAL COATS UNTIL UNDERCOATS OR OTHER CONDITIONS DO NOT SHOW THROUGH.

* *

DIVISION 10 - SPECIALTIES

SECTION 102113 - TOILET COMPARTMENTS

1. SOLID POLYMER UNITS UNITS WITH OVERHEAD BRACED TOILET ENCLOSURES AND WALL HUNG URINAL SCREENS.
   A. MANUFACTURERS: ACCURATE PARTITONS CORP. AMCO INC. COMTEE INDUSTRIES/CAPITOL PARTITIONS. METCAR CORP.
   B. DOOR, PANEL, SCREEN AND PILASTER CONSTRUCTION: SOLID POLYPROPLENE (PP) PANEL MATERIAL LESS THAN 1" THICK SEAMLESS, WITH EASED EDGES AND WITH HOMOGENOUS COLOR AND PATTERN THROUGHOUT THICKNESS OF MATERIAL.
   C. FINISH/COLOR: SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL REANGE, WITH MANUFACTURER'S STANDARD THROUGH - COLOR CORE MATCHING FACE SHEET.
   D. ACCESSORIES (CHROME PLATED): HEAD RAILS, PILASTER SHOES, ANCHORS, AND FASTENERS.
   E. DOORS: STANDARD 24" WIDE, IN-SWINGING; ACCESSIBLE 32" MINIMUM CLEAR OPENING, OUT-SWINGING.
   F. DOOR HARDWARE: STAINLESS STEEL HINGES, LATCH AND KEEPER, COAT HOOK, DOOR BUMPER, AND DOOR PULL.
2. INSTALLATION: COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL UNITS RIGID STRAIGHT, LEVEL, AND PLUMB AND SECURE WITH MANUFACTURER'S RECOMMENDED ANCHORING DEVICES. SECURE PILASTERS TO FLOOR AND HEADRAIL. HANG DOORS AND ADJUST FOR ALIGNMENT AND OPERATION.

SECTION 102600 - WALL AND DOOR PROTECTION

1. MANUFACTURERS:
   A. BASIS-OF-DESIGN: CONSTRUCTION SPECIALTIES "ACROVYN".
   B. ACCEPTABLE: (IPC) (KOROGARD) (PAWLING).
2. WALL (AND DOOR) PROTECTION TYPES:
   A. 2" END-WALL GUARDS: ACROVYN (FSC-25 FLUSH) (SSH-20 SURFACE).
   B. 4" SURFACE WALL GUARDS: (ACROVYN SCR-40).
   C. WALL COVERINGS: (ACROVYN .040 RIGID SHEET) (ACROVYN .060" HIGH IMPACT SHEET).
3. MATERIALS:
   A. PLASTIC SHEET WALL COVERING: ASTM D 1784, CLASS 1, TEXTURED, CHEMICAL- AND STAIN-RESISTANT, SEMIRIGID, HIGH-IMPACT-RESISTANT PVC OR ACRYLIC-MODIFIED VINYL PLASTIC SHEET WITH INTEGRAL COLOR THROUGHOUT.
   B. FASTENERS AND ADHESIVE: TYPE RECOMMENDED BY MANUFACTURER AND FOR USE WITH MATERIAL BEING ADHERED TO SUBSTRATE.
4. INSTALLATION: INSTALL UNITS LEVEL, PLUMB, AND TRUE TO LINE WITHOUT DISTORTIONS. DO NOT USE DEFECTIVE MATERIALS. PROVIDE SPLICES, MOUNTING HARDWARE, ANCHORS, AND ACCESSORIES FOR A COMPLETE INSTALLATION. (PROVIDE TOP AND EDGE MOLDING, CORNERS, AND DIVIDER BARS TO COMPLETE WALL COVERING INSTALLATION.)

SECTION 102800 - TOILET, BATH AND LAUNDRY ACCESSORIES

1. MANUFACTURERS:
   A. BASIS-OF-DESIGN: BOBRICK CLASSIC SERIES.
   B. ACCEPTABLE: AMERICAN SPECIALTIES BRADLEY.
2. MATERIALS:
   A. STAINLESS STEEL: ASTM A 666, TYPE 304, 0.0312" MINIMUM.
   B. SHEET STEEL: ASTM A 1008, DESIGNATION CS, COLD ROLLED, COMMERCIAL STEEL), 0.0359" MINIMUM.
   C. GALVANIZED STEEL MOUNTING DEVICES: ASTM A 153, HOT-DIPPED GALVANIZED AFTER FABRICATION.
   D. FASTENERS: SCREWS, BOLTS, AND OTHER DEVICES, TAMPER-AND-THEFT RESISTANT WHERE EXPOSED.
   E. MIRRORS: ASTM C 1503, MIRROR GLAZING QUALITY, CLEAR-GLASS MIRRORS, 1/4" THICK.
3. FABRICATE UNITS WITH TIGHT SEAMS AND JOINTS AND EXPOSED EDGES ROLLED. HANG DOORS WITH CONTINUOUS STAINLESS-STEEL HINGE. PROVIDE FULLY CONCEALED ANCHORAGE. SUPPORT FRAMED MIRRORS WITH TAMPER-RESISTANT INSTALLATION.
4. TOILET AND BATH ACCESSORY SCHEDULE SURFACE MOUNTED UNITS UNLESS OTHERWISE NOTED BOBRICK PRODUCTS BASIS-OF-DESIGN:
   A. TOILET TISSUE ROLL DISPENSER: B-7685 SINGLE, SUPPORT ARMS AND SPINDLE.
   B. SEMI RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE B-3942 OR EQUAL.
   C. GRAB BARS 1-1/2", SATIN FINISH WITH PEENED GRIP AND CONCEALED MOUNTING:B-6806 STRAIGHTBARS: REFER TO SHEET A0.1 FOR SIZES.
   D. MIRROR UNIT ANGLE FRAME:B-290 1836.
5. INSTALLATION: ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS, USING FASTENERS APPROPRIATE TO SUBSTRATE INDICATED AND RECOMMENDED BY MANUFACTURER. INSTALL LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS AND AT HEIGHTS INDICATED.

SECTION 104400 - FIRE PROTECTION SPECIALTIES

1. GENERAL:
   A. OBTAIN EQUIPMENT (EXTINGUISHERS AND CABINETS) FROM ONE SOURCE (SINGLE MANUFACTURER). COORDINATE SIZE OF CABINET TO ENSURE ACCOMMODATION OF EXTINGUISHER TYPE AND CAPACITY.
   B. FABRICATE AND LABEL EXTINGUISHERS TO COMPLY WITH NFPA 10, "PORTABLE FIRE EXTINGUISHERS". LIST AND LABEL FOR TYPE, RATING, AND CLASSIFICATION.
2. PORTABLE FIRE EXTINGUISHERS:
   A. MANUFACTURER/MODEL: J.L. INDUSTRIES COSMIC 10E.
   B. MULTIPURPOSE DRY-CHEMICAL TYPE: 10 LBS. CAPACITY.
3. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL, WITH BAKED-ENAMEL FINISH AND DESIGNED FOR VERTICAL, WALL-MOUNTING.
4. INSTALLATION: (PREPARE RECESSES FOR RECESSED CABINETS.) INSTALL UNITS IN LOCATIONS AND AT MOUNTING HEIGHTS INDICATED (OR AT 54" FROM FINISH FLOOR TO TOP OF CABINET. ADJUST CABINET DOORS.

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TALAWANDA SCHOOL DISTRICT

MAINTENANCE AND BUS GARAGE

5302 University Park Blvd.
City of Oxford, Ohio 45056

ISSUE

NO.	DATE	DESCRIPTION
	04/08/2022	FOR BIDDING

DATE	04/08/2022
JOB NO.	3977.00
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TITLE
SPECIFICATIONS

SHEET NO.
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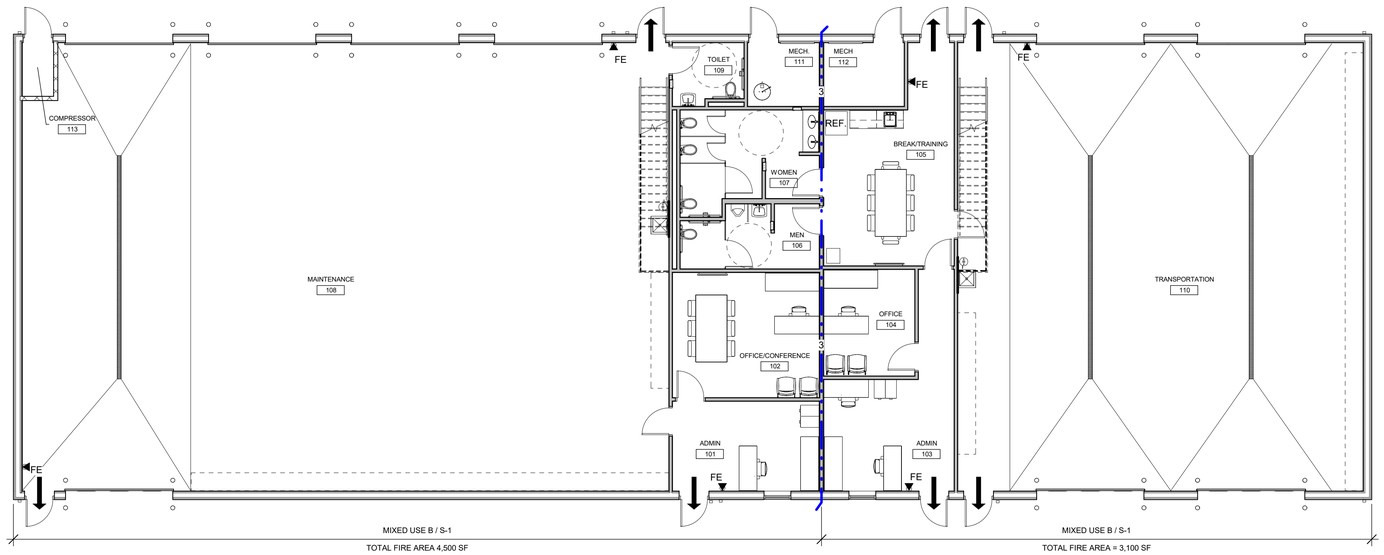
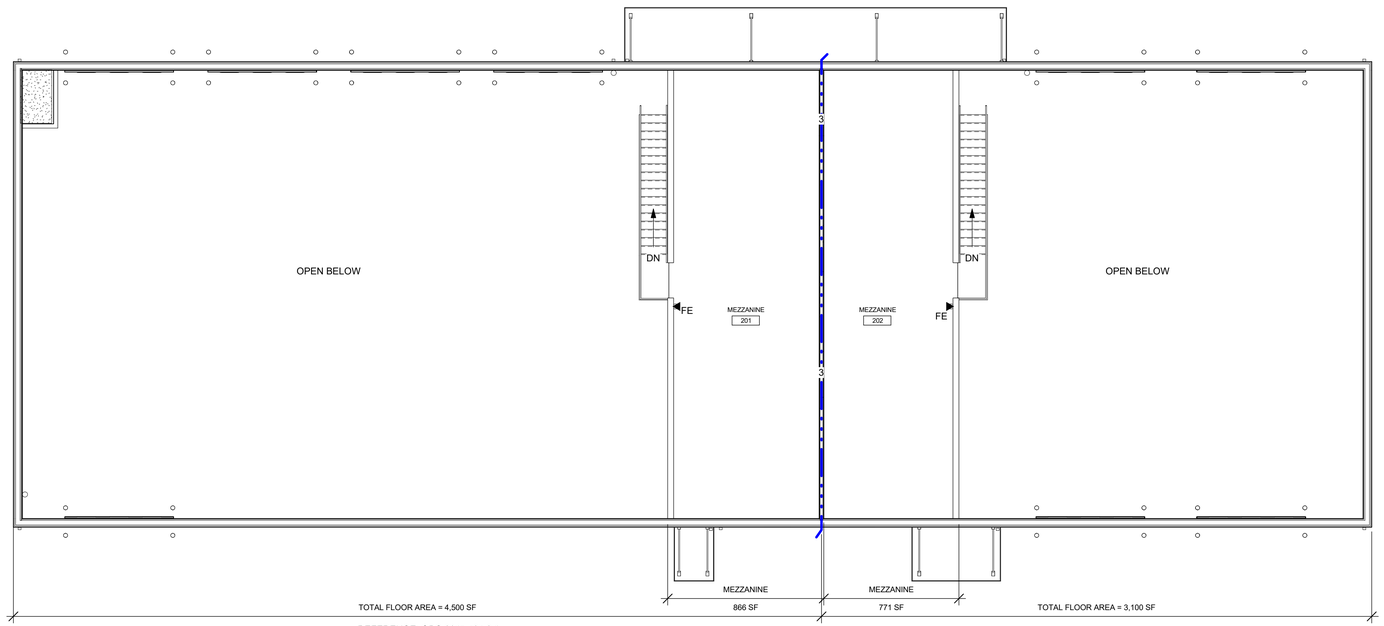


REFERENCE: OBC 2017 903.2.9.1 (FIRE AREA FOR THE STORAGE OF COMMERCIAL MOTOR VEHICLES DOES NOT EXCEED 5000 SQUARE FEET)

1 FIRST FLOOR REFERENCE PLAN
1/8" = 1'-0"



REFERENCE: OBC 2017 505.2.1

2 MEZZANINE REFERENCE PLAN
1/8" = 1'-0"

LEGEND

- 3 HR FIRE BARRIER
- EXIT
- FIRE EXTINGUISHER

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LIFE SAFETY PLAN

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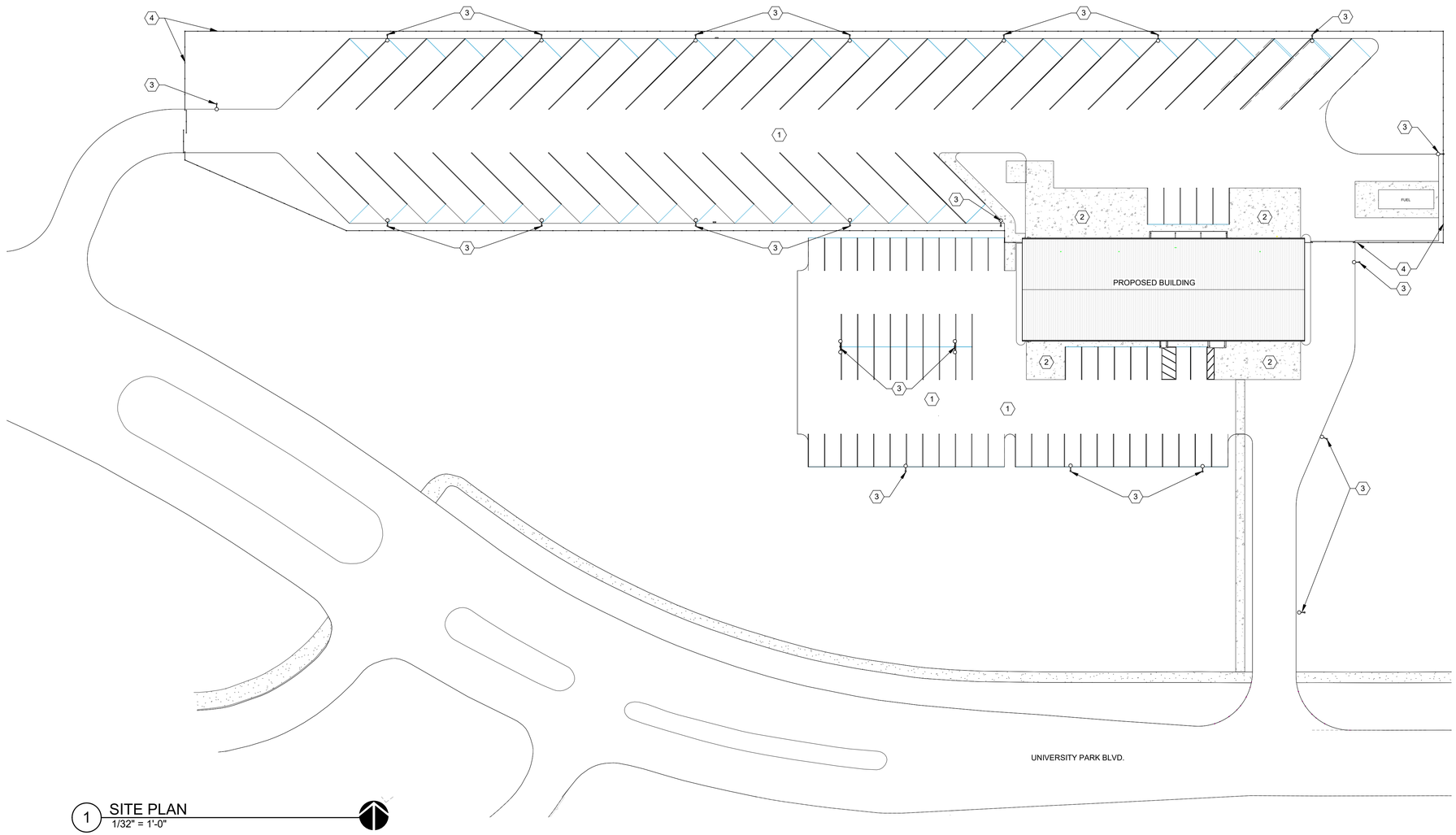

1 SITE PLAN
1/32" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. ASPHALT PARKING LOT. REFER TO CIVIL DRAWINGS BY OTHERS.
2. CONCRETE PAD. REFER TO CIVIL DRAWINGS BY OTHERS.
3. EXTERIOR LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
4. SECURITY FENCE. REFER TO CIVIL DRAWINGS BY OTHERS.

GENERAL NOTES

A. REFER TO CIVIL DRAWINGS PREPARED BY BAYER BECKER FOR COMPLETE SITE INFORMATION.

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ARCHITECTURAL SITE PLAN

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ABBREVIATIONS

SYMBOL	
@	AT
&	AND
∠	ANGLE
Ø	DIAMETER
℄	CENTER LINE
▱	PLATE

A	
ABV	ABOVE
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLER UNIT
AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
ANCH	ANCHOR
APPROX	APPROXIMATELY
ARCH	ARCHITECT OR ARCHITECTURAL
ATTEN	ATTENUATED
AUTO	AUTOMATIC
AVG	AVERAGE

B	
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT

C	
CAB	CABINET
CB	CATCH BASIN
C/C	CENTER TO CENTER
CF	CUBIC FOOT
CFCI	CONTRACTOR FURNISH, CONTRACTOR INSTALL
CFOI	CONTRACTOR FURNISH, OWNER INSTALL
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CL	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS OR CONTINUE
CPU	CENTRAL PROCESSING UNIT (COMPUTER)
CY	CUBIC YARD

D	
DBL	DOUBLE
DEMO	DEMOLISH, DEMOLITION
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DS	DOWNSPOUT
DWG	DRAWING
DTL	DETAIL

E	
EA	EACH
EC	ELECTRICAL CONTRACTOR
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATION OR ELEVATOR
EMERG	EMERGENCY
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST OR EX	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F	
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH OR FINISHED
FLR	FLOOR
FND	FOUNDATION
FRT	FIRE RETARDANT TREATED WOOD
FT	FOOT OR FEET OR FULLY TEMPERED
FTG	FOOTING
FUR	FURRING
FV	FIELD VERIFY
FOW	FACE OF WALL

G	
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GD	GRADE OR GRADING
GEN	GENERAL
GL	GLASS OR GLAZING
GND	GROUND
GYP	GYPSUM
GWB	GYPSUM BOARD
GWT	GLAZED WALL TILE

H	
HB	HOSE BIBB
HDW	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWD	HARDWARE

I	
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE (D) (ING)
INT	INTERIOR
INV	INVERT

J	
JB	JUNCTION BOX
JC	JANITOR CLOSET

L	
L	LONG
LAV	LAVATORY
LBS	POUNDS
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LTL	LINTEL
LVR	LOUVER

M	
M	MEN OR METER
MAS	MASONRY
MAT	MATERIAL
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MOUNTING HEIGHT, MANHOLE
MIL	THOUSANDTHS OF AN INCH
MM	MILLIMETER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL

N	
N	NORTH OR NITROGEN
NC	NURSE CALL
NIC	NOT IN CONTRACT
NO	NUMBER OR NITROUS OXIDE
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE

O	
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISH, CONTRACTOR INSTALL
OFOI	OWNER FURNISH, OWNER INSTALL
OFVI	OWNER FURNISH, VENDOR INSTALL
OH	OVERHEAD
OHD	OVERHEAD DOOR
OPNG	OPENING
OPP	OPPOSITE
O_2	OXYGEN

P	
PAR	PARALLEL
PC	PLUMBING CONTRACTOR
PCF	POUNDS PER CUBIC FOOT
PL	PLATE OR PROPERTY LINE
PLBG	PLUMBING
PLWD	PLYWOOD
PME	PLUMBING, MECHANICAL & ELECTRICAL
PNL	PANEL
PR	PAIR
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE

Q	
QTY	QUANTITY

R	
R	RADIUS
RA	RETURN AIR
RB	RUBBER BASE
RD	ROOF DRAIN
RECEPT	RECEPTACLE
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
RET	RETURN
REV	REVISION
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY

S	
S	SOUTH
SAN	SANITARY
SB	SINK BASE
SCHED	SCHEDULE
SEAL	SEALANT
SECT	SECTION
SF	SQUARE FEET
SG	SAFETY GLASS
SH	SPRINKLER HEAD OR SHOWER HEAD
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SPEC	SPECIFICATION(S)
SPK	SPEAKER
SQ	SQUARE
ST	STREET
STC	SOUND TRANSMISSION CLASSIFICATION
STD	STANDARD
STL	STEEL
STR	STRUCTURAL
SUSP	SUSPENDED
SV	SHEET VINYL
SYS	SYSTEM

T	
T & G	TONGUE & GROOVE
TB	TOWEL BAR
T&B	TOP AND BOTTOM
TEL	TELEPHONE
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOM	TOP OF MASONRY
TOW	TOP OF WALL
TRANS	TRANSFORMER
TV	TELEVISION
TYP	TYPICAL

U	
UC	UNDER CABINET OR COUNTER
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE

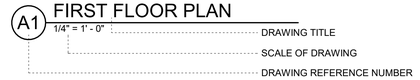
V	
V	VACUUM
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VS	VACUUM SLIDE

W	
W	WIDE OR WEST OR WOMEN
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET OR WALL CABINET
WD	WOOD
WIN	WINDOW
WP	WORK POINT
WPT	WOOD PRESERVATIVE TREATMENT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

ALL SYMBOLS OR ABBREVIATIONS MIGHT NOT NECESSARILY BE USED ON THIS PROJECT.
ADDITIONAL SYMBOLS OR ABBREVIATIONS MAY APPEAR ON SUBSEQUENT SHEETS.

REFERENCE SYMBOLS

DRAWING TITLE



INTERIOR ELEVATIONS

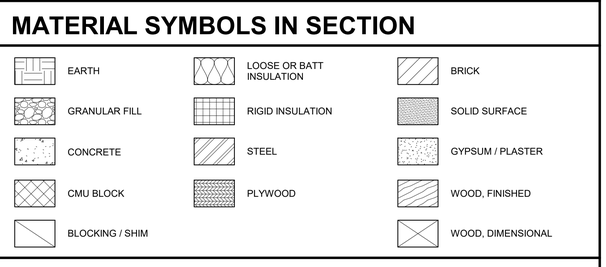
BUILDING/DETAIL SECTION

ENLARGED DETAIL

EXTERIOR ELEVATIONS

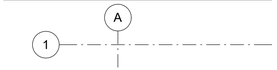
MATCH LINE

MATERIAL SYMBOLS IN SECTION



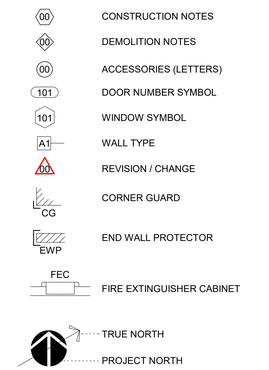
DRAWING SYMBOLS

COLUMN CENTER LINES



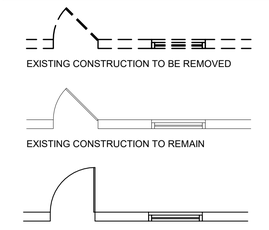
ROOM SYMBOL

PLAN SYMBOLS

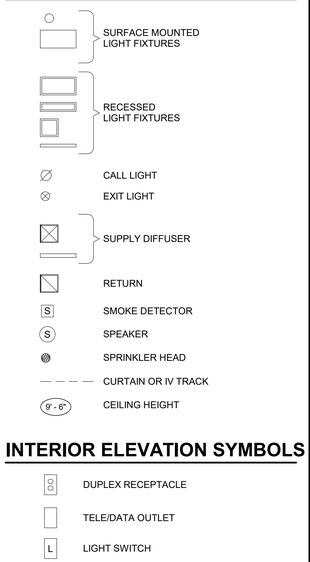


ELEVATION SYMBOLS

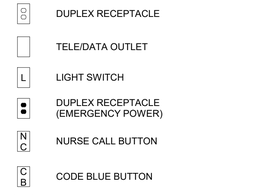
TYPICAL WALL CONVENTIONS



REFLECTED CEILING SYMBOLS



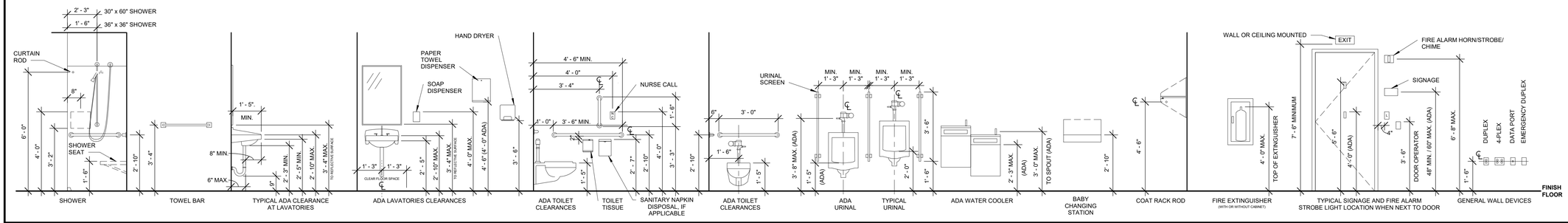
INTERIOR ELEVATION SYMBOLS



FIRE BARRIER LEGEND

MOUNTING & CLEARANCE STANDARDS N.T.S.

(FOLLOW THESE UNLESS NOTED OTHERWISE)



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TITLE
ABBREVIATIONS AND SYMBOLS

SHEET NO.
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ROOM FINISH SCHEDULE

ROOM No.	ROOM NAME	FLOOR	BASE	WAINSCOT		WALLS				CEILING	REMARKS
				MAT.	HT.	N	S	E	W	MAT.	
101	ADMIN	MCT	RB-1			P-1	MTLP	P-1	P-1	APC	
102	OFFICE/CONFERENCE	MCT	RB-1			P-1	P-1	P-1	P-1	APC	
103	ADMIN	MCT	RB-1			P-1	MTLP	P-1	P-1	APC	
104	OFFICE	MCT	RB-1			P-1	P-1	P-1	P-1	APC	
105	BREAK/TRAINING	MCT	RB-1			P-1	P-1	P-1	P-1	APC	
106	MEN	MCT	RB-1			P-1	P-1	P-1	P-1	APC	
107	WOMEN	MCT	RB-1			P-1	P-1	P-1	P-1	APC	
108	MAINTENANCE	SC	RB-1			MTLP	MTLP	P-1	MTLP	MTLP	1
108B	STAIR	-	RB-1	VWP	48"	MTLP	MTLP	P-1	MTLP	MTLP	
109	TOILET	SC	RB-1			MTLP	P-1	P-1	P-1	APC	
110	TRANSPORTATION	SC	RB-1			MTLP	MTLP	MTLP	P-1	MTLP	1
110B	STAIR	-	RB-1	VWP	48"	MTLP	MTLP	MTLP	P-1	MTLP	
111	MECH.	SC	-			MTLP	P-1	P-1	P-1	-	
112	MECH	SC	-			MTLP	P-1	P-1	P-1	-	
113	COMPRESSOR	SC	-			MTLP	P-1	P-1	MTLP	-	
201	MEZZANINE	MCT	RB-1			MTLP	MTLP	P-1	-	MTLP	
202	MEZZANINE	MCT	RB-1			MTLP	MTLP	-	P-1	MTLP	

ROOM FINISH SCHEDULE REMARKS

No.	REMARK
1	RUBBER BASE ONLY AT DRYWALL WALLS OF ADMIN CORRIDOR

MATERIAL LEGEND

SORT MATERIAL	ITEM	MATERIAL	MANUFACTURER	MATERIAL MODEL NO.	CONTACT INFO	COLOR	FLAME / SMOKE	COMMENTS
BASE								
BASE	RB-1	RUBBER BASE 6"	JOHNSONITE	TRADITIONAL RUBBER BASE WITH 6" TOE	ERIN RINK 513.504.5734	TBD		
CABINETS								
CABINETS	PL	PLASTIC LAMINATE	WILSONART	TBD	DONNA ARIAPAD 513.295.0380	TBD		CABINETS AS NOTED
CABINETS	SSM	SOLID SURFACE	LG	T003	SHERRIN MASTERS 502.689.6655	SATURN		
CEILING								
CEILING	APC	ACOUSTIC PANEL CEILING	ARMSTRONG CEILING SYSTEMS	MESA 686 24" X 24"	MONTY GILLESPIE 513.309.1495	WHITE	CLASS A	
CEILING	EXPS	EXPOSED STRUCTURE						
FLOOR								
FLOOR	MCT	MARMOLEUM COMPSITE TILE	FORBO FLOORING	MCT 3048 (AS SELECTED BY OWNER)	TOM BUIKEMA, 937.231.2732	GRAPHITE	CLASS 1	
FLOOR	SC	SEALED CONCRETE	LATICRETE	L&M AQUAPEL				
WALL								
WALL	MTLP	METAL LINER PANEL	DIMENSIONAL METALS INC. (DMI)	FLUSH PANEL FP1012		WHITE		LOW BEAD STIFFNER PATTERN
WALL	P-1	PAINT	SHERWIN WILLIAMS	TBD	ANGIE JULIAN 317.714.5610	TBD		EGGSHELL FINISH.
WALL	P-2	PAINT	SHERWIN WILLIAMS	TBD	ANGIE JULIAN 317.714.5610	TBD		ENAMEL PAINT FOR METAL DOORS AND FRAMES
WALL	VWP	VINYL WALL PROTECTION	INPRO			OATMEAL		

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TALAWANDA SCHOOL DISTRICT

MAINTENANCE AND BUS GARAGE

5302 University Park Blvd.
City of Oxford, Ohio 45056

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	04/08/2022	FOR BIDDING

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JOB NO.	3977.00
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TITLE
FINISH SCHEDULES

SHEET NO.
A0.2

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DOOR AND FRAME SCHEDULE

DOOR No.	ROOM NAME	HDW. SET	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MAT.	DOOR TYPE	DOOR FIN.	DOOR U/C	FRAME MAT.	FRAME TYPE	FRAME FIN.	FRAME DETAILS HEAD	FRAME DETAILS JAMB	FRAME DETAILS SILL	FIRE RTG.	REMARKS
101A	ADMIN	1	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4			1,4
101B	ADMIN	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
102	ADMIN	4	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4		-	
103A	ADMIN	4	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4			2
103B	ADMIN	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
104	ADMIN	1	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4		-	
105A	BREAK/TRAINING	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
105B	BREAK/TRAINING	1	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4			3
106	MEN	6	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4		180 MIN.	
107	WOMEN	6	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4		180 MIN.	
108A	MAINTENANCE	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
108B	STAIR	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
109	TOILET	2	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B1/A0.4	C1/A0.4		-	3
110A	STAIR	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
110B	TRANSPORTATION	5	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
111	MECH.	3	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4		-	
112	MECH	3	3' - 0"	7' - 0"	1 3/4"	HM	F1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4		-	
113	COMPRESSOR	3	3' - 0"	7' - 0"	1 3/4"	HM	NL1	P-2		HM	1	P-2	B3/A0.4	C3/A0.4			
OH-A1	MAINTENANCE	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-A2	MAINTENANCE	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-A3	MAINTENANCE	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-A4	MAINTENANCE	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-A5	MAINTENANCE	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-B1	TRANSPORTATION	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-B2	TRANSPORTATION	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-B3	TRANSPORTATION	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			
OH-B4	TRANSPORTATION	-	12' - 0"	14' - 0"	2"	STEEL	OH1	PWDR COATED		-	-	-	F1/A0.4	F3/A0.4			

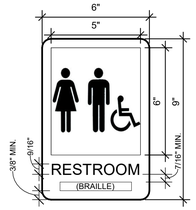
DOOR REMARKS

No.	REMARK
1	ADD CLOSER
2	ADD ONE EA EXIT HARDWARE
3	INSUATED EXTERIOR TYPE DOORS IN INTERIOR LOCATION WITH WEATHER STRIP AND SWEEP

Window Schedule

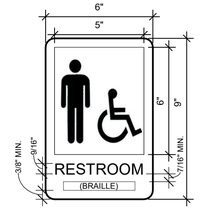
TYPE	QUANTITY	R.O. WIDTH	R.O. HEIGHT	Sill Height	FRAME MATERIAL	JAMB	HEAD	SILL	HEAD HEIGHT	COMMENTS
AF1	2	3' - 0"	4' - 2"	3' - 0"	ALUM	C6/A0.4	B6/A0.4	E6/A0.4	7' - 2"	

SIGNAGE LEGEND



UNISEX RESTROOM - TYPE 1

3" = 1'-0"



MEN'S RESTROOM - TYPE 2

3" = 1'-0"

WOMEN'S RESTROOM - TYPE 3

3" = 1'-0"

SIGN NOTES

A. ALL SIGNS SHALL HAVE BRAILLE LETTERING BENEATH TEXT, TYPICAL.

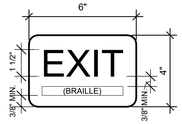
B. SIGNS MOUNTED ON GLASS AT DOOR NEED TO BE MOUNTED WITH ADHESIVE AND MATCHING BACKER PLATE FOR OTHER SIDE OF GLASS.

C. TEXT AND GRAPHICS TO BE NON-GLARE COLOR IN HIGH CONTRAST WITH BACKGROUND. SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

D. BACKGROUND TO BE NON-GLARE COLOR IN HIGH CONTRAST WITH TEXT AND GRAPHICS. SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

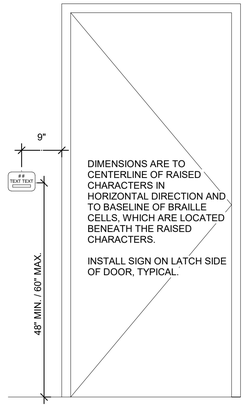
E. 1/2" RADIUS CORNERS.

F. ALL TEXT ON SIGNS LOCATED NEXT TO INTERIOR DOORS WILL BE 1/32" RAISED CHARACTERS, UPPERCASE, AND VIEWABLE AT LESS THAN 6 FEET.



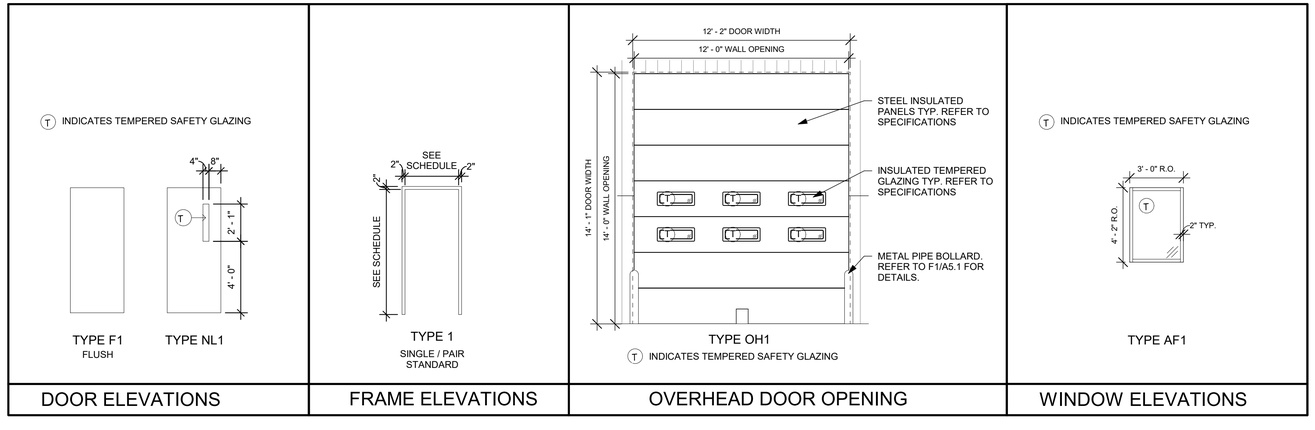
EXIT SIGN - TYPE 4

3" = 1'-0"



SIGNAGE LOCATION

3/4" = 1'-0"



DOOR ELEVATIONS | FRAME ELEVATIONS | OVERHEAD DOOR OPENING | WINDOW ELEVATIONS

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DOOR AND WINDOW SCHEDULES

SHEET NO.
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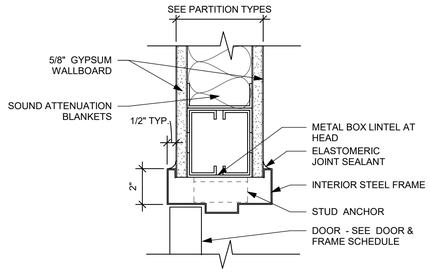
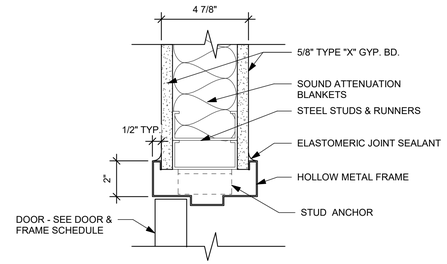
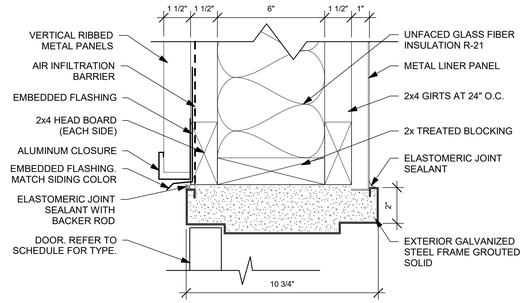


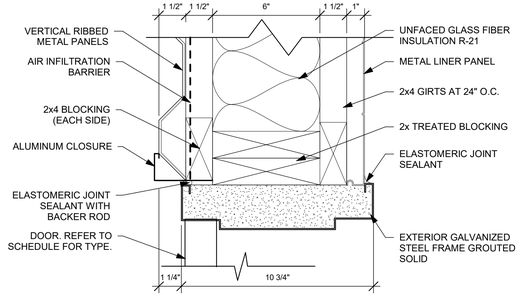
B1 DOOR HEAD DETAIL
3" = 1'-0"



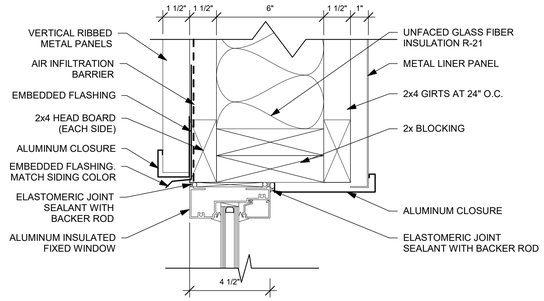
C1 DOOR JAMB DETAIL
3" = 1'-0"



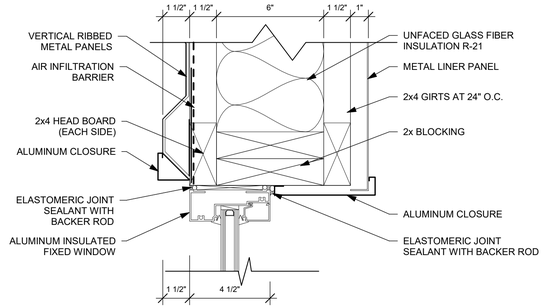
B3 EXTERIOR DOOR HEAD DETAIL
3" = 1'-0"



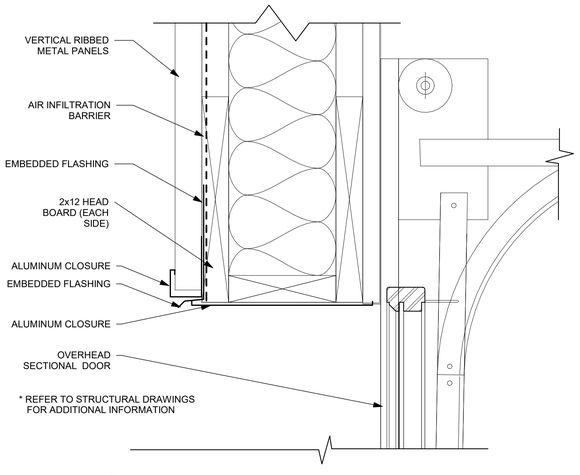
C3 EXTERIOR DOOR JAMB DETAIL
3" = 1'-0"



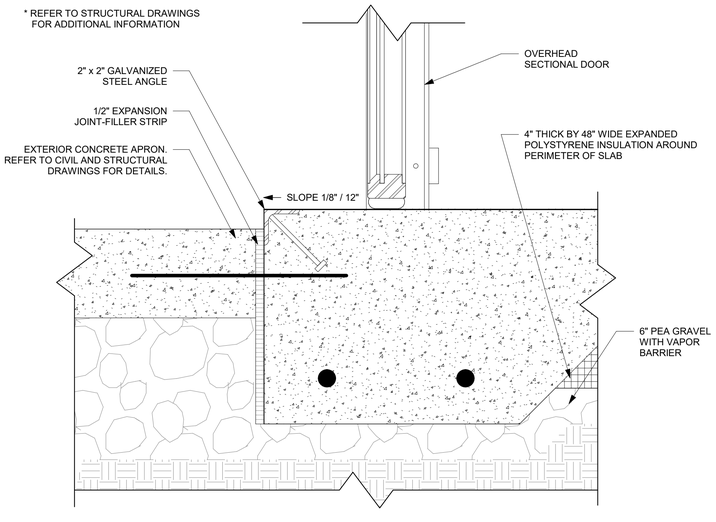
B6 WINDOW HEAD DETAIL
3" = 1'-0"



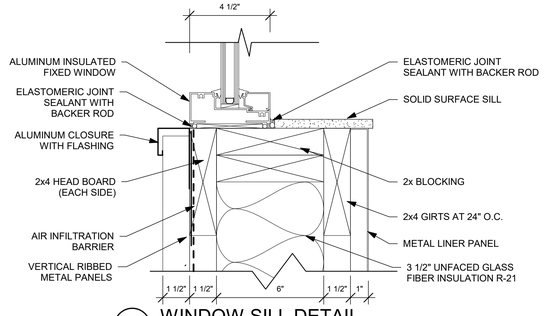
C6 WINDOW JAMB DETAIL
3" = 1'-0"



F1 OVERHEAD DOOR HEADER
3" = 1'-0"



F3 OVERHEAD DOOR SILL
3" = 1'-0"



E6 WINDOW SILL DETAIL
3" = 1'-0"

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DOOR AND WINDOW DETAILS

SHEET NO.
A0.4

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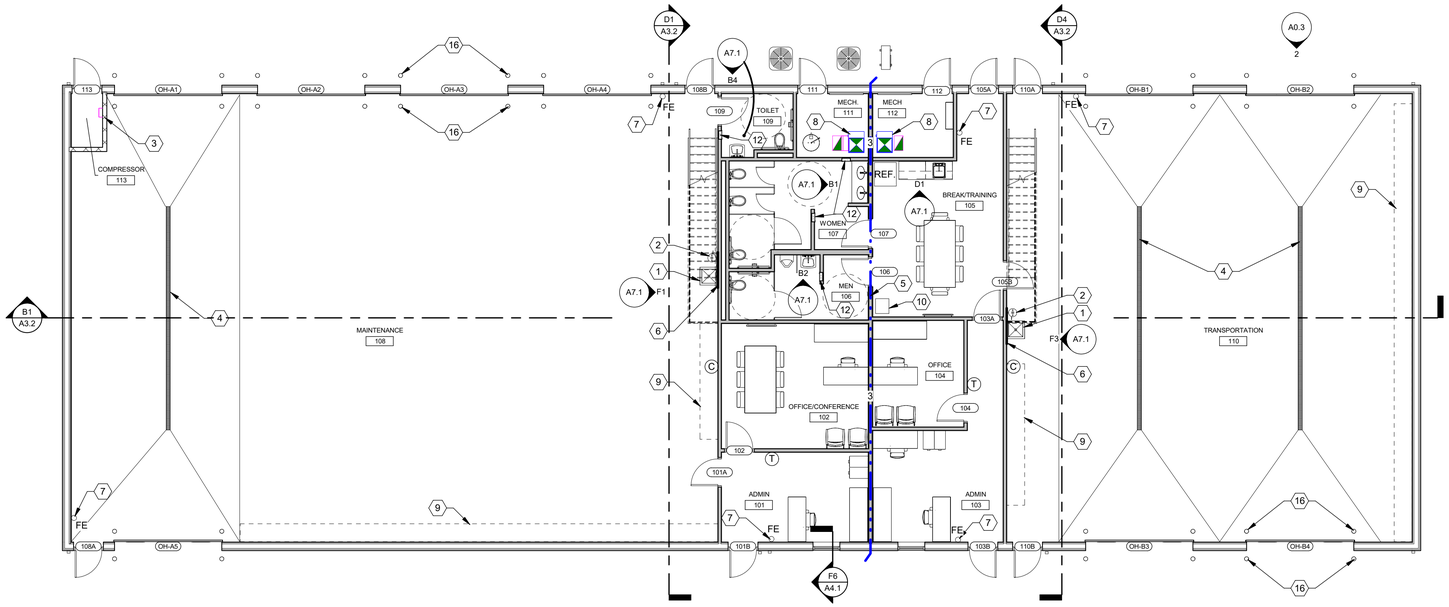
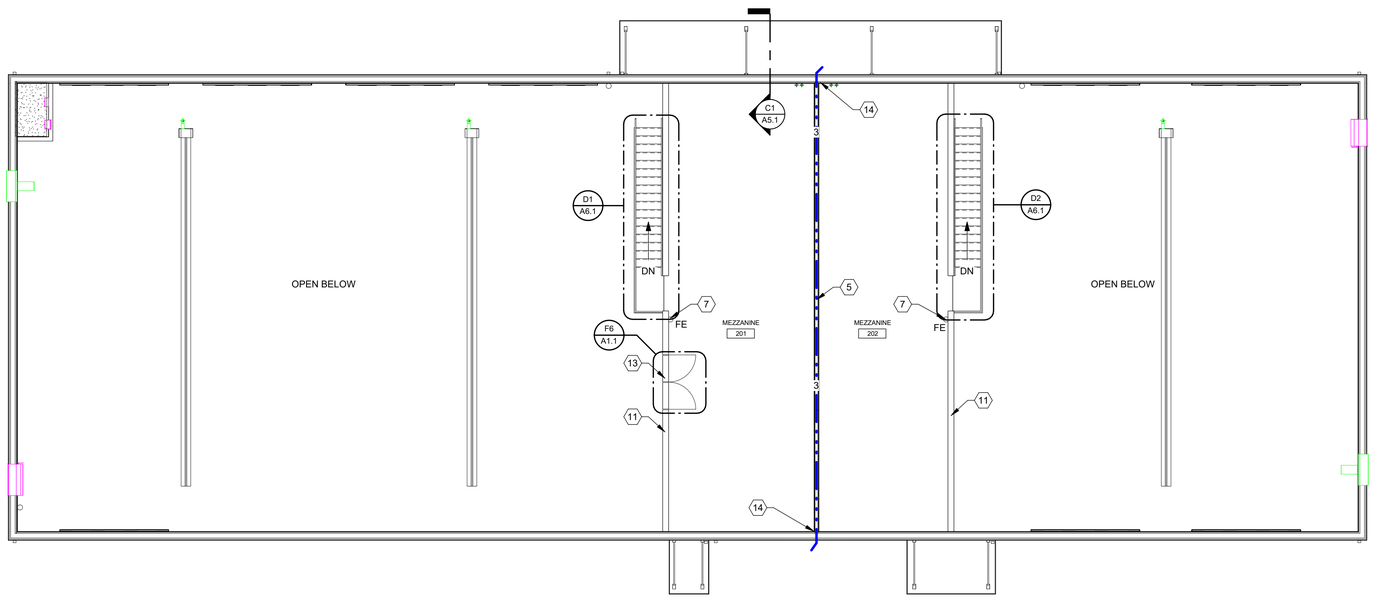
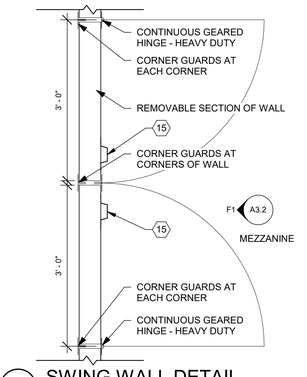


1 FIRST FLOOR REFERENCE PLAN
1/8" = 1'-0"



2 MEZZANINE REFERENCE PLAN
1/8" = 1'-0"



F6 SWING WALL DETAIL
3/4" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. MOP SINK. REFER TO PLUMBING DRAWINGS.
2. EYE WASH STATION. REFER TO PLUMBING DRAWINGS.
3. 6" CMU WALL UP TO 8' - 0" A.F.F. PROVIDE BULLNOSE EDGE AT CORNER. CAP WITH 3/4" PLYWOOD OVER 2X6 WOOD JOISTS 16" O.C.
4. TRENCH DRAIN. REFER TO PLUMBING DRAWINGS.
5. 3 HR. FIRE RATED BARRIER UL U490. EXTEND FULL HEIGHT TO UNDERSIDE OF ROOF DECK.
6. VINYL WALL PROTECTION (VWP) ON THIS WALL 48" HEIGHT WITH LOCAL FIRE DEPARTMENT.
7. WALL HUNG FIRE EXTINGUISHER. COORDINATE F.E. TYPE WITH LOCAL FIRE DEPARTMENT.
8. FURNACE. REFER TO MECHANICAL DRAWINGS.
9. LOCATION FOR OWNER'S STORAGE.
10. REQUIREMENTS FOR 1 DRINKING FOUNTAIN WILL BE MET WITH THE ADDITION OF 1 REFRIGERATED DRINKING WATER COOLER WITH REPLACEABLE WATER BOTTLES.
11. 42" HIGH METAL STUD WALL WITH 5/8" HIGH ABUSE GYPSUM BOARD AND TREATED 1X8 WOOD CAP WITH RADIUS EDGES.
12. SEMI-RECESSED C-FOLD PAPER TOWEL DISPENSER.
13. REMOVABLE SECTION OF WALL. MIN. 6' - 0" COORDINATE EXACT LOCATION WITH OWNER.
14. FIRE CAULK FULL HEIGHT AT OUTSIDE WALL. BOTH SIDES.
15. 5" CLOSED GRIP HANDLE ATTACHED TO SOLID WOOD BLOCKING.
16. METAL PIPE BOLLARD. TYPICAL ALL OVERHEAD DOORS. REFER TO CIVIL DRAWINGS FOR LOCATION.

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TITLE
REFERENCE PLANS

SHEET NO.
A1.1

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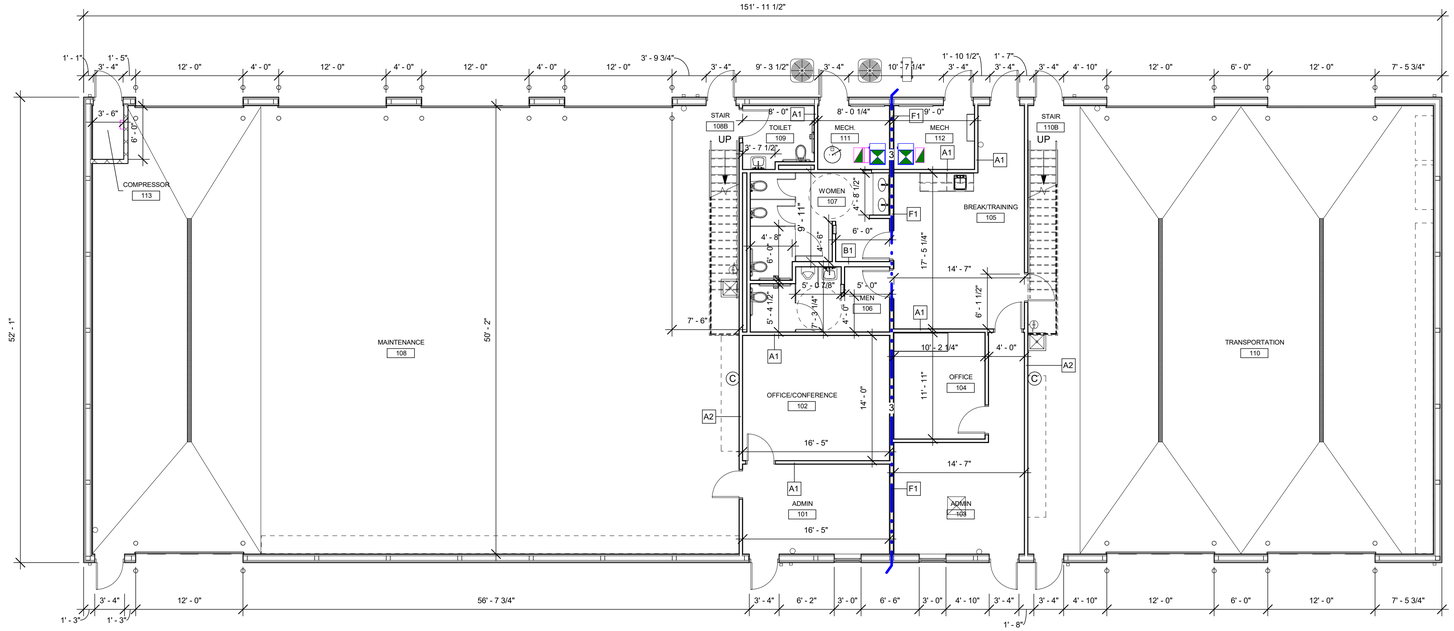
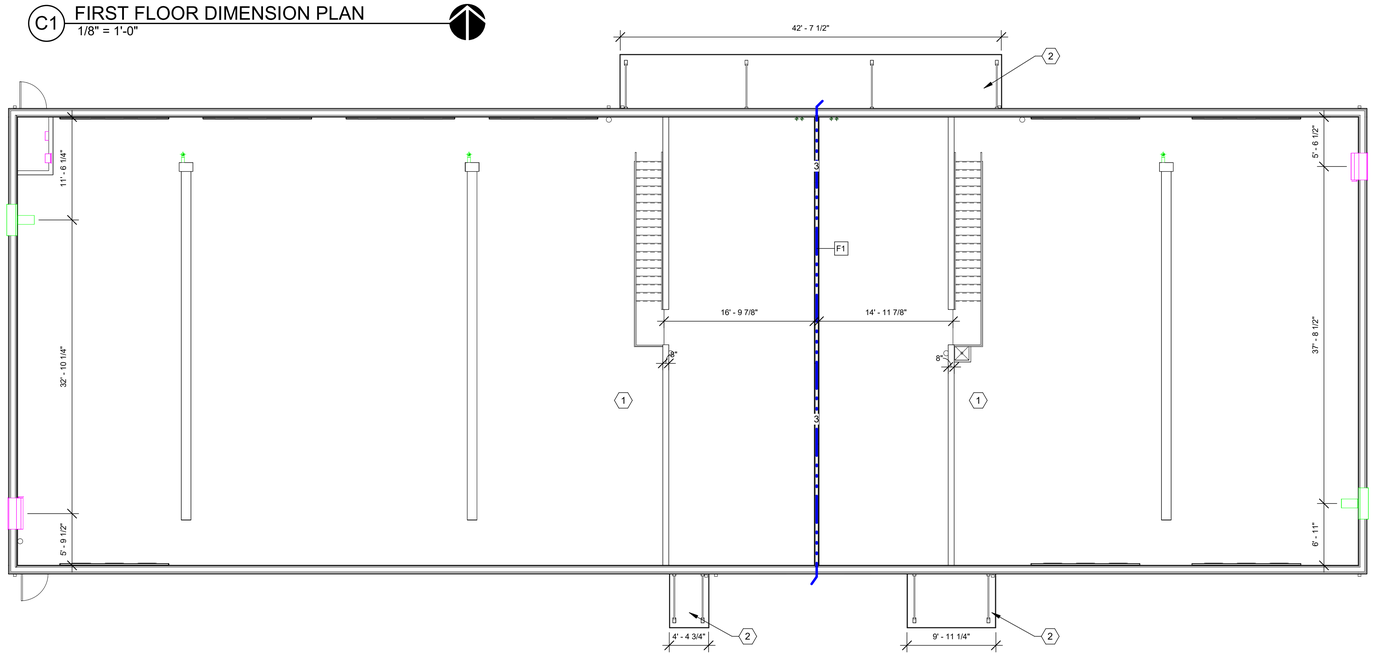


C1 FIRST FLOOR DIMENSION PLAN
1/8" = 1'-0"



F1 MEZZANINE REFERENCE PLAN
1/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. 42" HIGH METAL STUD WALL WITH 5/8" HIGH ABUSE GYPSUM BOARD AND TREATED 1X8 WOOD CAP WITH RADIUS EDGES.
2. CENTER OVERHANG ON DOORS.

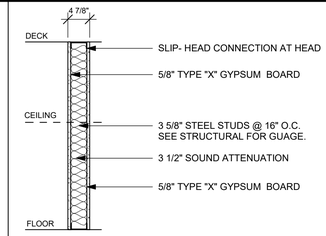
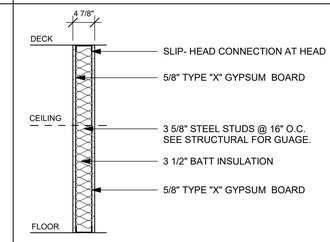
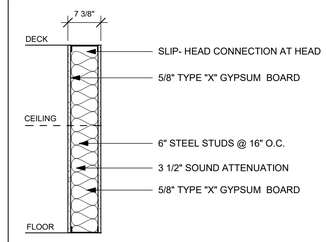
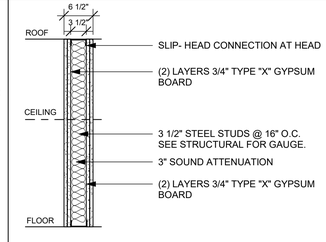
GENERAL NOTES

A. ALL INTERIOR PARTITIONS ARE A1 U.N.O.

B. PROVIDE FIRE RETARDANT WOOD BLOCKING BEHIND ALL WALL HUNG ACCESSORIES, CABINETS, FURNISHINGS, HANDRAILS U.N.O.

C. FOR SIDEWALKS AND EXTERIOR PADS REFER TO CIVIL PLANS.

INTERIOR WALL TYPES SCHEDULE

TYPE	BASE WALL WIDTH	FIRE RATING TESTING AGENCY, ASSEMBLY NO.	DETAILS & NOTES
A1	3 5/8"	- -	
A2	3 5/8"	- -	
B1	6"	- -	
F1	3 5/8"	3 HR FIRE BARRIER UL U490	

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DIMENSION PLAN

SHEET NO.
A1.2

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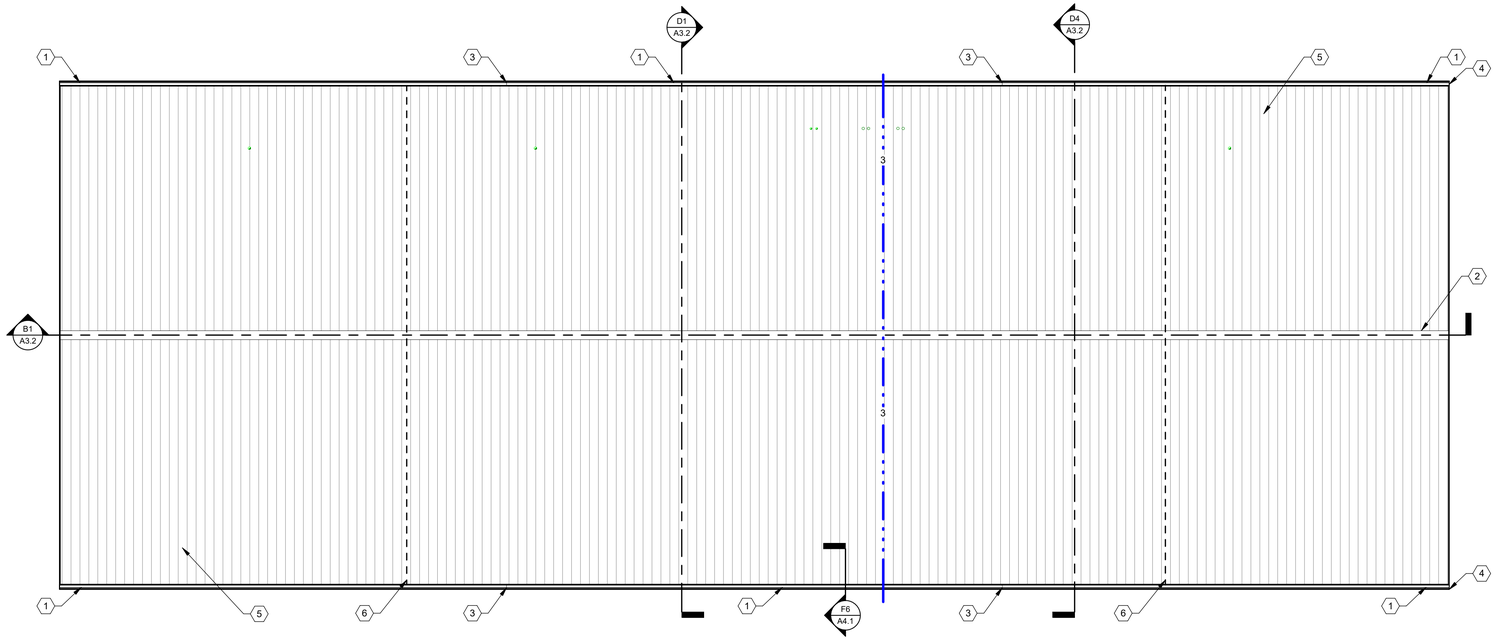

1 ROOF
1/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. DOWNSPOUT LOCATION WITH 24" DOWNSPOUT ADAPTOR. BASIS OF DESIGN: PIEDMONT MANUFACTURING, PIEDMONT PIPE DOWNSPOUT - MODEL SO. REFER TO SHEET A5.01 FOR DETAILS.
2. CONTINUOUS RIDGE VENT. SEE B1/A5.1 FOR DETAILS.
3. GUTTER EXPANSION JOINT - INSTALL PER LATEST EDITION OF SMACNA STANDARDS. GUTTER EXPANSION JOINTS SPACING NOT TO EXCEEN 40 FT.
4. 6" PREFINISHED ALUMINUM GUTTER.
5. STANDING SEAM METAL ROOF - COLOR TO MATCH SCHOOL BUILDINGS.
6. DRAFTSTOPPING. AREA BETWEEN NOT TO EXCEED 3000 SF.

GENERAL NOTES

A. COORDINATE ROOF PENETRATIONS WITH PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS.

B. ALL PENETRATIONS THROUGH ROOF (I.E. VENTS, FLUTES, ETC.) SHALL BE PAINTED TO MATCH ROOF.

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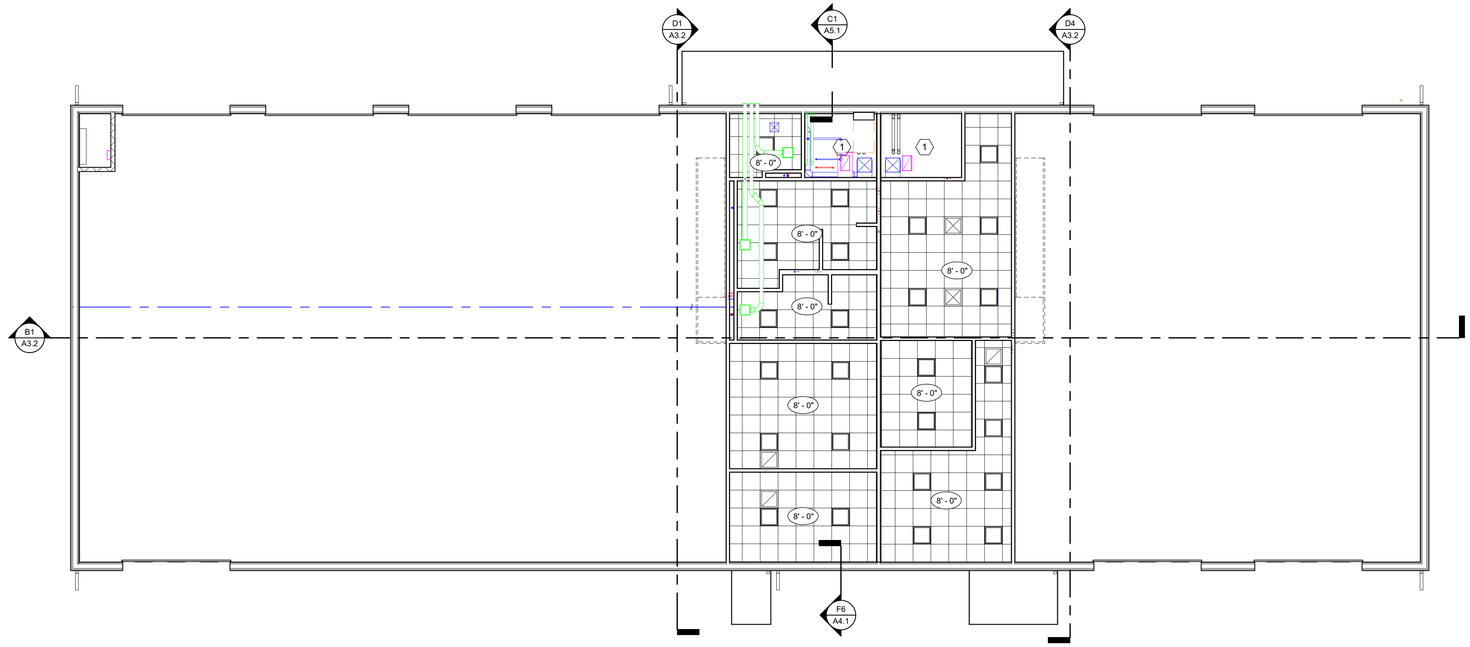
DRAWN	MLG
CHECKED	RFW

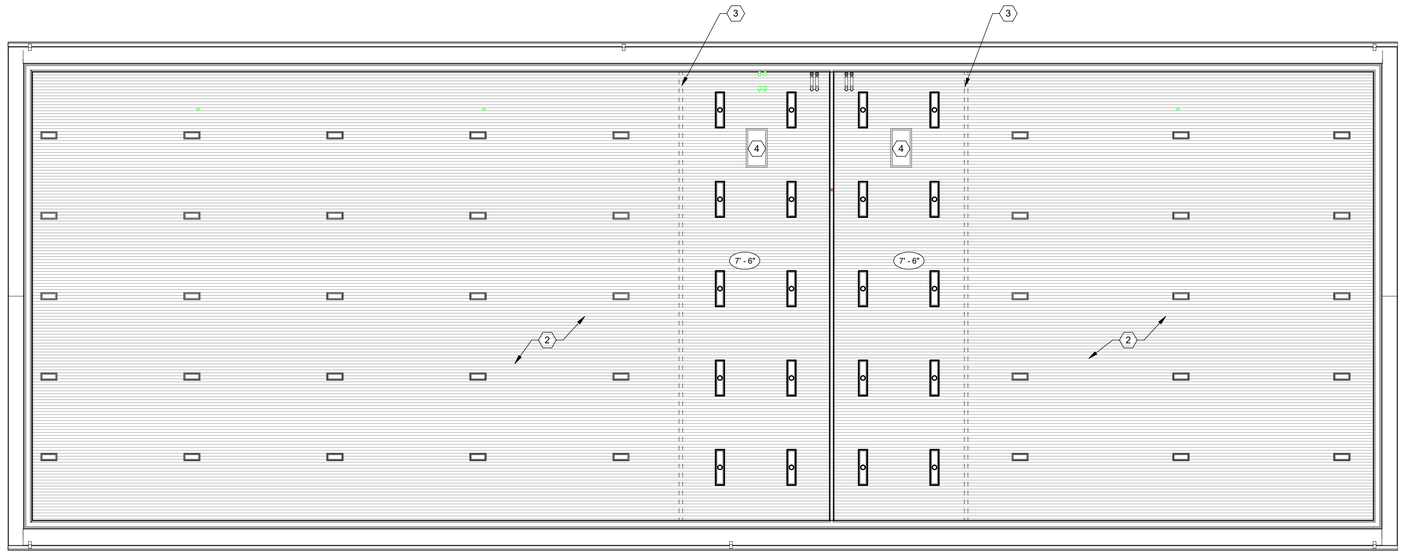
TITLE
ROOF PLAN

SHEET NO.
A1.3

5/23/2022 2:16:16 PM



1 REFLECTED CEILING PLAN
1/8" = 1'-0"



2 MEZZANINE REFLECTED CEILING PLAN
1/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. OPEN TO DECK ABOVE.
2. METAL LINER CEILING PANELS.
3. EXTENT OF MEZZANINE BELOW.
4. ATTIC ACCESS PANEL.

GENERAL NOTES

A. REFER TO ROOM FINISH SCHEDULE, MATERIALS LEGEND, AND SPECIFICATIONS FOR CEILING TYPES AND FINISHES.

B. MEASURE VEILING AND LAYOUT GRIDS TO BALANCE BORDER WIDTHS AT OPPOSITE EDGES. BORDER TILES TO BE 3" MINIMUM U.N.O. INSTALL EDGE MOLDING AT PERIMETER U.N.O.

C. ALL DEVICES INSTALLED IN THE COUSTIC PANEL ARE TO BE CENTERED IN THE TILE.

D. CONTRACTOR TO BRING ANY CONFLICTS TO THE ARCHITECT'S ATTENTION PRIOR TO INSTALLATION.

E. ALL MEP ITEMS SHOWN ARE FOR REFERENCE ONLY. REFER TO MEP DRAWINGS FOR AMOUNTS AND LOCATIONS.

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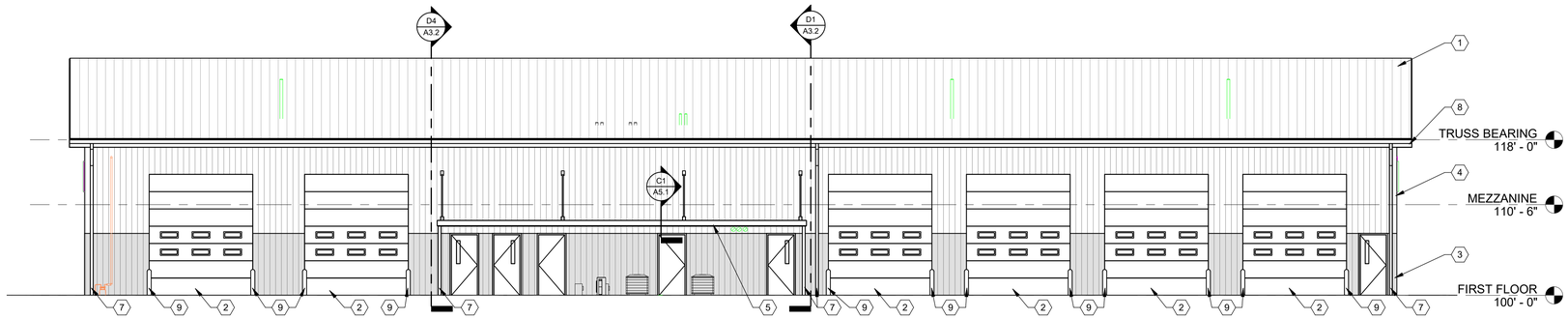
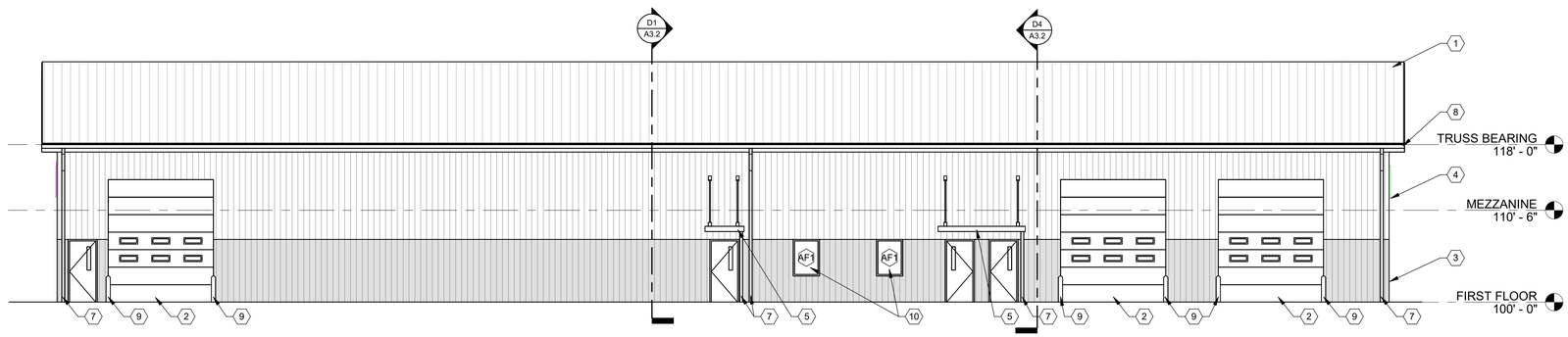
TITLE
REFLECTED CEILING PLAN

SHEET NO.
A2.1

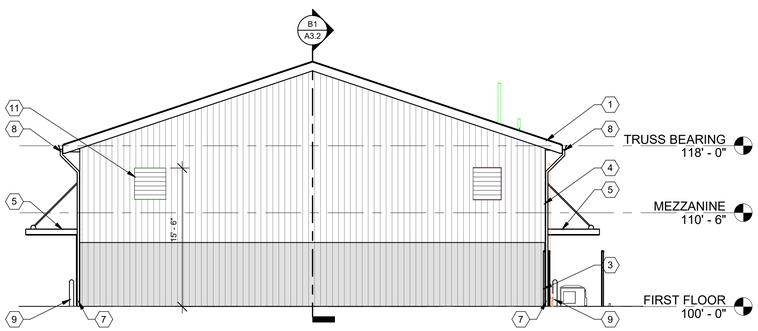
5/23/2022 2:16:17 PM



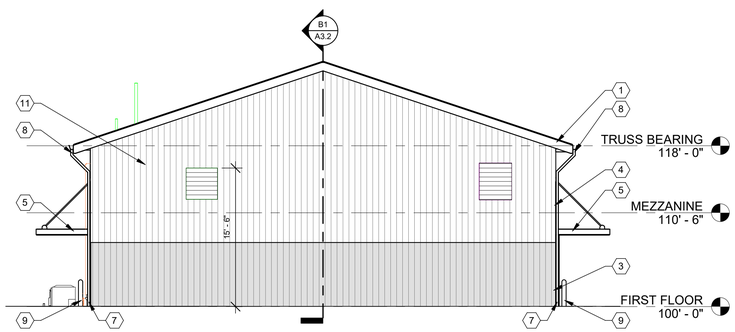
B1 NORTH ELEVATION
1/8" = 1'-0"



D1 SOUTH ELEVATION
1/8" = 1'-0"



F1 EAST ELEVATION
1/8" = 1'-0"



F4 WEST ELEVATION
1/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. STANDING SEAM METAL ROOF. ICE AND WATER SHIELD BELOW. COLOR PANELS TO MATCH EXISTING SCHOOL.
2. INSULATED OVERHEAD DOORS.
3. TYPE 1 VERTICAL RIBBED METAL SIDING. ALIGN WITH TOP OF DOOR AND WINDOW FRAME. COLOR TBD.
4. TYPE 2 VERTICAL RIBBED METAL SIDING. ALIGN WITH TOP OF DOOR AND WINDOW FRAME.COLOR TBD.
5. ALUMINUM CANOPY. SEE SHEET A5.1 FOR DETAILS.
6. LOUVER. REFER TO MECHANICAL DRAWINGS FOR DETAILS.
7. DOWNSPOUT LOCATION WITH 24" DOWNSPOUT ADAPTOR. BASIS OF DESIGN: PIEDMONT MANUFACTURING, PIEDMONT PIPE DOWNSPOUT - MODEL SO. REFER TO SHEET A5.01 FOR DETAILS.
8. 6" x 6" ALUMINUM GUTTER.
9. PIPE BOLLARD. SEE SHEET A5.1 FOR DETAILS.
10. INSULATED FIXED GLASS WINDOW. REFER TO A0.5 FOR DETAILS
11. METAL LOUVERS. COLOR TO MATCH SIDING. REFER TO MECHANICAL DRAWINGS.

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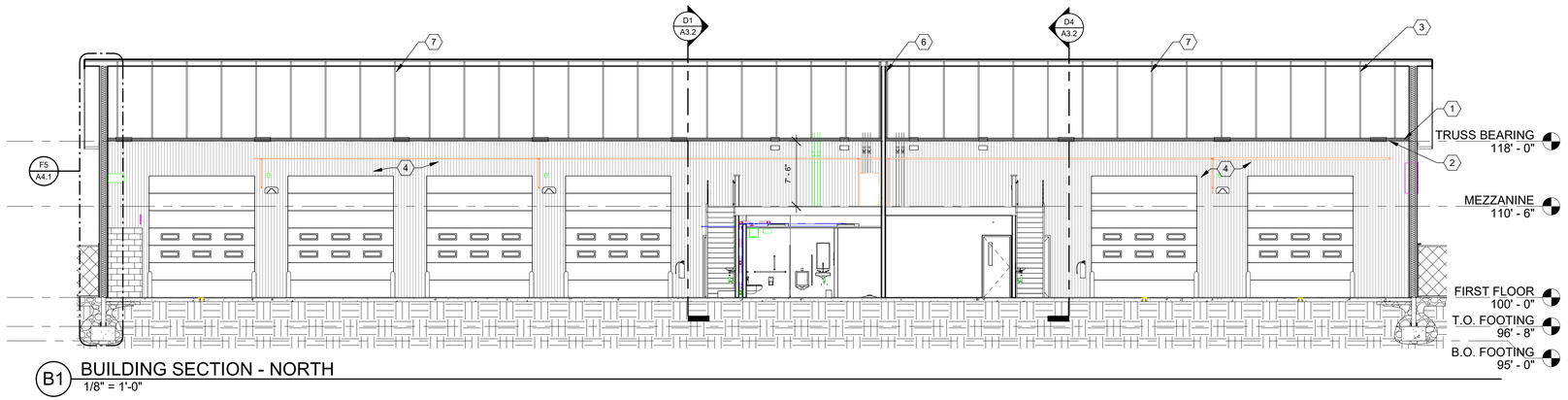
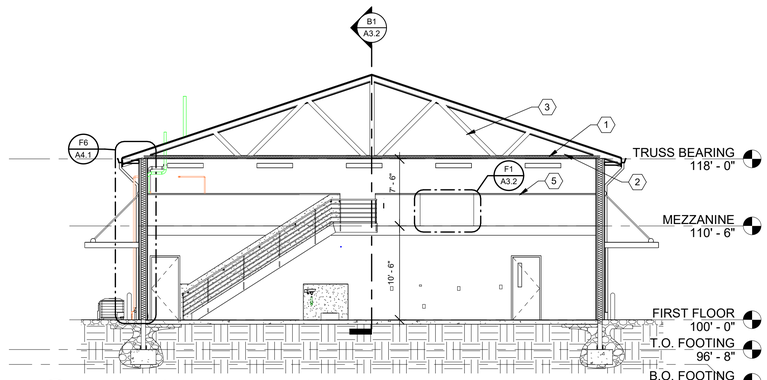
TITLE
EXTERIOR ELEVATIONS

SHEET NO.
A3.1

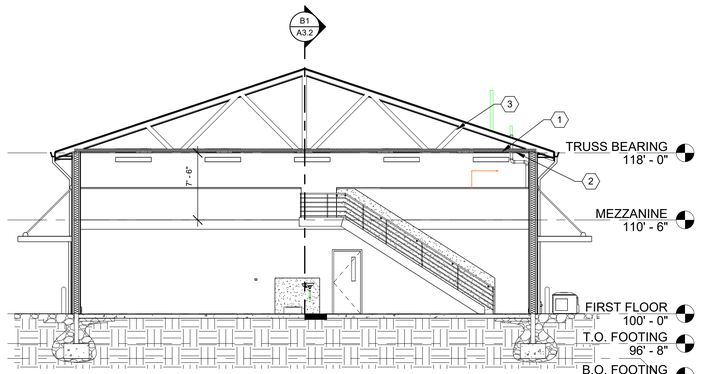
5/23/2022 2:16:21 PM



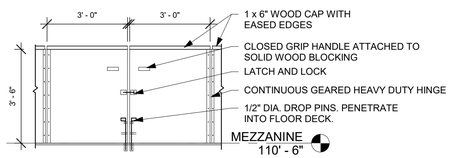
B1 BUILDING SECTION - NORTH
1/8" = 1'-0"



D1 BUILDING SECTION - EAST
1/8" = 1'-0"



D4 BUILDING SECTION - WEST
1/8" = 1'-0"



F1 SWING WALL ELEVATION
3/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. LOOSE FILL GLASS FIBER INSLUATION (R-38) ALONG BOTTOM CHORD OF TRUSSES.
2. METAL LINER PANELS ATTACHED TO BOTTOM CHORD OF TRUSSES.
3. WOOD TRUSS 4' - 0" O.C. SHOWN FOR REFERENCE ONLY. REFER TO STRUCTURAL DRAWINGS.
4. METAL LINER PANEL AT INSIDE WALLS.
5. REMOVABLE SECTION OF WALL.
6. 2 LAYERS OF GYPSUM TYPE "X" INSTALLED EACH SIDE FO FIRE BARRIER BEFORE ATTACHING DOUBLE STRUCTURAL TRUSS.
7. DRAFTSTOPPING. AREA BETWEEN NOT TO EXCEED 3000 SF.

GENERAL NOTES

A. TRUSSES SHOWN FOR REFERENCE ONLY. REFER TO STRUCTURAL DRAWINGS FOR FRAMING DETAILS.

B. FOR SIDEWALKS AND EXTERIOR PADS REFER TO CIVIL SITE PLAN.

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TITLE
BUILDING SECTIONS

SHEET NO.
A3.2

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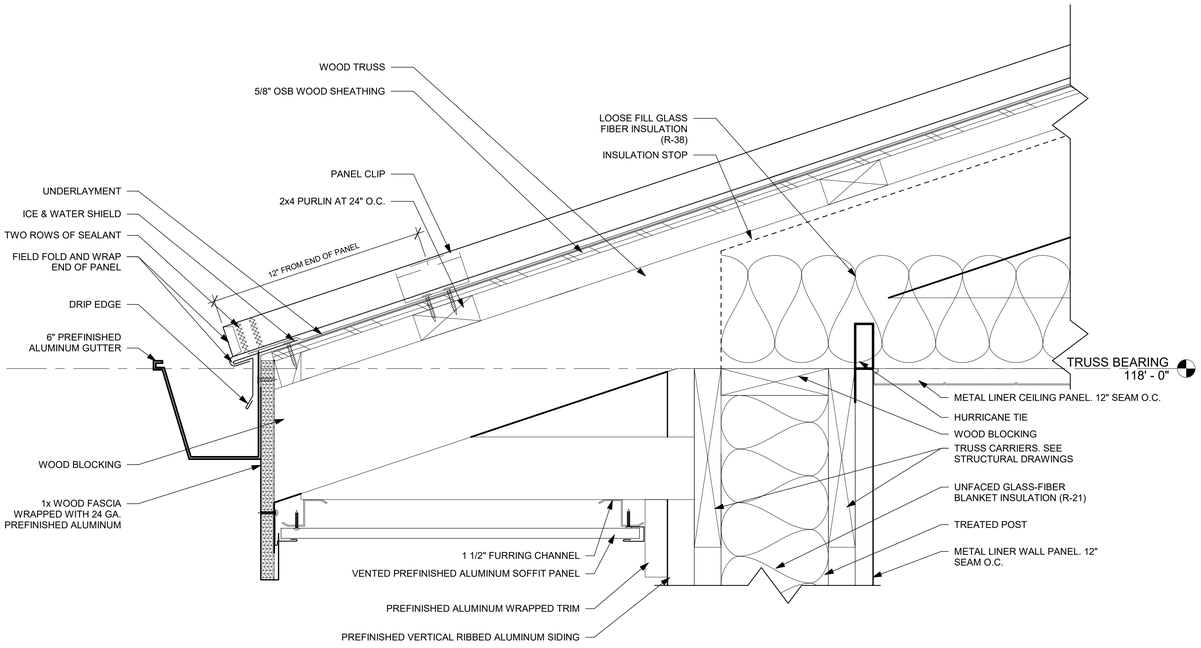
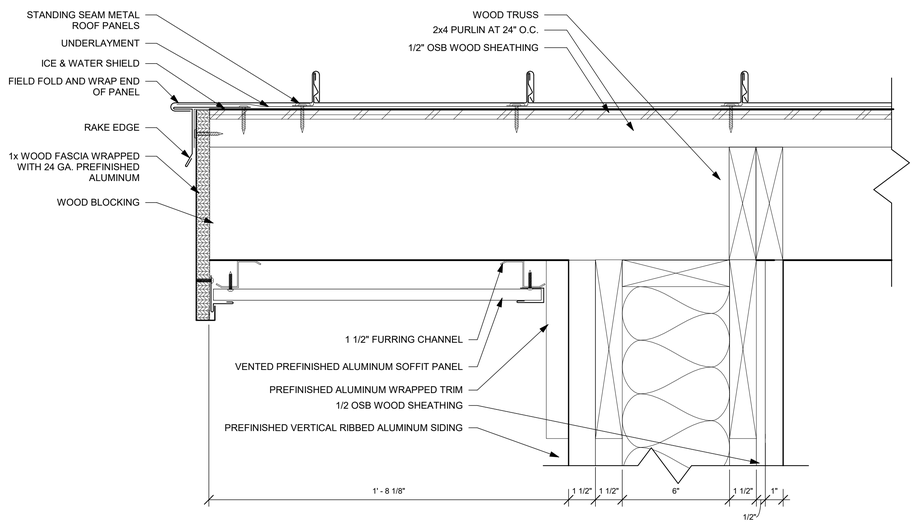
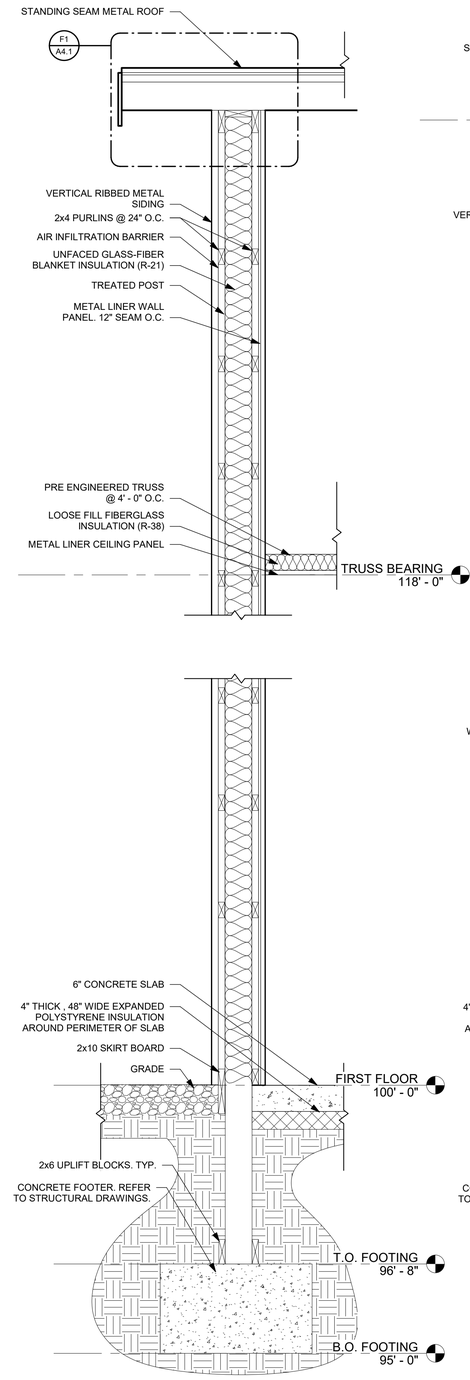


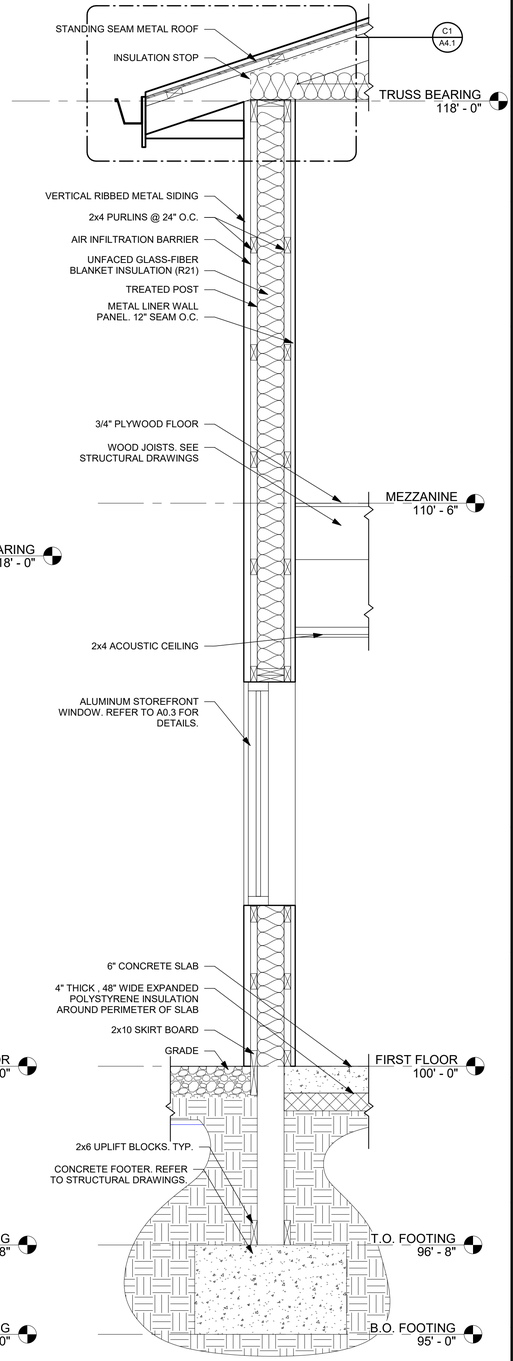
C1 ROOF EDGE DETAIL - GABLE
3" = 1'-0"



F1 ROOF EDGE DETAIL - RAKE
3" = 1'-0"



F5 WALL SECTION
3/4" = 1'-0"



F6 WALL SECTION
3/4" = 1'-0"

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TITLE
WALL SECTIONS

SHEET NO.
A4.1

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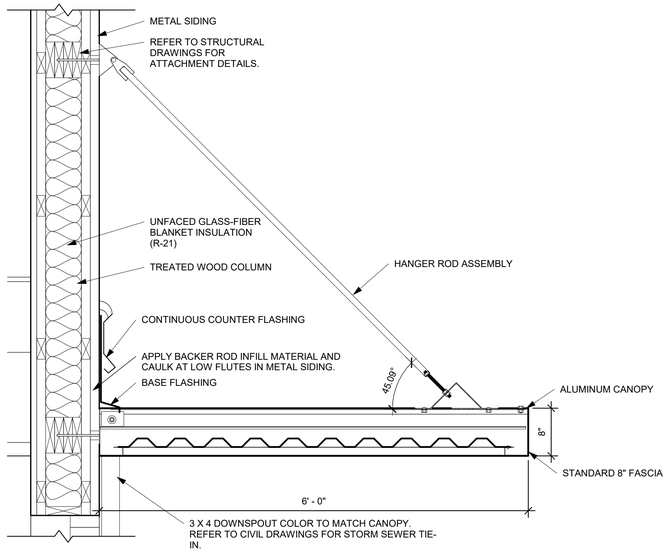
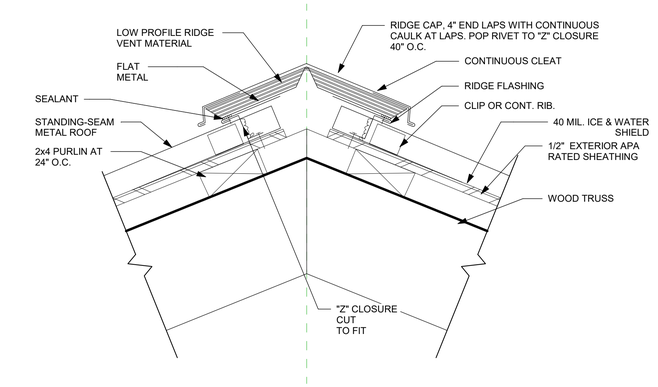
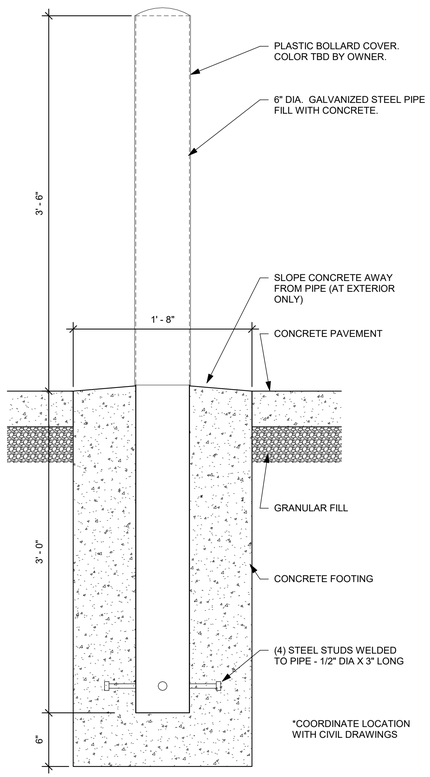


C1 AWNING SECTION DETAIL
1" = 1'-0"

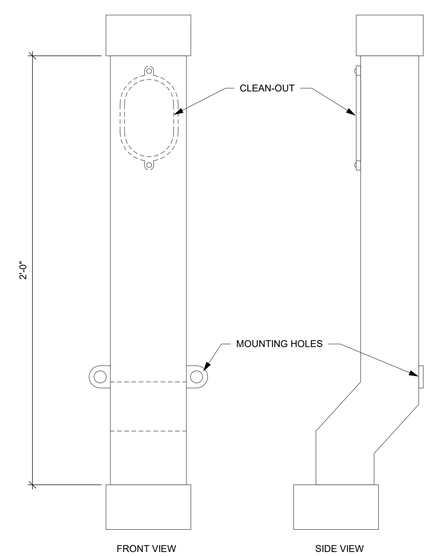


B1 RIDGE DETAIL
3" = 1'-0"



F1 PIPE BOLLARD DETAIL
1 1/2" = 1'-0"

BASIS OF DESIGN: PIEDMONT MANUFACTURING, PIEDMONT PIPE DOWNSPUT - MODEL SO. OFFSETS AND SIZING TO BE COORDINATED WITH DOWNSPOUTS AND STORM PIPING.



F6 DOWNSPOUT ADAPTOR
3" = 1'-0"

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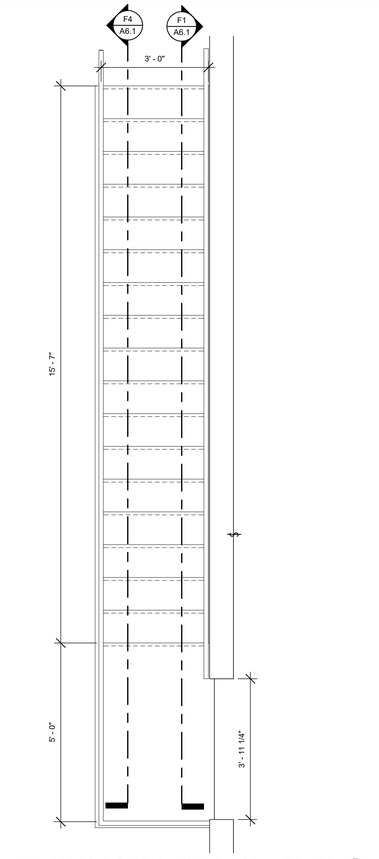
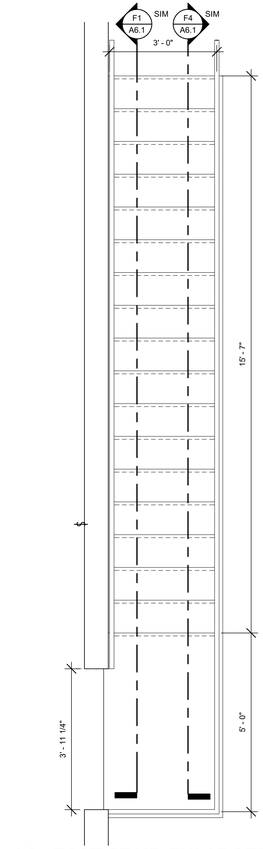
TITLE
EXTERIOR DETAILS

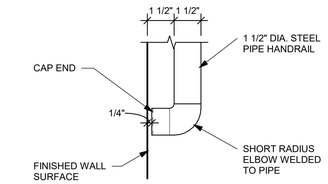
SHEET NO.
A5.1



D1 WEST STAIR ENLARGED PLAN
1/2" = 1'-0"

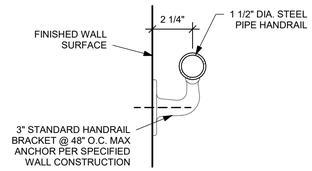


D2 EAST STAIR ENLARGED PLAN
1/2" = 1'-0"



PLAN VIEW

NOTE: GRIND SMOOTH ALL WELDS AND EASE SHARP CORNERS



SECTION

C5 HAND RAIL DETAILS
3" = 1'-0"

CONSTRUCTION NOTES

⟨00⟩ INDICATES CONSTRUCTION NOTE.

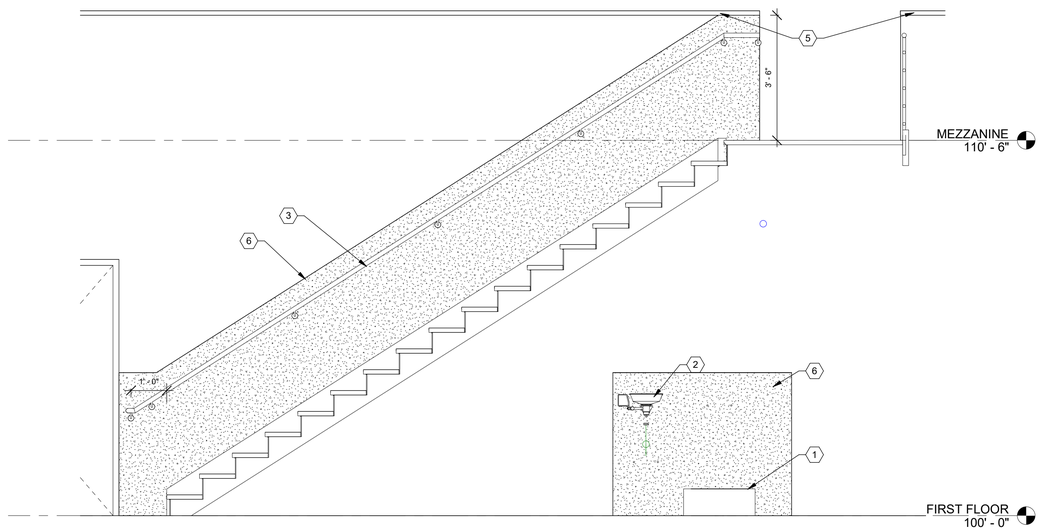
1. MOP SINK REFER TO PLUMBING DRAWINGS.
2. EYE WASH STATION. REFER TO PLUMBING DRAWING.
3. 1 1/2" PIPE HANDRAILING WITH WALL BRACKETS AT 4'-0" O.C. MAXIMUM TYPICAL. RETURN TO WALL AT ENDS.
4. 1 1/2" PIPE GUARD RAILING WITH 3/4" DIAMETER STEEL PICKETS. SPACING BETWEEN PICKETS < 4 3/4" O.C. 1 1/2" BOTTOM RAIL <4 3/4" O.C. ABOVE FINISHED FLOOR.
5. 42" HIGH WALL WITH 6" WOOD CAP WITH RADIUS EDGES.
6. VINYL WALL PROTECTION 48" ABOVE FINIISHED FLOOR AND FINISHED STAIR. REFER TO FINISH SCHEDULE.
7. STAIR PAN. REFER TO STRUCUTRAL DRAWINGS FOR TYPE AND CONSTRUCTION.

GENERAL NOTES

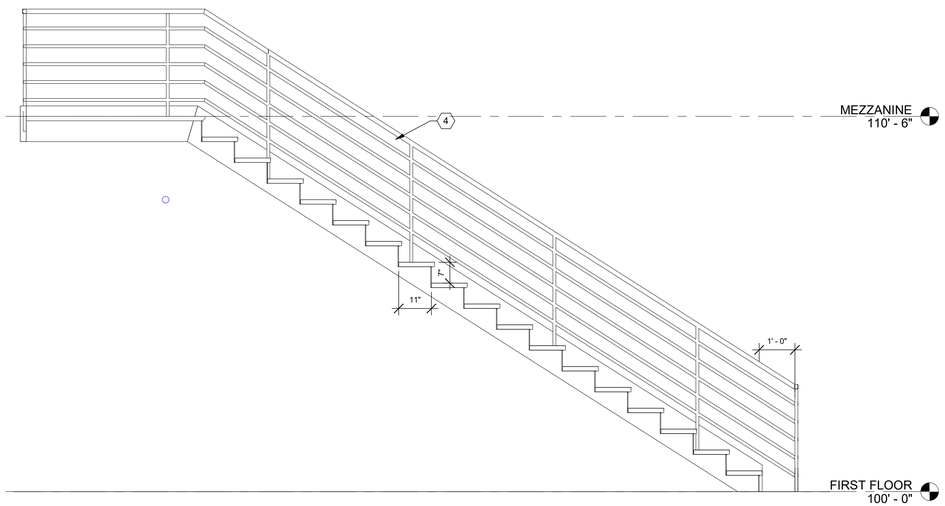
A. RADIUS/ GRIND/ EASE CORNERS AND SURFACES SMOOTH ON RAILS, POSTS, WELDS, AND CONNECTORS.

B. ALL RAILS AND STRUCTURE SHALL BE EPOXY PAINTED.

C. WHEN SIMILAR, REVERSE SECTIONS AND DETAILS.



F1 TYPICAL STAIR WALL SECTION
1/2" = 1'-0"



F4 TYPICAL STAIR SECTION - SUPPORT
1/2" = 1'-0"

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TITLE
VERTICAL CIRCULATION

SHEET NO.
A6.1

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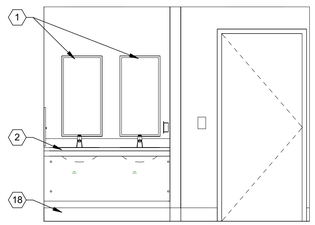
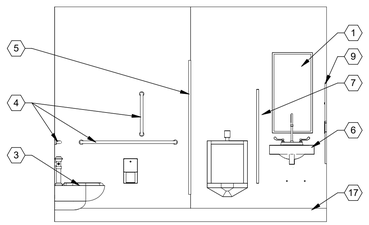
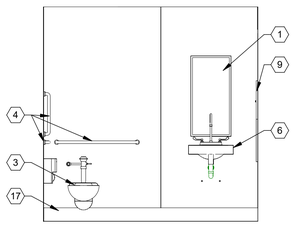


B1 WOMEN'S TLT ROOM ELEVATION
3/8" = 1'-0"

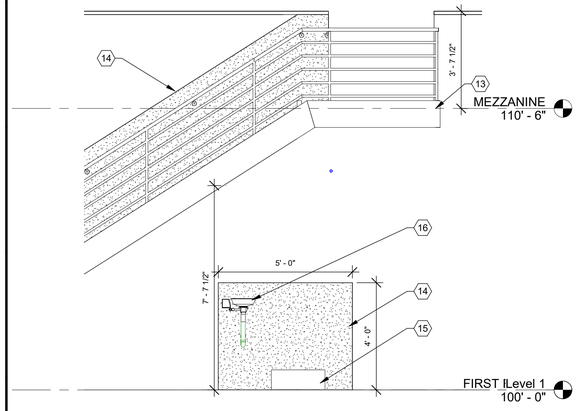


B2 MEN'S TLT ROOM ELEVATION
3/8" = 1'-0"

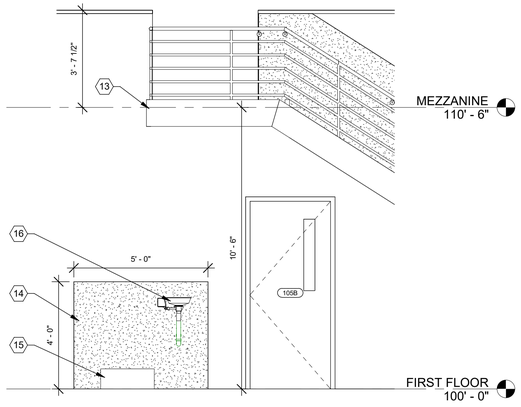


B4 UNISEX TLT ROOM ELEVATION
3/8" = 1'-0"

D1 BREAK ROOM ELEVATION
3/8" = 1'-0"



F1 WEST MOP SINK ELEVATION
3/8" = 1'-0"



F3 EAST MOP SINK ELEVATION
3/8" = 1'-0"

CONSTRUCTION NOTES

00 INDICATES CONSTRUCTION NOTE.

1. 24" x 30" MIRROR
2. ACCESSIBLE SLOPED BASE SINK WITH INTEGRAL BOWL. REFER TO A8.1 FOR DETAILS.
3. WALL HUNG TOLILET. REFER TO PLUMBING DRAWINGS.
4. ACCESSIBLE GRAB BARS. REFER TO A0.1 FOR HEIGHT AND CLEARANCES.
5. TOILET PARTITION.
6. WALL HUNG SINK. REFER TO PLUMBING DRAWINGS.
7. URINAL SCREEN.
8. SOAP DISPENSER.
9. SEMI RECESSSED PAPER TOWEL DISPENSER. C-FOLD.
10. PLASTIC LAMINATE SLOPED TOP.
11. UNDERMOUNT SINK. SEE PLUMBING DRAWINGS FOR DETAILS.
12. SOLID SURFACE COUNTERTOP.
13. STAIRS. REFER TO A6.1 FOR DETAILS.
14. VINYL WALL PROTECTION.
15. MOP SINK. REFER TO PLUMBING DRAWINGS.
16. EYE WASH STATION. REFER TO PLUMBING DRAWINGS.
17. 6" RUBBER BASE

GENERAL NOTES

A. FOR CASEWORK DETAILS REFER TO SHEET A8.1

B. ALL BASE AND WALL CABINETS (PL-1). U.N.O.

C. INSTALL SOLID WOOD (FIRE TREATED) BLOCKING IN WALLS BEHIND WALL-MOUNTED ITEMS INCLUDING CASEWORK, RAILINGS, TOILET ACCESSORIES.

D. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL RECEPTICALE LOCATIONS.

E. ALL COUNTERTOPS 25" DEEP U.N.O.

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TITLE
INTERIOR ELEVATIONS

SHEET NO.
A7.1

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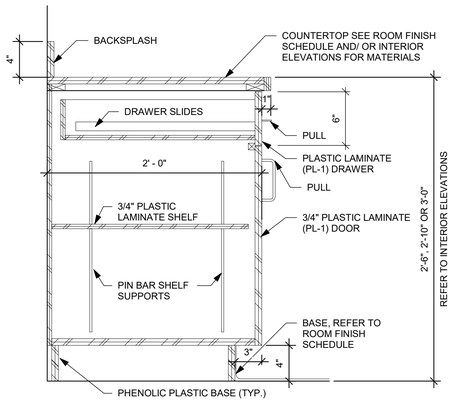
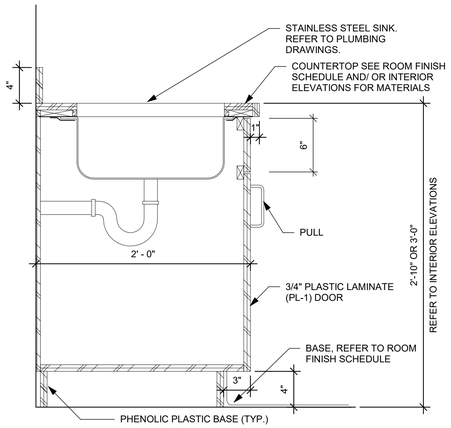
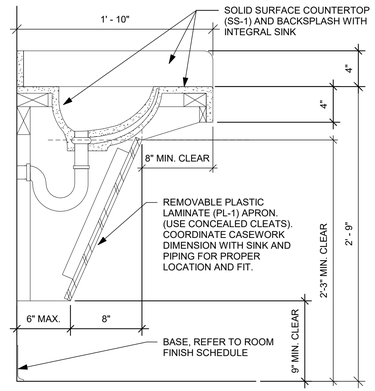


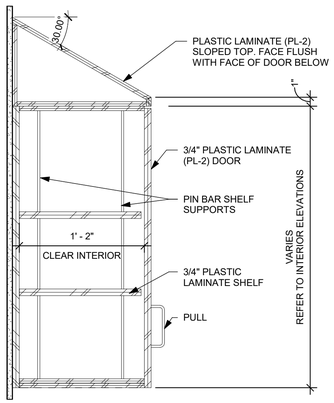
C1 TYP. BASE CABINET (B) DETAIL
1 1/2" = 1'-0"



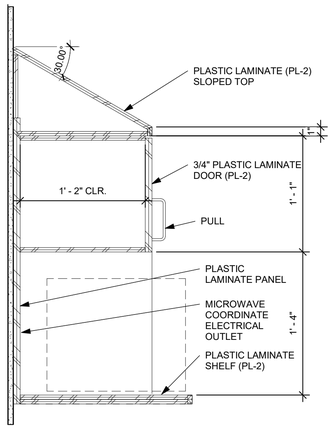
C2 TYP. SINK BASE CABINET (SB) DETAIL
1 1/2" = 1'-0"



C4 "ADA" SINK DETAIL
1 1/2" = 1'-0"



E1 WALL CABINET (WC) DETAIL
1 1/2" = 1'-0"



E2 MICROWAVE CABINET (WM) DETAIL
1 1/2" = 1'-0"

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TALAWANDA SCHOOL DISTRICT

MAINTENANCE AND BUS GARAGE

5302 University Park Blvd.
City of Oxford, Ohio 45056

ISSUE

NO.	DATE	DESCRIPTION
	04/08/2022	FOR BIDDING

DATE	04/08/2022
JOB NO.	3977.00
DRAWN	MLG
CHECKED	RFW

TITLE
CASEWORK DETAILS

SHEET NO.
A8.1

5/23/2022 2:16:32 PM

A. GENERAL:

1. THE STRUCTURAL ENGINEER OF RECORD IS RESPONSIBLE FOR THE ADEQUACY OF THE STRUCTURAL DESIGN AS SHOWN IN THE CONTRACT DOCUMENTS WHICH DEPICT THE STRUCTURE IN ITS COMPLETED FORM. THE STRUCTURE IS DESIGNED TO BE CAPABLE OF WITHSTANDING CODE PRESCRIBED DESIGN FORCES AND FULLY STABLE WHEN THE STRUCTURE IS FULLY CONSTRUCTED (I.E., FULLY BUILT). IT IS SOLEY THE RESPONSIBILITY OF OTHERS TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AS WELL AS TO PROVIDE FOR THE SAFETY OF THE STRUCTURE AND ITS COMPONENTS PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, SHEETING, TEMPORARY BRACING, GUYS, TIE DOWNS, OR DE-WATERING WHICH MIGHT BE NECESSARY. SUCH MATERIAL SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THE COMPLETION OF THE PROJECT.

2. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

3. ALL ELEVATIONS GIVEN ON THE STRUCTURAL DRAWINGS ARE BASED ON THE GROUND FLOOR DATUM OF 100'-0" (U.N.O.).

4. SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THE GENERAL STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, IT SHALL BE ASSUMED THAT THE STRICTEST PROVISION SHALL GOVERN AND A WRITTEN REQUEST FOR INFORMATION (RFI) SHALL BE SUBMITTED TO THE A/E. ADDITIONALLY, ALL ITEMS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, OR AMBIGUITIES IN THE PLANS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE A/E. CONTRACTOR SHALL SUBMIT RFI PRIOR TO COMMENCING WITH AFFECTED WORK AND SHALL AWAIT THE A/E'S APPROVAL-TO-PROCEED PRIOR TO PERFORMING WORK.

5. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH THE OTHER DRAWINGS RELEASED FOR THE PROJECT. CONTRACTOR TO COORDINATE, TO THE EXTENT POSSIBLE, SUCH INTERRELATIONSHIPS IN PROJECT SHOP DRAWINGS AND FIELD WORK.

6. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONAL DATA PROVIDED.

7. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATING REQUIREMENTS, FIRE-PROOFING METHODS, AND FIRE-PROOFING MATERIALS FOR STRUCTURAL MEMBERS.

B. DELEGATED DESIGN / DEFERRED SUBMITTALS:

1. DELEGATED DESIGN AND DEFERRED SUBMITTALS ARE ITEMS DESIGNED BY OTHERS. SHOP DRAWINGS AND CALCULATIONS SHALL BE GENERATED FOR THE DESIGN AND FABRICATION OF ALL DELEGATED DESIGN AND DEFERRED SUBMITTALS ITEMS INDICATED BELOW. THESE DRAWINGS AND CALCULATIONS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS TO BE CONSTRUCTED. FOR ITEMS INDICATED AS "DESIGNED BY THE CONTRACTOR", "DESIGNED BY SUPPLIER", "DESIGNED BY FABRICATOR" AND "DESIGNED BY INSTALLER", IF THESE ENTITIES ARE NOT PROVIDING THEIR OWN ENGINEERING WITH THEIR DESIGNS COMPLETED BY A PROFESSIONAL ENGINEER WHO WILL SEAL AND SIGN THEIR SUBMITTALS THEN THESE ENTITIES WILL INDEPENDENTLY CONTRACT A THIRD PARTY TO PROVIDE THIS SERVICE ON THEIR BEHALF. UNLESS SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, DELEGATED DESIGN ITEMS SHALL BE DESIGNED FOR ALL CODE DEFINED LOADS PLUS INDUSTRY STANDARD LOADS INCLUDING GRAVITY LOADS AND LATERAL LOADS DUE TO WIND AND SEISMIC. SEE THE RELEVANT SECTIONS OF THE GENERAL NOTES SHEETS FOR ADDITIONAL DESIGN REQUIREMENTS. CALCULATIONS SHALL INCLUDE REVIEW OF THE CAPACITIES OF ALL SUPPORTING STRUCTURAL ELEMENTS INCLUDING LOCAL STRESSES DUE TO THE CONNECTION METHODS SELECTED. ADDITIONALLY, THE CALCULATIONS AND DRAWINGS SHALL CLEARLY INDICATE THE MAGNITUDES AND DIRECTIONS OF THE LOADS IMPARTED ON THE SUPPORTING STRUCTURAL ELEMENTS. THE LOADING CRITERIA USED FOR DESIGN OF THE DELEGATED DESIGN SYSTEMS AND COMPONENTS SHALL BE CLEARLY INDICATED ON THE DRAWINGS AND CALCULATIONS, REGARDLESS OF WHETHER THEY ARE MANDATED BY THE ENGINEER OF RECORD BY WAY OF THE DRAWING AND SPECIFICATIONS OR DERIVED BY THE DESIGNER.

2. TEMPORARY SHORING:
FOUNDATIONS - SHEET PILING, PILES AND LAGGING REQUIRED FOR INSTALLATION OF FOUNDATIONS AND FOUNDATION WALLS SHALL BE DESIGNED BY THE CONTRACTOR. EXCAVATIONS REQUIRED FOR FOUNDATION AND FOUNDATION WALL CONSTRUCTION NEXT TO EXISTING BUILDINGS, NEAR PROPERTY LINES AND NEAR OR OVER UTILITIES MUST BE CONSIDERED BY THE CONTRACTOR IN EVALUATING SHORING REQUIREMENTS.

3. MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION COMPONENTS:
ROOF-TOP UNITS - DESIGN OF THE MECHANICAL UNIT CURB, CONNECTIONS OF THE UNIT TO THE CURB AND CONNECTIONS OF THE CURB TO STRUCTURE SHALL BE PROVIDED BY THE MECHANICAL UNIT CONTRACTOR. ADDITIONAL SUPPORT FRAMING FOR SUPPORTING THE GRAVITY AND LATERAL LOADS SHALL BE DESIGNED, ENGINEERED AND PROVIDED IF IT IS NOT INDICATED ON THE STRUCTURAL DRAWINGS. IF ADDITIONAL SUPPORT FRAMING IS PROVIDED, THE STRUCTURAL ADEQUACY SHALL BE VERIFIED FOR ALL ASCE 7-16 LOAD COMBINATIONS. SHOPS DRAWINGS AND CALCULATIONS PROVIDED BY THE MECHANICAL CONTRACTOR SHALL PROVIDE DETAILS INDICATING THESE CONNECTIONS. SUPPORT AND BRACING OF DUCTWORK, PIPING, CONDUIT AND CABLE TRAYS ASSOCIATED WITH MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION COMPONENTS SHALL BE PROVIDED BY THE CONTRACTOR INSTALLING THE COMPONENTS. FOR PROJECTS IN SEISMIC DESIGN CATEGORY C, D AND HIGHER, SEISMIC BRACING OF ALL MECHANICAL AND ELECTRICAL COMPONENTS REQUIRED BY THE ASCE 7-16 SHALL BE DESIGNED BY THE MECHANICAL CONTRACTOR AND CLEARLY INDICATED AND DETAILED ON THE SHOP DRAWINGS.

4. STAIRS:
ALL INTERIOR AND EXTERIOR STAIRS AND LANDINGS SHALL BE DESIGNED AND ENGINEERED BY THE STAIR FABRICATOR. CONNECTIONS TO STRUCTURE SHALL BE DESIGNED BY THE STAIR FABRICATOR AND CLEARLY INDICATED AND COMMUNICATED TO THE ENGINEER OF RECORD PRIOR TO FABRICATION.UNLESS INDICATED ON THE DRAWINGS, ADDITIONAL FOUNDATIONS REQUIRED FOR STAIR SUPPORT SHALL BE DESIGNED THE FABRICATOR. IF A FOUNDATION IS INDICATED ON THE STRUCTURAL DRAWINGS, THE ADEQUACY OF THE FOUNDATION SHALL BE VERIFIED FOR THE LOADS RESULTING FROM THE STAIR FABRICATORS DESIGN. THE STAIR FABRICATOR SHALL CLEARLY INDICATE THE LOCATION OF THESE FOUNDATIONS AND THEIR INTERRELATIONSHIP WITH FOUNDATION OF THE PRIMARY STRUCTURE.

5. SUPPORTS FOR INTERIOR FINISHES AND ACCOUTERMENTS:
INTERIOR PARTITIONS, SOFFITS AND STOREFRONT SYSTEMS NOT PART OF THE MAIN BUILDING SHELL SHALL BE DESIGNED BY THE SUPPLIER. SUPPORTS AND CONNECTION TO STRUCTURE REQUIRED FOR ARTWORK, SPECIALTY LIGHTING SYSTEMS, MONITORS, VIDEO EQUIPMENT AND PROJECTION SCREENS, TELEVISIONS AND ANY OTHER MISCELLANEOUS ITEMS SHALL BE PROVIDED BY THE SUPPLIER.

6. WINDOWS, STOREFRONTS, GLAZING AND CURTAIN WALL SYSTEMS:
ALL EXTERIOR AND INTERIOR GLAZING SYSTEMS AND THEIR CONNECTIONS TO STRUCTURE SHALL BE DESIGNED BY THE SUPPLIER. CONNECTION LOCATIONS SHALL BE CLEARLY INDICATED AND COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DETAILS.

DUE TO MOVEMENT OF THE STRUCTURAL FRAMING SYSTEMS FROM LATERAL WIND AND SEISMIC FORCES, THE GLAZING SYSTEM MUST BE DESIGNED TO ACCOMMODATE ½" HORIZONTAL STORY DRIFT IN EACH DIRECTION AT EACH STORY LEVEL. THE DESIGN STORY DRIFT IS THE DIFFERENCE IN LATERAL DISPLACEMENT OF THE TOP OF THE STORY UNDER CONSIDERATION RELATIVE TO THE BOTTOM OF THAT STORY (TOP OF THE STORY BELOW).

THE CONNECTIONS OF THE GLAZING SYSTEM TO STRUCTURE CAN BE DESIGNED FOR THIS RELATIVE HORIZONTAL MOVEMENT. THE CONNECTIONS SHALL BE DESIGNED FOR ½" HORIZONTAL (IN-PLANE) MOVEMENT IN ADDITION TO THE VERTICAL DEFLECTION REQUIREMENTS AS NOTED IN THE PLANS, DETAILS AND SPECIFICATIONS. IF THE CONNECTIONS ARE NOT DESIGNED FOR THE LATERAL MOVEMENT, THE GLAZING SYSTEM SHALL BE DESIGNED TO ACCOMMODATE ½" HORIZONTAL STORY DRIFT IN EACH DIRECTION AT EACH STORY LEVEL TO ACCOUNT FOR DIFFERENTIAL DISPLACEMENTS FROM LOAD REVERSALS IN THE STRUCTURAL SYSTEMS.

7. RAILING AND GUARDRAILS:
THE INTERIOR AND EXTERIOR RAILING AND GUARDRAILS SHALL BE DESIGN BY THE FABRICATOR. UNLESS SPECIFICALLY DETAILED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS, THE FABRICATOR SHALL DESIGN THE CONNECTIONS TO STRUCTURE AND VERIFY THE CAPACITY OF THE RECEIVING STRUCTURAL ELEMENTS FOR LOADS DUE TO THEIR CONNECTIONS.

C. SOIL / STRUCTURE INTERACTION & SOIL PREPARATION INFORMATION:

1. DO NOT BACKFILL WALLS UNTIL CONCRETE HAS ATTAINED FOURTEEN (14) DAY STRENGTH OR LATERAL BRACING IS PROVIDED.

2. FOUNDATIONS HAVE BEEN DESIGNED ASSUMING AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 POUNDS PER SQUARE FOOT (PSF). SOIL CONDITIONS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER OR AN APPOINTED REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETE PLACEMENT. THE GEOTECHNICAL ENGINEER (OR REPRESENTATIVE) SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL.

D. DESIGN LOADS:

1. CODE REFERENCES:

a. OHIO BUILDING CODE (OBC) - 2017
b. ASCE 7-16, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
c. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY, ACI 318 - 2017
d. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMMENTARIES, ACI 530 - 2016
e. COLD-FORMED STEEL DESIGN MANUAL, AISI - 2017
f. SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AISI - 2017
g. CATALOG OF STANDARD SPECIFICATIONS AND LOAD TABLES FOR STEEL JOISTS AND JOIST GIRDERS, STEEL JOIST INSTITUTE - 2017
h. STEEL DECK INSTITUTE FLOOR DECK DESIGN MANUAL, 1st EDITION - MARCH 2014
i. STEEL DECK INSTITUTE ROOF DECK DESIGN MANUAL, 1st EDITION - MAY 2013
j. STEEL DECK INSTITUTE DIAPHRAGM DESIGN MANUAL, 4th EDITION - SEPTEMBER 2015
k. STEEL DECK INSTITUTE MANUAL OF CONSTRUCTION WITH STEEL DECK - OCTOBER 2016
l. STEEL DECK INSTITUTE STANDARD PRACTICE DETAILS - MAY 2001
m. MANUAL OF STEEL CONSTRUCTION - AISC, 15th EDITION - 2017
n. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OF A490 BOLTS - 01 AUGUST 2014
o. STRUCTURAL WELDING CODE - STEEL, ANSI/AWS D1.1 - 2015
p. FEMA 405 - NEHRP RECOMMENDED PROVISIONS FOR SEISMIC REGULATIONS FOR NEW BLDGS AND OTHER STRUCTURES - 2015

DEAD LOADS:

ROOF DEAD LOAD	20 PSF (10 PSF TOP CHORD / 10 PSF BOTTOM CHORD)
FLOOR DEAD LOAD	20 PSF

LIVE LOADS:

ROOF LIVE LOAD:	
MINIMUM DESIGN ROOF LIVE LOAD	20 PSF
FLOOR LIVE LOAD:	
GARAGE SPACES	250 PSF
LIGHT STORAGE AREAS (MEZZANINE)	125 PSF

SNOW LOAD PARAMETERS:

a. GROUND SNOW LOAD, Pg	20 PSF
b. FLAT-ROOF SNOW LOAD, Pf	14 PSF
c. THERMAL FACTOR, Ct	1.0
d. EXPOSURE FACTOR, Ce	1.0
e. SNOW LOAD IMPORTANCE FACTOR, I	1.0

WIND DESIGN PARAMETERS:

a. BASIC WIND SPEED = 115 MPH
b. WIND EXPOSURE = EXPOSURE C
c. MAIN WIND DESIGN VELOCITY PRESSURES:

HEIGHT (FT.)	WINDWARD WALL	LEEWARD WALL	SIDEWALLS
0-15	22.0 PSF	-17.8 PSF / -10.3 PSF	-22.8 PSF
15-20	22.9 PSF	-17.8 PSF / -10.3 PSF	-22.8 PSF
20-25	23.7 PSF	-17.8 PSF / -10.3 PSF	-22.8 PSF

COMPONENT AND CLADDING - WALLS

AREA (SQ. FT.)	INERIOR ZONE	EDGE ZONE
10	30.8 PSF	37.9 PSF
100	26.6 PSF	29.4 PSF
200	25.4 PSF	27.0 PSF
500	23.7 PSF	23.7 PSF

SEISMIC DESIGN PARAMETERS:

a. OCCUPANCY CATEGORY	II
b. SITE CLASS	D
c. IMPORTANCE FACTOR	1.0
d. SEISMIC DESIGN CATEGORY:	B
e. RESPONSE MODIFICATION COEFFICIENT, R	1 ½
f. 0.2 SECOND MAPPED SPECTRAL ACCELERATION, Ss	16.0%
g. 1.0 SECOND MAPPED SPECTRAL ACCELERATION, S1	7.0%
h. 0.2 SECOND MAXIMUM SPECTRAL RESPONSE, Sms	25.6%
i. 1.0 SECOND MAXIMUM SPECTRAL RESPONSE, Sm1	16.8%
j. 0.2 SECOND DESIGN SPECTRAL RESPONSE, Sds	17.1%
k. 1.0 SECOND DESIGN SPECTRAL RESPONSE, Sd1	11.2%
l. SEISMIC RESPONSE COEFFICIENT, Cs	8.55%
m. DEFLECTION AMPLIFICATION FACTOR, Cd	1 ½

n. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
e. SEISMIC FORCE-RESISTING SYSTEM: TIMBER FRAMES
P. SEISMIC BASE SHEAR: V = Cs x WEIGHT

SCHEDULE OF SPECIAL INSPECTION SERVICES PER CHAPTER 17 OF INTERNATIONAL BUILDING CODE. SEE SECTION 1704.3 "CONTRACTOR RESPONSIBILITY"

E. REINFORCED CONCRETE:

1. MATERIALS:

a. SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS RELATED TO THE CONCRETE TO BE USED ON THIS PROJECT.

b. STRUCTURAL CONCRETE OVERVIEW - SEE SPECS FOR SPECIFIC INFO

LOCATION	f'c (PSI)
FOUNDATIONS AND GRADE BEAMS	3000
TYP. INTERIOR CONCRETE	4000
EXTERIOR CONCRETE EXPOSED TO DE-ICING	4500, 6% AIR
BACKFILL BELOW FOOTINGS, CONCRETE FILL IN STRUCTURES	1500

c. ALL DEFORMED REINFORCING BARS: FY = 60,000 P.S.I.

d. WELDED WIRE FABRIC: ASTM A185

2. FIELD MANUAL:

PROVIDE AT LEAST ONE COPY OF THE LATEST ACI FIELD REFERENCE MANUAL, SP-15, IN THE FIELD OFFICE AT ALL TIMES.

3. CONTINGENCIES:

PROVIDE LEAN CONCRETE UNDER FOUNDATIONS FOR ACCIDENTAL OVER-EXCAVATION, SOFT SPOTS AND TRENCHES.

4. FOOTINGS, PIERS, WALLS AND SLABS:

a. DOWELS IN FOOTINGS TO MATCH VERTICAL PIER OR WALL REINFORCING, U.N.O.

b. PROVIDE CORNER BARS AT WALL AND FOOTING CORNERS TO MATCH HORIZONTAL REINFORCING, MINIMUM LENGTH OF EACH LEG - 45 BAR DIAMETERS. (PLACE AS PER DETAILS U.N.O.).

c. PROVIDE 10 MIL. POLYETHYLENE VAPOR RETARDER AND 6" COMPACTED AGGREGATE SUBBASE MATERIAL ON TOP IN ACCORDANCE WITH THE TYPICAL SLAB DETAILS. UNDER ALL INTERIOR SLABS ON GRADE, VAPOR RETARDER SHALL BE CARRIED TO AND PLACED IN CONTACT W/RIGID INSULATION AT INTERIOR FACE OF EXTERIOR FOUNDATION WALLS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

5. CONSTRUCTION JOINTS:

CONSTRUCTION JOINTS PERMITTED ONLY WHERE SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER. ALL CONSTRUCTION JOINTS ARE TO BE KEYED.

6. CHAMFER:

PROVIDE 3/4" CHAMFER AT ALL EXPOSED EDGES OF CONCRETE, U.N.O.

7. MISCELLANEOUS:

a. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR OPENINGS AND COORDINATE WORK WITH THE CONSTRUCTION MANAGER AND OTHER TRADES. IF OPENING IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.

8. CONCRETE COVER:

U.N.O. DETAIL REINFORCING TO PROVIDE MINIMUM CONCRETE COVER AS FOLLOWS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3 IN.
CONCRETE EXPOSED TO EARTH OR WEATHER:	
No. 6 - No. No. 18 BARS	2 IN.
No. 5 BAR, W31 OR D31 WIRE, AND SMALLER	1½ IN.
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, AND JOISTS:	
No. 14 AND No. 18 BARS	1½ IN.
No. 11 BARS AND SMALLER	¾ IN.
BEAMS AND COLUMNS:	
PRIMARY REINFORCEMENT, STIRRUPS, TIES AND SPIRALS	1½ IN.
SURFACES EXPOSED TO LIQUIDS:	2 IN.
SLABS ON GRADE - 1/3 SLAB THICKNESS FROM TOP OF SLAB OR AS SHOWN ON DRAWINGS	

TENSION LAP SCHEDULE:
f'c = 3000 PSI TENSION LAP SPLICE LENGTHS (INCHES) - TOP BARS (NOTES 1 AND 2)

BAR COVER (INCHES)	3/4			1 1/2			3		
BAR SPACING (INCHES)	2 1/2	4	>=6	2 1/2	4	>=6	2 1/2	4	>=6
#4	29	29	29	29	29	29	29	29	29
#5	36	36	36	36	36	36	36	36	36
#6	43	43	43	43	43	43	43	43	43
#7	69	69	69	66	63	63	66	63	63
#8	-	-	-	86	72	72	86	72	72
#9	-	-	-	109	81	81	109	81	81

f'c = 4000 PSI TENSION LAP SPLICE LENGTHS (INCHES) - TOP BARS (NOTES 1 AND 2)

BAR COVER (INCHES)	3/4			1 1/2			3		
BAR SPACING (INCHES)	2 1/2	4	>=6	2 1/2	4	>=6	2 1/2	4	>=6
#4	25	25	25	25	25	25	25	25	25
#5	31	31	31	31	31	31	31	31	31
#6	37	37	37	37	37	37	37	37	37
#7	60	60	60	57	54	54	57	54	54
#8	-	-	-	74	62	62	74	62	62
#9	-	-	-	94	70	70	94	70	70

NOTES:
1. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
2. FOR BARS OTHER THAN TOP BARS, DIVIDE DEVELOPMENT LENGTH SPECIFIED IN TABLE BY 1.3.
3. INTERPOLATE FOR SPLICE LENGTHS AS NECESSARY
4. TENSION LAP SPLICES ARE BASED ON CLASS B. FOR CLASS A, DIVIDE BY 1.3. UNLESS NOTED OTHERWISE IN DRAWINGS, ASSUME ALL SPLICES AS CLASS B.
5. IF SPLICE DIMENSION IS INDICATED IN DRAWINGS, PROVIDE LARGER SPLICE LENGTH.
6. LAP SPLICE TABLES ARE BASED ON ACI 318-02, SECTIONS 12.2.2, 12.2.3 & 12.14.2
7. VALUES SHOWN IN TABLE MAY BE LOWERED WITH Ktr IF TRANSVERSE REINFORCEMENT EXISTS PER 12.2.3.

F. ROUGH CARPENTRY:

1. FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION" (NDS), AMERICAN FOREST & PAPER ASSOCIATION / AMERICAN WOOD COUNCIL.

2. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE WORK OF A CERTIFIED LUMBER GRADING AGENCY. MOISTURE CONTENT SHALL NOT EXCEED 19%. ALL SAWN LUMBER SHALL BE SPRUCE-PINE-FIR OR SOUTHERN PINE.

3. SAWN LUMBER:
SMALLER DIMENSION <4x NOMINAL: NO. 2 & BETTER
SMALLER DIMENSION >4x NOMINAL: NO. 1 & BETTER

4. WOOD STRUCTURAL PANELS: ALL PANELS SHALL CONFORM TO NER-108 AND BEAR THE STAMP OF THE APA OR AN APPROVED GRADING AGENCY WITH THE FOLLOWING SPAN RATINGS:
WALLS: ½" NOMINAL THICKNESS (15/32" MIN.) - 32/16, SHEATHING
NAILS: 8d COMMON @ 6" O.C. - EDGES (UNO)
8d COMMON @ 12" O.C. - FIELD (UNO)
ROOF: ⅜" NOMINAL THICKNESS (19/32" MIN.) - 40/20, SHEATHING
NAILS: 8d COMMON @ 6" O.C. - EDGES (UNO)
8d COMMON @ 12" O.C. - FIELD (UNO)
FLOOR: ¾" NOMINAL THICKNESS (23/32" MIN.) - 24" O.C. T&G STURD-I-FLOOR OR 48/24, T&G, SHEATHING
GLUE & NAIL: 10d COMMON @ 6" O.C. - EDGES (UNO)
10d COMMON @ 10" O.C. - FIELD (UNO)
PROVIDE BLOCKING AT WALL PANEL EDGES AND AS DESIGNATED ON THESE DRAWINGS.

5. FRAMING ANCHORS: "SIMPSON" OR APPROVED EQUAL. INSTALL AS PER MANUFACTURER'S RECOMMENDATIONS.

6. FOR NAILING NOT SHOWN ON THESE DRAWINGS, USE IBC NAILING SCHEDULE, TABLE 2304.9.1.

7. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, DUCTS, ETC., UNLESS SPECIFICALLY NOTED, DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

8. ALL EXPOSED MEMBERS OR MEMBERS IN CONTACT WITH CONCRETE SHALL BE PRESERVATIVE-TREATED WOOD STAMPED BY AN APPROVED AGENCY.

9. ALL STEEL, FASTENERS, AND CONNECTORS IN CONTACT WITH WOOD THAT HAS ACQ FORMULATION PRESERVATIVE TREATMENT WITHOUT AMMONIA SHALL BE GALVANIZED (G185) PER ASTM A653 AND ASTM A153 OR TYPE 316L STAINLESS STEEL. ALL STEEL, FASTENERS, AND CONNECTORS IN CONTACT WITH WOOD THAT HAS ACQ FORMULATION PRESERVATIVE TREATMENT WITH AMMONIA SHALL BE TYPE 316L STAINLESS STEEL.

10. ALL NON-BEARING WALLS BELOW FRAMING SHALL BE SLIP CONNECTED TO ALLOW FOR POTENTIAL FRAMING DEFLECTION AND UPLIFT.

G. PROPRIETARY PRODUCTS:

1. ENGINEERED WOOD MATERIALS SHALL CONFORM TO THE FOLLOWING:

a. LAMINATED VENEER LUMBER (LVL) - Fb = 2600 PSI, E = 1.9 x 10^6 PSI, Fv = 285 PSI MINIMUM. PARALLEL STRAND LUMBER (PSL) MAY BE SUBSTITUTED FOR LVL PRODUCTS WITH EQUIVALENT SIZES AS LONG AS ABOVE MINIMUM PROPERTIES ARE MAINTAINED.

b. LAMINATED STRAND LUMBER (LSL):
BEAM, STUD, JOIST (1.55E): Fb =2325 PSI, E = 1.55 x 10^6 PSI, Fv = 310 PSI MINIMUM. LVL OR PSL MAY NOT BE SUBSTITUTED FOR LSL PRODUCTS, UNLESS APPROVED IN WRITING BY THE ENGINEER.
RIM BOARD (1.3E): Fb = 1700 PSI, E = 1.3 x 10^6 PSI, Fv = 400 PSI MINIMUM. LVL OR PSL MAY NOT BE SUBSTITUTED FOR LSL PRODUCTS, UNLESS APPROVED IN WRITING BY THE ENGINEER.

2. MULTIPLE PLIES OF MATERIAL MAY BE USED TO ACHIEVE THE TOTAL WIDTH INDICATED ON DRAWINGS. PLIES MUST BE JOINED TO FORM A SINGLE MEMBER AS REQUIRED BY THE MANUFACTURER OR AS DETAILED.

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JONATHAN MICHAEL REIS
PE-77926
REGISTERED PROFESSIONAL ENGINEER

TALAWANDA SCHOOL DISTRICT

MAINTENANCE AND BUS GARAGE

5301 University Park Blvd.
City of Oxford, Ohio 45056

ISSUE

NO.	DATE	DESCRIPTION
	4/08/2022	PERMIT AND CONSTRUCTION

DATE	4/08/2022
JOB NO.	2021145
DRAWN	JMR
CHECKED	JMR

TITLE
GENERAL NOTES

SHEET NO.
S0.1

TABLE 1705.3 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	--	X	ACI 318: 3.5, 7.1-7.7	1913.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B.	--	--	AWS D1.4 ACI 318: 3.5.2	--
3. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED.	X	--	--	1911.5
4. VERIFYING USE OF REQUIRED DESIGN MIX.	--	X	ACI 318: Ch. 4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.10
6. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
7. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	--	X	ACI 318: 5.11, 5.13	1913.9
8. INSPECTION OF PRESTRESSED CONCRETE:				
A. APPLICATION OF PRESTRESSING FORCES.	X	--	ACI 318: 18.20	--
B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X	--	ACI 318: 18.18.4	--
9. ERECTION OF PRECAST CONCRETE MEMBERS.	--	X	ACI 318: Ch. 16	--
10. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318: 6.2	--
11. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 6.1.1	--

TABLE 1705.6 REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	--	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	--	X
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	--	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	--
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	--	X

SPECIAL INSPECTION PROGRAM NOTES:

1. PERIODIC INSPECTION FREQUENCY DETERMINED BY THE DESIGN PROFESSIONAL, UNLESS NEEDED OTHERWISE.
2. CONTINUOUS OR PERIODIC SELECTION TO BE MADE BY THE DESIGN PROFESSIONAL BASED ON BUILDING CATEGORY AND DESIGN METHODOLOGY.

SPECIAL INSPECTION/TESTING PROGRAM

1. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION STIPULATED.
2. IF NECESSARY, THE CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, AND TESTING AGENCY TO REVIEW THE SPECIAL INSPECTION REQUIREMENTS.
3. DUTIES OF THE SPECIAL INSPECTOR INCLUDE, BUT ARE NOT LIMITED TO:
   A. ACKNOWLEDGE AND CONFORM TO THE SPECIAL INSPECTION REQUIREMENTS OF OBC.
   B. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED PERMIT PLANS AND SPECIFICATIONS. ALL DISCREPANCIES SHALL BE BROUGHT TO IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ATTENTION OF THE ARCHITECT, THE ENGINEER AND THE BUILDING OFFICIAL.
   C. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE CONTRACTOR, THE ARCHITECT, THE ENGINEER AND THE BUILDING OFFICIAL AS A MINIMUM. THE REPORTS SHALL BE DISTRIBUTED IN A TIMELY MANNER.
   D. INSPECTION FOR PREFABRICATED COMPONENTS SHALL BE THE SAME AS IF THE MATERIAL WAS INSTALLED ON SITE. CONTINUOUS INSPECTION SHALL NOT BE REQUIRED DURING THE PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.
   E. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING INSPECTION WAS INSPECTED AND WHETHER THE WORK WAS COMPLETED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATION AND IN CONFORMANCE WITH ANY APPLICABLE WORKMANSHIP PROVISIONS OF THE APPLICABLE CODE.
4. SPECIAL INSPECTION AND TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.

STRUCTURAL OBSERVATION:

1. STRUCTURAL OBSERVATION CONFORMING TO THE 2017 OBC SECTION 1710 WILL BE PERFORMED BY AN *L2 ENGINEERING* REPRESENTATIVE IN ORDER TO REVIEW THE CONTRACTOR'S WORK FOR GENERAL CONFORMANCE WITH THE DESIGN DOCUMENTS.
2. THE CONTRACTOR SHALL PROVIDE *L2 ENGINEERING* WITH A MINIMUM OF 3 DAYS NOTICE TO PROPERLY SCHEDULE THE OBSERVATION VISIT.
3. IF ADDITIONAL ENGINEERING TIME IS REQUIRED DUE TO INCOMPLETE OR UNACCEPTABLE WORK BY THE CONTRACTOR, *L2 ENGINEERING* SHALL BE REIMBURSED FOR ALL ASSOCIATED COSTS.
4. STRUCTURAL OBSERVATION FOR THIS PROJECT WILL OCCUR AT THE FOLLOWING STAGES:
   a. DURING CONCRETE PLACEMENT
5. STRUCTURAL OBSERVATION OCCURS INDEPENDENT OF THE SPECIAL INSPECTION PROGRAM.

A
A/E - ARCHITECT/ENGINEER
AB - ANCHOR BOLT/ROD
AFF - ABOVE FINISH FLOOR
ARCH. - ARCHITECT (URAL)
B
BFF - BELOW FINISH FLOOR
BLK - BLOCK (ING)
BM - BEAM
BRG - BEARING
BU - BUILT UP
BI - BOTTOM OF
C
CAM (C=) - CAMBER
CIP - CAST-IN-PLACE
CJ - CONTROL JOINT
CL - CENTERLINE
CLR - CLEAR
CMU - CONCRETE MASONRY UNIT
COL - COLUMN
CONC - CONCRETE
CONN - CONNECT (ION)
CONT - CONTINUOUS
CONTR - CONTRACT (OR)
CTR - CENTER
CU - CUBIC
D
D - DEEP, DEPTH
DBL - DOUBLE
DEMO - DEMOLITION, DEMOLISH
DET - DETAIL
DIA - DIAMETER
DIAG - DIAGONAL, DIAGRAM
DIM - DIMENSION
DIR - DIRECTION
DL - DEAD LOAD
DR - DRAIN
DWG - DRAWING
E
EA - EACH
EF - EACH FACE
EJ - EXPANSION JOINT
EL, ELEV - ELEVATION
EMBED - EMBEDMENT
EQ - EQUAL
EST - ESTIMATE
EW - EACH WAY
EQUIP - EQUIPMENT
EXP - EXPANSION
EXT - EXTERIOR
F
FD - FLOOR DRAIN
FF - FINISHED FLOOR
FIN - FINISH (ED)
FLG - FLANGE
FLR - FLOOR (ING)
FOC - FACE OF CONCRETE
FOM - FACE OF MASONRY
FOS - FACE OF STUD
FOW - FACE OF WALL
FS - FAR SIDE
FT - FOOT, FEET
FTG - FOOTING
FRMG - FRAMING
FUT - FUTURE
G
GA - GAGE, GAUGE
GALV - GALVANIZED
GC - GENERAL CONTRACTOR
GEN - GENERAL
GL - GRADE LINE
GLU-LAM - GLUE-LAMINATED BEAM
GR BM - GRADE BEAM
GYP BD - GYPSUM BOARD
H
H - HIGH
HAS - HEADED ANCHOR STUD
HC - HOLLOW CORE
HDR - HEADER
HGR - HANGER
HORIZ - HORIZONTAL
HR - HANDRAIL
HS - HIGH STRENGTH
HSB - HIGH STRENGTH BOLT
HSS - HOLLOW STRUCTURAL SHAPE
HT - HEIGHT
I
ID - INSIDE DIAMETER
INCL - INCLUDING
INT - INTERIOR
J
JST - JOIST
JT - JOINT
K
K - KIPS (1000 lbs.)
KCJ - KEYED CONSTRUCTION JOINT
KLF - KIPS PER LINEAR FOOT
KSF - KIPS PER SQUARE FOOT
KSI - KIPS PER SQUARE INCH
L
L - ANGLE
LL - DOUBLE ANGLE
LBS - POUNDS
LG - LONG
LL - LIVE LOAD
LLH - LONG LEG HORIZONTAL
LLV - LONG LEG VERTICAL
LOC - LOCATION
LONG - LONGITUDINAL
LSL - LAMINATED STRAND LUMBER
LT WT - LIGHT WEIGHT
LVL - LAMINATED VENEER LUMBER
M
MATL - MATERIAL
MAX - MAXIMUM
MBR - MEMBER
MC - MISCELLANEOUS CHANNEL
MECH - MECHANICAL
MEZZ - MEZZANINE
MFD - MANUFACTURED
MFR - MANUFACTURER
MIN - MINIMUM
MISC - MISCELLANEOUS
MTL - METAL
N
NA - NOT APPLICABLE
NIC - NOT IN CONTRACT
NO - NUMBER
NOM - NOMINAL
NS - NEAR SIDE
NTS - NOT TO SCALE
O
OC - ON CENTER
OD - OUTSIDE DIAMETER
OH DR - OVERHEAD DOOR
OPNG - OPENING
OPP - OPPOSITE
OSB - ORIENTED STRAND BOARD
OVS - OVERSIZED
P
PAF - POWDER ACTUATED FASTENER
PCF - POUNDS PER CUBIC FOOT
PL - PLATE
PLF - POUNDS PER LINEAR FOOT
PLYWD - PLYWOOD
PNL - PANEL
PR - PAIR, PIPE RAIL
PRCST - PRECAST
PREFAB - PREFABRICATED
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PT - POST TENSION (ED), PRESSURE TREATED
R
R - RADIUS
RCP - REINFORCED CONCRETE PIPE
RD - ROOF DRAIN
REF - REFERENCE
REINF - REINFORCING
REQ'D - REQUIRED
REV - REVISION
RO - ROUGH OPENING
S
SCHED - SCHEDULE
SECT - SECTION
SHT - SHEET
SHTHG - SHEATHING
SIM - SIMILAR
SL - SNOW LOAD
SLV - SLEEVE
SOG - SLAB-ON-GRADE
SPEC - SPECIFICATION
SQ - SQUARE
SSL - SHORT SLOTTED
SST - STAINLESS STEEL
STD - STANDARD
STIF - STIFFENER
STL - STEEL
SUSP - SUSPENDED
SW - SHEAR WALL
SYMM - SYMMETRICAL
T
T&B - TOP AND BOTTOM
T&G - TONGUE AND GROOVE
TBD - TO BE DETERMINED
THK - THICK (NESS)
TL - TOTAL LOAD
TO - TOP OF
TOB - TOP OF BEAM
TOC - TOP OF CONCRETE
TOCW - TOP OF CONCRETE WALL
TOF - TOP OF FOOTING
TOM - TOP OF MASONRY
TOS - TOP OF STEEL
TOW - TOP OF WALL
TRANS - TRANSVERSE
TYP - TYPICAL
U
UNO - UNLESS NOTED OTHERWISE
V
V - SHEAR
VERT - VERTICAL
VIF - VERIFY IN FIELD
VR - VAPOR RETARDER
VRFY - VERIFY
W
W - WIDTH
W/ - WITH
W/O - WITHOUT
WD - WOOD
WF - WIDE FLANGE
WL - WIND LOAD
WLD - WELD (ED)
WP - WATERPROOFING, WORK POINT
WS - WATERSTOP
WT - WEIGHT
WWF - WELDED WIRE FABRIC
Y
YD - YARD

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ISSUE

NO.	DATE	DESCRIPTION
	4/08/2022	PERMIT AND CONSTRUCTION

DATE	4/08/2022
JOB NO.	2021145
DRAWN	JMR
CHECKED	JMR

TITLE
SPECIAL INSPECTIONS

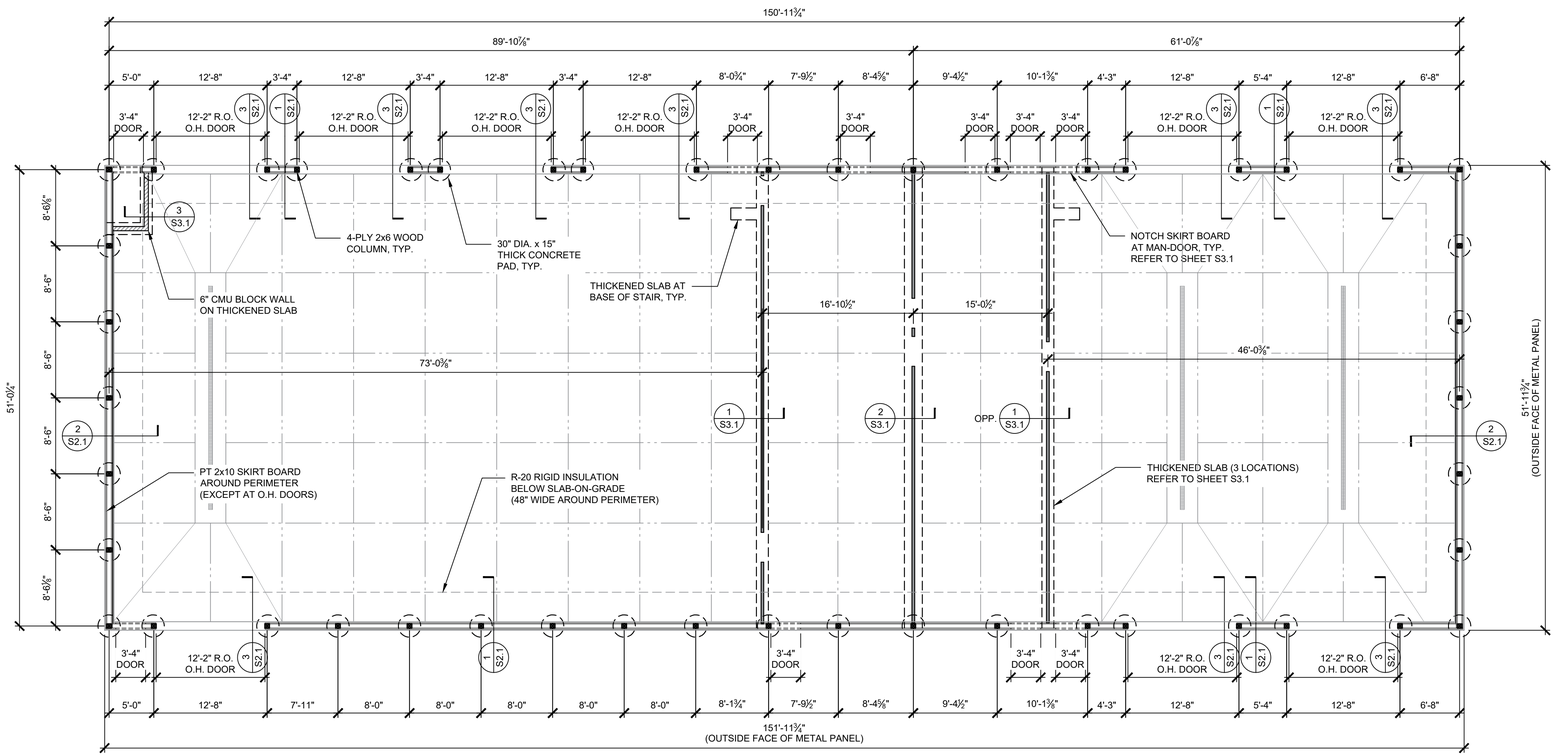
SHEET NO.
S0.2

FOUNDATION PLAN

SCALE : ⅛" = 1'-0"

FOUNDATION NOTES:

1. AT MAINTENANCE & TRANSPORTATION BAYS, PROVIDE 6" THICK CONCRETE SLAB-ON-GRADE w/ 6x6 - W2.9 x W2.9 WWF OVER 6" MIN. COMPACTED GRANULAR BASE & 10 MIL VAPOR BARRIER. AT OFFICE SPACES, PROVIDE 4" THICK CONCRETE SLAB-ON-GRADE w/ 6x6 - W1.4 x W1.4 WWF OVER 4" MIN. COMPACTED GRANULAR BASE & 6 MIL VAPOR BARRIER. T/SLAB = 100'-0".
2. —— · —— DENOTES APPROXIMATE LOCATION OF CONTROL JOINT.
3. B/FOOTING = 95'-0" U.N.O.
4. REFER TO ARCH. DWG's FOR EXACT LOCATIONS OF MAN-DOORS.
5. AT TRENCH DRAINS, THICKEN SLAB AS NEEDED TO MAINTAIN 6" OF CONCRETE COVER AROUND DRAIN. INSTALL #4 x 8" LONG DOWELS AT 24" O.C. AROUND PERIMETER OF TRENCH DRAIN CONSTRUCTION JOINT (4" EPOXY EMBEDMENT).



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TITLE
FOUNDATION PLAN

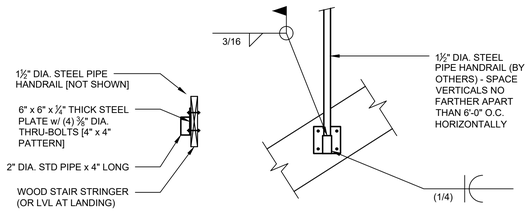
SHEET NO.
S1.0

MEZZANINE FRAMING PLAN

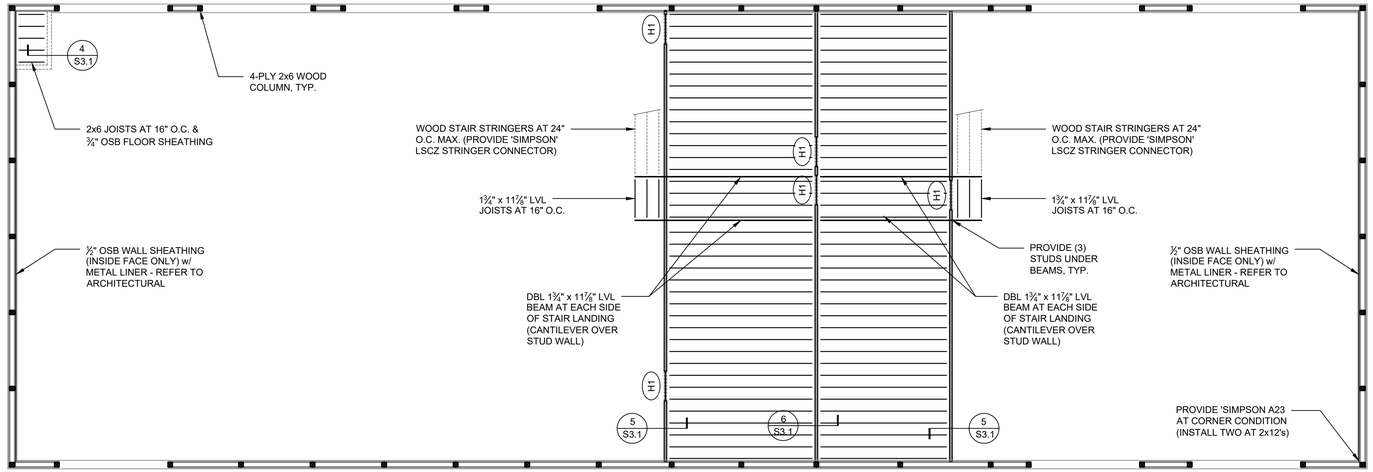
SCALE : ⅛" = 1'-0"

FRAMING NOTES:

1. TYPICAL MEZZANINE FRAMING CONSISTS OF 11⅞" DEEP TJI-560 FLOOR JOISTS AT 16" O.C. T/FLOOR = 109'-6".
2. PROVIDE ¾" OSB FLOOR SHEATHING (GLUED & SCREWED).
3. SEE SHEET S3.1 FOR TYPICAL DOOR FRAMING, WINDOW / LOUVER FRAMING, AND CANOPY FRAMING. REFER TO ARCH. DWG's FOR LOCATIONS.
4. PROVIDE DEFLECTION TRACKS AT THE TOP OF ALL NON-LOAD BEARING INTERIOR LIGHT GAUGE STUD WALLS, TYP.



1 / S1.1 TYPICAL DETAIL - HANDRAIL ATTACHMENT AT STAIR/LANDING
SCALE: ¾" = 1'-0"



LIGHT GAUGE HEADER SCHEDULE:

H1	(2) 600S162-54 (50 KSI) STUDS & (2) 362T150-54 (50 KSI) TRACKS

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MEZZANINE FRAMING PLAN

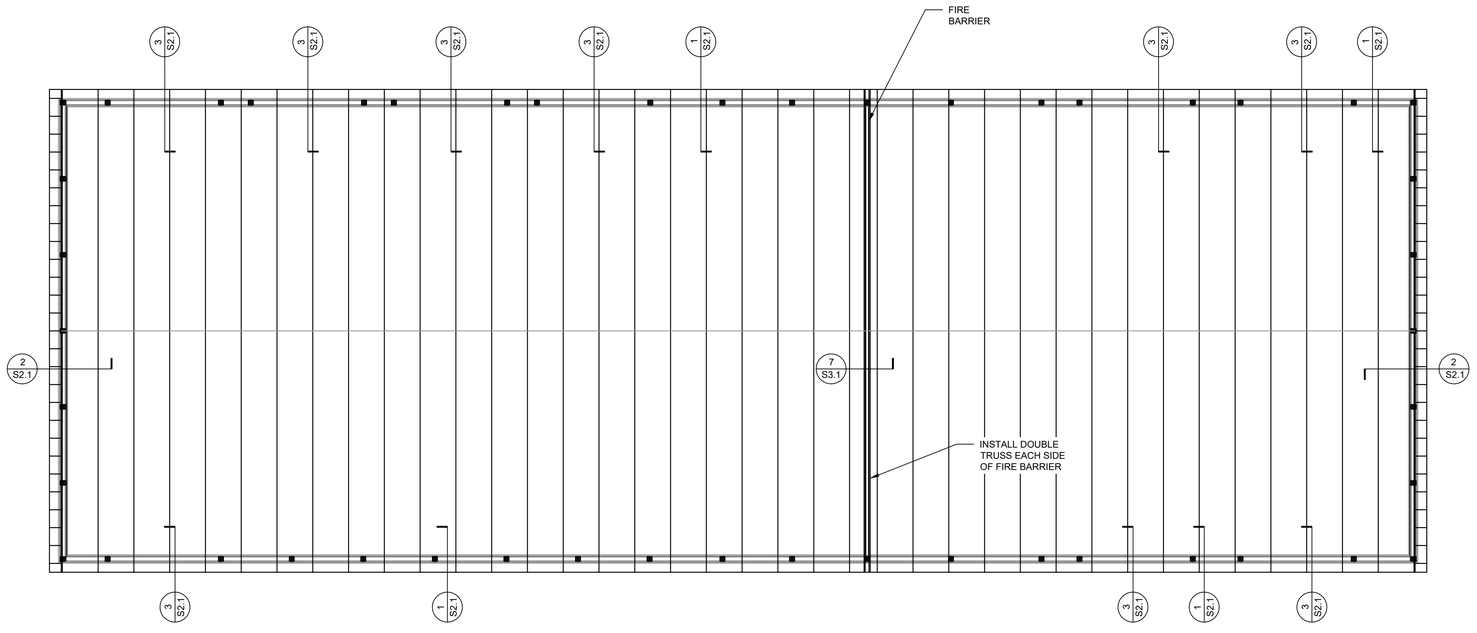
SHEET NO.
S1.1

ROOF FRAMING PLAN

SCALE : ⅛" = 1'-0"

FRAMING NOTES:

1. DESIGN ROOF TRUSSES FOR 20 PSF DEAD LOAD (10 PSF - TOP CHORD & 10 PSF - BOTTOM CHORD) AND 25 PSF LIVE LOAD (TOP CHORD ONLY). LIMIT TOTAL DEFLECTION TO SPAN / 240. SPACE TRUSSES NO FARTHER APART THAN 4'-0" O.C.
2. TRUSS BEARING ELEVATION = 118'-0" U.N.O.



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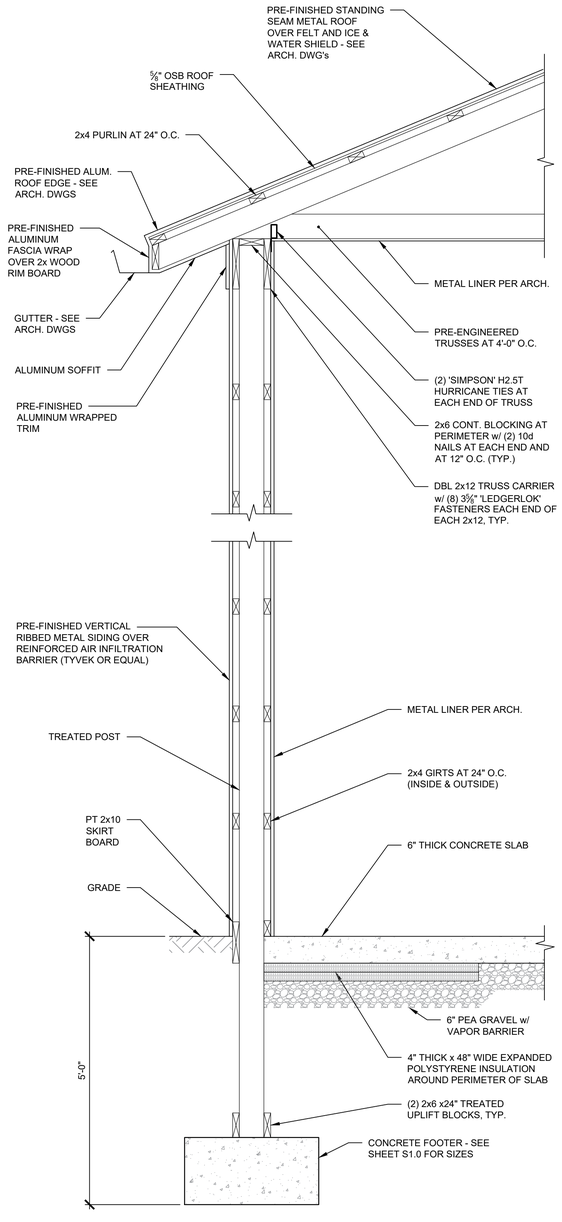
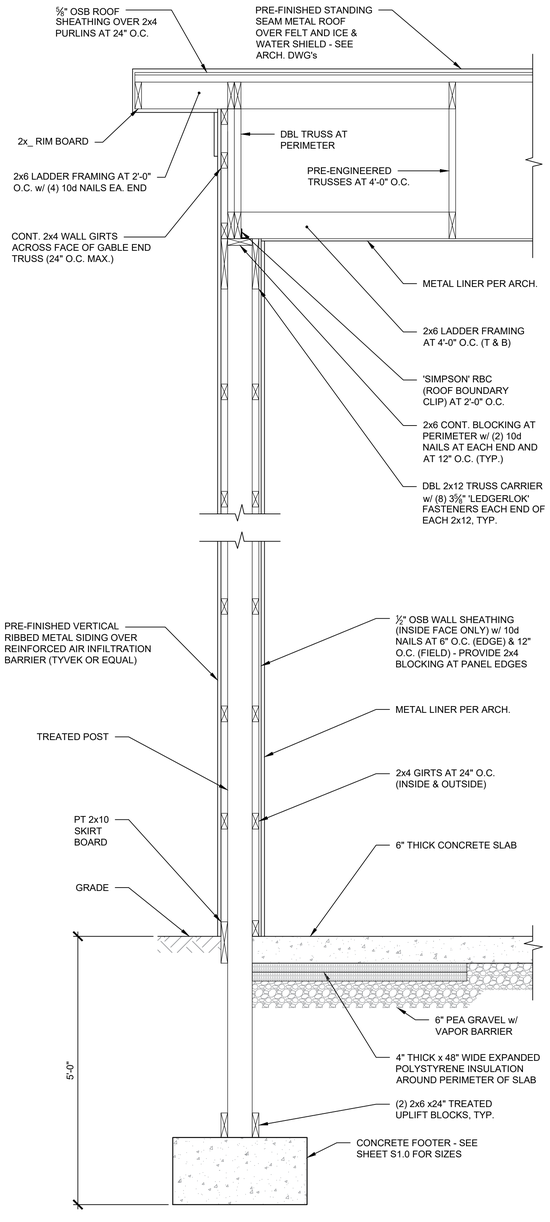
ROOF FRAMING PLAN

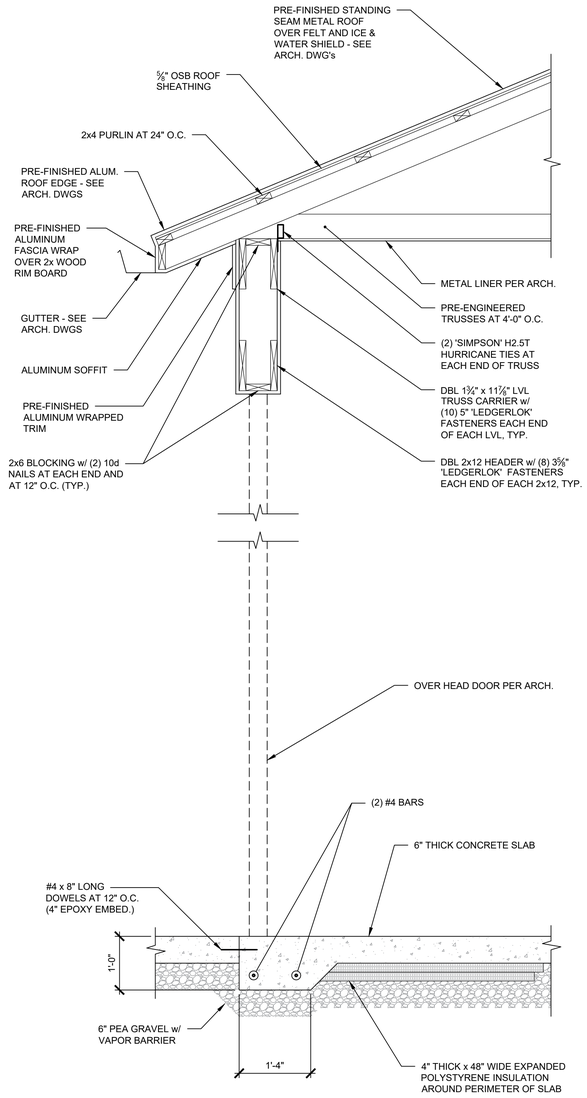
SHEET NO.
S1.2



1 S2.1 WALL SECTION
SCALE: ¾" = 1'-0"



2 S2.1 WALL SECTION
SCALE: ¾" = 1'-0"



3 S2.1 WALL SECTION
SCALE: ¾" = 1'-0"

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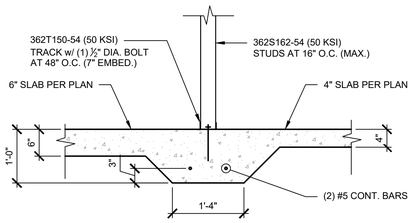
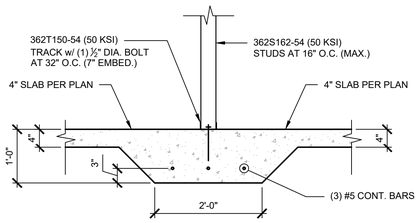
TITLE
WALL SECTIONS

SHEET NO.
S2.1



1 S3.1 SECTION
SCALE: ¾" = 1'-0"



2 S3.1 SECTION
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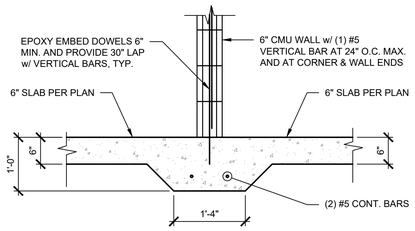
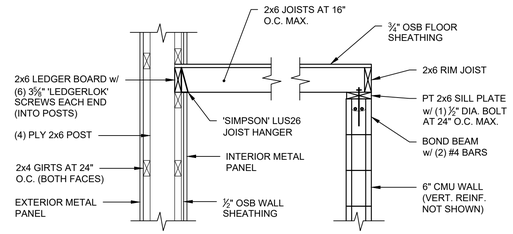


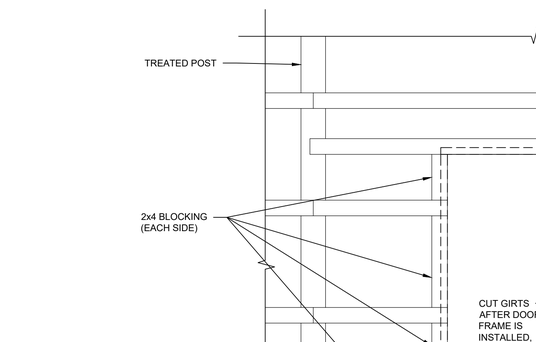
3 S3.1 SECTION
SCALE: ¾" = 1'-0"



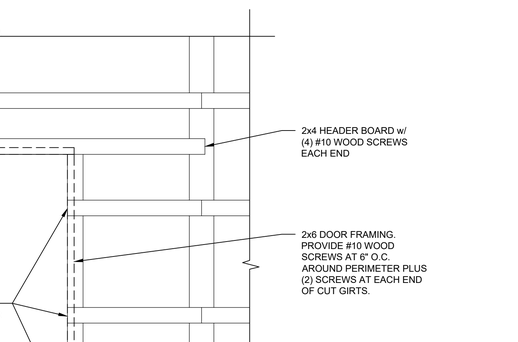
4 S3.1 SECTION
SCALE: ¾" = 1'-0"

5 S3.1 SECTION
SCALE: ¾" = 1'-0"

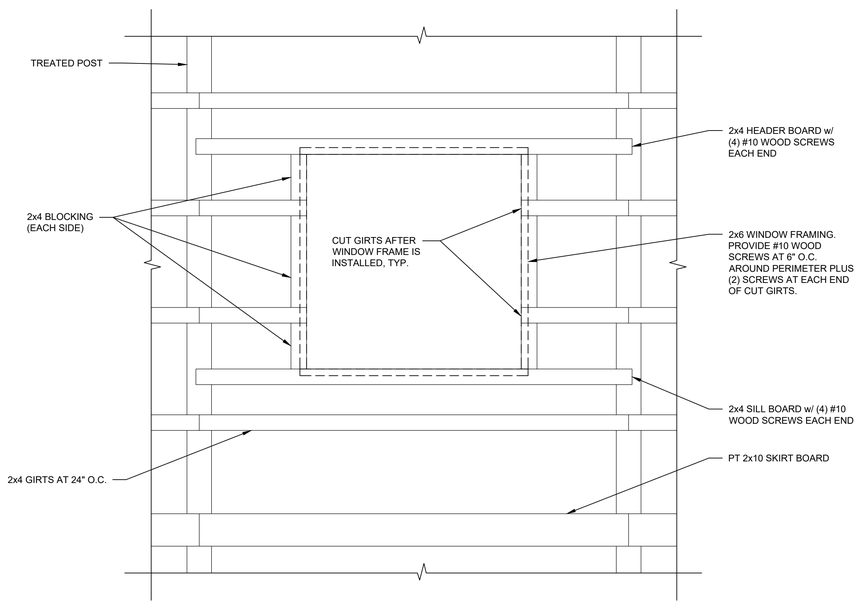
6 S3.1 SECTION
SCALE: ¾" = 1'-0"



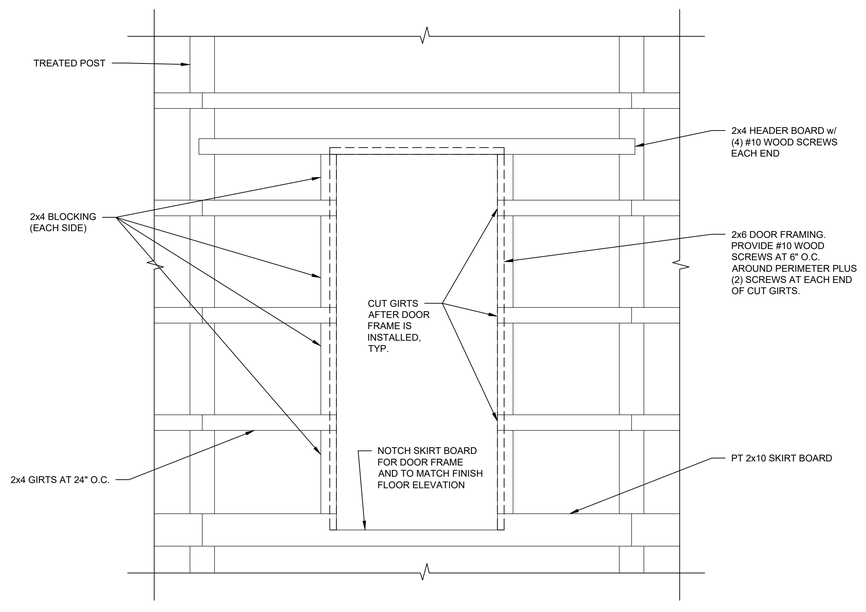
7 S3.1 SECTION
SCALE: ¾" = 1'-0"



8 S3.1 CANOPY DETAIL
SCALE: ¾" = 1'-0"



9 S3.1 ELEVATION - TYPICAL WINDOW FRAMING
SCALE: ¾" = 1'-0"



10 S3.1 ELEVATION - TYPICAL DOOR FRAMING
SCALE: ¾" = 1'-0"

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TITLE
STRUCTURAL DETAILS

SHEET NO.
S3.1

PLUMBING SPECIFICATIONS

A. GENERAL CONDITIONS

1. WORK UNDER THIS CONTRACT SHALL CONSIST OF, BUT NOT LIMITED TO; FURNISHINGS, INSTALLATION, TESTING, AND WARRANTY OF PLUMBING AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
2. PLUMBING SHALL BE INSTALLED BY A LICENSED CONTRACTOR. WARRANTY SHALL BE FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
3. THE WORD "PROVIDE" SHALL BE DEFINED TO MEAN "FURNISH AND INSTALL, COMPLETE, AND OPERATING."
4. WHERE THE WORD "EQUAL TO" IS USED THE CONTRACTOR SHALL HAVE THE OPTION OF SELECTING BETWEEN ON OF THE ADDITIONAL NAMES OR MANUFACTURERS LISTED OR MAY SUBMIT PRODUCTS SUBJECT TO ENGINEER'S APPROVAL.
5. ALL PERMIT AND INSPECTION FEES ARE TO BE INCLUDED IN CONTRACTOR'S SCOPE.
6. PROVIDE THE OWNER CERTIFICATES OF APPROVAL FROM INSPECTION AGENCIES.
7. WORK MUST CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS; ORDINANCES; AND REGULATIONS.
8. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL FEES AND PERMITS ASSOCIATED WITH HIS PORTION OF THE WORK.
9. PLUMBING CONTRACTOR SHALL COORDINATE ALL ASPECTS OF WORK WITH OTHER TRADES PRIOR TO AND DURING CONSTRUCTION/INSTALLATION.
10. WORK PLANS TO BE CONSIDERED AS DIAGRAMMATIC AND ALONG WITH THE SPECIFICATIONS, REFLECT A MINIMUM ACCEPTABLE STANDARD. ALL WORK SHALL CONFORM TO THE OHIO PLUMBING CODE, AND THE AMERICANS WITH DISABILITIES ACT GUIDELINES.
11. UNLESS OTHERWISE NOTED, ALL FLOOR DRAINS SHALL BE THREE (3") INCH IN SIZE.
12. WHEN A CONFLICT BETWEEN PLANS AND SPECIFICATIONS OR NOTES OCCURS. THE ENGINEER SHALL DECIDE WHICH GOVERNS. GENERALLY, THE MORE RESTRICTIVE, MORE SPECIFIC, OR STRICTER PROVISION SHALL GOVERN. IF ANY DISCREPANCIES ARE DISCOVERED ON THE PLANS OR BETWEEN THE PLANS AND THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER AND OBTAIN CLARIFICATION OF THE INTENT FROM THE ENGINEER PRIOR TO CONSTRUCTION OR INSTALLATION OF PROPOSED IMPROVEMENTS.
13. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE HEIGHTS AND ACCESSIBILITY REQUIREMENTS.

PIPING NOTES

1. FIXTURES TO BE COMPLETE WITH SUPPLY PIPES WITH STOPS. SUPPLIES AND STOPS TO BE CHROME PLATE W/SET SCREW ESCUTCHEONS, WHERE EXPOSED TO VIEW.
2. ACCESSIBLE SHUTOFF VALVES SHALL BE PROVIDED FOR EACH TOILET ROOM AND EXTERIOR WALL HYDRANTS. PLUMBING CONTRACTOR TO PROVIDE 8"x8" (MIN.) ACCESS PANELS FOR SHUTOFF VALVES WHERE REQUIRED, COORDINATE TYPE AND FINISH WITH DIV. 8 REQUIREMENTS.
3. PROVIDE SHOCK ARRESTORS AT COLD AND HOT WATER CONNECTIONS TO WASHING MACHINE AND REFRIGERATOR ICE MAKER. PROVIDE AIR CHAMBERS AT WATER SUPPLY CONNECTIONS TO ALL OTHER FIXTURE OR PROVIDE SHOCK ARRESTORS PER FIXTURE GROUP AS RECOMMENDED BY PDI INSTITUTE AND MANUFACTURER.
4. PLUMBING VENTS SHALL BE A MINIMUM OF 12'-0" FROM ANY HVAC OUTDOOR AIR OPENINGS.
5. PROVIDE CLEANOUTS AT BASE OF ALL DWV AND STORM RISERS AND WITHIN 5'-0" (EITHER SIDE) OF EXTERIOR WALL AS REQUIRED BY CODE, WHETHER OR NOT DIRECTLY INDICATED ON PLUMBING PLAN.
6. DRAINAGE (STORM OR SANITARY) PIPE SIZE BELOW FLOOR TO BE 2" MINIMUM. FOR SIZES REFER TO PLANS AND ISOMETRICS.
7. ROUTE GAS AND WATER PIPING AS HIGH AS POSSIBLE, OFFSET WHERE IN CONFLICT WITH OTHER TRADES.
8. GAS MAIN ROUTED THROUGH CEILING SPACE SHALL BE INSTALLED IN SUCH A MANNER SO AS NOT TO SUBJECT PIPING TO POSSIBLE DAMAGE. VALVES SHALL NOT BE INSTALLED IN CEILING SPACE.
9. NATURAL GAS EQUIPMENT CONNECTIONS SHALL BE PROVIDED WITH VALVES, UNIONS, DIRT LEGS, ETC. AS NECESSARY FOR A COMPLETE INSTALLATION. INSTALL "AGA" APPROVED FLEXIBLE GAS SUPPLY CONNECTION WHERE SPECIFICALLY NOTED. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10. BACKFILL AROUND UNDERGROUND PIPING WITH 3/8" CLEAN (CA-16) GRAVEL ALL AROUND. BACKFILL A MINIMUM OF TWO TIMES THE PIPE OUTSIDE DIAMETER, PRIOR TO FINAL BACKFILL. PVC PIPING SHALL BE PROPERLY SUPPORTED EVERY 4'-0" ALONG IT'S HORIZONTAL RUN PRIOR TO BACKFILLING.
11. DWV, SUPPLY, GAS AND STORM PIPING ROUTED THROUGH FINISHED AREAS SHALL BE CONCEALED ABOVE CEILING OR IN FURRED-OUT WALL. DWV, SUPPLY, GAS AND STORM PIPING PIPING SHALL NOT BE EXPOSED IN FINISHED AREAS, EXCEPT WHERE NOTED ON DRAWINGS.

EQUIPMENT NOTES:
1. INSTALL AL THERMOMETERS IN ACCESSIBLE AND READABLE POSITIONS.

FINISH NOTES:
1. PAINT ALL PLUMBING PIPE SUPPORTS WITH A RUST INHIBITIVE PRIMER AND TWO COATS OF GLOSS GRAY OR BLACK ENAMEL OR ACRYLIC PAINT.
2. PAINT ALL UNINSULATED/UNJACKETED PLUMBING PIPING EXPOSED TO OUTDOORS, INCLUDING PIPING COMPONENTS, VALVES, UNIONS, & ETC., WITH ONE COAT OF RUST INHIBITIVE PRIMER AND TWO COATS OF GLOSS ENAMEL OR ACRYLIC PAINT.
3. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL FIRESTOPPING FOR PLUMBING PIPE PENETRATIONS THROUGH SMOKE AND FIRE RATED ASSEMBLIES. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL RATED ASSEMBLIES. ALL PENETRATIONS SHALL BE FIRESTOPPED TO ORIGINAL ASSEMBLY RATING AND FLOOR PENETRATIONS SEALED WATER TIGHT WITH A FLEXIBLE SEALANT.

B. INSTALLATIONS

1. INSPECT THE EXISTING FACILITY AND VERIFY LOCATIONS OF ALL EXISTING UTILITIES.
2. DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. HOWEVER, MAKE FIELD ADJUSTMENTS TO INSURE CORRECT FIT.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL EQUIPMENT OR ABOVE ACCESS TO SAME PER "NEC" GUIDELINES.
4. WORK SHALL BE PLANNED AND EXECUTED TO PROVIDE REASONABLY CONTINUOUS SERVICE OF EXISTING FACILITIES.
5. PROVIDE WALL OR CEILING ACCESS PANELS WHERE REQUIRED FOR ACCESS TO CONCEALED VALVES, EQUIPMENT, ET. PANELS SHALL BE MINIMUM 18"x18" OR LARGER AS REQUIRED AND SHALL BE COMPATIBLE WITH THE AREA IN WHICH THEY ARE INSTALLED. PANELS IN FIRE RATED BUILDING ELEMENTS SHALL BE LABELED IN COMPLIANCE WITH THE RATING OF THE BUILDING ELEMENT.
6. PROVIDE ALL CUTTING AND PATCHING NECESSARY TO INSTALL THE WORK. SAW CUT OR DRILL OPENINGS.
7. ALL FERROUS METAL WHICH IS NOT FACTORY, SHOP PAINTED, GALVANIZED WHICH WILL BE EXPOSED IN FINISHED AREAS OR OUTSIDE THE BUILDING SHALL BE PRIME COATED.
8. PROVIDE PIPE SLEEVES AT PENETRATIONS OF BUILDING ELEMENTS. SLEEVES MAY BE GALVANIZED SHEET METAL OR STEEL PIPE. FIRE STOPPING SHALL BE PROVIDED AT ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. FIRE STOPPING SHALL BE UL LISTED AND PROVIDE A FIRE RATING EQUAL TO THAT OF THE CONSTRUCTION BEING PENETRATED.
9. ALL WELDERS SHALL BE FULLY CERTIFIED IN ACCORDANCE WITH ASME QUALIFICATIONS.
10. PROVIDE PIPE LABELING AND VALVE TAGGING USING MANUFACTURED LABELS: TAGS IN COMPLIANCE WITH ANSI A13.1
11. FLUSH NEW PIPING SYSTEM PRIOR TO OPERATION. PROVIDE SERVICES OF A FIRM REGULARLY ENGAGED IN DISINFECTION SERVICES TO DISINFECT THE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH AWWA GUIDELINES.
12. BALANCE DOMESTIC HOT WATER RECIRCULATION SYSTEM TO FLOW RATES INDICATED ON THE DRAWINGS.
13. PREPARE TEST AND INSPECTION REPORTS.
14. TEST AND CERTIFY BACKFLOW PREVENTERS AND PRESSURE VACUUM BREAKERS ACCORDING TO CODE AND STANDARD PER AUTHORITY HAVING JURISDICTION.
15. REPLACE DEFECTIVE PRODUCTS AND/OR MATERIALS WITH NEW.
16. PROVIDE ATMOSPHERIC VENT DRAIN CONNECTION ON BACKFLOW PREVENTERS AND EXTEND PIPING TO FLOOR DRAIN FOR INDIRECT DISCHARGE WITH MINIMUM 2" AIR GAP.

C. INSTALLATIONS

1. BEFORE CONSTRUCTION OR INSTALLATION OF MATERIALS OR EQUIPMENT; CONTRACTOR SHALL SUBMIT AN ELECTRONIC COPY OF SHOP DRAWINGS TO BE REVIEWED BY THE ENGINEER.
2. SHOP DRAWINGS SHALL INDICATE INDIVIDUAL COMPONENTS, MODEL NUMBERS, AND ELECTRICAL INFORMATION.
3. SHOP DRAWINGS FOR THE FOLLOWING SHALL BE SUBMITTED.
   - A. PIPE FITTINGS
   - B. VALVES
   - C. HEATERS
   - D. PLUMBING FIXTURES
   - E. DRAINS, CLEANOUTS, AND CARRIERS

D. TESTING

1. ALL PIPING PROVIDED SHALL BE PRESSURE TESTED.
   - A. DOMESTIC WATER: HYDROSTATIC AT 125 PSI FOR 1.5 TIMES MAXIMUM OPERATING PRESSURE FOR 6 HOURS.
   - B. UNDERGROUND WATER: HYDROSTATIC AT 125 PSI FOR 6 HOURS AND/OR IN CONFORMANCE WITH AWWA PROCEDURES.
   - C. SOIL, WASTE, VENT, AND STORM: IN CONFORMANCE WITH PLUMBING CODE.
   - D. INTERIOR NATURAL GAS: 50 PSI COMPRESSED AIR FOR 6 HOURS.

E. EXCAVATION: EXCAVATE FOR ALL UNDERGROUND PIPING. BACKFILL AND COMPACT TO FINISH GRADE OR TO LEVELS CONSISTENT WITH THE GENERAL CONTRACTOR'S ACTIVITIES. PROVIDE COMPACTED BACKFILL OF GRADED PEA GRAVEL, GRADED COURSE SAND, OR CRUSHED LIMESTONE (MAXIMUM 0.75" SIZE) UNDER ANY PAVED OR OTHER HARD SURFACED AREAS. EXCAVATION, TRENCH WALL SUPPORTING AND OPEN TRENCH BARRICADING, AND SIGNAGE SHALL BE PER OSHA AND LOCAL REQUIREMENTS. A UTILITY LOCATOR SERVICE SHALL BE PROVIDED TO IDENTIFY AND/OR VERIFY THE LOCATION OF EXISTING PRIVATE UTILITIES WITHIN THE EXCAVATION AREA.

F. HANGERS: ALL INTERIOR ABOVE GRADE PIPING SHALL BE SUPPORTED BY ATTACHMENT TO THE BUILDING STRUCTURAL ELEMENTS. HANGER ROD SIZES AND HANGER/SUPPORT SPACING SHALL BE PER THE FOLLOWING SCHEDULES. FIRE SUPPRESSION HANGER AND SUPPORT REQUIREMENTS SHALL BE PER NFPA STANDARDS.

PIPE SIZE	MINIMUM HANGER ROD DIAMETER
≤ 1"	0.25"
1.25"-3"	0.375"
4"-6"	0.5"

PIPE MATERIAL SIZE	MAXIMUM HANGER/SUPPORT SPACING
VERTICAL	
STEEL	BASE AND 15'
COPPER	BASE AND 10'
CAST IRON	BASE AND EACH FLOOR LEVEL
PLASTIC	PER MANUFACTURER
HORIZONTAL	
STEEL/ ≤ 2"	8'
STEEL/ 2.5"-6"	10'
STEEL/ > 6"	12'
COPPER/ ≤ 1.25"	6'
COPPER/ ≤ 1.5"-2"	8'
COPPER/ > 2"	10'
CAST IRON	10' AND EACH FITTING/JOINT
PLASTIC	PER MANUFACTURER

J. PIPING

G. INSULATION: PROVIDE INSULATION ON ALL NEW DOMESTIC WATER AND INTERIOR HORIZONTAL STORM DRAINAGE PIPING (INCLUDING HORIZONTAL OVERFLOW DRAINAGE PIPING AND THE UNDERSIDE OF ALL ROOF DRAIN SUMPS) WITH FIBERGLASS/TUBULAR CLOSED CELL PIPE INSULATION IN COMPLIANCE WITH ASHRAE 90.1. FIBERGLASS INSULATION SHALL BE FACTORY MOLDED TUBULAR FIBERGLASS WITH ALL SERVICE JACKET, INTEGRAL VAPOR BARRIER, AND FACTORY ADHESIVE OVERLAPPING JOINTS. PROVIDE FACTORY MOLDED PVC COVERS AND INSULATION FOR FITTINGS, VALVES, AND DEVICES. TUBULAR CLOSED CELL INSULATION SHALL BE FOAM PLASTIC TYPE WITH PRESSURE-SENSITIVE ADHESIVE TAPE CLOSURE SYSTEM AND/OR VAPOR SEALING ADHESIVE. COMPOSITE INSULATING SYSTEMS SHALL NOT EXCEED A MAXIMUM FLAME SPREAD OF 25 ADEN SMOKE DEVELOPMENT OF 50 AS ESTABLISHED BY NFPA TEST METHODS. FIBERGLASS INSULATION MANUFACTURERS: OWENS-CORNING, JOHNS MANVILLE, MASON, OR KNAUFF. TUBULAR CLOSED CELL INSULATION SHALL BE EQUAL TO ARMSTRONG ARMACELL ARMAFLEX 2000. INSULATION THICKNESS SHALL COMPLY WITH THE FOLLOWING SCHEDULE:

PIPE SYSTEM	RUNOUTS <12'	≤1"	1.25"-2"	2.5"-4"	5"-6"	≥6"
DOMESTIC COLD WATER	0.5"	0.5"	0.5"	1.0"	1.0"	1.0"
DOMESTIC HOT WATER	0.5"	1.0"	1.0"	1.5"	1.5"	1.5"
DOMESTIC HOT RETURN	0.5"	1.0"	1.0"	1.5"	1.5"	1.5"
STORM (INCLUDING OVERFLOW)	-	-	-	1.0"	1.0"	1.0"

H. PLUMBING FIXTURES: PROVIDE PLUMBING FIXTURES COMPLETE WITH SUPPORTS, CARRIERS, AND SUPPLY AND WASTE TRIM. SUPPLIES TO EACH FIXTURE SHALL BE INDIVIDUALLY VALVED. ALL WASTE AND SUPPLY TRIM SHALL BE CHROME PLATED BRASS. FIXTURES SHALL BE WHITE UNLESS OTHERWISE SPECIFIED. SEAL JOINTS AROUND EACH FIXTURE AT THE WALL, FLOOR, AND ANY ADJACENT CONSTRUCTION. JOINT SEALANT SHALL BE ONE PART, MILDEW RESISTANT SILICONE, ASTM C920, TYPE S, GRADE NS, CLASS 25 WITH FUNGICIDE, EQUAL TO PECORA 898.

I. VALVES: VALVES SHALL BE TWO-PIECE, BRONZE BODY, BALL TYPE, 150 WSP, EQUAL TO NIBCO T-580-70, T-585-70, AND T-580-70-66. CHECK VALVES SHALL BE BRONZE, SWING TYPE, 125 WSP, EQUAL TO NIBCO T-413-Y. BALANCING-SHUTOFF VALVES SHALL BE GLOBE TYPE, POSITIVE SHUTOFF DESIGN, 125 PSI, WITH MEMORY STOP, GAUGE PORTS, AND PORTABLE GAUGE KIT, EQUAL TO ARMSTRONG CBV SERIES.

1. INTERIOR DOMESTIC WATER: PIPING SHALL BE TYPE L SEAMLESS HARD DRAWN COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS AND SOLDERED JOINTS OR PEX TUBING WITH EXPANSION OR MECHANINCAL CRIMP FITTINGS MATCHING TUBING TYPE. SOLDER SHALL BE LEAD-FREE TIN ALLOW, 95-5 TIN-ANTIMONY, OR SILVER BEARING TIN. UNDER FLOOR BURIED PIPING SHALL BE TYPE K SOFT COPPER TUBING WITH SILVER BRAZED JOINTS OR PEX TUBING WITH EXPANSION OR MECHANINCAL CRIMP FITTINGS MATCHING TUBING TYPE.
2. INTERIOR SOIL, WASTE, AND VENT PIPING INCLUDING IN GRADE BELOW THE FLOOR SLAB, SHALL BE SCHEDULE 40 PVC, ASTM D2665, FITTING SHALL BE DRAINAGE TYPE. JOINTS SHALL BE SOLVENT WELDED. FLOOR DRAIN TRAPS SHALL BE THE SAME MATERIAL AS THE CONNECTING PIPING. PROVIDE CLEANOUTS WHERE SHOWN ON THE DRAWINGS AND WHERE REQUIRED BY THE GOVERNING PLUMBING CODE.
3. EXTERIOR NATURAL GAS SERVICE PIPING: PIPING SHALL BE AS APPROVED BY THE GAS COMPANY. PIPING SHALL BE POLYETHYLENE PLASTIC, PE 2306 OR 2406, TYPE II, GRADE 3, OR PE3406 OR 3408, TYPE III, GRADE 3, CONFORMING TO ASTM D2513, FITTINGS SHALL BE MOLDED POLYETHYLENE AND JOINTS SHALL BE BUTT HEAT-FUSION TYPE CONFORMING TO ASTM D2513 AND D2683. UNDERGROUND VALVES SHALL BE PLASTIC BALL VALVE, 125 PSI, EQUAL TO NORDSTROM POLYVALVE. PROVIDE A VALVE BOX AND COVER AT GRADE. ABOVE GROUND VALVES SHALL BE IRON BODY LUBRICATED PLUG VALVE, 200 PSI, EQUAL TO NORDSRTOM #142 AND #143. PROVIDE MINIMUM 30" OF BURIAL DEPTH AND A COPPER TRACER WIRE. VERIFY WITH THE GAS COMPANY THE LOCATION OF CONNECTION TO SOURCE, AVAILABLE GAS PRESSURE, SERVICE SIZE, METER AND REGULATOR SETTING REQUIREMENTS, ETC. BEFORE INSTALLING ANY WORK. CONTRACTOR SHALL BE A FULLY QUALIFIED INSTALLER TO PERFORM COVERED TASKS AS REQUIRED BY THE DOT AND PUCO OPERATOR QUALIFICATION RULE AND SHALL BE LISTED AS A QUALIFIED CONTRACTOR OF THE SERVICING GAS COMPANY.
4. INTERIOR NATURAL GAS PIPING: PIPING SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A53, TYPE E OR F. FITTINGS SHALL BE STEEL WELDING TYPE AND THREADED MALLEABLE IRON TYPE, CONSISTENT WITH JOINT REQUIREMENTS. JOINTS SHALL BE WELDED, EXCEPT THAT THREADED JOINTS MAY BE USED ON THREADED VALVES AND UNIONS, AT FINAL CONNECTIONS TO EQUIPMENT. VALVES, UNIONS, AND THREADED JOINTS ARE NOT PERMITTED IN INACCESSIBLE CONCEALED LOCATIONS. SHUTOFF VALVES 2" AND SMALLER SHALL BE TWO-PIECE FORGED BRASS BALL VALVE, 600 PSI NON-SHOCK WOG, SCREWED ENDS, EQUAL TO HAMMOND 8901. SHUTOFF VALVES 2.5" AND LARGER SHALL BE IRON BODY LUBRICATED PLUG VALVE, 200 PSI, FLANGED ENDS, EQUAL TO NORDSTROM #143. MATERIALS AND INSTALLATION SHALL CONFORM TO THE INTERNATIONAL FUEL GAS CODE AND NFPA 54 NATIONAL FUEL GAS CODE. VENT PIPING SHALL BE EXTENDED INDIVIDUALLY FROM EACH GAS VENTING DEVICE TO OUTSIDE THE BUILDING.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
—V—	VENT PIPING
—SAN—	SANITARY PIPING
—GW—	GREASE WASTE PIPING
—NG—	NATURAL GAS PIPING
—CW—	DOMESTIC COLD WATER PIPING
—HW—	DOMESTIC HOT WATER PIPING
—HWR—	DOMESTIC HOT WATER RETURN PIPING
	BALL VALVE
	CHECK VALVE
	BALANCING VALVE
	BACKFLOW PREVENTER
	HOT WATER RETURN RECIRCULATION PUMP
	PIPE CAP
	PIPE UP
	PIPE DOWN
	EXISTING PIPING TO REMAIN
	EXISTING PIPING TO BE DEMOLISHED
	NEW PIPING
	FLOW ARROW
##	KEYNOTE DESIGNATION
K##	KITCHEN EQUIPMENT DESIGNATION
1 / P1.1	DETAIL DESIGNATION

ABBREVIATIONS	
ADA	AMERICAN WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
CO	CLEANOUT
CW	DOMESTIC COLD WATER
DS	DOWNSPOUT
ET	EXPANSION TANK
EX	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
GMR	GAS METER/REGULATOR
GS	GAS SERVICE
GT	GREASE TRAP OR KITCHEN WASTE
HB	HOSE BIBB
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
IND	INDIRECT WASTE
LV	LAVATORY
MB	MOP BASIN
NG	NATURAL GAS
NP	NON POTABLE WATER
NTS	NOT TO SCALE
OD	OVERFLOW STORM DRAIN
ODS	OVERFLOW DOWNSPOUT
SAN	SANITARY
SD	STORM DRAIN
SK	SINK
TP	TRAP PRIMER
TYP.	TYPICAL
UR	URINAL
VR	VENT RISER
VS	VENT STACK
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WATER HEATER
WS	WATER SERVICE
WTC	WATER COOLER
YCO	YARD CLEANOUT

PLUMBING INDEX OF DRAWINGS

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	04/08/22	PERMIT AND CONSTRUCTION

DATE	04/08/22
JOB NO.	2021145
DRAWN	JDO
CHECKED	JLW

TITLE
PLUMBING LEGEND AND GENERAL NOTES

SHEET NO.
P0.1

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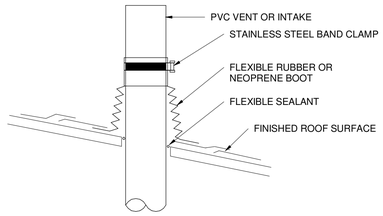


③ PLUMBING VENT THROUGH SLOPED ROOF
NTS

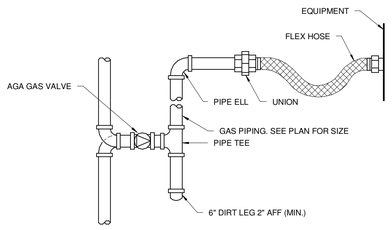
GAS PIPE SIZING

PIPE SIZE (BLACK STEEL)	MAX MBH
0.5"	37
0.75"	77
1"	144
1.25"	296
1.5"	443
2"	854
2.5"	1,360
3"	2,410

GENERAL NOTES:
1. SIZING BASED ON LESS THAN 2 PSIG PRESSURE, 0.5 PSIG DROP PER TABLE 402.4(2) OF IFGC
2. TOTAL DEVELOPED LENGTH = 175 FT.

PLUMBING FIXTURE SCHEDULE

PLAN MARK	FIXTURE TYPE	DESCRIPTION	LOCATION	SAN.	VENT	CW	HW	ACCESSORIES
A1	WATER CLOSET ADA	AMERICAN STANDARD MODEL #3351.101 "AFWALL", WALL MOUNT, ELONGATED BOWL, TOP SPUD, WHITE VITREOUS CHINA; WITH OLSONITE #95 ELONGATED, WHITE, OPEN FRONT, NO COVER SEAT, WITH SELF SUSTAINING HINGE; 481310-100 BOLT CAPS; SLOAN ROYAL #111 MANUAL FLUSH VALVE.	VARIES	4.0"	2.0"	1.00"		MOUNT 17" TO RIM
A2	WATER CLOSET	AMERICAN STANDARD MODEL #3351.101 "AFWALL", WALL MOUNT, ELONGATED BOWL, TOP SPUD, WHITE VITREOUS CHINA; WITH OLSONITE #95 ELONGATED, WHITE, OPEN FRONT, NO COVER SEAT, WITH SELF SUSTAINING HINGE; 481310-100 BOLT CAPS; SLOAN ROYAL #111 MANUAL FLUSH VALVE.	VARIES	4.0"	2.0"	1.00"		
B1	LAVATORY	AMERICAN STANDARD MODEL #0355.012 "LUCERNE", WALL MOUNT, WHITE VITREOUS CHINA, 4" CENTER FAUCET HOLES; AMERICAN STANDARD MODEL #6114.116.002, "MONTERREY" SINGLE CONTROL CENTERSET FAUCET W/ 4" CENTER, LESS DRAIN; 1/2" SUPPLY AND STOP (TWO REQUIRED); 1-1/2" CAST BRASS	VARIES	1.5"	1.5"	0.50"	0.5"	PROVIDE "TRUEBRO" HANDI-LAV GUARD INSTALLATION KIT MODEL #102 (WHITE) OR APPROVED EQUAL. PROVIDE 1070 ASSE MIXING VALVE.
B2	LAVATORY	AMERICAN STANDARD MODEL #0476.028 "AQUALYN", DROP IN, WHITE VITREOUS CHINA, 4" CENTER FAUCET HOLES; AMERICAN STANDARD MODEL #6114.116.002, "MONTERREY SINGLE CONTROL CENTERSET FAUCET W/ 4" CENTER, LESS DRAIN; 1/2" SUPPLY AND STOP (TWO REQUIRED); 1-1/2" CAST BRASS P-TRAP.	WOMEN 107	1.5"	1.5"	0.50"	0.5"	PROVIDE "TRUEBRO" HANDI-LAV GUARD INSTALLATION KIT MODEL #102 (WHITE) OR APPROVED EQUAL. PROVIDE 1070 ASSE MIXING VALVE.
B3	SINK	ELKAY MODEL #LRD1720SC LUSTERSTONE CLASSIC, 17"x20"x7-5/8" SINGLE BOWL DROP-IN, STAINLESS STEEL, 4" CENTER FAUCET HOLES, LK18B DRAIN INCLUDED; #LK406GN04T4SC FACUET INCLUDED;1/2" SUPPLY AND STOP (TWO REQUIRED); #LK500 P-TRAP INCLUDED	BREAK/TRAINING 105	1.5"	1.5"	0.50"	0.5"	PROVIDE 1070 ASSE MIXING VALVE.
C1	URINAL	AMERICAN STANDARD MODEL #6590001EC "WASHBROOK", WHITE VITREOUS CHINA WALL MOUNTED, (LOW FLOW 1.0 GALLON PER FLUSH), SIPHON JET, SLOAN ROYAL #186-1.0 MANUAL FLUSH VALVE.	MEN 106	4.0"	1.5"	0.75"		REFER TO ARCH. DRAWINGS FOR MOUNTING HEIGHT.
D1	MOP/UTILITY SINK	MUSTEE PRECAST MODEL #63M (24"x24"x10");T&S BRASS FAUCET MODEL #B-0655-BSTR CHROME PLATED WITH VACCUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT; MUSTEE #65.600 HOSE BRACKET, 30" LONG FLEXIBLE, HEAVY DUTY 5/8" RUBBER HOSE, CLOTH REINFORCED WITH 3/4" BRASS COUPLING AT ONE END.	VARIES	3.0"	1.5"	0.50"	0.5"	
E1	EYE WASH	BRADLEY MODEL #S19224 SERIES WALL-MOUNT HALO EYEWASH	VARIES	1.5"	1.5"	0.50"	0.5"	PROVIDE BRADLEY NAVIGATOR S19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE.

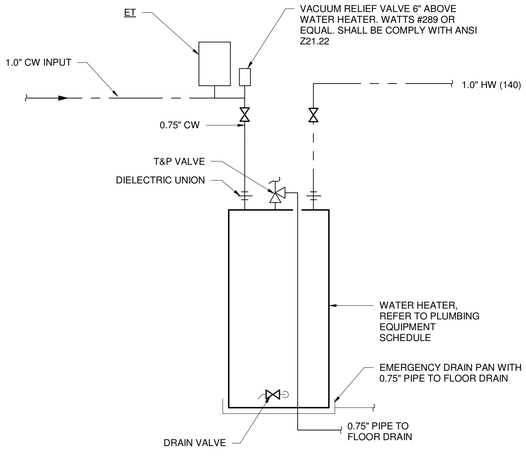


② GAS EQUIPMENT CONNECTION
NTS

PLUMBING EQUIPMENT SCHEDULE

PLAN MARK	DESCRIPTION	COLD WATER	HOT WATER (120°F)	HOT WATER (140°F)	NATURAL GAS	NON POTABLE	WASTE	INDIRECT	FLOOR DRAIN	NOTES
ET-1	EXPANSION TANK - DOMESTIC WATER SYSTEM - WATTS #PLT-12 - 150 PSI RATING	0.75"								
HB-1	WALL MOUNTED HOSE BIB - FREEZELESS, AUTOMATIC DRAIN, VACUUM BREAKER, BRASS FINISH - MINIMAL INSTALL DEPTH, FEED 90° FROM OUTLET	0.75"								3
HB-2	WOODFORD MODEL #65 SERIES, FREEZELESS, AUTOMATIC DRAIN, VACUUM BREAKER, BRASS FINISH	0.75"								1
OI-1	OIL INTERCEPTOR - ZURN #Z250H - BELOW SLAB						4"			
RPZ-1	REDUCED PRESSURE BACKFLOW PREVENTER - EQUAL TO WATTS SERIES 009			2.0"						
WH-1	GAS WATER HEATER - RHEEM MODEL #GPDV50-65 , 50 GALLON, 65 MBH, 59 GPH RECOVERY AT 100°F TEMP RISE	1.0"		1.0"						2

NOTES:
1. MOUNT AT 18" A.F.G
2. PROVIDE VENT PIPING PER AMNUFACTURER GUIDELINES.
3. COORDINATE MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.



① WATER HEATER PIPING DETAIL
NTS

DRAIN AND CLEANOUT SCHEDULE

PLAN MARK	APPROVED SUPPLIERS - J.R. SMITH, JOSAM, WATTS, ZURN ZURN CATALOG NO.	TYPE: FLOOR	TYPE: ROOF	TYPE: TRENCH	TYPE: DECK	BODY: CAST IRON	BODY: BRASS	BODY: HDPE	BODY: STAINLESS STEEL	OUTLET: SIZE	OUTLET: BOTTOM	OUTLET: SIDE	STRAINER/GRATE: SIZE	STRAINER/GRATE: ADJUSTABLE	STRAINER/GRATE: FLAT	STRAINER/GRATE: DOME	STRAINER/GRATE: RECESSED	STRAINER/GRATE: FUNNEL	STRAINER/GRATE: HINGED	STRAINER/GRATE: 1/2 GRATE	TOP FINISH: NICKEL BRONZE	TOP FINISH: CAST IRON	TOP FINISH: DUCTILE IRON	TOP FINISH: STAINLESS STEEL	ADDITIONAL FEATURES: ANCHOR FLANGE	ADDITIONAL FEATURES: FLASHING CLAMP	ADDITIONAL FEATURES: DBL. DRAINAGE	ADDITIONAL FEATURES: SED. BUCKET	ADDITIONAL FEATURES: AUX. STRAINER	ADDITIONAL FEATURES: GRAVELSTOP	ADDITIONAL FEATURES: U'DECK CLAMP	ADDITIONAL FEATURES: TRAP PRIMER	SEE NOTE
FD-1	Z507	X				X				3"	X		7"		X							X				X	X	X					1
						X					X		6.25" WIDE		X								X										2,3
TD-1	Z886			X				X																									
FCO	ZN1400-B	X				X				6"	X		7-7/8"	X							X												
GCO	Z1474-VP	X				X							-	X								X											

NOTES:
1. PROVIDE TRAP SEAL PROTECTION DEVICE EQUAL TO Z1072.
2. TOTAL LENGTH OF DRAIN TO BE 25'-0".
3. SLOPE TO MIDDLE OF DRAIN.

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TITLE
PLUMBING SCHEDULES AND DETAILS

SHEET NO.
P0.2

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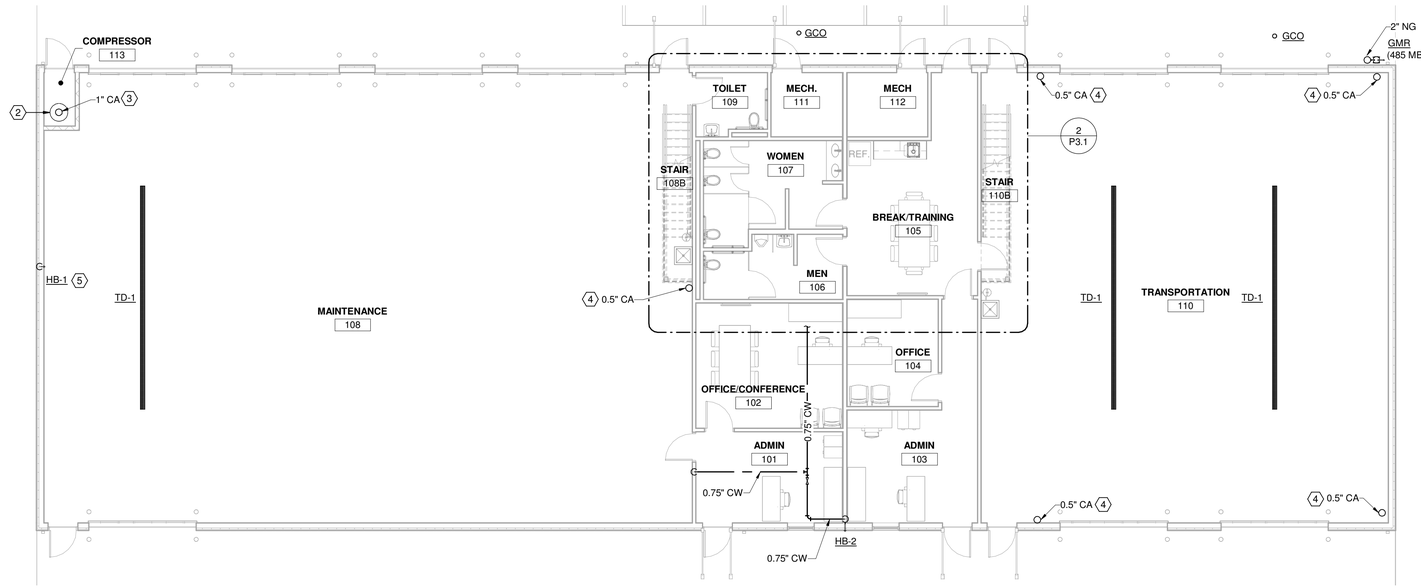
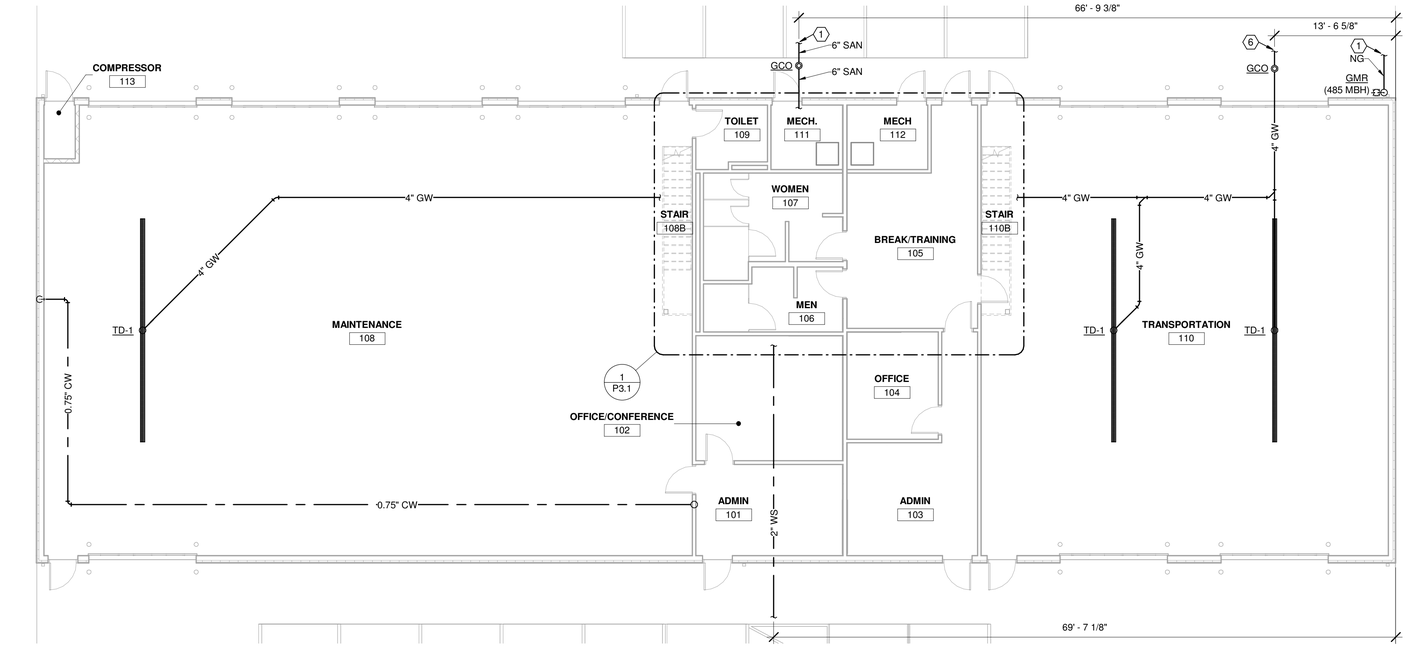


2 FIRST FLOOR PLUMBING PLAN (ABOVE SLAB)
1/8" = 1'-0"



1 FIRST FLOOR PLUMBING PLAN (BELOW SLAB)
1/8" = 1'-0"

DRAWING NOTES

1. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
2. AIR COMPRESSOR PROVIDED BY OWNER.
3. COMPRESSED AIR PIPING UP TO STRUCTURE ABOVE. REFER TO 1/P2.1 FOR CONTINUATION.
4. 0.5" COMPRESSED AIR PIPING FROM MEZZANINE ABOVE. TERMINATE WITH SHUT-OFF VALVE 4'-0" A.F.F.
5. SUPPLY PIPING TO HOSE BIB TO BE ROUTED ON WARM SIDE OF INSULATED WALL.
6. EXTEND TRENCH DRAIN DISCHARGE TO OIL INTERCEPTOR LOCATED BELOW GRADE. COORDINATE OIL INTERCEPTOR FINAL LOCATION WITH GENERAL CONTRACTOR AND CIVIL ENGINEER. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.

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TITLE
FIRST FLOOR PLUMBING PLAN

SHEET NO.
P1.1

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DRAWING NOTES

1. PROVIDE DIRT LEG, GAS ISOLATION VALVE, UNION, AND FLEXIBLE HOSE CONNECTION. REFER TO DETAIL 2/P0.2 FOR ADDITIONAL INFORMATION.
2. EXTEND VENT PIPING TO EXTERIOR WALL AND TERMINATE PER MANUFACTURER GUIDELINES.
3. COMPRESSED AIR PIPING DOWN TO FLOOR BELOW.

1 MEZZANINE PLUMBING PLAN
1/8" = 1'-0"

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TITLE
MEZZANINE PLUMBING PLAN

SHEET NO.
P2.1

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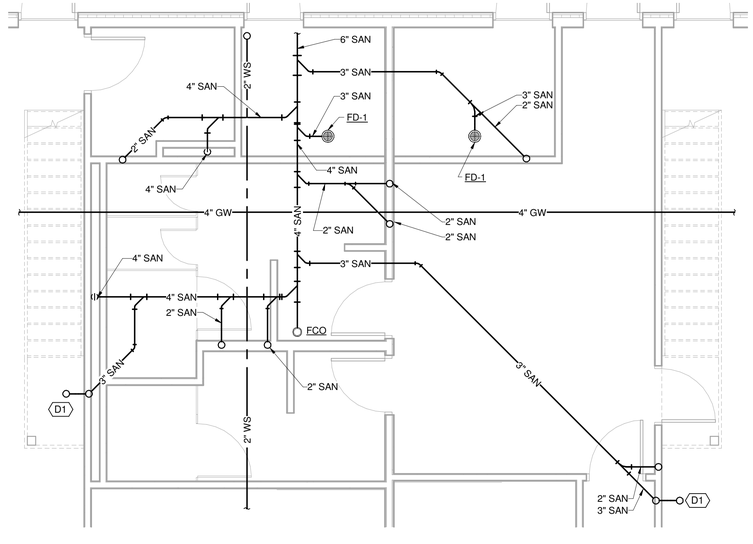
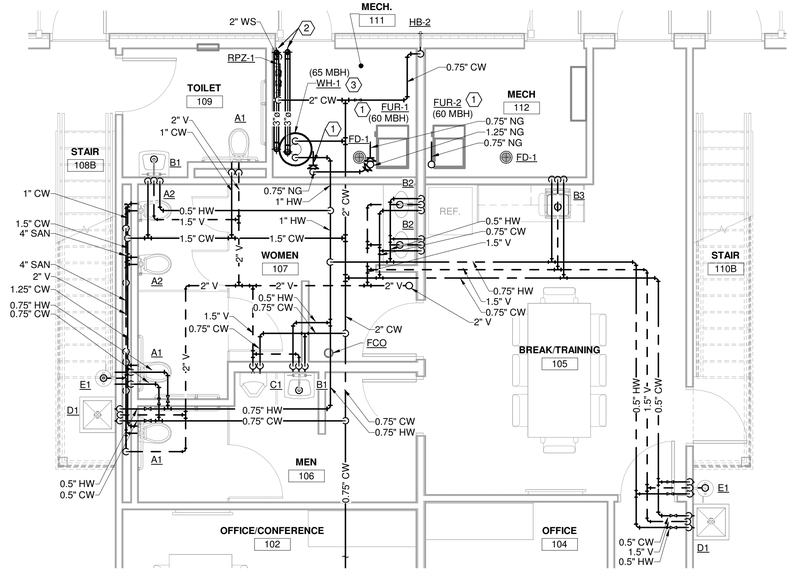
DRAWING NOTES

1. PROVIDE DIRT LEG, GAS ISOLATION VALVE, UNION, AND FLEXIBLE HOSE CONNECTION. REFER TO DETAIL 2/P0.2 FOR ADDITIONAL INFORMATION.
2. EXTEND VENT PIPING TO EXTERIOR WALL FACE TIGHT TO STRUCTURAL FRAMING AND UP TO MEZZANINE. REFER TO 1/P2.1 FOR CONTINUATION.
3. PROVIDE NEW FLOOR SET TANK TYPE WATER HEATER. EXPANSION TANK MOUNTED TO WALL USING WALL BRACKET EQUAL TO HOLD-RITE MODEL QS-12. TANK SHALL NOT BE SUPPORTED BY PIPING. REFER TO WATER HEATER PIPING DIAGRAM FOR ADDITIONAL INFORMATION.



1 ENLARGED FIRST FLOOR PLUMBING PLAN (BELOW SLAB)
1/4" = 1'-0"



2 ENLARGED FIRST FLOOR PLUMBING PLAN (ABOVE SLAB)
1/4" = 1'-0"

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TITLE
ENLARGED PLUMBING PLANS

SHEET NO.
P3.1

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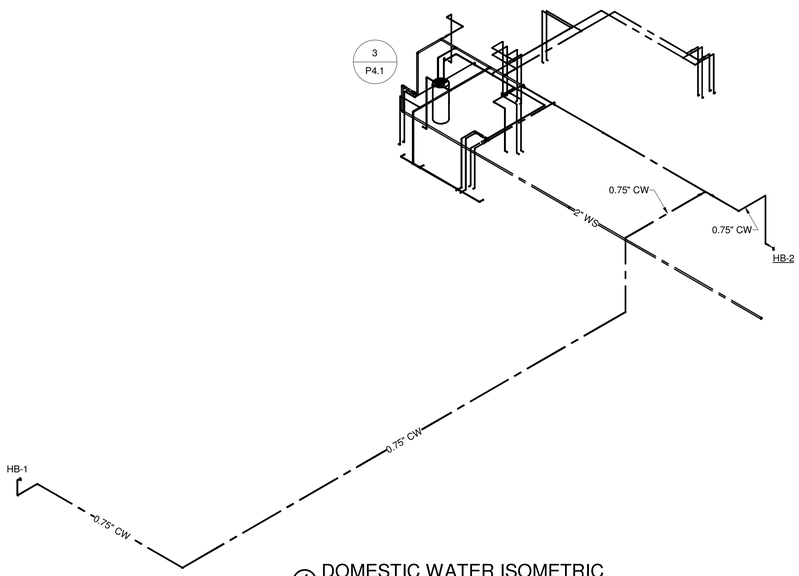

④ DOMESTIC WATER ISOMETRIC
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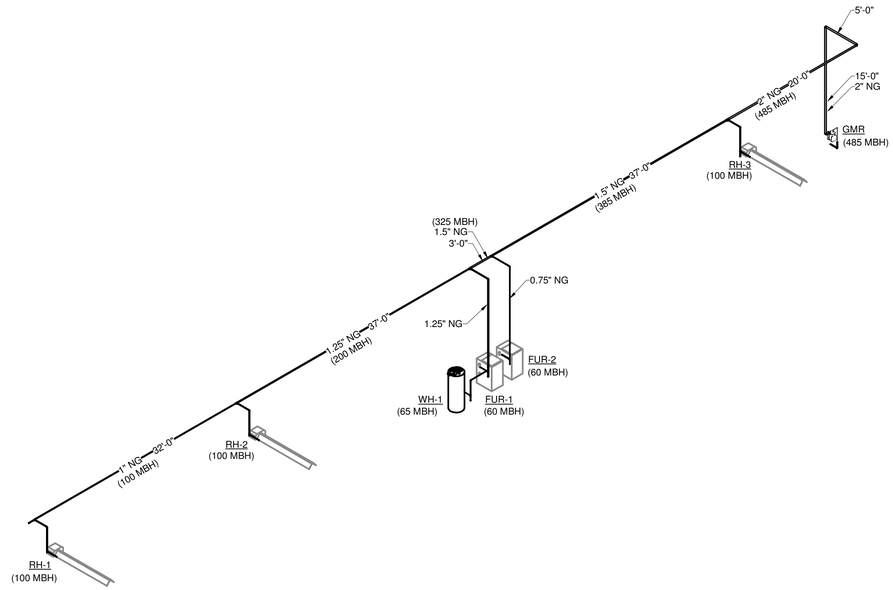

⑤ NATURAL GAS ISOMETRIC
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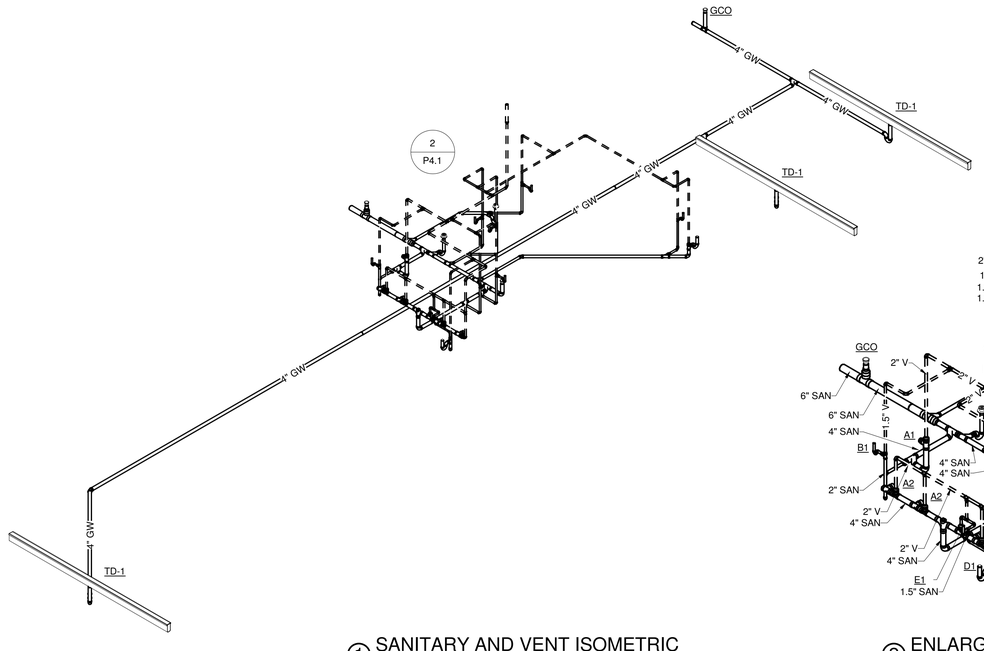
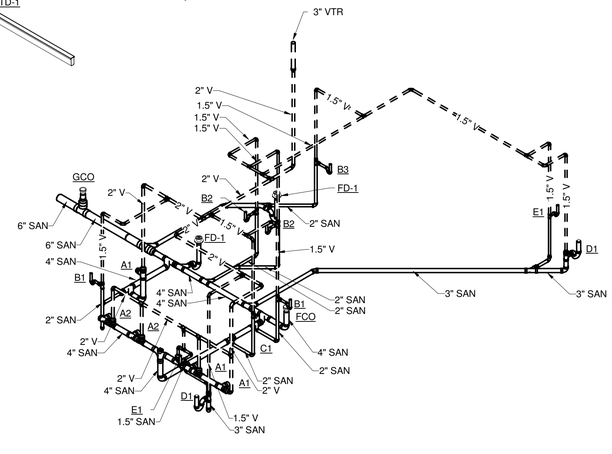
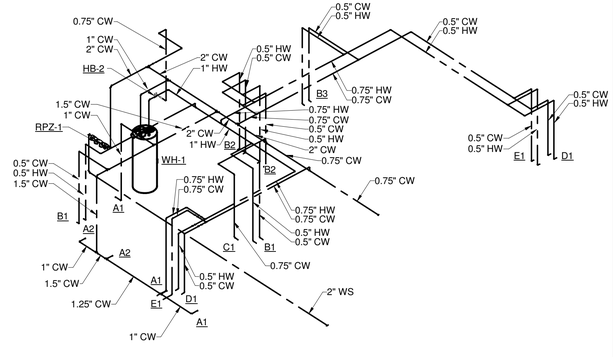


① SANITARY AND VENT ISOMETRIC
NTS



② ENLARGED SANITARY AND VENT ISOMETRIC



③ ENLARGED DOMESTIC WATER ISOMETRIC
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PLUMBING ISOMETRICS

SHEET NO.
P4.1

GENERAL NOTES

A. DO NOT SCALE DRAWINGS. IF DIMENSIONS CANNOT BE DETERMINED OR DOCUMENTS ARE IN CONFLICT (WITH THEMSELVES OR FIELD CONDITIONS), THE CONTRACTOR MUST OBTAIN CLARIFICATION FROM THE ARCHITECT PRIOR TO CONTINUATION OF WORK.

B. CONTRACTOR(S) SHALL VISIT THE SITE TO ACQUAINT THEMSELVES WITH THE EXISTING OR NEWLY INSTALLED CONDITIONS. CONTRACTOR(S) SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, UTILITIES, AND EXISTING OR NEWLY INSTALLED CONDITIONS PRIOR TO CONSTRUCTION.

C. THE CONSTRUCTION DOCUMENTS AND DRAWING NOTES / SPECIFICATIONS ARE INTENDED TO DESCRIBE AND PROVIDE FOR A FINISHED PIECE OF WORK. THE WORK SHALL BE COMPLETED IN EVERY DETAIL EVEN THOUGH EVERY ITEM NECESSARILY INVOLVED IS NOT PARTICULARLY MENTIONED OR SPECIFIED. ALL WORK SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND / OR MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. IF ANY CONTRACTOR IS IN DOUBT AS TO THE TRUE MEANING OF ANY PART OF THE DOCUMENTS, OR FINDS DISCREPANCIES IN OR OMISSIONS FROM ANY PART OF THE DOCUMENTS, HE MUST CONTACT THE ARCHITECT FOR CLARIFICATION.

D. ALL DIMENSIONS ARE TO FACE OF STUD, CONCRETE, MASONRY, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE. WHEN EXISTING CONDITIONS ARE SHOWN, DIMENSIONS ARE TO FACE OF EXISTING FINISH, UNLESS NOTED OTHERWISE

E. FINISH FLOOR ELEVATIONS ARE FOR GENERAL REFERENCE. REFER TO CIVIL SHEETS FOR ACTUAL FINISH FLOOR ELEVATIONS.

F. EQUIPMENT AND FURNITURE SHOWN IS FOR REFERENCE ONLY, EQUIPMENT AND FURNITURE PROVIDED BY OWNER (UNLESS NOTED OTHERWISE). COORDINATE EQUIPMENT AND FURNITURE INSTALLATION AND UTILITY CONNECTIONS WITH OWNER AND OWNER'S SUPPLIER.

G. **DEFINITIONS:**
NECESSARY: WORK NEEDED TO COMPLETE THE WORK TO "MAKE IT OPERATIONAL".

REQUIRED: WORK NEEDED TO BE IN COMPLIANCE WITH BUILDING CODE, GOVERNING CODE, OR JURISDICTION HAVING AUTHORITY.

PROVIDE: RESPONSIBLE FOR PURCHASE, DELIVERY, RECEIVING, INSPECTION, STORAGE, PREPARATION, AND INSTALLATION OF ITEM(S).

FURNISH: RESPONSIBLE FOR PURCHASE AND DELIVERY OF ITEM(S).

INSTALL: RESPONSIBLE FOR RECEIVING, INSPECTION, STORAGE, PREPARATION, AND INSTALLATION OF ITEM(S).

BASIS OF DESIGN: AN ACCEPTABLE MANUFACTURER OR PRODUCT, DESIGNATED BY THE DESIGN PROFESSIONAL, WHICH EXHIBITS THE INTENDED STANDARDS AND DESIGN CRITERIA THAT MUST BE MET FOR PERFORMANCE. THE ITEM(S) INDICATED MAY BE PROVIDED OR AN ITEM OF EQUIVALENT APPEARANCE, AESTHETIC, QUALITY, MATERIAL, CONSTRUCTION, AND PERFORMANCE MAY BE SUBSTITUTED SUBJECT TO THE ARCHITECT'S OR DESIGN PROFESSIONAL'S APPROVAL. (REFER TO THE "SUBSTITUTIONS" SPECIFICATION FOR ADDITIONAL INFORMATION)

OR EQUAL: MAY FOLLOW A "BASIS OF DESIGN" OR OTHER SPECIFIED MANUFACTURER OR PRODUCT AND INDICATES THAT AN ITEM OF EQUIVALENT APPEARANCE, AESTHETIC, QUALITY, MATERIAL, CONSTRUCTION, AND PERFORMANCE MAY BE SUBSTITUTED SUBJECT TO THE ARCHITECT'S OR DESIGN PROFESSIONAL'S APPROVAL. (REFER TO THE "SUBSTITUTIONS" SPECIFICATION FOR ADDITIONAL INFORMATION)

HVAC GENERAL SPECIFICATIONS

A. UPON COMPLETION OF ALL HVAC WORK, THE CONTRACTOR SHALL SUBMIT (2) COPIES OF THE MANUFACTURER'S OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT TO THE OWNER. THE CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A COMPLETE SET OF RECORD DRAWINGS WITH ANY AND ALL CHANGES OR MODIFICATIONS TO THE DESIGN, CONSTRUCTION, SYSTEMS, OR EQUIPMENT CLEARLY INDICATED; SHOP DRAWINGS; INFORMATION ON THE THERMOSTATS, CONTROL WIRING DIAGRAMS, AND OTHER PERTINENT INFORMATION.

B. **HVAC EQUIPMENT:** ALL EQUIPMENT SHALL BE COMPLETE IN EVERY RESPECT WITH ALL DEVICES, APPURTENANCES, AND ACCESSORIES PROVIDED TO MEET THE DESIGN INTENT AND OPERATION OF THE SYSTEMS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL AIR CONDITIONING EQUIPMENT MUST HAVE A CONDENSATE DRAIN AND BE TRAPPED IN ACCORDANCE WITH MANUFACTURER'S DATA. ALL COMPRESSORS ARE TO INCLUDE A 5-YEAR EXTENDED WARRANTY.

C. **GAS PIPING (IF INCLUDED IN THE PROJECT)**: CONTRACTOR TO COORDINATE (INCLUDING VERIFICATION OF EXISTING SYSTEM EQUIPMENT, MAINS, LINE SIZES, AND REQUIREMENTS) AND SIZE GAS PIPING PER MANUFACTURER'S RECOMMENDATIONS, LOCAL CODE, AND UTILITY COMPANY REQUIREMENTS, UNLESS PROVIDED OTHERWISE IN THE CONSTRUCTION DOCUMENTS - **ARCHITECT/ENGINEER TO REVIEW AND APPROVE GAS PIPING SIZING PRIOR TO INSTALLATION.** GAS PIPING TO BE INSTALLED PER NFPA 54. REFER TO PLUMBING GENERAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.

D. **REFRIGERANT LINE SET**: HVAC CONTRACTOR TO SIZE REFRIGERANT LINE SET SIZES PER MANUFACTURER'S RECOMMENDATIONS AND FIELD CONDITIONS - **ARCHITECT/ENGINEER TO REVIEW AND APPROVE LINE SET SIZES PRIOR TO INSTALLATION.** LINES EXCEEDING 150 FEET IN LENGTH REQUIRE A PUMP (SIZED AND PROVIDED BY THE HVAC CONTRACTOR).

E. **NOISE AND VIBRATION:** MECHANICAL AND ELECTRICAL EQUIPMENT IS TO OPERATE WITHOUT OBJECTIONABLE NOISE OR VIBRATION. ALL MOTOR OPERATED OR ROTATING EQUIPMENT IS TO BE VIBRATION ISOLATED OR FREE FROM ALL BEAMS, COLUMNS, FLOORS, CEILINGS, JOISTS, WALLS, AND OTHER PARTS OF THE BUILDING STRUCTURE. HANGER RODS FOR ALL PIPING, EQUIPMENT, AND DUCTWORK CONNECTED TO MOTOR OPERATED OR ROTATING EQUIPMENT IS TO BE PROVIDED WITH KINETICS OR APPROVED EQUAL FIBERGLASS ISOLATOR HANGERS. PROVIDE FLEXIBLE COLLARS IN ALL CONNECTIONS BETWEEN VIBRATING EQUIPMENT (FANS, ROOFTOP UNITS, ETC.) AND DUCTS. THE FLEXIBLE CONNECTION IS TO BE RATED FOR THE OPERATING PRESSURE OF THE SYSTEM.

F. **CURBS AND STEEL FRAMING FOR SUPPORT:** PROVIDE ALL NECESSARY CURBS AND STEEL FRAMING REQUIRED TO INSTALL ALL HVAC EQUIPMENT AS DESCRIBED OR IMPLIED ON THE DRAWINGS. CURBS SHALL BE OF THE SAME MANUFACTURER OF THE EQUIPMENT SUPPORTED. INSULATE UNDER THE COMPRESSOR SECTION TO PREVENT CONDENSATION. ALL CURBS MUST BE INSTALLED SO THAT TOP OF CURBS ARE LEVEL.

G. **DUCTWORK:** DUCTWORK IS TO BE FABRICATED WITH GALVANIZED SHEET STEEL (NO FIBERGLASS ALLOWED) IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE" AND NAIMA "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS," LATEST EDITIONS; CONFORMING TO THE REQUIREMENTS IN THE REFERENCED STANDARD FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, TIE ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS. ALL JOINTS, SEAMS, AND CONNECTIONS MUST BE SECURELY FASTENED AND SEALED AIRTIGHT IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE AND OHIO MECHANICAL CODE.

H. **BRANCH DUCTWORK:** ALL DUCT BRANCHES TO DIFFUSERS ARE TO BE RECTANGULAR OR ROUND RIGID DUCT. ALL BRANCH TAKEOFFS FROM RECTANGULAR MAINS TO BE CONNECTED TO SPIN COLLARS WITH SCOOPS AND QUADRANT DAMPERS.

I. **FLEXIBLE DUCTWORK:** FLEX DUCTWORK IS TO BE NFPA 90 AND 90A APPROVED INDICATING NO VINYL, TESTED IN ACCORDANCE WITH UL 181, AND LISTED AND LABELED AS CLASS 0 OR CLASS 1 DUCT. NO FLEX DUCT RUN TO EXCEED **8'-0" MAXIMUM** TOTAL LENGTH AT ANY ONE LOCATION. ALL FLEX CONNECTIONS TO BE TAPED AND STRAPPED PER MANUFACTURER'S INSTRUCTIONS. FLEXIBLE AIR DUCT MAY ONLY BE USED IN VERTICAL APPLICATIONS WITH PRIOR APPROVAL FROM THE ARCHITECT. **FLEXIBLE DUCTWORK IS NOT PERMITTED TO BE USED FOR RETURN DUCTWORK.**

J. **DUCTWORK INSULATION:** INSTALL INSULATION PRODUCTS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES. INSULATION MUST COMPLY WITH NFPA 90A. DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. INSULATE DUCTWORK PER THE DUCT CONSTRUCTION SCHEDULE. PROVIDE DUCTWORK INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, AND SIMILAR PENETRATIONS. ALL INSULATION SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NO HIGHER THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM C411, OR AS REQUIRED BY LOCAL CODES.

K. WHERE ROUND DUCTWORK IS INDICATED ON PLANS, PROVIDE RECTANGULAR DUCTWORK, IF ROUND DUCTWORK CANNOT BE INSTALLED BECAUSE OF OBSTRUCTIONS, INSUFFICIENT CLEARANCES OR OTHER CAUSES DUE TO FIELD CONDITIONS. CONTRACTOR'S OPTION TO INSTALL RECTANGULAR DUCTWORK IN LIEU OF INDICATED ROUND DUCTWORK AT OTHER LOCATIONS. SIZE ALL RECTANGULAR DUCTWORK CONVERSIONS COMPARABLE TO INDICATED DUCTWORK SIZE PER SMACNA "HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE," LATEST EDITION. SHOULD THE CONTRACTOR BE IN DOUBT OF THE REQUIREMENTS UNDER THIS SECTION, DUCTWORK SIZING, OR SHOULD ANY DISCREPANCY BE REVEALED BASED ON FIELD CONDITIONS, IMMEDIATELY CONTACT THE ARCHITECT FOR CLARIFICATION.

L. PROVIDE A FLEXIBLE CONNECTION BETWEEN BONNET AND RIGID DUCT ON ALL SUPPLY AND RETURN DUCTWORK.

M. **DIFFUSERS, GRILLES, REGISTERS, AND DAMPERS:** PROVIDE DIFFUSERS, GRILLES, AND REGISTERS AS SCHEDULED. DEVICES TO BE COMPLETE WITH BALANCING DAMPERS, FRAMES, AND ALL ACCESSORIES, FINISH AS INDICATED. PROVIDE UL LISTED (UL555) FIRE RATED DAMPERS AT ALL FIRE PARTITION OR FIRE BARRIER PENETRATIONS, WHETHER SHOWN OR NOT SHOWN ON THE PLANS. ALL GRAVITY DAMPERS REQUIRE SEALS.

N. **SUPPORT AND BRACING:** INSTALL RIGID ROUND AND RECTANGULAR METAL DUCTWORK WITH APPROVED SUPPORT SYSTEMS INDICATED IN SMACNA STANDARDS AND STATE BUILDING CODE. SUPPORT HORIZONTAL DUCTS AT A MAXIMUM INTERVAL OF 10 FEET AND WITHIN 2 FEET OF EACH ELBOW AND WITHIN 4 FEET OF EACH BRANCH INTERSECTION USING DOUBLE STRAP HANGERS ON EACH SIDE OF FITTING. SUPPORT VERTICAL DUCTS AT A MAXIMUM INTERVAL OF 10 FEET AND AT EACH FLOOR. FLEXIBLE AND OTHER FACTORY MADE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. NO WOOD SHALL BE USED TO SUPPORT OR BRACE DUCTS. PROVIDE SWAY AND SEISMIC BRACING AS REQUIRED BY STATE AND LOCAL CODES. PROVIDE FIXED ANCHORS AT EACH MECHANICAL DIFFUSER OR GRILLE TO CEILING GRID. CEILING GRID CONTRACTOR TO PROVIDE SUPPORT WIRES AT OPPOSITE CORNERS OF LIGHT FIXTURES, MECHANICAL DIFFUSERS, AND GRILLES TO STRUCTURE ABOVE.

HVAC GENERAL SPECIFICATIONS CONT'D

O. **CONTROLS:** EACH UNIT TO BE CONTROLLED BY THERMOSTAT WITH PROPER STAGES OF HEATING AND COOLING - MOUNTED AT 54" AFF (REFER TO MECHANICAL SHEETS FOR MODEL NO. AND LOCATION). CONTROL WIRING IS TO BE FURNISHED AND INSTALLED BY THE HVAC CONTRACTOR. POWER WIRING IS TO BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

P. **POWER AND CONTROL WIRING:** ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY POWER WIRING FOR HVAC EQUIPMENT FROM SUITABLE FUSED DISCONNECT SOURCE TO UNIT WITH FUSED DISCONNECT TO MEET NATIONAL ELECTRIC CODE (NEC), STATE AND LOCAL CODES. HVAC CONTRACTOR TO PROVIDE 24 VOLT OR LESS CONTROL WIRING.

Q. **STARTUP:** HVAC CONTRACTOR TO PROVIDE STARTUP PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.

R. **AIRFLOW AND TESTING:** ALL DUCT AS PER SMACNA GUIDELINES. THE SYSTEM TO BE BALANCED AND TESTED BY AN INDEPENDENT, "NEBB" CERTIFIED, BALANCING CONTRACTOR PER "NEBB"

S. PROCEDURES. THE HVAC CONTRACTOR SHALL INCLUDE THE COST OF THE BALANCING AND TESTING IN HIS BID. THE BALANCING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, AND EQUIPMENT NECESSARY TO COMPLETELY BALANCE THE AIR FLOW FOR THE HVAC SYSTEMS AS SHOWN ON THE DRAWINGS. HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN MINIMUM POSITION. BALANCE THE SYSTEM TO WITHIN +-5 PERCENT OF THE DESIGN REQUIREMENTS. THE HVAC CONTRACTOR AT NO ADDITIONAL COST SHALL PERFORM ANY REQUIRED CHANGES REQUIRED TO ACHIEVE SPECIFIED FLOW RATES. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, CO2 SENSORS, ETC.) AND OPERATING STATUS RECORDED IN THE REPORT. A DIGITAL OR THREE (3) PRINTED COPIES OF THE BALANCE AND TESTING REPORT SHALL BE PROVIDED TO THE OWNER, OWNER'S REPRESENTATIVE, OR ARCHITECT BEFORE PROJECT CLOSE OUT FOR REVIEW. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE OWNER OR ARCHITECT DEEMS REASONABLY NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

T. VENTILATION AND COMBUSTION AIR INTAKE: PROVIDE OUTSIDE VENTILATION AIR BY NATURAL VENTILATION OR MECHANICAL EQUIPMENT AS REQUIRED BY THE MECHANICAL CODE (REFER TO OUTSIDE AIR VENTILATION SCHEDULE). IF GAS-FIRED EQUIPMENT IS USED, VERIFY THAT THE MECHANICAL ROOM AND / OR MECHANICAL EQUIPMENT ARE PROVIDED WITH ADEQUATE COMBUSTION AND DILUTION AIR IN COMPLIANCE WITH THE MECHANICAL CODE, PROVIDE ADDITIONAL AIR AS REQUIRED. PROVIDE A VENT DESIGNED FOR THE TYPE OF APPLIANCE BEING VENTED FOR ALL GAS-FIRED EQUIPMENT TO THE EXTERIOR. PROVIDE VENTS DIRECTLY TO THE EXTERIOR FOR ALL EXHAUST FANS. ALL EXHAUST AND INTAKE OPENINGS MUST BE LOCATED A MINIMUM OF 10 FEET FROM LIT LINES OR BUILDINGS ON THE SAME LOT.

U. PROVIDE A SMOKE DETECTOR IN RETURN AIR SYSTEMS WITH A DESIGN CAPACITY GREATER THAN 2,000 CFM IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES (PER OMC SECTION 606.2.1). WHERE TWO OR MORE UNITS SHARE THE SAME RETURN, THE COMBINED AMOUNT OF CFM SHALL BE USED IN DETERMINING WHETHER A DUCT SMOKE DETECTOR IS REQUIRED. COORDINATE THESE REQUIREMENTS BETWEEN THE HVAC AND THE ELECTRICAL OR FIRE ALARM CONTRACTORS.

V. PROVIDE ACCESS TO ALL DAMPERS, CONTROLS, AND OTHER ITEMS IN DUCTWORK THAT REQUIRE SERVICE OR INSPECTION. IF THE ACCESS PANEL LOCATION IS EXPOSED, THE OWNER OR THE ARCHITECT MUST APPROVE IT PRIOR TO INSTALLATION. ACCESS PANELS ARE NOT REQUIRED ABOVE LAY-IN GRID TYPE CEILINGS.

W. ALL HVAC EVAPORATORS AND COOLING COILS REQUIRE A CONDENSATE DRAIN, WHICH IS CONVEYED TO AN APPROPRIATE PLACE OF DISPOSAL (TYPICALLY INDIRECTLY INTO A FLOOR DRAIN). A SECONDARY DRAIN OR AUXILIARY DRAIN PAN [WITH A SEPARATE DRAIN OR A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQUIPMENT SERVED PRIOR TO OVERFLOW OF THE AUXILIARY DRAIN PAN] IS REQUIRED FOR ANY EQUIPMENT THAT PRODUCES CONDENSATE AND WHERE DAMAGE MAY OCCUR AS A RESULT OF OVERFLOW FROM THE EQUIPMENT DRAIN PAN OR STOPPAGE IN THE CONDENSATE DRAIN (PER OMC SECTION 307.2.3). COORDINATE THESE REQUIREMENTS BETWEEN THE HVAC AND PLUMBING CONTRACTORS AND THE ARCHITECT.

X. ALL ROOF AND/OR EXTERIOR WALL PENETRATIONS ARE TO BE SEALED AIR AND WATER TIGHT, COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS. ALL EQUIPMENT, PIPES, DUCTS, ETC. ARE TO BE INSTALLED CONCEALED ABOVE THE CEILING UNLESS SHOWN OTHERWISE.

Y. VERIFY ALL SUSPENDED MECHANICAL LOADS WITH ARCHITECT PRIOR TO ORDERING NEW MECHANICAL EQUIPMENT.

Z. HVAC CONTRACTOR TO COORDINATE ROUTING AND LOCATION OF ALL DEVICES WITH BUILDING STRUCTURE AND OTHER CEILING MOUNTED DEVICES.

AA. HVAC CONTRACTOR TO REVIEW DRAWINGS FOR COMPLIANCE WITH LOCAL CODES AND WITH AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT. CONTACT ARCHITECT WITH ANY QUESTIONS OR CONCERNS.

DUCTWORK SYMBOL LEGEND

SUPPLY OR OUTSIDE AIR DUCT UP	RADIUS RECTANGULAR ELBOW
RETURN OR EXHAUST AIR DUCT UP	SUPPLY OR OUTSIDE AIR ROUND DUCT UP
SUPPLY OR OUTSIDE AIR DUCT DOWN	RETURN OR EXHAUST AIR ROUND DUCT UP
RETURN OR EXHAUST AIR DUCT DOWN	ROUND DUCT DOWN
SUPPLY OR OUTSIDE AIR DUCT OFFSET	ROUND OFFSET
RETURN AIR DUCT OFFSET	ROUND ELBOW
MANUAL BALANCING DAMPER	ROUND WYE
MOTORIZED DAMPER	RECTANGULAR BRANCH TAKEOFF
FIREDAMPER	RECTANGULAR DUCT TERMINATION
RECTANGULAR TO ROUND TRANSITION	ROUND DUCT TERMINATION
RECTANGULAR TRANSITION	
STANDARD RECTANGULAR ELBOW	

ANNOTATION SYMBOL LEGEND

(T) THERMOSTAT OR TEMP. SENSOR	4 / H-100 SECTION SYMBOL
(H) HUMIDISTAT	
(S) SWITCH	
(10) KEYED NOTE SYMBOL	RTU / 12 EQUIPMENT PLAN MARK
CONNECT TO EXISTING	
1-01 VAV TERMINAL UNIT MARK	4 / H-100 DETAIL SYMBOL
AHU-1 EQUIPMENT MARK	
A-8"ø / 250 A-24x12 / 250 AIR DEVICE MARK - NECK SIZE / AIRFLOW	
8"ø ROUND DUCT SIZE	
24x12 RECTANGULAR DUCT SIZE	

AIR DEVICE AND DUCT ACCESS. LEGEND

RETURN AIR GRILLE	SUPPLY AIR DIFFUSER (HARD CONNECTION)
SUPPLY AIR DIFFUSER WITH FLEXIBLE RUNOUT AND DAMPER	RETURN OR EXH. GRILLE (HARD CONNECTION)
SIDEWALL DIFFUSER	14X14 TRANSFER OPENING IN WALL
SUPPLY AIR DIFFUSER (HARD CONNECTION)	TRANSFER OPENING IN WALL
RETURN OR EXH. GRILLE (HARD CONNECTION)	

PIPE SYMBOL LEGEND

C	PIPE DOWN
O	PIPE UP
	TEE DOWN
	TEE UP
	PIPE BREAK (FOR CLARITY)
E	CAPPED PIPE
RS	REFRIGERANT SUCTION PIPE
RHG	REFRIGERANT HOT GAS PIPE

HVAC INDEX OF DRAWINGS

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HVAC LEGEND AND GENERAL NOTES

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DIFFUSERS, REGISTERS, GRILLES AND LOUVERS SCHEDULE

PLAN MARK	DESCRIPTION	BASIS OF DESIGN		MOUNTING	FINISH	MATERIAL	DAMPER TYPE	NOTES
		MFR	MODEL					
A1	SQUARE FACE DIFFUSER, 24"x24" FACE	TITUS	TMS	LAY-IN	WHITE	STEEL	-	-
B1	EGGCRATE RETURN GRILLE	TITUS	50F	LAY-IN	WHITE	STEEL	-	-
C1	DBL DEFLECTION SUPPLY GRILLE	TITUS	272RL	SURFACE	WHITE	STEEL	OPP. BLADE DMPR	-
D1	RETURN GRILLE	TITUS	350RL	SURFACE	WHITE	STEEL	OPP. BLADE DMPR	-

GENERAL NOTES:
A PRICE AND KRUEGER ACCEPTABLE ALTERNATE MANUFACTURERS.

NOTES:

GAS FIRED RADIANT HEATER SCHEDULE

PLAN MARK	DESCRIPTION	BASIS OF DESIGN		INPUT MBH	ELECTRIC		TUBE LENGTH	NOTES
		MANUF.	MODEL		V/PH	MCA		
RH-1	SINGLE STAGE, LOW INTENSITY	RE-VERBER-RAY	DES3-40-100	100	120/1	1.7	41'-1"	1
RH-2	SINGLE STAGE, LOW INTENSITY	RE-VERBER-RAY	DES3-40-100	100	120/1	1.7	41'-1"	1
RH-3	SINGLE STAGE, LOW INTENSITY	RE-VERBER-RAY	DES3-40-100	100	120/1	1.7	41'-1"	1

NOTES:
1. PROVIDE WITH POLISHED ALUMINUM REFLECTOR, FLEXIBLE GAS CONNECTOR, 24V CONTROL TRANSFORMER AND DIGITAL HEATING ONLY LOW VOLTAGE THERMOSTAT.

DUCTLESS SPLIT SYSTEM SCHEDULE

PLAN MARK	INDOOR UNIT						OUTDOOR UNIT					NOTES
	BASIS OF DESIGN				NOM. COOLING CAPACITY (MBH)	NOM. HEATING CAPACITY (MBH)	BASIS OF DESIGN		ELECTRIC			
	MFR	MODEL	CFM	V/PH			MFR	MODEL	V/PH	MCA	MOCP	
FC-1	MITSUBISHI	MSZ-GL18NA	-	208-230/1	18.0	13.8						1,2
AC-3							MITSUBISHI	MUZ-GL18NA	208-230/1	14	15	

GENERAL NOTES:
A INDOOR UNIT COOLING CAPACITY BASED ON 80°F DB, 67°F WB E.A.T., OUTDOOR UNIT COOLING CAPACITY BASED ON 95°F AMBIENT TEMPERATURE. HEATING CAPACITY BASED ON 17°F AMBIENT TEMPERATURE.
B INDOOR UNIT AIRFLOW QUANTITIES BASED ON HIGH FAN SPEED SETTING.

NOTES:
1. INDOOR UNIT POWERED FROM OUTDOOR UNIT. WIRING AND DISCONNECTS BY EC.
2. PROVIDE WITH WALL MOUNTED WIRED TEMPERATURE CONTROLLER WITH CLEAR VENTED LOCKABLE ENCLOSURE WITH TAMPERPROOF HARDWARE. REFER TO PLANS FOR MOUNTING LOCATION.

VENTILATION SCHEDULE

ROOM NUMBER	ROOM NAME	OCCUPANCY TYPE	AREA (SF)	OCCUPANT DENSITY (#/1000SF)	PEOPLE AIR RATE (CFM/PERSON)	AREA AIR RATE (CFM/SF)	NUMBER OF PEOPLE	MINIMUM OA. AIRFLOW (CFM)
101	ADMIN	OFFICE	167	5	5	0.06	1	15
102	OFFICE/CONFERENCE	CONFERENCE	230	50	5	0.06	12	74
103	ADMIN	OFFICE	234	5	5	0.06	2	24
104	OFFICE	OFFICE	122	5	5	0.06	1	12
105	BREAK/TRAINING	BREAK	293	25	5	0.06	8	58
106	MEN		101					
107	WOMEN		162					
108	MAINTENANCE		3530	0	0	0.75	0	2648
109	TOILET		54					
110	TRANSPORTATION		2178	0	0	0.75	0	1634
111	MECH.		58					
112	MECH		65					
113	COMPRESSOR		21					
			7214					4465

FURNACE SCHEDULE

PLAN MARK	BASIS OF DESIGN		CFM	VENT. AIR CFM	ESP	HEATING		NOM. COOL CAPACITY (TONS)	DIMENSION			ELECTRICAL			NOTES
	MFR	MODEL				MBH INPUT	MBH OUTPUT		WIDTH	DEPTH	HEIGHT	V/PH	MCA	MOCP	
FUR-1	CARRIER	59SC2D	1,000	89	0.50"	60	56	2.5	14.5"	29"	34"	120/1	9.9	15	1,2,3,4,5
FUR-2	CARRIER	59SC2D	1,000	94	0.50"	60	56	2.5	14.5"	29"	34"	120/1	9.9	15	1,2,3,4,5

GENERAL NOTES:
A ACCEPTABLE ALTERNATE MANUFACTURER BY RHEEM OR BRYANT.
B REFRIGERANT PIPING TO BE SIZED BY MANUFACTURER.

NOTES:
1. PROVIDE WITH NON-FUSED DISCONNECT SWITCH.
2. PROVIDE MATCHED EVAPORATOR COIL AND CONDENSING UNIT.
3. PROVIDE WITH FILTER RACK AND 1" PLEATED SPARE SET OF FILTERS.
4. PROVIDE CONCENTRIC VENT KIT AND NEUTRALIZING KIT.
5. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT.

AIR COOLED CONDENSING UNIT SCHEDULE

PLAN MARK	ASSOCIATED INDOOR UNIT	BASIS OF DESIGN		NOM. TONS	AMB. TEMP (°F)	MIN. UNIT EER	REFRIG.	ELECTRICAL			NOTES
		MFR	MODEL					V/PH	MCA	MOCP	
CU-1	FUR-1	CARRIER	24ACC6	2.5	95	16	R410A	208-230/1	16.7	25	1
CU-2	FUR-2	CARRIER	24ACC6	2.5	95	16	R410A	208-230/1	16.7	25	1

GENERAL NOTES:
A ACCEPTABLE ALTERNATE MANUFACTURER BY CARRIER OR BRYANT.

NOTES:
1. PROVIDE WITH CONCRETE OR COMPOSITE EQUIPMENT PAD.

FAN SCHEDULE

PLAN MARK	TYPE	MANUF.	MODEL	CFM	ESP ("WC)	WHEEL SIZE	DRIVE	MAX. SONES	ELECTRICAL			NOTES
									HP	VOLT	PHASE	
EF-1	SIDEWALL PROPELLER	GREENHECK	SE	5,250	0.38	-	DIRECT	-	1.5	208	1	2
EF-2	SIDEWALL PROPELLER	GREENHECK	SE	3,300	0.38	-	DIRECT	-	0.75	208	1	2
EF-3	CEILING EXHAUST	GREENHECK	SPB-110	140	0.25	-	DIRECT	2.0	80W	120	1	1,3
EF-4	CEILING EXHAUST	GREENHECK	SPA-200	200	0.25	-	DIRECT	2.0	52W	120	1	1,3
EF-5	CEILING EXHAUST	GREENHECK	SPB-110	110	0.25	-	DIRECT	2.0	80W	120	1	1,3

NOTES:
1. PROVIDE WITH INTEGRAL DISCONNECT SWITCH, BACKDRAFT DAMPER AND MOTOR SPEED SELECTOR.
2. PROVIDE WITH MOTOR GUARD, BACKDRAFT DAMPER, WALL SLEEVE AND EXTERIOR LOUVER. FAN SHALL BE CONTROLLED BY WALL STARTER. WIRING BY E.C.
3. FAN SHALL BE CONTROLLED BY OCCUPANCY SENSOR.

ELECTRIC UNIT HEATER SCHEDULE

PLAN MARK	TYPE	BASIS OF DESIGN		KW	VOLT	PHASE	DIMENSIONS				NOTES
		MANUF.	MODEL				LENGTH	HEIGHT	DEPTH	RECESS	
EUH-1	RECESSED WALL HEATER	MARLEY	EFF	4	208	3	15"	19"	4"	3"	1

NOTES:
1. PROVIDE DISCONNECT SWITCH, INTEGRAL THERMOSTAT AND TAMPERPROOF HARWARE.

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HVAC SCHEDULES & DETAILS

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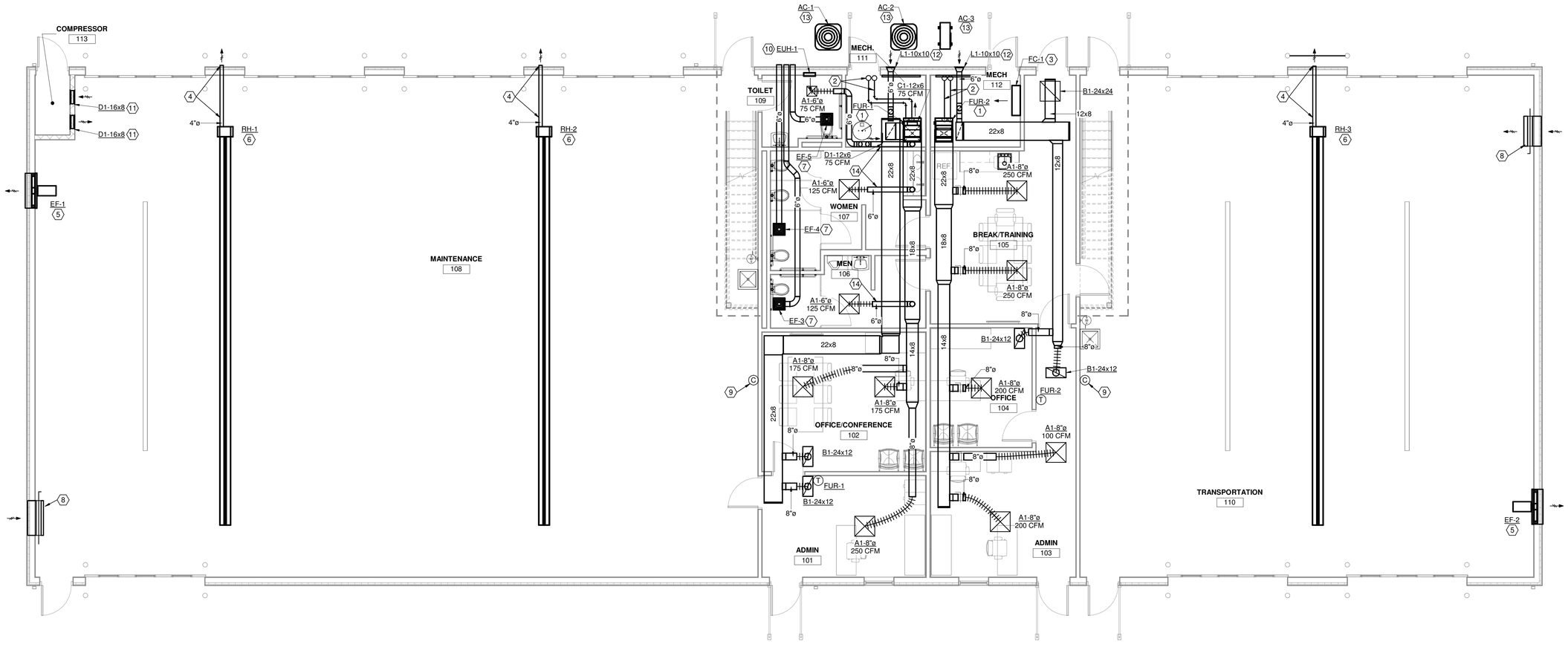
DRAWING NOTES

1. PROVIDE NEW VERTICAL GAS FIRED FURNACE. UNIT SHALL BE MOUNTED ON COMPOSITE EQUIPMENT PAD. EXTEND CONDENSATE DRAIN PIPING TO FLOOR DRAIN IN MECH ROOM.
2. 3" PVC VENT PIPING FROM FURNACE UP TO MEZZANINE LEVEL. REFER TO MEZZANINE PLAN FOR CONTINUATION.
3. PROVIDE WALL MOUNTED DUCTLESS SPLIT SYSTEM INDOOR UNIT. MOUNT UNIT APPROXIMATELY 7'-0" AFF. EXTEND DRAIN PIPING TO FLOOR DRAIN IN ROOM.
4. EXTEND RADIANT HEATER VENT PIPING THRU EXTERIOR WALL. TERMINATE WITH SIDEWALL VENT KIT. SEAL PENETRATION WATERTIGHT.
5. PROVIDE NEW SIDEWALL PROPELLER VENTILATION FAN. PROVIDE WITH WALL SLEEVE, EXTERIOR LOUVER AND MOTOR CAGE. FAN SHALL BE CONTROLLED BY HAND-OFF-AUTO SWITCH. AUTOMATIC OPERATION SHALL BE INTERLOCKED TO CARBON MONOXIDE SENSOR.
6. PROVIDE NEW GAS FIRED RADIANT HEATER. MOUNT HEATER APPROXIMATELY 15'-0" AFF. COORDINATE MOUNTING HEIGHT AND LOCATION WITH OTHER TRADES.
7. PROVIDE NEW CEILING MOUNTED BATH FAN. EXTEND DISCHARGE TO EXTERIOR WALL AND TERMINATE WITH WALL VENT CAP.

DRAWING NOTES CONT'D

8. PROVIDE SIDEWALL INTAKE LOUVER WITH AUTOMATIC DAMPER. DAMPER SHALL BE INTERLOCKED TO OPEN ON FAN OPERATION.
9. PROVIDE CARBON MONOXIDE DETECTOR. UPON RISE IN CO IN SPACE ASSOCIATED INTAKE LOUVER DAMPER SHALL OPEN AND VENTILATION FAN SHALL START.
10. PROVIDE NEW RECESS WALL HEATER WITH INTEGRAL THERMOSTAT.
11. PROVIDE HI-LO TRANSFER AIR GRILLE AND DUCT. MOUNT GRILLES ONE BLOCK COURSE FROM THE TOP AND TWO COURSES FROM FLOOR.
12. PROVIDE VENTILATION AIR INTAKE LOUVER WITH BACK DRAFT DAMPER AND MANUAL BALANCE DAMPER AND BALANCE TO VENTILATION AIRFLOW INDICATED IN FURNACE SCHEDULE.
13. PROVIDE NEW AIR COOLED CONDENSER MOUNTED ON CONCRETE. PROVIDE WITH EQUIPMENT MOUNTING LEGS. EXTEND REFRIGERANT PIPING LOW INTO BUILDING AND TO ASSOCIATED INDOOR SPLIT SYSTEM UNIT.
14. DUCTWORK LOCATED IN STRUCTURAL FRAMING.



1 FIRST FLOOR HVAC PLAN - NEW WORK
3/16" = 1'-0"

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FIRST FLOOR HVAC PLAN

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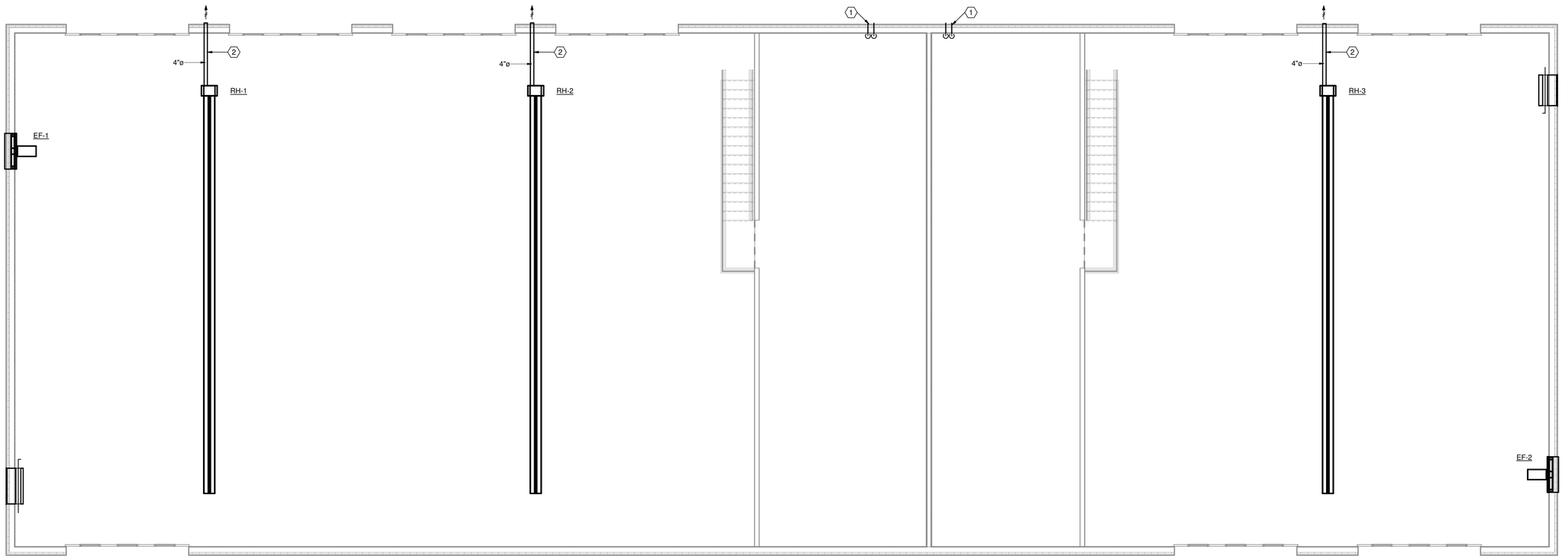
DRAWING NOTES

1. 3" PVC VENT PIPING FROM FURNACE BELOW TO TERMINATE OUT THE EXTERIOR WALL. TERMINATE PER MANUFACTURER GUIDELINES, INCLUDING ALL CLEARANCES TO BUILDING ENTRANCES, COMBUSTIBLES AND MECHANCIAL INTAKE LOCATIONS.
2. EXTEND RADIANT HEATER VENT PIPING THRU EXTERIOR WALL. TERMINATE WITH SIDEWALL VENT KIT. SEAL PENETRATION WATERTIGHT.



1 MEZZANINE HVAC PLAN - NEW WORK
3/16" = 1'-0"

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MEZZANINE FLOOR HVAC PLAN

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GENERAL LIGHTING/POWER NOTES

1. LIGHT FIXTURES DESIGNATED AS "NIGHT LIGHTS" SHALL BE ON UNSWITCHED CIRCUIT, UNLESS NOTED.
2. EXIT LIGHTS SHALL BE ON UNSWITCHED CIRCUIT, UNLESS NOTED.
3. ALL RECESSED DOWNLIGHTS MOUNTED IN GRID CEILING SHALL BE CENTERED IN CEILING TILE, UNLESS NOTED.
4. IN ALL MECHANICAL ROOMS, COORDINATE EXACT LOCATION OF LIGHT FIXTURES WITH HVAC DUCTWORK.
5. CONDUCTORS FOR BRANCH CIRCUITRY ARE #12 AWG MINIMUM, UNLESS NOTED. DERATE PER CODE WHERE CIRCUITS ARE COMBINED.
6. ALL HOMERUN CONDUCTORS BACK TO PANEL SHALL BE #10 AWG MINIMUM, UNLESS NOTED. PROVIDE A GREEN GROUND CONDUCTOR IN ALL BRANCH CIRCUITRY. DERATE PER CODE WHERE CIRCUITS ARE COMBINED.
7. ALL CONDUIT DROPS FOR PLENUM RATED CABLES SHALL BE PROVIDED WITH A CONDUIT BUSHING ABOVE CEILING.
8. WHERE TERMINATED IN J-BOX, ALL SPARE CIRCUITRY SHALL BE LABELED WITH PANEL AND CIRCUIT NUMBER.
9. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE ALL NECESSARY AUXILIARY CONTACTS, RELAY, ETC. IN MOTOR STARTERS FOR REQUIRED CONTROL OF MECHANICAL EQUIPMENT.
10. DO NOT SUPPORT CONDUIT OFF OF CEILING GRID, CEILING GRID SUPPORTS, MECHANICAL SUPPORTS, OR ANY OTHER TRADE'S SUPPORTS. INSTALL CONDUITS AND BOXES ON SEPARATE SUPPORTS FROM BAR JOIST OR STRUCTURE.
11. COORDINATE OUTLET LOCATIONS FOR ALL KITCHEN AND BAR EQUIPMENT PRIOR TO ROUGH-IN.

ABBREVIATIONS

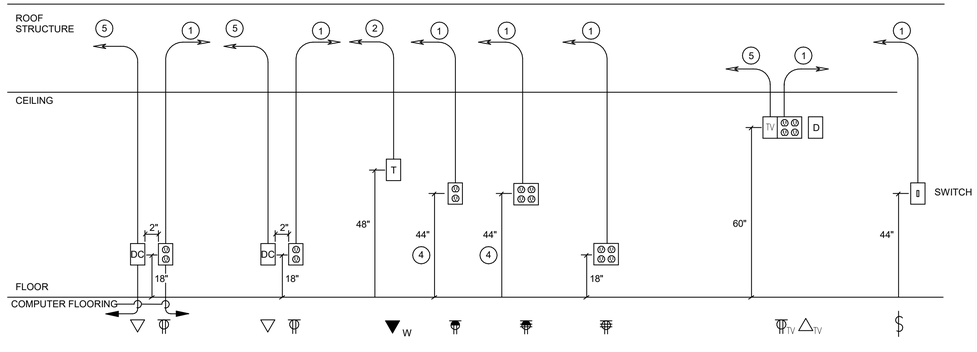
A	AMPS
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BKR	BREAKER
C	CONDUIT
CATV	CABLE TELEVISION
CUH	CABINET UNIT HEATER
CKT	CIRCUIT
Cu	COPPER
E	EXISTING
EF	EXHAUST FAN
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	EMERGENCY METALLIC TUBING
FCU	FAN COIL UNIT
G	GROUND
GFI	GROUND FAULT INTERRUPTER
GRC	GALVANIZED RIGID CONDUIT
HP	HORSEPOWER
J	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATTS
LGTG	LIGHTING
MECH	MECHANICAL
MW	MICROWAVE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE
P	PHASE (POLE)
TTB	TELEPHONE TERMINAL BOX
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UV	UNIT VENTILATOR
V	VOLTS
VAV	VARIABLE AIR VOLUME
VIF	VERIFY IN FIELD
W	WATTS
WC	WATER COOLER
WP	WEATHERPROOF
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE

DETAIL NOTES:

1. 120V RECEPTACLE BRANCH CIRCUIT. REFER TO POWER PLANS
2. 3/4" CONDUIT WITH CABLES TO CABLETRAY/DATA/COMM. BACKBOARD.
3. SWITCH LEG.
4. OR 4" ABOVE BACKSPLASH
5. STUB 1" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE BUSHING

LEGEND

- DC — DATA/COMMUNICATIONS OUTLET
- T — TELEPHONE OUTLET
- TV — AV BOX
- 120V POWER OUTLET
- SWITCH
- DOUBLE DUPLEX 120V POWER OUTLET



② TYPICAL DEVICE ELEVATION DETAILS
NTS

GENERAL PROJECT NOTES

1. WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL, STATE OF OHIO, 2017 NEC AND NATIONAL CODES, RECOMMENDATIONS, REGULATIONS, AND REQUIREMENTS.
2. COORDINATE ELECTRICAL REQUIREMENTS FOR NEW WORK WITH THE PLUMBING AND MECHANICAL CONTRACTORS. VERIFY VOLTAGE, PHASE AND ACCESSORY REQUIREMENTS, SUCH AS MOTOR STARTERS AND DISCONNECTS.
3. CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED FOR HIS WORK. OPENING IN WALLS, FLOORS AND CEILINGS SHALL BE FILLED IN, PATCHED, PAINTED AND FINISHED IN A MANNER TO MATCH THE QUALITY OF THE EXISTING, LIKE ADJACENT SURFACES.
4. NEW OPENINGS IN EXISTING WALLS AND FLOORS SHALL BE CORE DRILLED OR SAW CUT. OPENINGS IN NEW WALLS AND FLOORS SHALL BE PLANNED AND COORDINATED WITH GENERAL CONTRACTOR FOR THE INSTALLATION OF APPROPRIATE SLEEVES.
5. ALL CONDUIT SHALL BE 3/4" MINIMUM U.N.O.
6. CONDUIT SHALL BE CONCEALED IN CEILING OR WALLS WHEREVER POSSIBLE.
7. ALL BRANCH CIRCUITS AND FEEDERS SHALL CONTAIN A GREEN INSULATED GROUND CONDUCTOR. GROUNDING BY MEANS OF RACEWAY IS NOT PERMITTED.
8. REFER TO MECHANICAL, PLUMBING, AND ARCHITECTURAL PLANS FOR EXACT LOCATION OF EQUIPMENT.
9. CONTRACTOR SHALL COORDINATE EXACT HEIGHT OF DEVICES DESIGNED AS OVER COUNTER WITH CASE WORK AND FURNITURE DRAWINGS.
10. VERIFY CEILING TYPES PER THE ARCHITECTURAL REFLECTED CEILING PLAN. PROVIDE APPROPRIATE TYPE FIXTURE, LAY-IN FOR GRID, FLANGE FOR DRYWALL, ETC.
11. VERIFY AND COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL DEVICES MOUNTED IN CASEWORK OR ABOVE COUNTERS WITH SPECIFIC EQUIPMENT FURNISHED.
12. NO MORE THAN 3 PHASE CONDUCTORS SHALL BE INSTALLED IN ANY ONE CIRCUIT, UNLESS NOTED OTHERWISE. EACH BRANCH CIRCUIT SHALL CONTAIN THEIR OWN NEUTRAL CONDUCTOR. NO SHARED NEUTRALS.
13. CONTRACTOR SHALL PROVIDE ALL FIRESTOPPING FOR CONDUIT OR CABLE TRAY PENETRATIONS THAT PENETRATE ACOUSTICAL RATED OR SMOKE AND FIRE RATED ASSEMBLIES. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL RATED ASSEMBLIES. ALL RATED PENETRATIONS SHALL BE FIRESTOPPED TO ORIGINAL ASSEMBLY RATING. ALL NON-RATED FLOOR PENETRATIONS SHALL BE SEALED WATER TIGHT WITH A FLEXIBLE SEALANT.
14. PROVIDE ALL PULL BOXES, IN ACCESSIBLE AREA, THAT EXCEED NEC NUMBER OF BENDS OR LENGTH IN FEEDER AND BRANCH CIRCUITS. INSTALL BOXES WHERE REQUIRED PER CODE.
15. ALL WIRING DEVICES SHALL BE OF HEAVY DUTY COMMERCIAL GRADE CONSTRUCTION. REFER TO ARCHITECTURAL SHEETS AND CODE SHEET FOR ALL FIRE-RATED PARTITION LOCATIONS AND RATINGS. COORDINATE COLORS WITH ARCHITECT.
16. CONTRACTOR IS RESPONSIBLE FOR ALL CORE-DRILLS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK.
17. ROUTING OF CIRCUITRY INSTALLED IN CASEWORK, CABINETRIES, ETC. SHALL BE COORDINATED FOR PROPER CONCEALMENT AND FUNCTION OF CASEWORK, CABINETRIES, ETC.
18. VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION, TRENCHING, OR DRILLING.
19. ALL ROOF PENETRATIONS OR PATCHES SHALL BE MADE PER ROOFING MANUFACTURER WARRANTY REQUIREMENTS.
20. ALL EXPOSED METAL CONDUITS ARE TO BE PAINTED TO MATCH THE ADJACENT SURFACE. COORDINATION OF PAINTING OF CONDUIT IS TO BE BY THE ELECTRICAL CONTRACTOR, WITH PAINTING BY OTHERS.
21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED JUNCTION BOXES, PULL BOXES. ETC FOR A COMPLETE INSTALLATION PER THE N.E.C. AND LOCAL CODES. ALL CONDUCTORS SHALL BE RATED FOR 90 DEGREE CELSIUS.
22. COORDINATE WORK WITH OTHER TRADES. COORDINATION OR SCHEDULING SHALL BE RESPONSIBILITY OF THE INVOLVED CONTRACTORS.
23. ALL LOW VOLTAGE CABLING INSTALLED IN SPACES WITHOUT A LAY-IN OR WITH A HARD CEILING SHALL BE INSTALLED IN CONDUIT AND BOXES.

ELECTRICAL LEGEND

LIGHTING

A1	LIGHTING FIXTURE. REFER TO FIXTURE SCHEDULE. LETTER INDICATES TYPE.
A1 E	EMERGENCY LIGHTING FIXTURE WITH EMERGENCY BALLAST. "NL" INDICATES NIGHT LIGHT CIRCUIT (NL - NIGHT LIGHT - FIXTURE TO OPERATE CONTINUOUSLY.).
C1	LIGHTING FIXTURE. LETTER INDICATES TYPE.
C1 E	EMERGENCY LIGHTING FIXTURE WITH EMERGENCY BALLAST OR POWERED THROUGH INVERTER SYSTEM.
X1	CEILING MOUNTED EXIT SIGN. REFER TO FIXTURE SCHEDULE. SHADED AREA DENOTES FACE OF UNIT. CONNECT TO LOCAL UNSWITCHED LIGHTING CIRCUIT.
X1	WALL MOUNTED EXIT SIGN. REFER TO FIXTURE SCHEDULE. SHADED AREA DENOTES FACE OF UNIT. CONNECT TO LOCAL UNSWITCHED LIGHTING CIRCUIT.
S	SINGLE POLE WALL SWITCH. 120/277 VOLT, 20 AMP. 44" AFF.
3S	THREE WAY WALL SWITCH. 120/277V, 20 AMP. 44" AFF
4S	FOUR WAY WALL SWITCH. 120/277V, 20 AMP. 44" AFF
OCS	OCCUPANCY SENSOR WALL SWITCH. 120/277V, 20 AMP. 44" AFF
PS	SINGLE POLE WALL SWITCH WITH PILOT LIGHT. 120/277V, 20 AMP. 44" AFF
	EXTERIOR LIGHT FIXTURE. ER, EXISTING TO REMAIN, PL1 - NEW FIXTURE. REFER TO FIXTURE SCHEDULE.
	EMERGENCY EGRESS LIGHT. REFER TO FIXTURE SCHEDULE.
OC	CEILING MOUNTED OCCUPANCY SENSOR.

POWER

	DUPLEX RECEPTACLE. 120 VOLT, 20 AMP. 18" AFF UNO.
U	DUPLEX RECEPTACLE WITH USB PLUG. 120 VOLT, 20 AMP. 18" AFF UNO.
	DUPLEX RECEPTACLE MOUNTED AT 46" OR ABOVE BACKSPLASH. 120 VOLT, 20 AMP.
	DOUBLE DUPLEX RECEPTACLE. 120 VOLT, 20 AMP. 18" AFF UNO.
	120 VOLT DOUBLE DUPLEX, 20 AMP RECEPTACLE MOUNTED AT 46" AFF OR 4" ABOVE BACKSPLASH.
GF/WP	DUPLEX RECEPTACLE WITH GROUND FAULT PROTECTION. 120 VOLT, 20 AMP. 18" AFF UNO, WP-WEATHERPROOF BOX
	FLUSH FLOOR DUPLEX RECEPTACLE IN FLOOR BOX
	120 VOLT SINGLE 20 AMP RECEPTACLE.
C	DUPLEX RECEPTACLE. CEILING MOUNTED
	SPECIAL PURPOSE RECEPTACE. REFER TO FLOOR PLANS FOR NEMA CONFIGURATION.
m	FRACTIONAL HP MOTOR STARTER WITH THERMAL OVERLOADS.
	ELECTRICAL MOTOR.
	INDICATES FINAL CONNECTION REQUIRED.
XXX-1	HOMERUN TO PANELBOARD. NOTION INDICATES PANEL AND CIRCUIT NUMBER. (ALL CONDUCTORS SHALL BE #10 UNLESS NOTED OTHERWISE.)
	ELECTRICAL PANELBOARD.
J	JUNCTION BOX.
	CONDUIT STUB-OUT AND CAP BELOW GRADE. MARK STUB-OUT AT GRADE LEVEL.
UE	UNDERGROUND HIGH VOLTAGE OR SECONDARY SERVICE FEED.
4X	SAFETY DISCONNECT SWITCH (NON-FUSED). 4X INDICATES ENCLOSURE TYPE.
	SAFETY DISCONNECT SWITCH (FUSED).
	COMBINATON MOTOR STARTER/DISCONNECT. WITH HOA SWITCH AT UNIT (FUSIBLE). OR (CIRCUIT BREAKER FOR ELEVATOR).
T1	TRANSFORMER (NUMBER INDICATES WHICH TRANSFORMER).
HD	HAND DRYER, VERIFY MOUNTING WITH SUPPLIER

GENERAL

2 / E0.1	DETAIL # ____ DETAIL REFERENCE TAG, DRAWING # REFER TO DETAIL SHEETS
	KEYNOTE FOR DRAWING
2 / E0.1	DETAIL REFERENCE TAG (SECTION)
EF-1	MECHANICAL EQUIPMENT TAG. REFER TO EQUIPMENT DATA SCHEDULE.
	INDICATES NEW WORK.
	INDICATES TO BE REMOVED.
	INDICATES EXISTING TO REMAIN.

FIRE ALARM

F	FIRE ALARM PULL STATION, 44" AFF MOUNTING HEIGHT
F	FIRE ALARM HORN/STROBE. 80" AFF MOUNTING HEIGHT
D / R	FIRE ALARM DUCT MOUNTED SMOKE DETECTOR. S = SUPPLY, R = RETURN - COORDINATE WITH DUCTWORK. MAKE SAMPLING TUBE FULL WIDTH OF DUCT IN LENGTH. PROVIDE SMOKE DETECTOR FOR DAMPER OPERATION AND 120 VOLT POWER CONNECTION AS SHOWN ON THE POWER DRAWINGS. COORDINATE ALL CONNECTIONS WITH MECHANICAL CONTRACTOR. CONNECT TO ALARM SYSTEM.
S	FIRE ALARM CEILING MOUNTED SMOKE DETECTOR.
FAAP	FIRE ALARM ANNUNCIATOR PANEL.
FACP	FIRE ALARM CONTROL PANEL.
F	FIRE ALARM STROBE. 80" AFF MOUNTING HEIGHT.
BL WP	BLUE EXTERIOR STROBE LIGHT FOR FIRE DEPARTMENT CONNECTION WP - WEATHERPROOF
FS	SPRINKLER SYSTEM FLOW SWITCH FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED BY ELECTRICAL CONTRACTOR.
TS	SPRINKLER SYSTEM GATE VALVE. SUPERVISORY SWITCH FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED BY ELECTRICAL CONTRACTOR.
F WP	FIRE ALARM STROBE. 80" AFF MOUNTING HEIGHT.
	MAGNETIC DOOR HOLD OPEN.
RPS	FIRE ALARM REMOTE POWER SUPPLY.
Z	FIRE ALARM MONITOR MODULE.
R	FIRE ALARM CONTROL RELAY MODULE.
E.O.L.R.	END OF THE LINE RESISTOR.
KB	FIRE ALARM CONTROL RELAY MODULE.

DOOR ACCESS

E	ELECTRIC DOOR STRIKE.
DC	DOOR SWITCH/CONTACT.
CR	KEY OR KEYCARD ACTIVATED SWITCH IN TAMPER PROOF ENCLOSURE. WP - WEATHERPROOF.
HC	HANDICAP DOOR ACCESS BUTTON IN FLUSH WALL BOX.

INTRUDER DETECTION SYSTEM

PIR	CEILING MOUNTED MOTION SENSOR DEVICE.
KP	CEILING MOUNTED MOTION SENSOR DEVICE.

DATA & COMMUNICATION

2	DATA /COMMUNICATION OUTLET. TWO PORTS REFER TO DETAIL FOR MOUNTING REQUIREMENTS.
W	WALL PHONE. 54" AFF.
	DATA OUTLET. 18" AFF.
4	DATA/COMMUNTICATION. FOUR PORT DATA, 18" AFF.
6	DATA/COMMUNTICATION. FOUR PORT DATA, 18" AFF.
WAP	WIRELESS ACCESS CONNECTION POINT WITH CEILING MOUNTED CISCO WIRELESS DEVICE.

ELECTRICAL INDEX OF DRAWINGS

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ELECTRICAL LEGEND AND GENERAL NOTES

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EQUIPMENT ELECTRICAL DATA SCHEDULE

PLAN SYMBOL	DESCRIPTION/LOCATION	LOAD CHARACTERISTICS						STARTER						DISCONNECT					CTRL DEVICE			PANEL	CIRCUIT	FEEDER SIZE/ RACEWAY	NOTES	PLAN SYMBOL
		KW	HP	VOLTAGE	PHASE	FLA	SPEED DRIVE	TYPE	NEMA SIZE	FURNISH BY	INSTALL BY	AUXIL. RELAY	LOCATION	TYPE	FURNISH BY	INSTALL BY	SWITCH/ FUSE SIZE	LOCATION	TYPE	FURNISH BY	INSTALL BY					
AC-1	AIR CONDITIONER	-	-	208	1	16.7	-	-	-	ES	ES	-	IN UNIT	-	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	AC-1
AC-2	AIR CONDITIONER	-	-	208	1	16.7	-	-	-	ES	ES	-	IN UNIT	-	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	AC-2
AC-3	AIR CONDITIONER	-	-	208	1	14.7	-	-	-	ES	ES	-	IN UNIT	-	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	AC-3
FC-1	FAN COIL	-	-	208	1	-	-	-	-	ES	ES	-	IN UNIT	-	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	FC-1
FUR-1	FURNACE	-	-	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	FUR-1
FUR-2	FURNACE	-	-	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	FUR-2
EF-1	EXHAUST FAN	-	-	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EF-1
EF-2	EXHAUST FAN	-	-	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EF-2
EF-3	EXHAUST FAN	-	.5	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EF-3
EF-4	EXHAUST FAN	-	.5	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EF-4
EF-5	EXHAUST FAN	-	.5	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EF-5
WH-1	WATER HEATER	-	-	120	1	-	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	WH-1
RH-1	RADIANT HEATER	-	-	120	1	1.7	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	RH-1
RH-2	RADIANT HEATER	-	-	120	1	1.7	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	RH-2
RH-3	RADIANT HEATER	-	-	120	1	1.7	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	RH-3
EUH-1	ELECTRIC UNIT HEATER	5	-	208	3	1.7	-	-	-	ES	ES	-	IN UNIT	SW	EC	EC	-	NEAR UNIT	-	-	-	-	-	(3) #12, (1) #12 GRD. IN .75"	-	EUH-1

ABBREVIATIONS:

CC - CONTROL CONTRACTOR
CP - CORD/PLUG
EC - ELECTRICAL CONTRACTOR
ES - EQUIPMENT SUPPLIER
FS - FUSED SWITCH
FSC - FIRE SUPPRESSION CONTRACTOR
FSEC - FOOD SERVICE EQUIP. CONTRACTOR
FVNR - FULL VOLTAGE NON-REVERSING
GC - GENERAL CONTRACTOR
HC - HEATING CONTRACTOR
PC - PLUMBING CONTRACTOR
SC - SPRINKLER CONTRACTOR
VC - VENTILATION CONTRACTOR
TS - THERMOSTAT

NOTES:

LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	LAMPS/LIGHT ENGINE QUANTITY: FLOURESCENT	INCANDESCENT	H.I.D.	L.E.D.	WATTS/LAMP	(MANUFACTURER) CATALOG NUMBER	FIXTURE VOLTAGE	FIXTURE INPUT WATTS	FIXTURE EFFICIENCY	DELIVERED LUMENS	MANUFACTURER AND MODEL NUMBER	OTHER ACCEPTABLE MANUFACTURER	DIFFUSER MEDIA	CLASSIFICATION	TRIM COLOR: WHITE	NICKEL	CHROME	BRUSHED NICKEL	STANDARD	SEE NOTE	MOUNTING	SIZE (IN.): DIAMETER OR WIDTH	LENGTH	DEPTH	NOTES
A1	-	-	-	1	75.9	-	120	75.9	-	10,527	COLUMBIA #CLB-2-40-LX-W-ED-U-CABLE MOUNT	AS PRE-APPROVED	HIGH BAY	N	X						C	10	22.7	2.3	-
A2	-	-	-	1	30	-	120	30	-	3,338	COLUMBIA #CFP22-40/33/2835	AS PRE-APPROVED	EDGE LIT LED	N	X						R	23.7	23.7	1.58	-
A3	-	-	-	1	30	-	120	30	-	4,274	COLUMBIA #CSL4-LSCS	AS PRE-APPROVED	EDGE LIT LED	N	X						CS	11.8	47.7	1.58	-
X1	-	-	-	1	-	-	120	-	-	-	COMPASS #CCRRC	AS PRE-APPROVED	-	EM	X						WM-7'-6"	19.25	8.125	1.75	-
ER	-	-	-	1	-	-	120	-	-	-	COMPASS #C0RS	AS PRE-APPROVED	-	EM	X						WM-7'-6"	4.5	DIA	6.7	-
▽▽	-	-	-	2	-	-	120	-	-	-	COMPASS #CU2	AS PRE-APPROVED	-	EM	X						WM-7'-6"	4	9	2.75	-
PL1	-	-	-	1	72.1	-	120	72.1	-	9,429	BEACON #VP-1-160L-75-4K7-4F-UNV-ASQU-BLT-F	AS PRE-APPROVED	SITE LIGHTING	N	X	X	X	X	X	X	POLE	-	-	-	1
PL2	-	-	-	1	72.1	-	120	72.1	-	10,461	BEACON #VP-1-160L-75-4K7-3-UNV-ASQU-BLT-F	AS PRE-APPROVED	SITE LIGHTING	N	X	X	X	X	X	X	POLE	-	-	-	1
PL3	-	-	-	1	72.1	-	120	144.2	-	9,429	BEACON #VP-1-160L-75-4K7-4F-UNV-ASQU-BLT-F	AS PRE-APPROVED	SITE LIGHTING	N	X	X	X	X	X	X	POLE	-	-	-	1
WP1	-	-	-	1	80	-	120	80	-	9,478	BEACON #TRV-D-36L-80-4K7-4F-UNV-BLT	AS PRE-APPROVED	SITE LIGHTING	N	X	X	X	X	X	X	WM-16'-0"	-	-	-	-

NOTES:

1. POLE #VALMONT #DS330-400Q250-D1-FP-BK-FBC

EM - EMERGENCY
N - NORMAL
HAZ - HAZARDOUS
HB - HIGH BAY
LB - LOW BAY
HM - HIGH MAST

S - SURFACE
R - RECESSED
SM - STEM MTD.
WM - WALL MTD.
C - CHAIN MTD.
UC - UNDER CAB.
CS - CEIL. SURF.

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ELECTRICAL EQUIPMENT AND LIGHTING SCHEDULE

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ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS

A. REFERENCE

1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS NILE, INSOFAR AS THEY APPLY HERETO.

2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

3. ALL PANEL BOARDS AND CIRCUIT BREAKERS SHALL BE BY SQUARE D PER OWNER REQUIREMENTS.

B. CONTRACT DRAWINGS

1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.

2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.

3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.

4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS

1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, (4) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER, BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION. AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS SHOP DRAWINGS TYPE SUBMITTALS REQUIRED

LIGHTING FIXTURES
WIRING DEVICES

E. GUARANTEES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP

6. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.

7. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION, AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSE DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.

8. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

9. TEMPORARY WIRING AND LIGHTING SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH NEC AND OSHA.

B. COORDINATION OF PLANS AND SPECIFICATIONS

1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING

1. PATCHING SHALL MATCH EXISTING SURFACES IN KIND AND FINISH AND SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE.

2. REPAIR OF DAMAGES, BY THE ELECTRICAL CONTRACTOR, TO NEWLY PATCHED AND REFINISHED AREAS SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE, TO MATCH EXISTING CONDITION.

3. WHERE REQUIRED TO MAINTAIN FIRE RATING, OPENINGS SHALL BE SEALED UTILIZING 3M BRAND FIRE BARRIER PENETRATION SEALING SYSTEMS. FIRE BARRIER OR FIRE STOP SYSTEMS FROM CROUSE-HINDS, THOMAS & BETTS OR DOW CORNING MAY BE USED AT CONTRACTOR'S OPTION. THIS INCLUDES HOLES LEFT DUE TO REMOVAL OF EXISTING CONDUITS, BUS DUCT, ETC. OPENINGS SHALL BE TEMPORARILY FIRE STOPPED UNTIL PERMANENT FIRE STOPPING IS DONE.

D. CLEANING AND PAINTING

1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.

2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.

3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

CODES AND FEES

A. CODES:

1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:

1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND SPECIFICAITONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

D. THE ELECTRICAL CONTRACTOR SHALL TEST AND OBTAIN ACCEPTANCE FOR THE FOLLOWING SYSTEMS:

1. EMERGENCY LIGHTING.
2. RECEPTACLE AND EQUIPMENT POWER.
3. LIGHTING.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN 3/4" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS. "MINERALAC" TYPE SUPPORTS AND "UNISTRUT" TYPE ONE BOLT SUPPORTS WITH SQUARE ENDS SHALL NOT BE USED AT ANY LOCATION.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE STRANDED AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN, CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. ALL CONDUCTORS SHALL BE COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

C. THE FOLLOWING COLOR CODE SHALL BE USED:

208 VOLT

PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
EQUIPMENT GROUND	GREEN

D. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

E. CONDUCTORS NO.8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE 1/2", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:

1. AT EACH TERMINAL.
2. AT EACH CONDUIT ENTRANCE.
3. AT INTERVALS NOT MORE THAN 12 INCHES APART.
4. IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

F. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANELBOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH-CIRCUIT NUMBERS.

G. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULLBOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.

B. PULLBOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND SIZE AND GAUGE, IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE UL LABELED.

C. FLUSH OUTLET, JUNCTION AND PULLBOXES SHALL BE PRESSED STEEL GALVANIZED OR SHERARDIZED AND SHALL BE A MINIMUM OF 4" SQUARE OR OCTAGONAL SIMILAR TO APPLETON #40. STEEL BOXES CAST IN CONCRETE SHALL BE DESIGNED FOR CONCRETE INSTALLATION.

D. FLUSH WALL BOXES IN TILE, MARBLE, BRICK OR OTHER FINISHED MASONRY WALLS SHALL BE STEEL CITY GW-135-C SERIES OR RACO 695 SERIES.

E. SWITCH PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NOS. P-1, P-2, P-3 ETC., AS REQUIRED, AND SHALL BE MADE OF IVORY PLASTIC. COORDINATE ALL DEVICES AND COVER PLATE COLORS WITH ARCHITECT PRIOR TO PURCHASE.

F. DUPLEX RECEPTACLE PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NO. P-8 IVORY PLASTIC.

G. ALL BOXES SHALL BE RIGIDLY SUPPORTED FROM BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.

WIRING DEVICES

A. WIRING DEVICES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH THE CATALOG NUMBERS AND MANUFACTURERS LISTED IN THE SCHEDULE WHICH FOLLOWS. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.

B. DUPLEX GROUNDING TYPE RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20R:

1. HUBBELL - 5362-1.
2. ARROW HART - 5362-1.

D. SINGLE POLE SWITCHES - 20 AMP. 120/277 VOLT:

1. HUBBELL - 1221-1.
2. ARROW HART - 1991-1.

G. G.F.I. RECEPTACLE - 15 AMP, 125 VOLT - NEMA 5-15R:

1. HUBBELL - GF 5262-1 WITH S26 OR PJ26 PLATE OR WP-26 W.P. COVER.

H. G.F.I. RECEPTACLE - 20 AMP, 125 VOLT - NEMA 5-20R:

1. HUBBELL - GF 5362-1 WITH S26 OR PJ26 PLATE OR WP-26 W.P. COVER.

I. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250.146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

J. GENERAL USE DUPLEX RECEPTACLES SHALL BE GROUNDING TYPE, 15 AMPERE, 125 VOLT UNLESS THERE IS ONLY ONE ON A 20 AMPERE CIRCUIT, THEN IT SHALL BE 20 AMPERE.

K. COORDINATE DEVICE COLOR WITH ARCHITECT.

IDENTIFICATION

H. EACH PIECE OF ELECTRICAL EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS ALL EXHAUST FAN MANUAL STARTING SWITCHES, ALL POWER AND LIGHTING PANELS, ALL CABINETS AND PULL BOXES, ETC., SHALL BE IDENTIFIED ON THE FRONT COVER OR TRIM WITH ITS NAME AND/OR DESIGNATION NUMBER OR LETTER AS SHOWN ON THE DRAWINGS AND WITH THE VOLTAGE AVAILABLE WITHIN THE PANEL.

I. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK FACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM 1/4" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEETMETAL SCREW ATTACHMENT, NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.

J. THE FOLLOWING IS AN EXAMPLE OF THE NAMEPLATE LAYOUT AND WORDING:

AC-1 DICONNECT
208V - 1PH CKT B-1,2

K. PLASTIC NAMEPLATES SHALL BE ATTACHED TO FACE OF ELECTRICAL DEVICE BY SHEETMETAL SCREWS. LOCATE PLATE SO WORDING READS HORIZONTALLY AND PLATE DOES NOT OBSTRUCT OTHER IDENTIFICATION PLATES, LATCHES OR OPERATORS.

L. WHERE CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION RATING. THE MARKING SHALL BE READILY VISIBLE AND STATE "CAUTION - SERIES RATED SYSTEM."

GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250.122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER SECTION "WIRE AND CABLE."

B. ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.

C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40 PVC NON-METALLIC ELECTRICAL CONDUIT WITH UL LABEL. SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.

D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS - ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC 250.24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250.30.

E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE; 2) THE GROUND PIGTAIL TO BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN, METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.

F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES, WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.

B. LENS THICKNESS FOR FIXTURES SHALL BE 0.125 INCHES, MINIMUM (NOT NOMINAL) AND HAVE A MINIMUM WEIGHT OF 8.0 OUNCES PER SQUARE FOOT.

C. FLUSH FIXTURES MAY BE FURNISHED WITH PRE-WIRED FEATURE PROVIDED THEY ARE UL APPROVED FOR 75.C WIRING AND THE JUNCTION BOX CAPACITY IS SUFFICIENT FOR THE CIRCUIT WIRING REQUIREMENTS.

D. CLEARANCES FOR RECESSED PORTIONS OF FIXTURES FROM COMBUSTIBLE MATERIAL AND THERMAL INSULATION, SHALL BE IN ACCORDANCE WITH NEC ARTICLE 410.66.

E. ANY FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.

F. ALL FIXTURES SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.

G. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT). BY USE OF A PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

DISCONNECTS

H. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL HEAVY DUTY FUSIBLE DISCONNECT OR NON-FUSIBLE DISCONNECT SWITCHES WHERE SHOWN ON THE DRAWINGS, IN CONFORMANCE WITH NEC REQUIREMENTS FOR EACH UNIT OF EQUIPMENT. (DOES NOT INCLUDE DISCONNECTS FURNISHED BY FIRE PUMP PROVIDER)

I. SWITCHES SHALL BE WALL MOUNTED IN GENERAL PURPOSE ENCLOSURE UNLESS OTHERWISE NOTED. THEY SHALL BE NEMA HEAVY-DUTY TYPE AND SHALL HAVE THE RATING. CAPACITY AND NUMBER OF POLES FOR THE SERVICE CONCERNED.

J. EXTERIOR SWITCHES SHALL BE NEMA 3R TYPE.

K. FUSIBLE SWITCHES SHALL HAVE CLASS R FUSE CLIPS.

L. SWITCHES FOR USE ON MOTOR CIRCUITS SHALL BE HORSEPOWER RATED.

M. SWITCHES SHALL BE INSTALLED TO PROVIDE CODE REQUIRED CLEARANCE AND SHALL BE GENERALLY WALL MOUNTED AT 6'-0" TO TOP.

N. DISCONNECTS MOUNTED ON EQUIPMENT SHALL BE FIELD COORDINATED AND LOCATED TO CLEAR ANY ACCESS OPENINGS OR PATHS.

O. PROVIDE FREE STANDING UNISTRUT SUPPORT FRAME FOR SWITCHES THAT CANNOT BE WALL OR EQUIPMENT MOUNTED. FRAME SHALL BE FULL HEIGHT AND ATTACHED AT THE FLOOR AND CEILING, OR ANGLE BRACED TO FLOOR OR POURED INTO CONCRETE EQUIPMENT PAD IN ORDER TO PROVIDE RIGID STRUCTURE. MINIMUM HEIGHT TO TOP OF FLOOR MOUNTED SWITCHES SHALL BE 36".

P. HANDLE SHALL BE PAD LOCKABLE.

MOTOR AND EQUIPMENT WIRING

A. PROVIDE POWER AND CONNECT ALL MOTORS AND MOTOR DRIVEN EQUIPMENT SHOWN ON THE PLANS.

B. FURNISH, INSTALL AND CONNECT ALL OVER CURRENT AND DISCONNECT MEANS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

C. MOTORS AND MOTOR DRIVEN EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY OTHERS. MOTOR STARTERS, CONTROLLERS AND CONTROL DEVICES; OTHER THAN BUILDING AUTOMATION SYSTEM (TEMPERATURE CONTROL) EQUIPMENT, DEVICES AND STARTERS FOR CONTROLLERS, FURNISHED AS PART OF PACKAGED EQUIPMENT; SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR EXCEPT AS OTHERWISE NOTED. MOTOR STARTERS SHALL BE RATED AT 25,000 AIC MINIMUM.

D. INSTALL AND WIRE ALL MOTOR EQUIPMENT PER WIRING DIAGRAMS AND INSTRUCTION FURNISHED TO HIM, INCLUDING INTERLOCK WIRING BETWEEN EQUIPMENT.

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ISSUE

NO.	DATE	DESCRIPTION
	04/08/2022	PERMIT AND CONSTRUCTION

DATE	04/08/22
JOB NO.	2021145
DRAWN	JMS
CHECKED	RLS

TITLE
ELECTRICAL SPECIFICATIONS

SHEET NO.
E0.3

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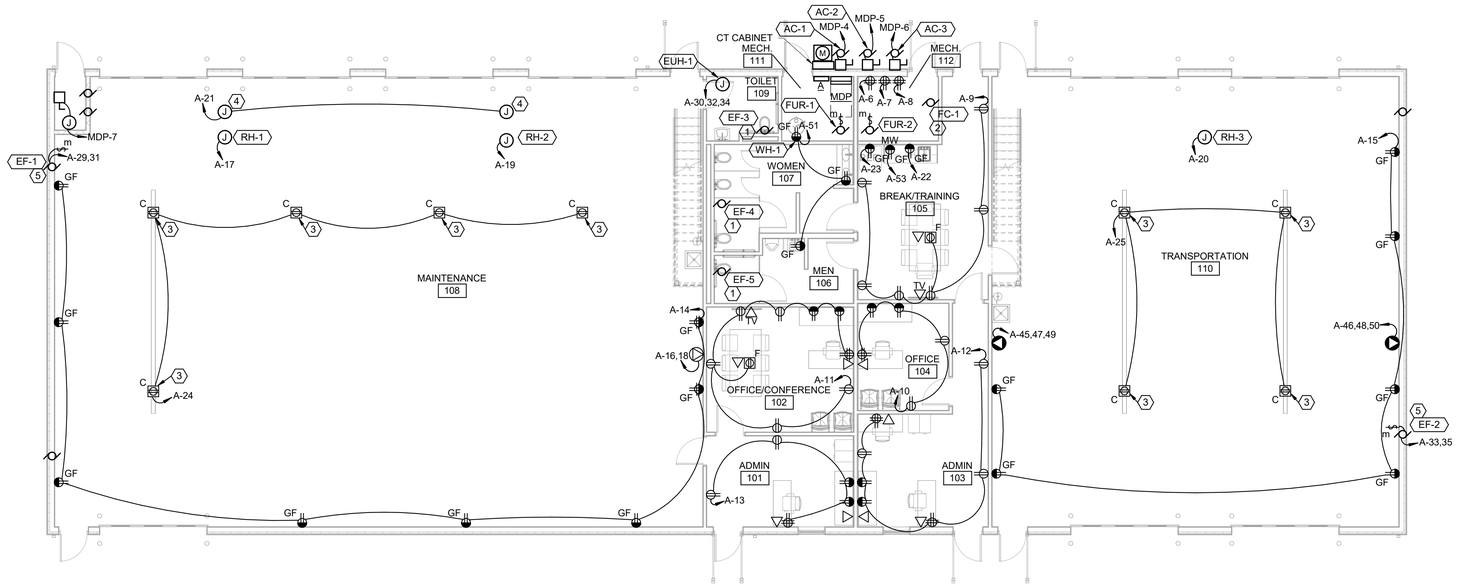
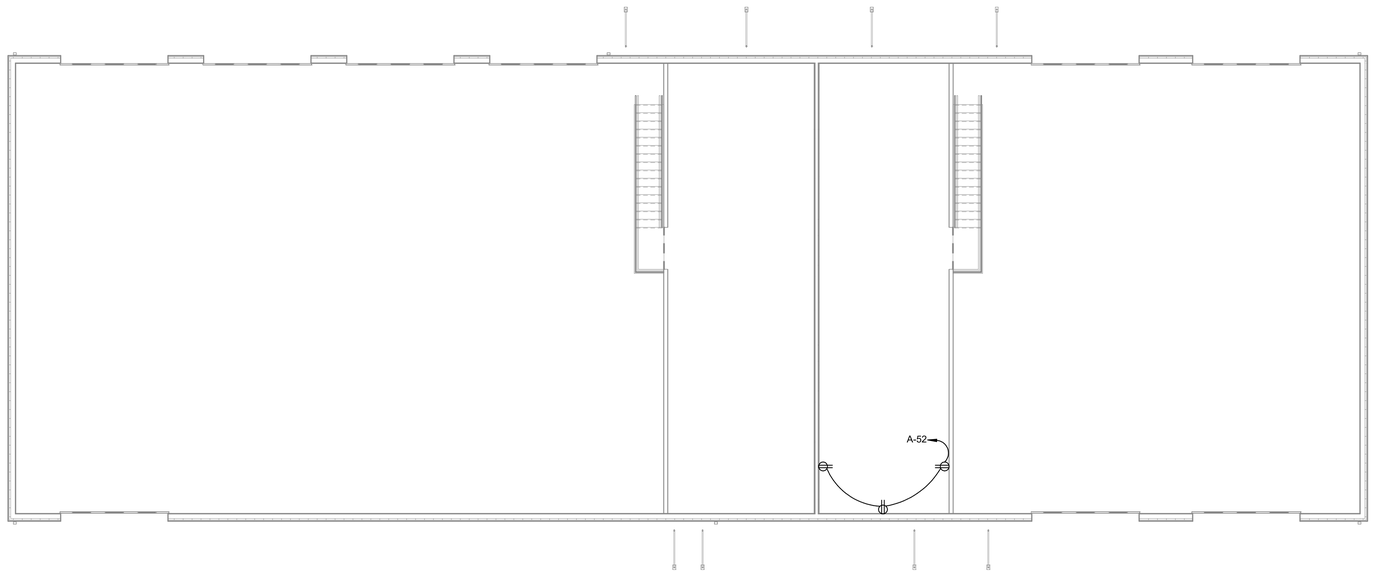


1 FIRST FLOOR POWER PLAN - NEW WORK
1/8" = 1'-0"



2 MEZZANINE POWER PLAN - NEW WORK
1/8" = 1'-0"

DRAWING NOTES

1. EXHAUST FAN TO BE CONNECTED AND CONTROLLED BY LIGHTING SWITCH IN SPACE.
2. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
3. COORDINATE EXACT LOCATION OF RECEPTACLES FOR GARAGE DOOR OPENERS. LOCATION COULD BE LOCATED ON WALL ABOVE OPENING. COORDINATE WITH OVERHEAD DOOR CONTRACTOR PRIOR TO ROUGH IN.
4. COORDINATE EXACT LOCATION OF CORD REELS WITH OWNER PRIOR TO ROUGH IN.
5. DAMPER IS TO BE CIRCUITED WITH FAN. PROVIDE INTERLOCK WIRING BETWEEN EXHAUST FAN AND AUTOMATIC BACKDRAFT DAMPER. COORDINATE EXACT REQUIREMENTS CLOSELY WITH HC.

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TITLE
ELECTRICAL POWER PLAN

SHEET NO.
E1.1

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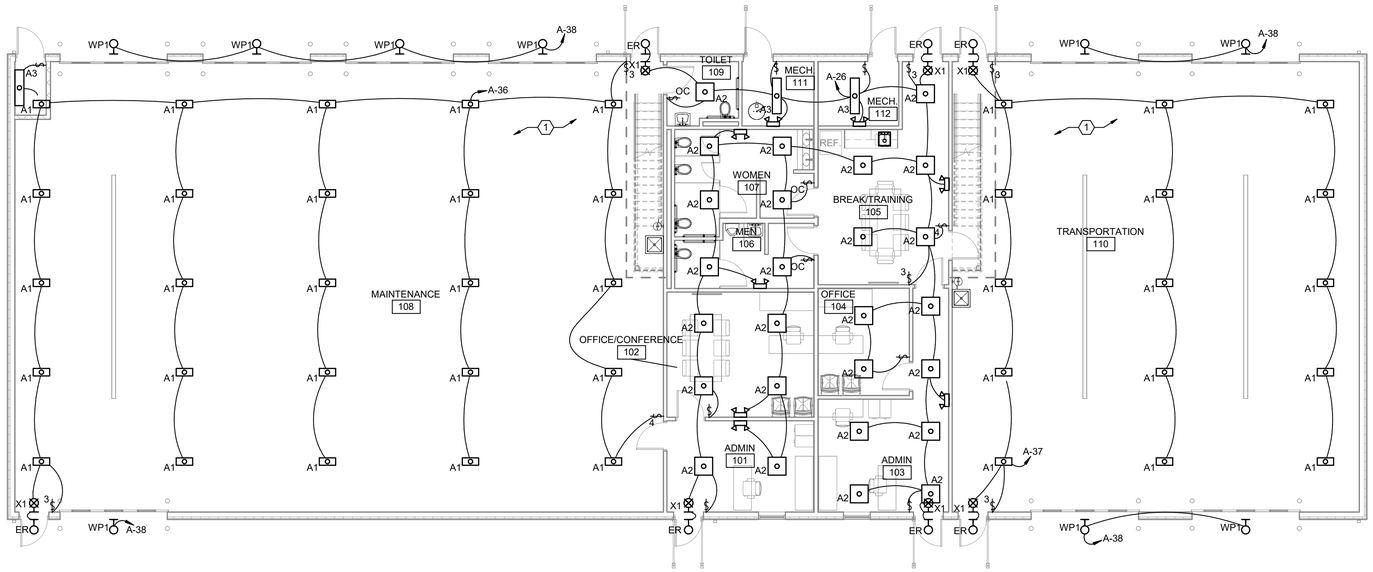
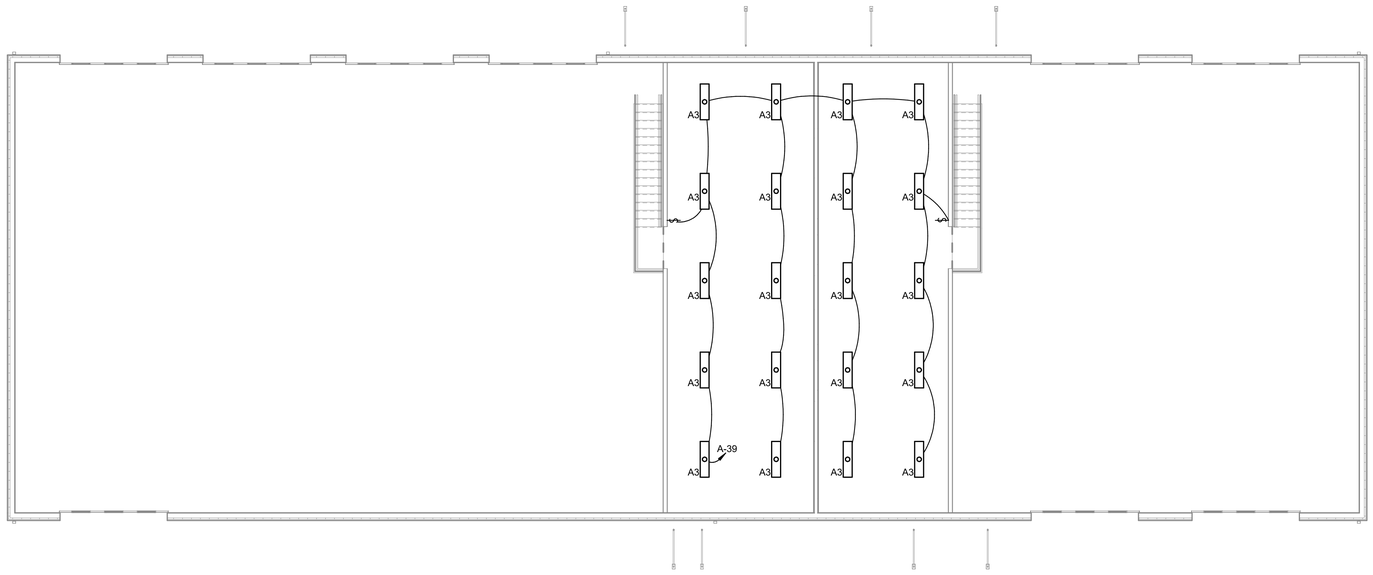
DRAWING NOTES

1. COORDINATE EXACT LOCATION OF LIGHTS SUCH THAT THEY DO NOT INTERFERE WITH GAS FIRED RADIANT HEAT EQUIPMENT OR OVERHEAD DOORS.



1 FIRST FLOOR LIGHTING PLAN - NEW WORK
1/8" = 1'-0"



2 MEZZANINE LIGHTING PLAN - NEW WORK
1/8" = 1'-0"

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TITLE
ELECTRICAL LIGHTING PLAN

SHEET NO.
E1.2

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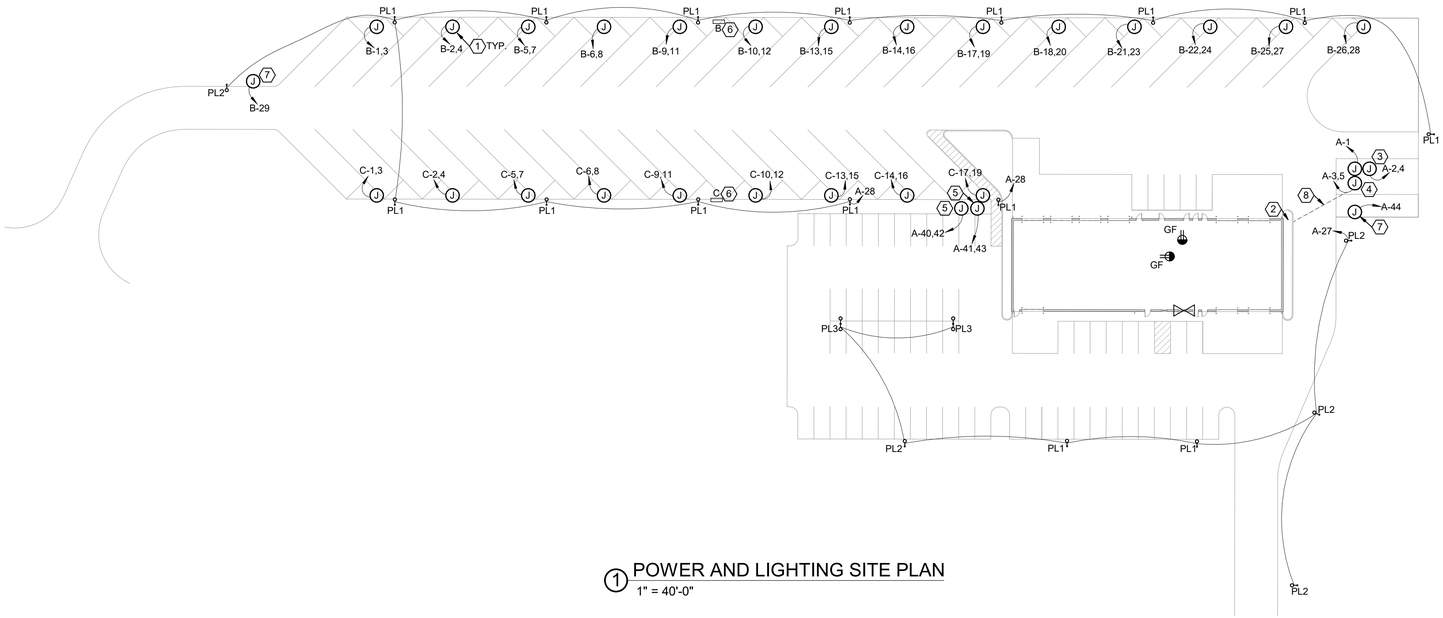


1 POWER AND LIGHTING SITE PLAN
1" = 40'-0"

DRAWING NOTES

1. PROVIDE NEW DIRECT BURY POWER PEDESTAL BY MILBANK #U5200-XL. POWER PEDESTAL SHALL HAVE 2, 20A/1P BREAKERS EACH SERVING 1 5-20R GFCI OUTLET. COORDINATE FINAL POWER PEDESTAL SPECS WITH OWNER PRIOR TO ORDERING.
2. CONTRACTOR TO INSTALL EPO. LOCATION TO BE COORDINATED AT SITE PRIOR TO ROUGH IN. EPO SHALL BE PROVIDED WITH LOCKING MEANS OR A LOCKING COVER TO SATISFY NEC 513.14 AND NEC 110.25. EPO WILL BE CONTROLLING A NORMALLY OPEN CONTACTOR THAT DISCONNECTS ALL CIRCUITS SERVING FUELING SKID.
3. PROVIDE (3) #10, (1) #10 IN .75" C.
4. PROVIDE (3) #12, (1) #12 IN .75" C.
5. ELECTRIC VEHICLE CHARGING STATION. PROVIDE (3) #8, (1) #10 GRD. IN 1" C.
6. PROVIDE (2) 4"X4" PRESSURE TREATED POSTS WITH 2"X6" PRESSURE TREATED BAND BOARDS TO SUPPORT EXTERIOR PANEL BOARDS. 4"X4" POSTS ARE TO BE BURIED 3' INTO THE GROUND AND SET IN CONCRETE. TOP OF PANEL SHALL BE AT 6'-0". PANEL IS TO BE NEMA 3R RATED.
7. COORDINATE EXACT LOCATION OF JUNCTION BOX FOR GATE OPERATOR PRIOR TO ROUGH IN.
8. PROVIDE 1" C. FOR DATA FOR FEEDER ROOT SYSTEM FROM FUELING STATION TO BUILDING. COORDINATE CONDUIT LOCATION IN BUILDING AT SITE WITH OWNER.

GENERAL NOTES

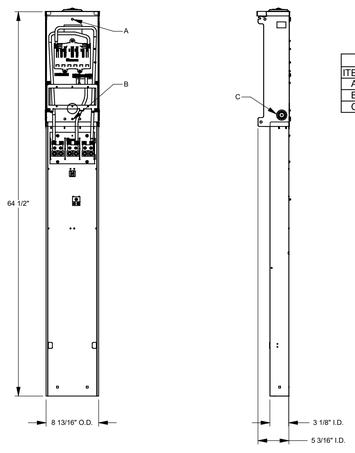
A. PER ARTICLE 514 OF THE NFPA CODE DIESEL FUEL IS A "COMBUSTIBLE" LIQUID, NOT A FLAMMABLE LIQUID. THEREFORE, A DIESEL DISPENSING AREA IS NONCLASSIFIED AND ELECTRICAL EQUIPMENT AND WIRING IS NOT REQUIRED TO COMPLY WITH THE STRINGENT REQUIREMENTS OF CHAPTER 5.

B. EACH CIRCUIT LEADING TO OR THROUGH A DISPENSER (INCLUDING EQUIPMENT FOR REMOTE PUMPING SYSTEMS) MUST HAVE A CLEARLY IDENTIFIED AND READILY ACCESSIBLE SWITCH (LOCATED REMOTE FROM THE DISPENSER) TO DISCONNECT SIMULTANEOUSLY ALL CONDUCTORS OF THE CIRCUIT (INCLUDING THE GROUNDED NEUTRAL CONDUCTOR). YOU CANT USE SINGLE-POLE BREAKERS WITH HANDLE TIES.

C. YOU CAN USE SET-SCREW AND COMPRESSION COUPLINGS AND CONNECTORS FOR ELECTRICAL METALLIC TUBING (EMT), IMC, OR RMC INSTALLED IN A NONCLASSIFIED AREA, PROVIDING THE CIRCUIT DOES NOT PASS THROUGH, OR IS PART OF, ANY CIRCUIT WITHIN A HAZARDOUS CLASSIFIED LOCATION.

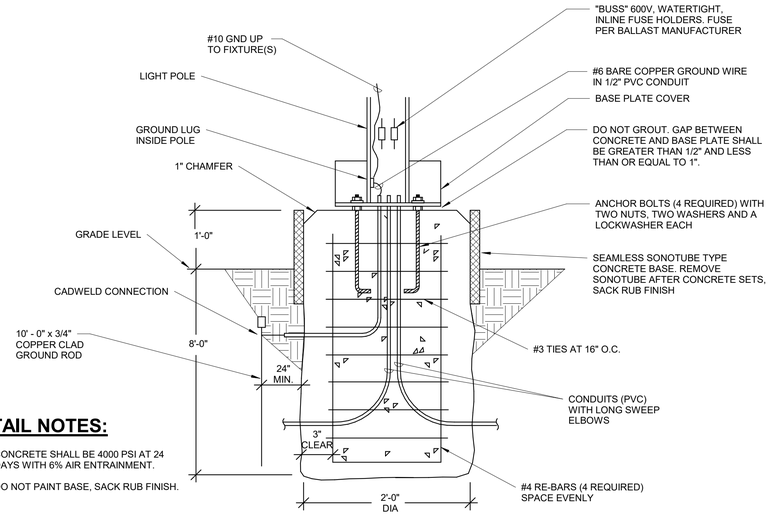
D. PER NEC 514.9 (A) A LISTED SEAL SHALL BE PROVIDED IN EACH CONDUIT RUN ENTERING OR LEAVING A DISPENSER OR ANY CAVITIES OR ENCLOSURES IN DIRECT COMMUNICATION THEREWITH. THE SEALING FITTING OR LISTED EXPLOSION PROOF REDUCER AT THE SEAL SHALL BE THE FIRST FITTING AFTER THE CONDUIT EMERGES FROM THE EARTH OR CONCRETE.

E. PER NEC 516.16 ALL METAL RACEWAYS, THE METAL ARMOR OR METALLIC SHEATH ON CABLES, AND ALL NON-CURRENT-CARRYING METAL PARTS OF FIXED AND PORTABLE ELECTRICAL EQUIPMENT, REGARDLESS OF VOLTAGE, SHALL BE GROUNDED AND BONDED. GROUNDING AND BONDING IN CLASS I LOCATION SHALL COMPLY WITH NEC 501.30



FEATURE TABLE		
ITEM	QTY	DESCRIPTION
A	3	U/L MNTG EMBOSS
B	1	1/4 SOLID K.O.
C	2	1/4, 1/2, 3/4, 1, 11/4 CONC. K.O.

3 POWER PEDESTAL DETAIL
NTS



DETAIL NOTES:

1. CONCRETE SHALL BE 4000 PSI AT 24 DAYS WITH 6% AIR ENTRAINMENT.
2. DO NOT PAINT BASE, SACK RUB FINISH.

2 PARKING LOT POLE BASE
NTS

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ISSUE

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CHECKED	RLS

TITLE
SITE PLAN

SHEET NO.
E1.3

4/8/2022 2:02:51 PM

Switchboard: MDP

Location: MECH. 111
Supply From:
Mounting: FLOOR
Enclosure: Switchboard

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type:
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	A	3	225 A	225 A	89996 VA	
2	B	3	225 A	225 A	45000 VA	
3	C	3	225 A	225 A	27000 VA	
4	AC-1	2	25 A	25 A	3474 VA	
5	AC-2	2	25 A	25 A	3474 VA	
6	AC-3	2	20 A	20 A	2912 VA	
7	AIR COMPRESSOR	3	50 A	50 A	10400 VA	
8						
9						
10						
11						
12						
				Total Conn. Load:	182255 VA	
				Total Amps:	506 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Exterior	2019 VA	125.00%	2524 VA		
Motor	10691 VA	108.12%	11560 VA	**Total Conn. Load:**	182255 VA
Receptacle	164750 VA	53.03%	87375 VA	**Total Est. Demand:**	106229 VA
Lighting	4894 VA	100.00%	4894 VA	**Total Conn.:**	506 A
				Total Est. Demand:	295 A

Notes:

Branch Panel: B

Location:
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 3R

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MB
Mains Rating: 225 A
MCB Rating: 1 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	BUS POWER PEDESTAL	20 A	2	1500	1500					2	20 A	BUS POWER PEDESTAL	2
3	--	--	--			1500	1500			--	--	--	4
5	BUS POWER PEDESTAL	20 A	2					1500	1500	2	20 A	BUS POWER PEDESTAL	6
7	--	--	--	1500	1500					--	--	--	8
9	BUS POWER PEDESTAL	20 A	2			1500	1500			2	20 A	BUS POWER PEDESTAL	10
11	--	--	--					1500	1500	--	--	--	12
13	BUS POWER PEDESTAL	20 A	2	1500	1500					2	20 A	BUS POWER PEDESTAL	14
15	--	--	--			1500	1500			--	--	--	16
17	BUS POWER PEDESTAL	20 A	2					1500	1500	2	20 A	BUS POWER PEDESTAL	18
19	--	--	--	1500	1500					--	--	--	20
21	BUS POWER PEDESTAL	20 A	2			1500	1500			2	20 A	BUS POWER PEDESTAL	22
23	--	--	--					1500	1500	--	--	--	24
25	BUS POWER PEDESTAL	20 A	2	1500	1500					2	20 A	BUS POWER PEDESTAL	26
27	--	--	--			1500	1500			--	--	--	28
29	GATE OPERATOR	20 A	1					3000					30
		Total Load:		15000 VA		15000 VA		15000 VA					
		Total Amps:		125 A		125 A		125 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	45000 VA	61.11%	27500 VA		
				Total Conn. Load:	45000 VA
				Total Est. Demand:	27500 VA
				Total Conn.:	125 A
				Total Est. Demand:	76 A

Notes:

Branch Panel: C

Location:
Supply From: MDP
Mounting: SURFACE
Enclosure: NEMA 3R

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MB
Mains Rating: 225 A
MCB Rating: 1 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	BUS POWER PEDESTAL	20 A	2	1500	1500					2	20 A	BUS POWER PEDESTAL	2
3	--	--	--			1500	1500			--	--	--	4
5	BUS POWER PEDESTAL	20 A	2					1500	1500	2	20 A	BUS POWER PEDESTAL	6
7	--	--	--	1500	1500					--	--	--	8
9	BUS POWER PEDESTAL	20 A	2			1500	1500			2	20 A	BUS POWER PEDESTAL	10
11	--	--	--					1500	1500	--	--	--	12
13	BUS POWER PEDESTAL	20 A	2	1500	1500					2	20 A	BUS POWER PEDESTAL	14
15	--	--	--			1500	1500			--	--	--	16
17	BUS POWER PEDESTAL	20 A	2					1500					18
19	--	--	--	1500									20
21													22
23													24
25													26
27													28
29													30
		Total Load:		10500 VA		9000 VA		7500 VA					
		Total Amps:		89 A		77 A		63 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	27000 VA	68.52%	18500 VA		
				Total Conn. Load:	27000 VA
				Total Est. Demand:	18500 VA
				Total Conn.:	75 A
				Total Est. Demand:	51 A

Notes:

App Architecture
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www.app-arch.com

STATE OF OHIO
RICHARD L. SIMPKINS II
69597
REGISTERED
PROFESSIONAL ENGINEER

NEW MAINTENANCE & BUS GARAGE
TALAWANDA SCHOOL DISTRICT
5301 UNIVERSITY PARK BLVD
OXFORD, OHIO 45056

ISSUE

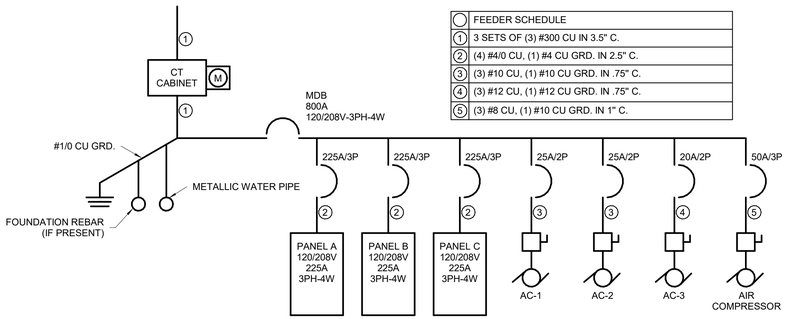
NO.	DATE	DESCRIPTION
	04/08/2022	PERMIT AND CONSTRUCTION

DATE	04/08/22
JOB NO.	2021145
DRAWN	JMS
CHECKED	RLS

TITLE
PANELBOARD SCHEDULES

SHEET NO.
E4.1

4/8/2022 2:02:52 PM



	FEEDER SCHEDULE
1	3 SETS OF (3) #300 CU IN 3.5" C.
2	(4) #4/0 CU, (1) #4 CU GRD. IN 2.5" C.
3	(3) #10 CU, (1) #10 CU GRD. IN .75" C.
4	(3) #12 CU, (1) #12 CU GRD. IN .75" C.
5	(3) #8 CU, (1) #10 CU GRD. IN 1" C.

1 SINGLELINE
NTS

Branch Panel: A

Location:
Supply From: MDP
Mounting: Recessed
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Type: MB
Mains Rating: 225 A
MCB Rating: 1 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	ALARM BOX	20 A	1	180	800					2	20 A	PUMP	2
3	FUEL MANAGEMENT SYSTEM	30 A	2			2400	800			--	--	--	4
5	--	--	--					2400	1500	1	20 A	DATA RACK	6
7	DATA RACK	20 A	1	1500	1500					1	20 A	DATA RACK	8
9	BREAK/TRAINING 105 RECEPS.	20 A	1			1260	1080			1	20 A	OFFICE 104 RECEPS.	10
11	OFFICE/CONFERENCE 102 RECEPS.	20 A	1					1800	1620	1	20 A	ADMIN 103 RECEPS.	12
13	ADMIN 101 RECEPS.	20 A	1	1080	1800					1	20 A	MAINTENANCE 108 RECEPS.	14
15	TRANSPORTATION 110 RECEPS.	20 A	1			1080	0			2	30 A	GENERAL 220V RECEP. MAINTENANCE	16
17	RADIANT HEATER 1	20 A	1					250	0	--	--	--	18
19	RADIANT HEATER 2	20 A	1	250	250					1	20 A	RADIANT HEATER 3	20
21	MAINTENANCE 108 CORD REELS	20 A	1			360	180			1	20 A	BREAK/TRAINING 105 GFCI RECEP	22
23	BREAK/TRAINING 105 REFRIGERATOR RECEP.	20 A	1					180	900	1	20 A	MAINTENANCE GARAGE OPENERS	24
25	TRANSPORTATION GARAGE OPENERS	20 A	1	720	842					1	20 A	LIGHTING OFFICE AREA	26
27	EXTERIOR LIGHTING - FRONT	20 A	1			1009	1009			1	20 A	EXTERIOR LIGHTING - BACK	28
29	EXHAUST FAN 1	20 A	2					208	1333	3	30 A	ELECTRIC UNIT HEATER	30
31	--	--	--	208	1333					--	--	--	32
33	EXHAUST FAN 2	20 A	2			208	1333			--	--	--	34
35	--	--	--					208	1594	1	20 A	MAINTENANCE LIGHTING	36
37	TRANSPORTATION LIGHTING	20 A	1	1139	720					1	20 A	EXTERIOR WALL PACK LIGHTING	38
39	MEZZANINE LIGHTING	20 A	1			600	4000			2	20 A	CAR CHARGING PORT	40
41	CAR CHARGING PORT	20 A	2					4000	4000	--	--	--	42
43	--	--	--	4000	180					1	20 A	GATE OPENER	44
45	TRANSPORTATION 110 WELDER	50 A	3			6000	6000			3	50 A	TRANSPORTATION 110 WELDER	46
47	--	--	--					6000	6000	--	--	--	48
49	--	--	--	6000	6000					--	--	--	50
51	WATER HEATER IGNITER	20 A	1			540	540			1	20 A	MEZZANINE RECEPTACLES	52
53	MICROWAVE	20 A	1					1200					54
55													56
57													58
59													60
61													62
63													64
65													66
67													68
69													70
71													72
73													74
75													76
77													78
79													80
81													82
83													84
		Total Load:		28502 VA		28306 VA		33193 VA					
		Total Amps:		238 A		236 A		277 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting - Exterior	2019 VA	125.00%	2524 VA		
Motor	832 VA	112.50%	936 VA	**Total Conn. Load:**	89996 VA
Receptacle	82350 VA	56.07%	46175 VA	**Total Est. Demand:**	54408 VA
Lighting	4894 VA	100.00%	4894 VA	**Total Conn.:**	250 A
				Total Est. Demand:	151 A

Notes:

App Architecture
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www.app-arch.com

STATE OF OHIO
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TALAWANDA SCHOOL DISTRICT
5301 UNIVERSITY PARK BLVD
OXFORD, OHIO 45056

ISSUE

NO.	DATE	DESCRIPTION
	04/08/2022	PERMIT AND CONSTRUCTION

DATE	04/08/22
JOB NO.	2021145
DRAWN	JMS
CHECKED	RLS

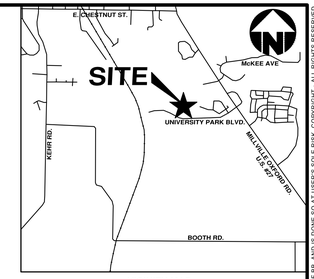
TITLE
PANELBOARD SCHEDULE AND SINGLELINE

SHEET NO.
E4.2

4/8/2022 2:02:52 PM

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT

5301 UNIVERSITY PARK BLVD
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO



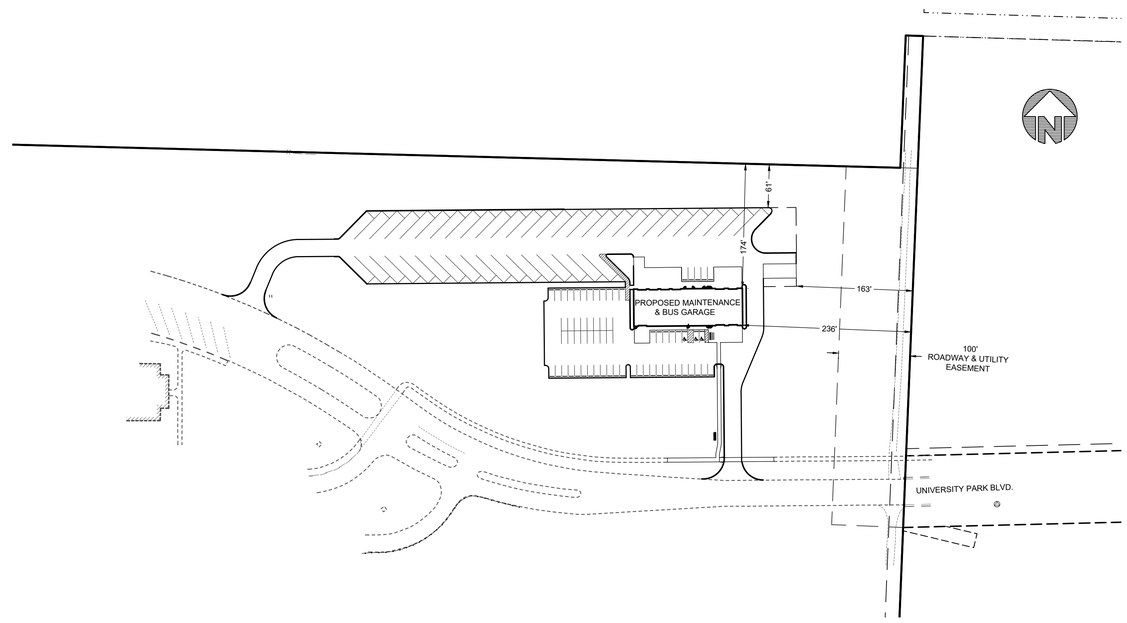
VICINITY MAP
(n.t.s.)

SURVEYOR & ENGINEER

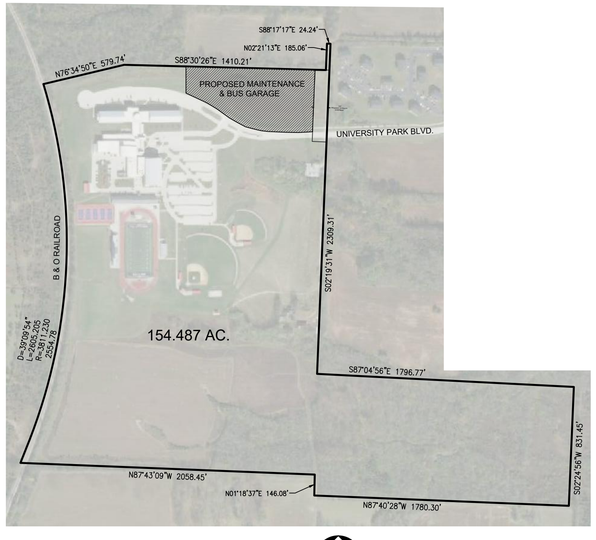
BAYER BECKER
110 S. COLLEGE AVENUE
OXFORD, OHIO 45056
513.523.4270

LEGEND

- Ex Sanitary M.H.
- Ex Storm M.H.
- Ex Storm Catch Basin
- Ex Fire Hydrant
- Ex Water Valve
- Ex Gas Marker
- Ex Elec. Box
- Ex Light Pole
- Ex Transformer
- Ex Tele. Box
- Ex Cable Box
- Ex Sign
- Ex Post
- Ex Deciduous Tree
- Ex Deciduous Bush
- R/W – Ex Right of Way
- Found Conc. Mon.
- Found 5/8" Iron Pin (cap as noted)
- Ex Underground Water Main
- Ex Underground Gas Main
- Ex Overhead Utilities
- Ex Underground Fiber Optic
- Ex Underground Electric
- Ex Underground Telephone
- Ex Underground High Pressure Steam Line
- Ex Treeline
- Ex Major Contour
- Ex Minor Contour



AREA MAP
1"=100 FT



OVERALL PROPERTY MAP
(1"=500')

INDEX OF SHEETS

DRAWING NO.	DRAWING TITLE	ISSUE DATE	REVISION NO.	REVISION DATE
C100	TITLE SHEET	05-19-22		
C101	GENERAL NOTES	05-19-22		
C200	EXISTING CONDITIONS & DEMOLITION PLAN	05-19-22		
C300	SITE LAYOUT & UTILITY PLAN	05-19-22		
C301	SITE DETAILS	05-19-22		
C302	UTILITY DETAILS	05-19-22		
C400	SITE GRADING & EROSION CONTROL PLAN	05-19-22		
C401	EROSION CONTROL NOTES & DETAILS	05-19-22		

CONTACTS

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CITY OF OXFORD
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OXFORD, OHIO 45056
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CABLE TV
SPECTRUM
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CLAYTON, OHIO 45415
ATTN: TIM KUSS
937-425-8850

ELECTRIC
DUKE ENERGY
1199 NILLES ROAD
FAIRFIELD, OHIO 45014
ATTN: ALAN EAST
513-313-9220

TELEPHONE
FRONTIER
6464 WESTBROOK ROAD
CLAYTON, OHIO 45315
ATTN: CHUCK BERNACCHI
937-833-0468

TALAWANDA SCHOOL DISTRICT
131 W. CHESTNUT STREET
OXFORD, OHIO 45056
ATTN: BILL HUBBARD
DIRECTOR OF DISTRICT FACILITIES
513-273-3132
HUBBARDB@TALAWANDA.ORG

Item	Revision Description	Date	Drwn	Chk

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT
5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

TITLE SHEET

bayer becker
www.bayerbecker.com
110 S. College Avenue, Suite 101
Oxford, OH 45056 - 513.523.4270

Drawing:	21-0202 CD
Drawn by:	JLE
Checked By:	EMR
Issue Date:	05/19/22
Sheet:	C100

Plot time: May 19, 2022 - 10:16am
Drawing name: J:\2021\21-0202\CV\DWG\21-0202 CD.dwg - Layout Tab: C100 Title

GENERAL

1. ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS (2016) AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE GOVERNING AGENCIES. WHEN IN CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS.
3. FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITY PROTECTION SERVICE (OUPS) AND ALL OTHER AGENCIES WHICH MAY HAVE UNDERGROUND UTILITIES INVOLVED IN THIS PROJECT AND ARE NOT MEMBERS OF OHIO UNDERGROUND PROTECTION, INC.
4. CONTRACTOR AND OWNER SHALL VERIFY AND ACCEPT ALL QUANTITIES PRIOR TO BEGINNING CONSTRUCTION.
5. CONTRACTOR SHALL VERIFY THAT COORDINATES, IF USED, MATCH PLAN DIMENSIONS. WHEN IN CONFLICT, THE PLAN DIMENSIONS SHALL GOVERN OVER COORDINATES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
6. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION DETAILS SHALL CONFORM WITH THE "STANDARD CONSTRUCTION DRAWINGS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION".
7. EXISTING SITE SURVEY, TOPOGRAPHY, AND SUBSURFACE CONDITIONS: EXISTING CONDITIONS PRESENTED IN DRAWING, REPORT OR SPECIFICATION FORM ARE BELIEVED ACCURATE WITHIN NORMAL INDUSTRY TOLERANCES BUT ARE NOT GUARANTEED. INVESTIGATE, SURVEY, CONFIRM AND VERIFY ALL CONDITIONS BEARING ON THE WORK BY ANY MEANS NECESSARY BEFORE STARTING ANY WORK THAT CHANGES EXISTING CONDITIONS. REPORT ANY UNACCEPTABLE DISCREPANCIES TO THE ENGINEER IN WRITING BEFORE BEGINNING OPERATIONS
   - 7.1. WRITTEN CLAIMS OF DIFFERENCE SHALL BE ACCOMPANIED BY SUBSTANTIATING EVIDENCE. CLAIMS OF DIFFERENCE SHALL BE RESOLVED, INCLUDING DETERMINATION OF QUANTITIES AND COSTS AND METHODS OF CONTRACT MODIFICATION, BEFORE WORK THAT ALTERS SUCH EXISTING CONDITIONS IS STARTED.
   - 7.2. INITIATION OF SITE-CLEARING, SOIL-MOVING OPERATIONS, DEMOLITION OR OTHER ACTIVITY THAT ALTERS EXISTING CONDITIONS SHALL BE EVIDENCE THAT CONTRACTOR HAS MADE ALL INVESTIGATIONS AND EVALUATIONS IT DEEMS NECESSARY AND HAS ACCEPTED ALL EXISTING CONDITIONS PRESENT WHETHER OR NOT THEY CONFORM EXACTLY TO THE DOCUMENTS.
   - 7.3. WITHOUT ADVANCE WRITTEN NOTIFICATION OF UNACCEPTABLE DISCREPANCY, NO CLAIM FOR EXTRA WILL BE CONSIDERED FOR A CLAIM OF DIFFERENCE BETWEEN DOCUMENTS AND ACTUAL CONDITIONS AFTER THE CONTRACTOR HAS ALTERED EXISTING CONDITIONS.
8. WHERE CONNECTING TO EXISTING ASPHALT PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING EDGE OF PAVEMENT TO PROVIDE A CLEAN AND SOUND EDGE. ITEM 407 TACK COAT SHALL BE APPLIED TO THE ENTIRE CUT FACE OF THE EXISTING PAVEMENT PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT.
9. PARKING LOT PAVEMENT MARKINGS SHALL CONFORM TO ITEM 641 PAVEMENT MARKINGS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAVEMENT MARKING MATERIAL SHALL BE PER ITEM 642 TRAFFIC PAINT UNLESS OTHERWISE NOTED.
10. PARKING LOT STRIPING SHALL BE FOUR (4) INCHES WIDE WHITE HIGHWAY-TYPE STRIPING APPLIED IN ACCORDANCE WITH THE PLAN.
11. ALL DIMENSIONS AND PROPOSED ELEVATIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
12. ALL RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
13. ALL RADII ARE 4.5' UNLESS NOTED EXCEPT ROADWAY/DRIVEWAY INTERSECTIONS WHERE RADII ARE 15' UNLESS OTHERWISE NOTED.
14. SITE LIGHTING OPERATION HOURS: DUSK TO DAWN.
15. CURB IN PARKING AREAS IS TYPE 6 UNLESS OTHERWISE NOTED.
16. PARKING STALLS ARE 9'x18' UNLESS OTHERWISE NOTED.
17. ALL SITE CONCRETE SHALL BE PER ODOT ITEM 499 CLASS C UNLESS OTHER WISE NOTED ON THE PLANS.
18. TAPER CURB HEIGHT FROM 6" TO 0" IN 5' AT ALL LOCATIONS PROPOSED CURB BEGINS AND ENDS.

DEMOLITION NOTES

1. THE TOPOGRAPHIC AND UTILITY INFORMATION SHOWN IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY BAYER BECKER, AND VARIOUS UTILITY PLANS PROVIDED BY THOSE GOVERNING AGENCIES.
2. THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLAN HAVE BEEN OBTAINED BY FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON THE PREMISES. THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY LOCATIONS WITH UTILITY COMPANIES BEFORE MAKING EXCAVATIONS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS WHETHER SHOWN ON THESE PLANS OR NOT.
3. APPROPRIATE UTILITY COMPANIES AND OHIO UTILITIES PROTECTION SERVICE (811) SHALL BE NOTIFIED AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO BREAKING GROUND FOR THE PURPOSE OF VERIFYING BY FIELD INSPECTION THE EXACT LOCATION OF THE UNDERGROUND UTILITY. UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO AVAILABLE INFORMATION.
4. THESE PLANS, AS PREPARED BY BAYER BECKER, DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE DEMOLITION/CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF BAYER BECKER'S REGISTERED PROFESSIONAL ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS..
5. ALL CONTRACTORS INCLUDING BUT NOT LIMITED TO THE DEMOLITION, EXCAVATION, PAVING, PLUMBING, ELECTRICAL, SIGN, FIRE PROTECTION, HVAC CONTRACTORS SHALL BE UNDER THE DIRECTION OF THE GENERAL CONTRACTOR OR OWNER WHO WILL BE HELD RESPONSIBLE FOR THE COORDINATION OF ALL WORK ON THIS PROJECT AND THE PROPER EXECUTION OF THE SAME.
6. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
7. REMOVAL AND/OR RELOCATION OF ANY UTILITIES SHALL BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY AND SHALL BE DISCONNECTED PER THE ASSOCIATED UTILITY AGENCY'S REQUIREMENTS.
8. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES, FACILITIES, AND STRUCTURES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER SHOWN ON THE PLANS OR NOT.
9. WHERE CONNECTING TO EXISTING PAVEMENT, THE CONTRACTOR SHALL SAWCUT THE EXISTING EDGE OF PAVEMENT TO PROVIDE A SOUND & CLEAN EDGE. THE CONTRACTOR SHALL APPLY ITEM 407 TACK COAT TO THE ENTIRE CUT FACE OF THE EXISTING PAVEMENT PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT.
10. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO DEMOLITION AND CONSTRUCTION.
11. AS SOON AS DEMOLITION WORK HAS BEEN OTHERWISE COMPLETED AND APPROVED BY THE OWNER, EARTHWORK MAY BEGIN. THE FINAL GRADE IN AREAS OUTSIDE THE CONSTRUCTION SITE SHALL BE SUCH AS TO PRESENT A NEAT, WELL-DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES.

GENERAL UTILITY

1. BACKFILL OF ALL UTILITY EXCAVATIONS IN STRUCTURAL AREAS INCLUDING UNDER PAVEMENTS OR WITHIN TEN (10) FEET OF ANY BUILDING AREAS SHOULD BE CONTINUALLY MONITORED BY A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER TO VERIFY THAT PROPER LIFT THICKNESS, MOISTURE CONDITION, AND COMPACTIVE EFFORT ARE MAINTAINED.
2. CONTRACTOR SHALL VERIFY ALL UTILITY AND CONDUIT SIZES AND LOCATIONS WITH THE ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
3. ALL BUILDING UTILITY SERVICES ARE TO BE STUBBED 5 FT. FROM THE BUILDING FOR CONNECTION BY INTERIOR CONTRACTOR.
4. ALL UTILITY TRENCHES PROPOSED WITHIN THE LIMITS OF EXISTING PAVEMENT AND WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED TO SUBGRADE WITH CONTROL DENSITY FILL TO A DISTANCE OF 5 FT BEYOND THE BACK OF CURB.
5. THE CITY OF OXFORD DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR, OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN 5 FT OF THE CENTERLINE OF ANY SANITARY SEWER MAIN OR WATER MAIN.
6. CONTRACTOR SHALL OBTAIN RIGHT OF WAY PERMIT FROM CITY OF OXFORD FOR ALL WORK PROPOSED WITHIN THE PUBLIC RIGHT OF WAY.

STORM SEWERS

1. ALL WORK AND MATERIALS ARE TO CONFORM TO THE 2010 EDITION OF ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS AND CITY OF OXFORD SPECIFICATIONS. WHEN IN CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.
2. STORM SEWER PIPES DESIGNATED AS "STM" SHALL MEET THE MATERIAL & INSTALLATION REQUIREMENTS OF ODOT ITEM 603, TYPE B CONDUITS AND AS FOLLOWS:
   - 2.1. NON-REINFORCED CONCRETE PIPE PER ODOT SPECIFICATION 706.01
   - 2.2. REINFORCED CONCRETE CIRCULAR PIPE PER ODOT SPECIFICATION 706.02
   - 2.3. PRECAST REINFORCED CONCRETE BOX SECTIONS PER ODOT SPECIFICATION 706.05
   - 2.4. REINFORCED CONCRETE ELLIPTICAL CULVERT, STORM DRAIN, AND SEWER PIPE PER ODOT SPECIFICATION 706.04
   - 2.5. ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCHES WITH PAVED INVERT PER ODOT SPECIFICATIONS 707.01 OR 707.02
   - 2.6. CORRUGATED STEEL SPIRAL RIB CONDUITS PER ODOT SPECIFICATIONS 707.12
   - 2.7. CORRUGATED POLYETHYLENE SMOOTH LINED PIPE PER ODOT SPECIFICATION 707.33
   - 2.8. POLYVINYL CHLORIDE PROFILE WALL PIPE PER ODOT SPECIFICATION 707.42
   - 2.9. PIPE BEDDING AND TRENCH BACKFILL SHALL BE PER ODOT 603 AND STANDARD DRAWING DM-1.4 CONDUIT INSTALLATION. CONTRACTOR SHALL PROVIDE AN ALTERNATE BID ITEM TO PROVIDE STRUCTURAL BACKFILL FOR ALL TRENCHES TO PAVEMENT SUBGRADE.
3. ALL STORM STRUCTURES ARE ODOT TYPES UNLESS OTHERWISE INDICATED.
4. ALL CATCH BASINS SHALL BE EQUIPPED WITH HEAVY DUTY, BICYCLE SAFE GRATES CAPABLE OF CARRYING AN HS-25 LOADING, UNLESS OTHERWISE NOTED.
5. ANY EXISTING STORM SEWER CUT IN EXCAVATION WHICH DRAINS AN OFFSITE AREA MUST BE TIED INTO THE STORM SEWER SYSTEM.
6. ALL CATCH BASINS IN THE PAVEMENT OR CURB ARE TO HAVE A MINIMUM OF TWO FOUR (4) INCH PERFORATED UNDERDRAINS EXTENDING TWENTY (20) LINEAR FEET FROM THE CATCH BASIN. UNDERDRAINS SHALL BE PLACED ONE ON EACH SIDE OF THE STORM SEWER AND AS NEAR TO PERPENDICULAR TO THE STORM SEWER AS IS PRACTICAL WITHOUT INTERFERING WITH STORM PIPES SHOWN ON THE PLANS. SEE PAVEMENT UNDERDRAIN DETAIL 4/C302.
7. AS THE INSTALLATION OF THE STORM SEWER PROGRESSES, EROSION CONTROL MEASURES SHALL BE PLACED AT INLET AND OUTLET OF SEWERS TO CONTROL THE SILT
8. SUMP LINE CONDUITS ARE TO BE SDR 35, ARMCO 2000, OR EQUIVALENT.
9. ALL JOINTS SHALL BE SOIL SEAL JOINTS UNLESS SPECIFICALLY NOTED ON THE PLANS.
10. DEFLECTION TESTING FOR STORM SEWERS AND CULVERTS SHALL BE AS PER THE REQUIREMENTS OF THE CITY OF OXFORD.
11. STORM WATER AND EXTRANEOUS FLOWS ARE PROHIBITED FROM ENTERING THE EXISTING SYSTEM DURING CONSTRUCTION. NO OPEN CUT TRENCHES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT. STORM DRAINS, DIVERSION DITCHES, PUMPS ETC., SHALL BE USED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE SYSTEM AT ALL TIMES.
12. ALL CATCH BASINS WITH A DEPTH GREATER THAN 4.0 FT SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF ODOT STANDARD 604.
13. ALL STORM SEWER SHALL HAVE A MAXIMUM MANNING'S ROUGHNESS COEFFICIENT OF 0.013.
14. ROOF DRAINS ARE TO BE PER ODOT 707.33, 707.42, OR 707.45.

SANITARY SEWERS

1. ALL WORK AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF OXFORD'S WATER AND SANITARY SEWER IMPROVEMENT SPECIFICATIONS AND BACKFLOW CROSS CONNECTION MANUAL.
2. ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
3. (NOT USED)
4. NO BUILDING SHALL BE CONNECTED TO A SEWER LATERAL UNTIL THE BUILDING IS UNDER ROOF.
5. SANITARY SHALL BE A MINIMUM OF SDR 35 FOR DEPTHS LESS THAN 16 FEET AND SDR 26 FOR DEPTHS GREATER THAN OR EQUAL TO 16 FEET.
6. ALL SANITARY SEWER MANHOLES, CASTINGS, PIPE, ETC., SHALL CONFORM WITH CURRENT SPECIFICATIONS OF THE CITY OF OXFORD'S WATER AND SANITARY SEWER IMPROVEMENT SPECIFICATIONS AND BACKFLOW CROSS CONNECTION MANUAL.
7. SANITARY SEWER MATERIALS AND INSTALLATION TO BE AS PER THE CITY OF OXFORD'S WATER AND SANITARY SEWER IMPROVEMENT SPECIFICATIONS AND BACKFLOW CROSS CONNECTION MANUAL
8. CROSSINGS:
   WHENEVER A SANITARY SEWER AND WATER MAIN MUST CROSS, THE SEWER SHALL BE AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES MEASURED BETWEEN THE OUTSIDE PIPE WALLS, BELOW THE BOTTOM OF THE WATER MAIN. IF IT IS ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18 INCH VERTICAL SEPARATION, THE WATER MAIN SHALL BE RELOCATED OR THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
   - 8.1. A SEWER PASSING OVER OR UNDER THE WATER MAIN SHALL BE ENCASED OR CONSTRUCTED OF MATERIALS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE WATER MAIN.
   - 8.2. THE SEWER CROSSING SHALL BE CONSTRUCTED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
   - 8.3. WHERE A WATER MAIN PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.
9. ALL BUILDINGS TO BE SERVED BY THE PUBLIC SEWER SYSTEM SHALL BE CONSTRUCTED SO AS TO PROVIDE A MINIMUM OF 4 FT OF VERTICAL SEPARATION BETWEEN THE PUBLIC SANITARY SEWER AT THE POINT OF CONNECTION AND THE LOWEST BUILDING LEVEL SERVED BY A GRAVITY SEWER CONNECTION. IN ADDITION, SAID BUILDING LEVEL SHALL BE AT LEAST 1 FT ABOVE THE LOWEST POINT OF FREE-OVERFLOW (NON-SEALED MANHOLE COVER) UPSTREAM OF ANY TREATMENT FACILITY OF WASTEWATER PUMPING FACILITY THAT RECEIVES THE DISCHARGE FROM SAID BUILDING. SAID MINIMUM SERVICE LEVELS SHALL BE RECORDED ON THE "AS-BUILT" PLANS FOR THE DEVELOPMENT WHICH WILL BE KEPT ON FILE IN THE OFFICE OF THE THE CITY OF OXFORD.
10. (NOT USED)
11. PROVIDE THE CITY OF OXFORD WITH A FORTY-EIGHT (48) HOUR NOTICE PRIOR TO THE START OF ANY CONSTRUCTION, INCLUDING SANITARY INSTALLATION BY CALLING (513) 524-5206.
12. SANITARY SEWER LATERALS, WHICH SHALL INCLUDE ALL PIPE AND APPURTENANCES FROM THE BUILDING TO THE PUBLIC SEWER MAIN, AND THE CONNECTION TO THE PUBLIC SEWER MAIN SHALL BE CONSIDERED PRIVATE AND THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN. THE CONNECTION TO THE SEWER MAIN WOULD BE ANY PIPING THAT EXTENDS OUT FROM THE MAIN BARREL OF THE SEWER MAIN.

WATER MAINS

1. ALL WATER WORK AND WATER MAIN MATERIALS INCLUDING PIPE, FITTINGS, VALVES, HYDRANTS, AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF CITY OF OXFORD'S WATER AND SANITARY SEWER IMPROVEMENT SPECIFICATIONS AND BACKFLOW CROSS CONNECTIONS MANUAL.
2. ALL PUBLIC WATER MAIN MATERIALS, VALVES, FIRE HYDRANTS, FITTINGS, AND APPURTENANCES SHALL BE CLASS 53 DUCTILE IRON PER AWWA C-151.
3. (NOT USED)
4. PRIVATE MAINS AND APPURTENANCES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE THE CITY OF OXFORD.
5. FIRE DEPARTMENT CONNECTION (STORTZ CONNECTION) SHALL BE WITHIN 75 FT. OF A PUBLIC FIRE HYDRANT OR A FIRE HYDRANT OFF OF THE MAIN BETWEEN THE PUBLIC MAIN AND THE METER PIT.
6. FIRE DEPARTMENT CONNECTION LINE SHALL TIE INTO THE FIRE SUPPRESSION SYSTEM ON THE BUILDING SIDE OF THE PUMP IF A PUMP IS INSTALLED.
7. NO PART OF ANY FIRE HYDRANT SETTING SHALL BE CLOSER THAN FIVE (5) FEET FROM ANY INLET, DRIVEWAY, PARKING LOT, UTILITY POLE, OR GUY WIRE ANCHOR.
8. WATER MAINS SHALL MAINTAIN A MINIMUM COVER OF FOUR (4) FEET.
9. ALL WATER MAIN VALVES SHALL HAVE A MINIMUM DEPTH OF 2.5 FT. AND MAXIMUM DEPTH OF 4.0 FT. FROM PROPOSED GRADE TO THE TOP OF THE VALVE OPERATING NUT.
10. A MINIMUM CLEAR DISTANCE OF TEN (10) FEET HORIZONTAL OR EIGHTEEN (18) INCHES VERTICAL SHALL BE MAINTAINED BETWEEN SANITARY AND/OR STORM SEWERS AND WATER MAINS.
11. SANITARY AND STORM SEWERS THAT CROSS WATER MAINS SHALL BE LOCATED SUCH THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
12. ALL WATER MAINS SHALL BE PROVIDED WITH JOINT RESTRAINT AT ALL TEES, HORIZONTAL AND VERTICAL BENDS, ETC...WHETHER SHOWN ON THE PLAN VIEW OR NOT. JOINT RESTRAINT SHALL MEET THE REQUIREMENTS OF THE CITY OF OXFORD'S WATER AND SANITARY SEWER IMPROVEMENT SPECIFICATIONS AND BACKFLOW CROSS CONNECTION MANUAL.
13. SERVICE PIPING SMALLER THAN THREE (3) INCHES SHALL BE SEAMLESS COPPER FLEXIBLE WATER TUBING, ASTM B 88, TYPE K, PRESSURE CLASS 250.
   - 13.1. FITTINGS SHALL BE COMPRESSION STYLE FOR CTS TUBING, CONSULT GOVERNING AGENCY FOR A LISTING OF ACCEPTABLE MANUFACTURERS AND PRODUCTS.
   - 13.2. COUPLINGS WITH SET SCREWS OR GRIP RINGS WILL NOT BE ACCEPTABLE.
   - 13.3. WATER SERVICE TUBING SHALL BE BEDDED SIX (6) INCHES ABOVE AND BELOW WITH SAND OR OTHER NON-COMPACTIBLE MATERIAL APPROVED BY THE GOVERNING AGENCY.
14. CITY OF OXFORD WATER DEPARTMENT SHALL ESTABLISH PROCEDURES FOR REPAIRS TO WATER MAIN OR WATER SERVICES DAMAGED.
15. ALL WATER METER PITS SHALL CONFORM TO THE MATERIALS AND SPECIFICATIONS OF THE GOVERNING AGENCY.
16. THE FOLLOWING ITEMS ARE TO BE APPROVED BY THE FIRE DEPARTMENT:
   - 16.1. INSTALLATION OF ALL UNDERGROUND FIRE SUPPRESSION LINES ARE TO BE INSPECTED BY THE FIRE DEPARTMENT; INSTALLERS ARE REQUIRED TO BE LICENSED BY THE OHIO FIRE MARSHALL.
   - 16.2. WATER SUPPLY AND CONNECTIONS TO THE SUPPLY.
   - 16.3. PRESSURE REGULATORS OR METERS ON THE WATER SUPPLY LINES.
   - 16.4. LOCATION AND/OR OMISSION OF FIRE DEPARTMENT CONNECTIONS.
   - 16.5. FIRE DEPARTMENT CONNECTION HOSE CONNECTION THREADS (CAPS ALSO REQUIRED)
   - 16.6. USE OF CONTROL VALVES IN WATER SUPPLY OTHER THAN INDICATING VALVES.
   - 16.7. SIZE AND LOCATION OF VALVE PITS; USE OF BURIED VALVES OR PITS.
   - 16.8. LOCATION AND IDENTIFICATION OF SECTION VALVES IN UNDERGROUND WATER SUPPLIES.
   - 16.9. TYPE, ARRANGEMENT, LOCATION, IDENTIFICATION, THREADS, PROTECTION OF ALL HYDRANTS
   - 16.10. UNDERGROUND PIPING INSTALLATION METHODS AND PROCEDURES.
   - 16.11. HYDROSTATIC TESTING OF UNDERGROUND SYSTEMS; FIRE DEPT. MUST BE CALLED TO WITNESS TESTING; PROVIDE COPY OF CONTRACTOR'S MATERIAL & TEST CERTIFICATE FOR UNDERGROUND SYSTEM. AMOUNT OF PIPE LEAKAGE TO BE ACCEPTABLE TO FIRE DEPT.
   - 16.12. FLUSHING OF UNDERGROUND SYSTEM TO BE WITNESSED BY FIRE DEPT.
   - 16.13. HYDRANT OPERATING TEST TO BE WITNESSED BY FIRE DEPT.

GAS FACILITIES AND SERVICES

1. FOR GAS ENGINEERING NOTIFICATION, AGREEMENTS AND OFFICIAL CORRESPONDENCE RELATED TO GLENWOOD ENERGY, ADDRESS TO:
   KEITH SMITH
   513-523-2555
   5181 COLLEGE CORNER PIKE
   OXFORD, OHIO 45056
2. THE GAS MAIN INFORMATION PROVIDED SHOWS THE APPROXIMATE LOCATIONS AND DEPTHS OF COVER AND IS PROVIDED TO COMPLY WITH STATUTORY REGULATIONS. THIS INFORMATION SHOULD BE USED ONLY FOR PLANNING, NOT CONSTRUCTION.
3. ALL GAS MAIN DEPTHS OF COVER IF NOTED ARE APPROXIMATE DEPTHS OF COVER RECORDED AT THE TIME OF INSTALLATION. ANY RESULTING GRADE CHANGES SINCE THE TIME OF THE MAIN INSTALLATION WILL CAUSE THE EXISTING DEPTHS OF COVER TO BE DIFFERENT. EXTREME CARE MUST BE TAKEN TO ENSURE SAFE EXCAVATION WHEN APPROACHING KNOWN OR SUSPECTED GAS FACILITIES.
4. GAS SERVICE SHALL MEET THE REQUIREMENTS OF THE UTILITY PROVIDER.
5. FOR ADDITIONAL GAS FACILITY RECORD INFORMATION, CALL 513-523-2555.
6. TO COMPLY WITH FEDERAL AND STATE REGULATIONS CONCERNING DAMAGE PREVENTION PROGRAMS, THE UTILITY COMPANIES MUST BE CONTACTED AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO EXCAVATION BY CALLING THE OHIO UTILITIES PROTECTION SERVICE (OUPS), TOLL FREE AT 811.
7. GAS FACILITIES ARE TO BE KEPT IN SERVICE AT ALL TIMES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO GAS FACILITIES DURING OR AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION. ALL DAMAGE TO GAS FACILITIES REQUIRING ADJUSTMENTS, RELOCATIONS AND/OR REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL SHEET AND SHORE ALL EXCAVATIONS AS REQUIRED TO CONTINUOUSLY SUPPORT GAS FACILITIES WITHIN THE ZONE OF INFLUENCE (AS DETERMINED BY THE NATURAL ANGLE OF REPOSE OF THE SOIL).
10. CROSSING BURIED GAS FACILITIES WITH HEAVY CONSTRUCTION EQUIPMENT MAY CAUSE DAMAGE TO THE GAS FACILITIES. CONTACT THE GAS ENGINEERING DEPARTMENT FOR DETAILS ON HOW TO PROTECT THE GAS FACILITIES FROM DAMAGE.
11. THE CONTRACTOR SHALL NOT BACKFILL EXPOSED GAS FACILITIES UNTIL THE UTILITY HAS INSPECTED ITS FACILITIES AND PERFORMED ANY MAINTENANCE AND/OR ADJUSTMENTS THAT MAY BE REQUIRED.
12. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING ANY DAMAGE TO EXISTING GAS FACILITIES. THIS INCLUDES PROTECTION OF COATINGS AND WRAPPINGS ON STEEL GAS MAINS. IT ALSO INCLUDES ANY DAMAGE WHICH MAY HAVE OCCURRED TO PLASTIC GAS MAINS, SUCH AS CRIMPS OR GOUGES.
13. WHEN CAST IRON OR SIMILAR GAS FACILITIES ARE EXPOSED OR INTERFERED WITH BY THE CONTRACTOR, REPLACEMENT OR REINFORCEMENT BY THE UTILITY OWNER MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE. BACKFILL WITH CONTROL LOW STRENGTH MATERIAL WILL BE REQUIRED.
14. BLASTING OR OTHER CONSTRUCTION PROCEDURES WHICH MAY TRANSMIT LOADS OR VIBRATIONS IN THE VICINITY OF GAS FACILITIES MUST BE APPROVED BY THE GAS ENGINEERING DEPARTMENT. A BLASTING PLAN, IDENTIFYING ALL PERTINENT INFORMATION, MUST BE SUBMITTED IN WRITING BY A BLASTING EXPERT PRIOR TO ANY WORK.
15. PROPOSED DEVELOPMENT PLANS AROUND AND NEAR GAS FACILITIES WITHIN PRIVATE EASEMENTS MUST BE SUBMITTED TO THE GAS ENGINEERING DEPARTMENT FOR REVIEW. THESE PLANS MUST BE APPROVED BEFORE ANY WORK MAY BEGIN WITHIN THE UTILITY OWNER'S EASEMENTS.
16. SPECIFIED EASEMENT WIDTHS MUST BE MAINTAINED IN ORDER FOR THE UTILITY PROVIDER TO PROTECT ITS FACILITIES.
17. NO PERMANENT STRUCTURES MAY BE BUILT WITHIN THE EASEMENTS.
18. CUTS AND FILLS ARE GENERALLY NOT PERMITTED WITHIN THE EASEMENTS. SOME FILLS MAY BE ALLOWED, AND WILL BE REVIEWED ON AN INDIVIDUAL BASIS. ANY PERMITTED FILLS WILL BE LIMITED TO AN AMOUNT WHICH WILL ALLOW THE UTILITY OWNERS TO PROPERLY MAINTAIN ITS FACILITIES.
19. PERPENDICULAR UTILITY CROSSINGS OF GAS EASEMENTS ARE ACCEPTABLE, PROVIDED PROPER CLEARANCES ARE MAINTAINED. PARALLEL INSTALLATIONS ARE NORMALLY NOT ALLOWED.
20. GAS FACILITIES SHOWN ON THIS PLAN ARE TO BE INSTALLED BY GLENWOOD ENERGY CONTRACTOR COORDINATE ALL CONDUIT TRENCHING ACTIVITIES WITH GLENWOOD ENERGY REPRESENTATIVE.

GRADING NOTES

A. ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS (2018) AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE GOVERNING AGENCIES. WHEN IN CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

B. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS.

C. FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITY PROTECTION SERVICE (OUPS) AND ALL OTHER AGENCIES WHICH MAY HAVE UNDERGROUND UTILITIES INVOLVED IN THIS PROJECT AND ARE NOT MEMBERS OF OHIO UNDERGROUND PROTECTION, INC.

D. CONTRACTOR AND OWNER SHALL VERIFY AND ACCEPT ALL QUANTITIES PRIOR TO BEGINNING CONSTRUCTION.

E. CONTRACTOR SHALL VERIFY THAT COORDINATES, IF USED, MATCH PLAN DIMENSIONS. WHEN IN CONFLICT, THE PLAN DIMENSIONS SHALL GOVERN OVER COORDINATES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

F. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION DETAILS SHALL CONFORM WITH THE "STANDARD CONSTRUCTION DRAWINGS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION".

G. EXISTING SITE SURVEY, TOPOGRAPHY, AND SUBSURFACE CONDITIONS: EXISTING CONDITIONS PRESENTED IN DRAWING, REPORT OR SPECIFICATION FORM ARE BELIEVED ACCURATE WITHIN NORMAL INDUSTRY TOLERANCES BUT ARE NOT GUARANTEED. INVESTIGATE, SURVEY, CONFIRM AND VERIFY ALL CONDITIONS BEARING ON THE WORK BY ANY MEANS NECESSARY BEFORE STARTING ANY WORK THAT CHANGES EXISTING CONDITIONS. REPORT ANY UNACCEPTABLE DISCREPANCIES TO THE ENGINEER IN WRITING BEFORE BEGINNING OPERATIONS
   - G.A. WRITTEN CLAIMS OF DIFFERENCE SHALL BE ACCOMPANIED BY SUBSTANTIATING EVIDENCE. CLAIMS OF DIFFERENCE SHALL BE RESOLVED, INCLUDING DETERMINATION OF QUANTITIES AND COSTS AND METHODS OF CONTRACT MODIFICATION, BEFORE WORK THAT ALTERS SUCH EXISTING CONDITIONS IS STARTED.
   - G.B. INITIATION OF SITE-CLEARING, SOIL-MOVING OPERATIONS, DEMOLITION OR OTHER ACTIVITY THAT ALTERS EXISTING CONDITIONS SHALL BE EVIDENCE THAT CONTRACTOR HAS MADE ALL INVESTIGATIONS AND EVALUATIONS IT DEEMS NECESSARY AND HAS ACCEPTED ALL EXISTING CONDITIONS PRESENT WHETHER OR NOT THEY CONFORM EXACTLY TO THE DOCUMENTS.
   - G.C. WITHOUT ADVANCE WRITTEN NOTIFICATION OF UNACCEPTABLE DISCREPANCY, NO CLAIM FOR EXTRA WILL BE CONSIDERED FOR A CLAIM OF DIFFERENCE BETWEEN DOCUMENTS AND ACTUAL CONDITIONS AFTER THE CONTRACTOR HAS ALTERED EXISTING CONDITIONS.

H. BACKFILL OF ALL UTILITY EXCAVATIONS IN STRUCTURAL AREAS INCLUDING UNDER PAVEMENTS OR WITHIN TEN (10) FEET OF ANY BUILDING AREAS SHOULD BE CONTINUALLY MONITORED BY A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER TO VERIFY AND DOCUMENT THAT PROPER LIFT THICKNESS, MOISTURE CONDITION, AND COMPACTIVE EFFORT ARE MAINTAINED. THE GRADING PLAN IS TO BE USED FOR GRADING PURPOSES ONLY.

I. SPOT ELEVATIONS REPRESENT FINISH PAVEMENT GRADE. SUBGRADE OF THE BUILDING PAD VARIES BETWEEN 9" AND 12" BELOW FINISH FLOOR. CONTRACTOR SHALL REVIEW THE FOUNDATION PLAN TO DETERMINE BUILDING SUBGRADE ELEVATIONS.

J. CONTRACTOR AND OWNER SHALL AGREE TO ALL EXCAVATION AND EMBANKMENT QUANTITIES PRIOR TO CONSTRUCTION.

K. CONTRACTOR SHALL REMOVE ALL TREES AND CLEAN ALL AREAS AS DETERMINED BY THE ENGINEER OR ARCHITECT TO PERFORM ALL GRADING AND UTILITY WORK IN ACCORDANCE WITH THE DRAWINGS, GENERAL NOTES, AND PROJECT SPECIFICATIONS. RESERVE MULCH FOR SOIL EROSION MULCHING AS NECESSARY.

L. THE PROJECT HAS BEEN DESIGNED TO CONTROL EROSION AND PREVENT DAMAGE TO OTHER PROPERTY. ALL STRIPPING, EARTHWORK, AND REGRADING SHALL BE PERFORMED TO MINIMIZE EROSION. NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE. THE PROPOSED PLAN WILL ALLOW MOST ERODED MATERIALS TO BE RETAINED ON SITE.

M. GEOTECHNICAL REPORT HAS BEEN COMPLETED FOR THIS SITE BY PROFESSIONAL SERVICE INDUSTRIES. COPIES OF THIS REPORT ARE AVAILABLE FROM THE OWNER'S REPRESENTATIVE.

N. CONTRACTOR SHALL OBTAIN A COPY OF THE COMPLETE GEOTECHNICAL REPORT PRIOR TO BEGINNING WORK.

O. CONTRACTOR SHALL SETUP AN ONSITE PRE-CONSTRUCTION MEETING WITH OWNER, PROJECT GEOTECHNICAL ENGINEER, EARTHWORK CONTRACTOR, AND SITE CIVIL ENGINEER PRIOR TO BEGINNING CONSTRUCTION.

P. ALL EARTHWORK AND CONSTRUCTION ACTIVITY SHALL BE PERFORMED PER THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AS DESCRIBED IN THE GEOTECHNICAL EXPLORATION REPORT AND ALL ADDENDUMS AND/OR THE PROJECT SPECIFICATIONS. WHEN IN CONFLICT THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

Q. BUILDING PAD PREPARATION SHALL BE MADE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S, STRUCTURAL ENGINEER'S, AND ARCHITECT'S RECOMMENDATIONS. BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO CONSTRUCTION.

R. ANY AREAS THAT APPEAR AS FUTURE BUILDING OR PARKING LOTS SHALL BE GRADED TO DRAIN TO THE NEAREST SWALE, CATCH BASIN, OR OTHER DRAINAGE FEATURE. IF NECESSARY, CONTRACTOR SHALL CONSTRUCT TEMPORARY FACILITIES TO DRAIN THESE AREAS TO THE NEAREST DRAINAGE FEATURE. THE FUTURE BUILDING PADS SHOULD BE LEFT HIGH TO ACCOUNT FOR DRAINAGE ACROSS THE PAD 0.5% MIN.

S. EXCESSIVELY ORGANIC TOPSOIL AND LOOSE MATERIALS SHALL BE STRIPPED FROM THE CONSTRUCTION AREAS AND WASTED OR STOCKPILED. AN AVERAGE TOPSOIL THICKNESS OF 3" WAS USED BY THE ENGINEER WHEN DEVELOPING THESE PLANS. ACTUAL TOPSOIL THICKNESS MAY VARY ACROSS THE AND THE EXACT DEPTH OF STRIPPING SHOULD BE DETERMINED BY A REPRESENTATIVE OF THE PROJECT GEOTECHNICAL ENGINEER IN THE FIELD AT THE TIME OF THE STRIPPING OPERATIONS.

T. AFTER STRIPPING OF THE TOPSOIL HAS BEEN PERFORMED, THE EXPOSED SUBGRADE SHALL BE PROOFROLLED WITH APPROVED EQUIPMENT TO IDENTIFY POCKETS OF SOFT UNSUITABLE MATERIALS. UNDER THE DIRECTION OF THE PROJECT GEOTECHNICAL ENGINEER, UNSUITABLE MATERIALS SHOULD BE REMOVED AND REPLACED WITH A WELL-COMPACTED MATERIAL.

U. THE LAST 12" OF ALL FILLS OUTSIDE OF PAVEMENT AND BUILDING AREAS SHALL BE TOPSOIL UNLESS OTHERWISE NOTED. ALL TOPSOIL FILLS SHALL BE BENCHED OR KNIT INTO FILL SLOPES AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

V. SEE LANDSCAPE PLANS FOR SEED MIXTURES TO BE USED THE GRADED AREAS.

W. THE CITY OF OXFORD REQUIRES AN AS-BUILT VOLUME CERTIFICATION OF ALL DETENTION/RETENTION BASINS. CONTRACTOR SHOULD CONTACT THE SITE CIVIL ENGINEER TO PERFORM AS-BUILT VOLUME CERTIFICATION PRIOR TO FINAL GRADING AND SEEDING OF BASINS.

Item	Revision Description	Date	Drawn:	Chk:

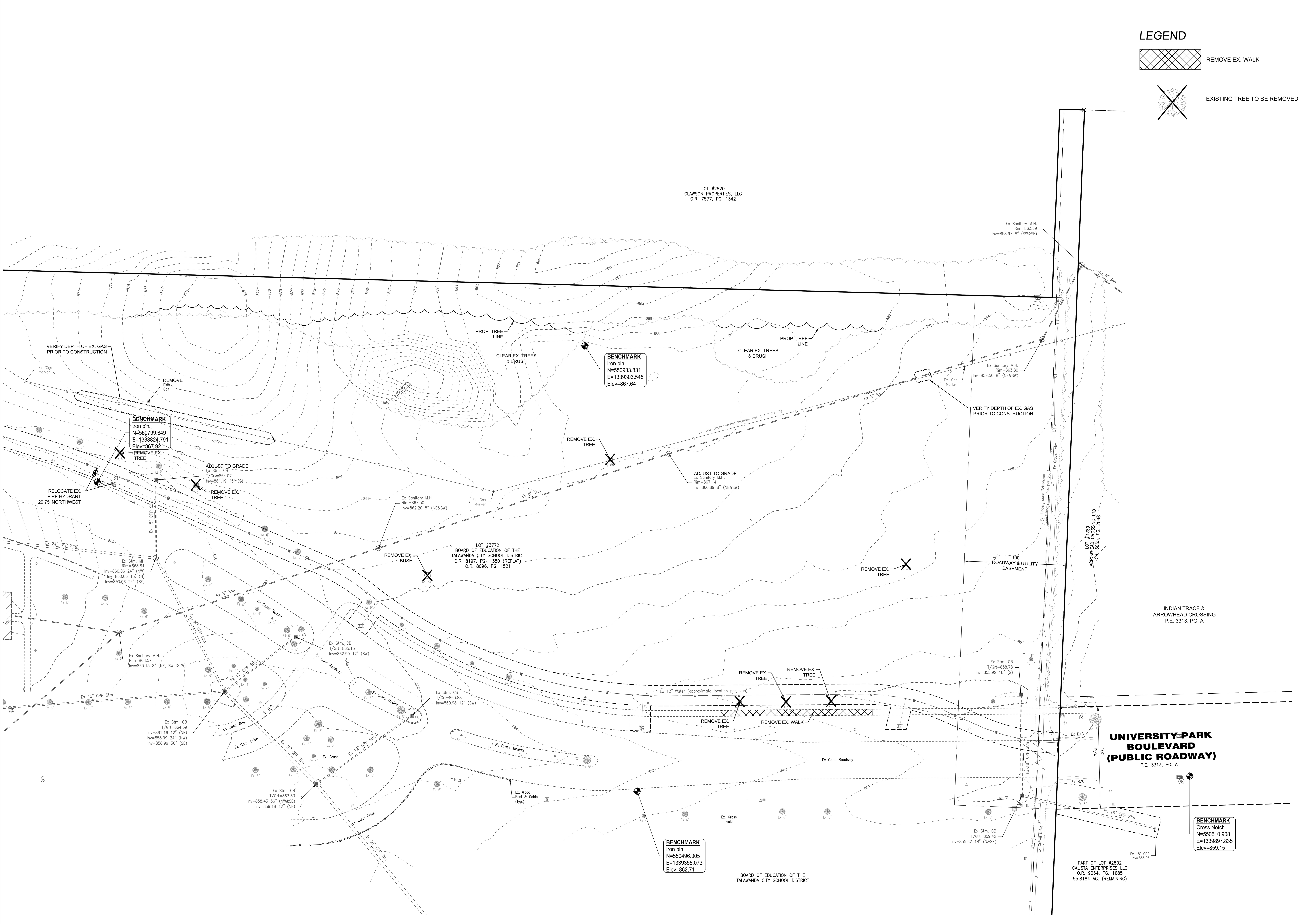
NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT
5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

GENERAL NOTES

bayer becker
www.bayerbecker.com
110 S. College Avenue, Suite 101
Oxford, OH 45056 - 513.523.4270

Drawing: 21-0202 CD
Drawn by: JLE
Checked By: EMR
Issue Date: 05-19-22
Sheet: C101

Plot time: May 19, 2022 - 10:16am
Drawing name: J:\2021\21-0202\CV\DWG\21-0202 CD.dwg - Layout Tab: C101 General Notes


LEGEND
REMOVE EX. WALK
EXISTING TREE TO BE REMOVED
LOT #2820
CLAWSON PROPERTIES, LLC
O.R. 7577, PG. 1342
Ex Sanitary M.H.
Rim=863.69
Inv=858.97 8" (SW&SE)
PROP. TREE LINE
CLEAR EX. TREES & BRUSH
BENCHMARK
Iron pin
N=550933.831
E=1339303.545
Elev=867.64
CLEAR EX. TREES & BRUSH
PROP. TREE LINE
Ex Sanitary M.H.
Rim=863.80
Inv=859.50 8" (NE&SW)
VERIFY DEPTH OF EX. GAS PRIOR TO CONSTRUCTION
VERIFY DEPTH OF EX. GAS PRIOR TO CONSTRUCTION
REMOVE Disc Golf
BENCHMARK
Iron pin
N=550799.849
E=1338824.791
Elev=867.92
REMOVE EX. TREE
RELOCATE EX. FIRE HYDRANT 20.75' NORTHWEST
ADJUST TO GRADE
Ex Stm. CB
T/Grt=864.07
Inv=861.19 15" (S)
REMOVE EX. TREE
REMOVE EX. TREE
ADJUST TO GRADE
Ex Sanitary M.H.
Rim=867.14
Inv=860.89 8" (NE&SW)
Ex Sanitary M.H.
Rim=867.50
Inv=862.20 8" (NE&SW)
LOT #3772
BOARD OF EDUCATION OF THE TALAWANDA CITY SCHOOL DISTRICT
O.R. 8197, PG. 1350 (REPLAT)
O.R. 8096, PG. 1521
REMOVE EX. BUSH
REMOVE EX. TREE
100' ROADWAY & UTILITY EASEMENT
LOT #3289
ARROWHEAD CROSSING LTD
O.R. 6055, PG. 2096
INDIAN TRACE & ARROWHEAD CROSSING
P.E. 3313, PG. A
Ex Stm. MH
Rim=868.84
Inv=860.06 24" (NW)
Inv=860.06 15" (N)
Inv=860.06 24" (SE)
Ex Sanitary M.H.
Rim=868.57
Inv=863.15 8" (NE, SW & W)
Ex Stm. CB
T/Grt=865.13
Inv=862.20 12" (SW)
Ex Stm. CB
T/Grt=863.88
Inv=860.98 12" (SW)
Ex Stm. CB
T/Grt=864.39
Inv=861.16 12" (NE)
Inv=858.99 24" (NW)
Inv=858.99 36" (SE)
Ex Stm. CB
T/Grt=863.33
Inv=858.43 36" (NW&SE)
Inv=859.18 12" (NE)
REMOVE EX. TREE
REMOVE EX. TREE
REMOVE EX. TREE
REMOVE EX. WALK
Ex Stm. CB
T/Grt=858.78
Inv=855.92 18" (S)
UNIVERSITY PARK BOULEVARD (PUBLIC ROADWAY)
P.E. 3313, PG. A
Ex Conc Roadway
Ex. Wood Post & Cable (Typ.)
BENCHMARK
Iron pin
N=550496.005
E=1339355.073
Elev=862.71
Ex Stm. CB
T/Grt=859.42
Inv=855.62 18" (N&SE)
PART OF LOT #2802
CALISTA ENTERPRISES LLC
O.R. 9064, PG. 1685
55.8184 AC. (REMAINING)
BENCHMARK
Cross Notch
N=550510.908
E=1339897.835
Elev=859.15
BOARD OF EDUCATION OF THE TALAWANDA CITY SCHOOL DISTRICT

Basis of Bearing: State Plane NAD83 (2011)

SCALE: 1" = 40'

Item	Revision Description	Date	Drwn:	Chk:

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT

5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

EXISTING CONDITIONS & DEMOLITION PLAN

bayer becker
www.bayerbecker.com
110 S. College Avenue, Suite 101
Oxford, OH 45056 - 513.523.4270

Drawing: 21-0202 CD
Drawn by: JLE
Checked By: EMR
Issue Date: 05/19/22
Sheet: **C200**

Plot time: May 19, 2022 - 10:17am
Drawing name: J:\2021\21-0202\CIVIL\DWG\21-0202 CD.dwg - Layout Tab: C200 Demo

NOTES

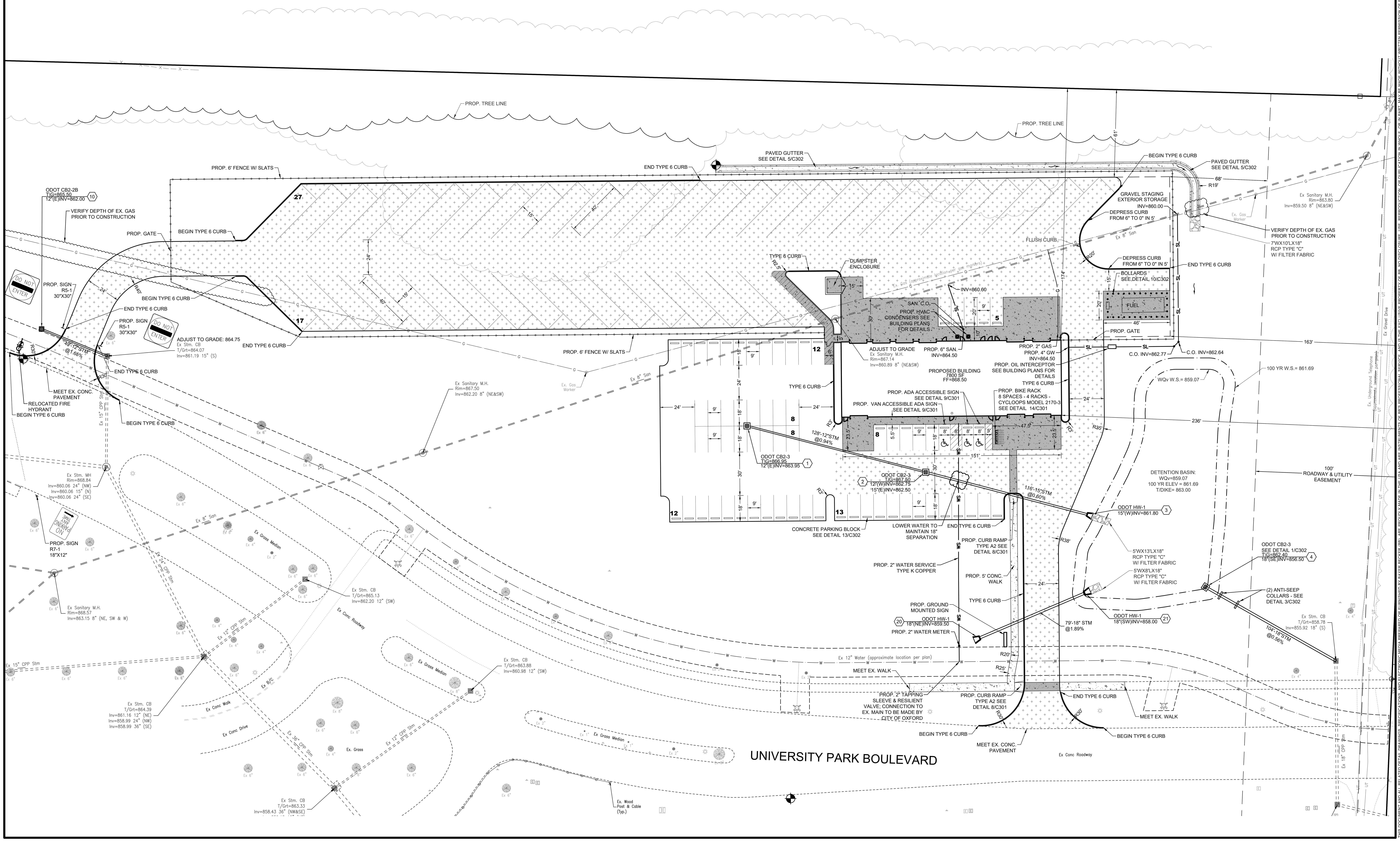
1. TAPER CURB HEIGHT FROM 6" TO 0" IN 5' AT ALL LOCATIONS PROPOSED CURB BEGINS AND ENDS.
2. CURBS SHALL BE CONSTRUCTED PER DETAILS 11/C301 AND 12/C301.
3. BACKFLOW PREVENTION FOR DOMESTIC WATER LINE TO BE ASSE 1013.
4. ALL CATCH BASINS IN PAVEMENT SHALL BE CONSTRUCTED WITH SPIDER DRAINS PER DETAIL 4/C302.

LEGEND

- PROPOSED CONCRETE WALK (SEE DETAIL 1/C302)
- PROPOSED CONCRETE PAVEMENT (SEE DETAIL 2/C302)
- PROPOSED LIGHT DUTY ASPHALT (SEE DETAIL 3/C302)
- PROPOSED HEAVY DUTY ASPHALT (SEE DETAIL 4/C302)

Basis of Bearing: State Plane NAD83 (2011)

SCALE: 1" = 30'



NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT

5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

DETAILED SITE LAYOUT & UTILITY PLAN

Item	Revision Description	Date	Drwn:	Chk:

bayer becker
www.bayerbecker.com
110 S. College Avenue, Suite 101
Oxford, OH 45056 - 513.523.4270

Drawing: 21-0202 CD
Drawn by: JLE
Checked By: EMR
Issue Date: 05/19/22
Sheet: C300

Plot time: May 19, 2022 - 11:59am
Drawing name: J:\2021\21-0202\CIVIL\DWG\21-0202 CD.dwg - Layout Tab: C300 Layout

1 C301 CONCRETE WALK

NOT TO SCALE

1. ITEM 608 - 4" CONCRETE WALK
2. ITEM 304 - 4" AGGREGATE BASE
3. ITEM 203 - SUBGRADE COMPACTION

2 C301 CONCRETE PAVEMENT

NOT TO SCALE

1. ITEM 452 - 8" P.C.C. PAVEMENT W/WWF 6"X6"-W2.9 X W2.9
2. ITEM 304 - 6" AGGREGATE BASE
3. ITEM 203 - SUBGRADE COMPACTION

3 C301 LIGHT DUTY ASPHALT PAVEMENT

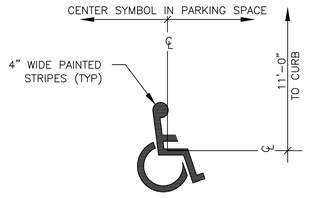
NOT TO SCALE

1. ITEM 448 - 1-1/2" SURFACE COURSE
2. ITEM 448 - 2" INTERMEDIATE COURSE
3. ITEM 407 - TACK COAT
4. ITEM 304 - 6" AGGREGATE BASE
5. ITEM 203 - SUBGRADE COMPACTION

4 C301 HEAVY DUTY ASPHALT PAVEMENT

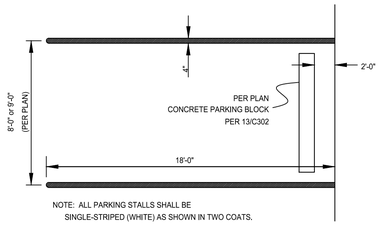
NOT TO SCALE

1. ITEM 448 - 1-1/2" SURFACE COURSE
2. ITEM 448 - 2-1/2" INTERMEDIATE COURSE
3. ITEM 407 - TACK COAT
4. ITEM 304 - 8" AGGREGATE BASE
5. ITEM 203 - SUBGRADE COMPACTION



5 C301 ADA SYMBOL DETAIL

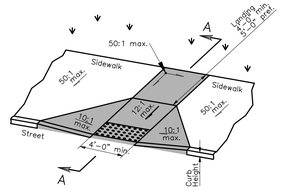
NOT TO SCALE



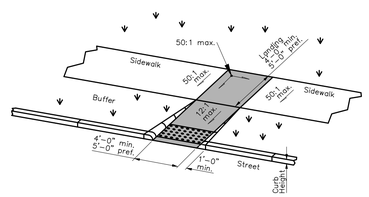
NOTE: ALL PARKING STALLS SHALL BE SINGLE-STRIPED (WHITE) AS SHOWN IN TWO COATS.

6 C301 STRIPING DETAIL

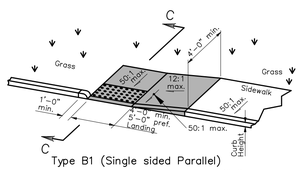
NOT TO SCALE



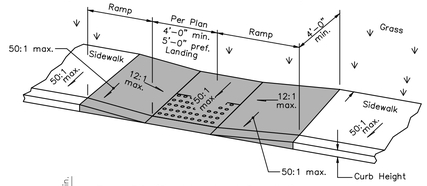
Type A1 (Perpendicular with flared sides)



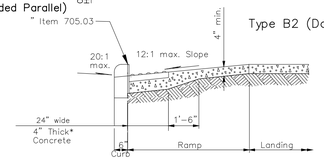
Type A2 (Perpendicular with returned curb)



Type B1 (Single sided Parallel)



Type B2 (Double sided Parallel)



New gutter shown.

SECTION A–A
NORMAL DETAIL

CURB RAMP NOTES

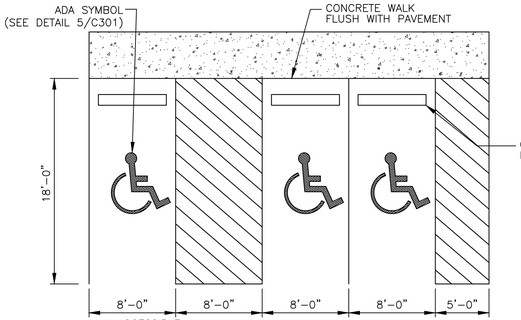
Contractor is to ensure the base of each constructed curb ramp allows for proper drainage, without exceeding allowable cross slope or ramp slopes. Vertical change in level exceeding ¼" between the 1) pavement and gutter, and 2) gutter and ramp, are not allowed.

Texture concrete surfaces by coarse brooming transverse to the ramp slopes to be rougher than the adjacent walk.

The edge of the curb shall be flush with the edge of the adjacent pavement and gutter and surface slopes that meet grade breaks shall also be flush.

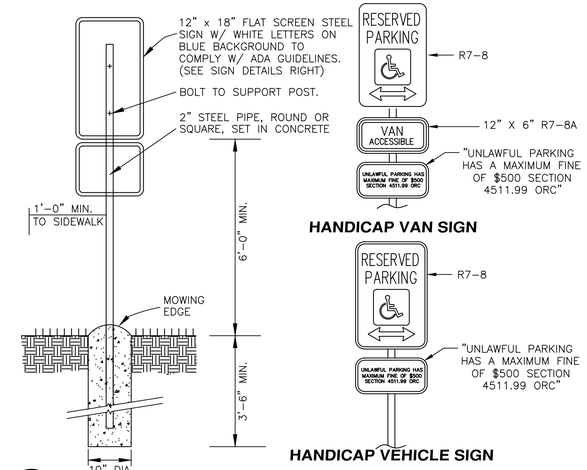
8 C301 CURB RAMP DETAILS

NOT TO SCALE



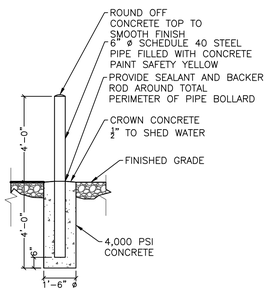
7 C301 ADA ACCESSIBLE PARKING DETAIL

NOT TO SCALE



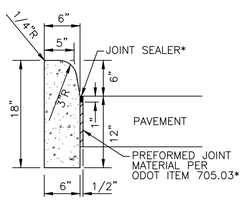
9 C301 ADA ACCESSIBLE SIGN DETAILS

NOT TO SCALE



10 C301 BOLLARD DETAIL

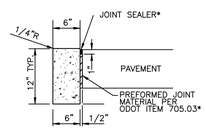
NOT TO SCALE



11 C301 O.D.O.T. TYPE 6 CURB DETAIL

NOT TO SCALE

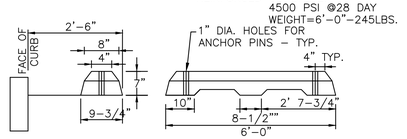
*NOTE: EXPANSION JOINT MATERIAL & JOINT SEALER ARE NOT REQUIRED FOR THAT PORTION OF THE CURB WHICH IS ADJACENT TO A FLEXIBLE TYPE PAVEMENT. BOTH MATERIALS ARE REQUIRED FOR THE FULL HEIGHT OF RIGID PAVEMENT AND CONCRETE BASES.



12 C301 FLUSH CURB DETAIL

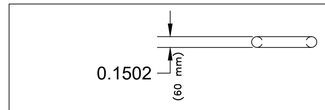
NOT TO SCALE

*NOTE: EXPANSION JOINT MATERIAL & JOINT SEALER ARE NOT REQUIRED FOR THAT PORTION OF THE CURB WHICH IS ADJACENT TO A FLEXIBLE TYPE PAVEMENT. BOTH MATERIALS ARE REQUIRED FOR THE FULL HEIGHT OF RIGID PAVEMENT AND CONCRETE BASES.

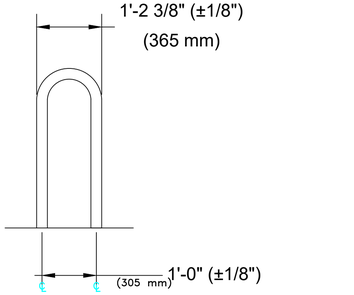


13 C301 CONCRETE PARKING BLOCK DETAIL

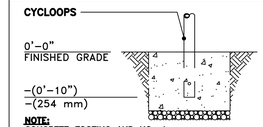
NOT TO SCALE



TOP VIEW

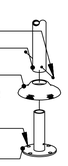


FRONT VIEW



NOTE:
CONCRETE FOOTING AND NO. 4 REBAR (BY OTHERS) PER LOCAL SOIL CONDITIONS. CONSULT PROJECT ENGINEER FOR EXACT REQUIREMENTS.

2170-3-E (DIRECT EMBEDMENT)



2170-3-P (PEDESTAL MOUNT)

COLUMBIA CASCADE COMPANY
Makers of TimberForm®, PipeLine®, RePlay® TimberForm®-2, InterPlay® CycLoops® and CycLocker® Products.
1300 S.W. Sixth Avenue, Suite 310 Telephone 503/223-1157
Portland, Oregon 97201-3464 Facsimile 503/223-4530
U.S.A.
WWW.TIMBERFORM.COM

Title: TIMBERFORM CYCLOOPS
MODEL NO. 2170-3
ORIGINAL CYCLOOPS

Scale: 3/4"=1'-0" | Drawn by: AT | 07-04-10 | Ck'd by:
Drawing No. W-2170-3 | Sheet 1 of 1

14 C301 BIKE RACK DETAIL

NOT TO SCALE

Item	Revision Description	Date	Drwn.	Chk.

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT
5001 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
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SITE DETAILS

bayer becker
www.bayerbecker.com
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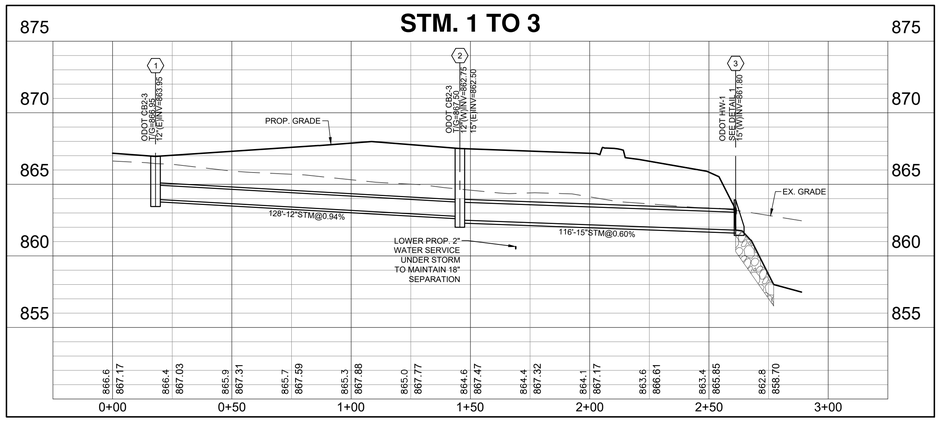
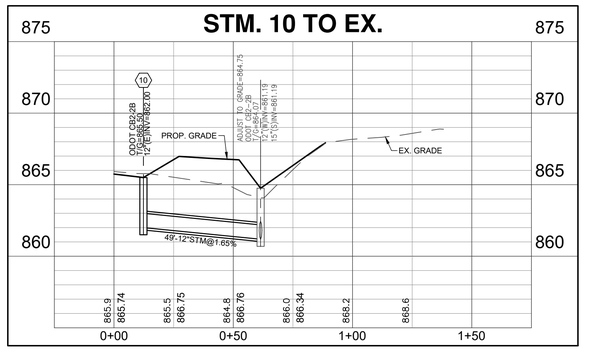
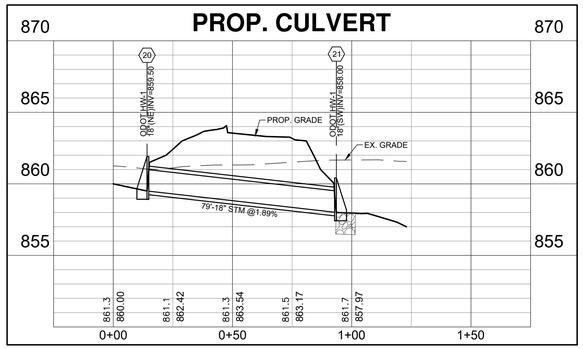
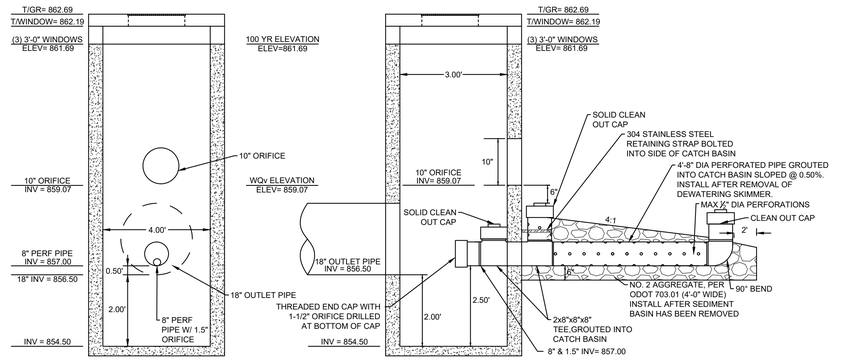
Drawing name: J:\2021\21-0202\CVD\WG\21-0202 CD.dwg - Layout Tab: C301 Site Details





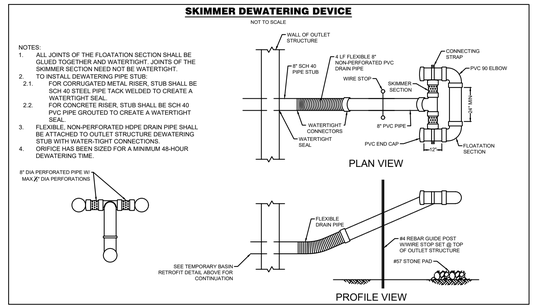




1 / C302

POST-CONSTRUCTION DETAIL
DETENTION BASIN OUTLET STRUCTURE - ODOT CB2-3

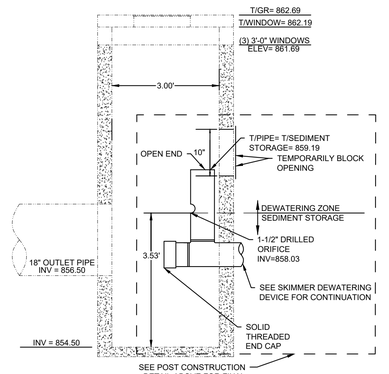
NOT TO SCALE



2 / C302

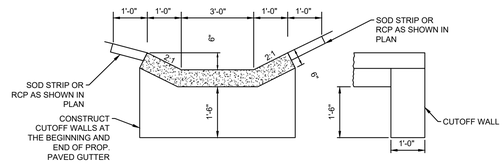
DURING CONSTRUCTION
OUTLET CONTROL STRUCTURE
SEDIMENT BASIN RETROFIT

NOT TO SCALE



TEMPORARY
BASIN RETROFIT DETAIL

NOT TO SCALE

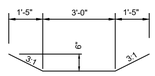


1. CONSTRUCT GUTTERS WITH 4000 PSI COMPRESSIVE STRENGTH CONCRETE.
2. IMPRESS CONCRETE GUTTER CONTRACTION JOINTS AND SPACE AT 10 FOOT INTERVALS.

5 / C302

PAVED GUTTER DETAIL

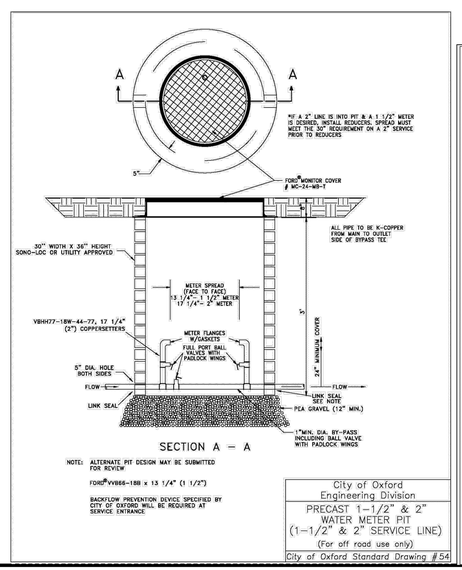
NOT TO SCALE



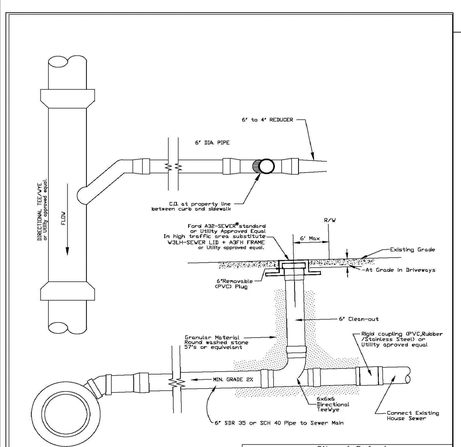
6 / C302

TYPICAL DITCH TO BASIN

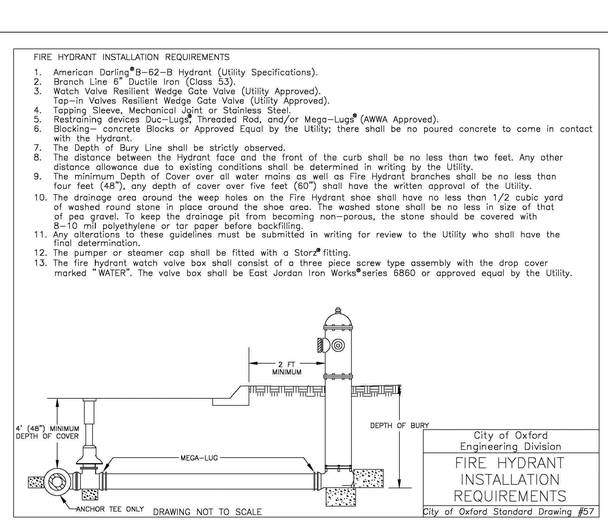
NOT TO SCALE



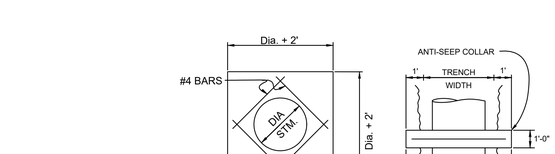
City of Oxford
Engineering Division
PRECAST 1–1/2" & 2" WATER METER PIT (1–1/2" & 2" SERVICE LINE)
(For off road use only)
City of Oxford Standard Drawing #54



City of Oxford
Engineering Division
STANDARD SANITARY SEWER SERVICE CONNECTION AND CLEANOUT DETAIL
REVISED 2015
City of Oxford Standard Drawing # 22



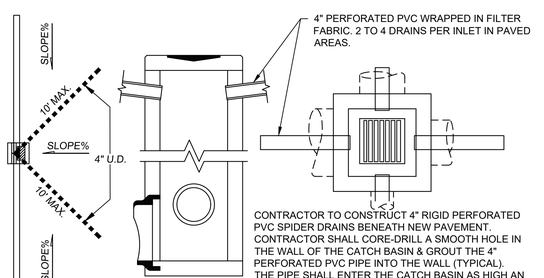
City of Oxford
Engineering Division
FIRE HYDRANT INSTALLATION REQUIREMENTS
City of Oxford Standard Drawing #57



3 / C302

ANTI-SEEP/FLOAT COLLAR DETAIL

NOT TO SCALE



CONTRACTOR TO CONSTRUCT 4" RIGID PERFORATED PVC SPIDER DRAINS BENEATH NEW PAVEMENT. CONTRACTOR SHALL CORE-DRILL A SMOOTH HOLE IN THE WALL OF THE CATCH BASIN & GROUT THE 4" PERFORATED PVC PIPE INTO THE WALL (TYPICAL). THE PIPE SHALL ENTER THE CATCH BASIN AS HIGH AN ELEVATION AS POSSIBLE (MAINTAINING 2' MINIMUM COVER) TO REDUCE POSSIBLE SURCHARGING (TYPICAL).

4 / C302

TYPICAL CATCH BASIN WITH SPIDER DRAINS

NOT TO SCALE

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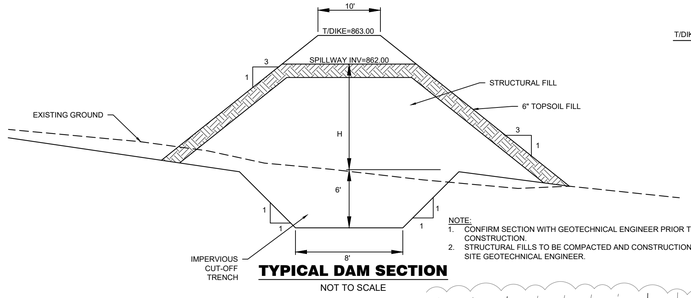
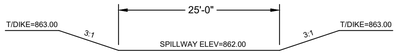
Drawing name: J:\2021\21-0202\CVD\WD\c21-0202 CD.dwg - Layout Tab: C302 Utility Details



TYPICAL DAM SECTION

NOT TO SCALE

NOTE:
1. CONFIRM SECTION WITH GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
2. STRUCTURAL FILLS TO BE COMPACTED AND CONSTRUCTION PER THE SITE GEOTECHNICAL ENGINEER.



BASIN SPILLWAY DETAIL

NOT TO SCALE

SPOT ELEVATION LEGEND

FF = Finish Floor	EX = Existing
HP = High Point	BS = Bottom of Steps
LP = Low Point	TS = Top of Steps
FC = Face of Curb	GS = Ground Shot
TC = Top of Curb	EP = Edge of Pavement
BW = Bottom of Wall	WSE = Water Surface
TW = Top of Wall	PAV'T = Pavement

BASIN SUMMARY

DRAINAGE AREA =	5.48 ACRES
SEDIMENT BASIN:	
SEDIMENT STORAGE REQUIRED =	0.11 AC-FT
SEDIMENT STORAGE PROVIDED =	0.11 AC-FT
DEWATERING VOLUME REQUIRED =	0.23 AC-FT
DEWATERING VOLUME PROVIDED =	0.23 AC-FT
SEDIMENT CONTROL ORIFICE DIA =	1-1/2 IN
DEWATERING DRAWDOWN TIME = (48HR MIN)	63.40 HRS
PERMANENT STORMWATER FACILITY:	
WQv STORAGE REQUIRED =	0.31 AC-FT
WQv STORAGE PROVIDED =	0.31 AC-FT
@ ELEV =	859.07
WQv ORIFICE DIA =	1-1/2" IN
WQv DRAWDOWN TIME = (48HR MIN)	55.72 HRS
100 YEAR W.S. ELEVATION =	861.69
EMERGENCY SPILLWAY INV =	862.00

SWPPP NOTES

TYPE OF CONSTRUCTION ACTIVITY: Mass Earthwork, Utility Installation, Pavement, & Proposed Building/ Maintenance Garage

TOTAL DISTURBED AREA: ±6.1 Acres

PRIOR LAND USE: Vacant Land

RECEIVING WATERS: Unnamed Tributary to Collins Creek
Unnamed Tributary to Lick Run

IMPERVIOUS CALCULATIONS:

IMPERVIOUS AREA	
PRE-DEVELOPED	0.55 ACRES
POST-DEVELOPED	2.80 ACRES

SOIL DATA:

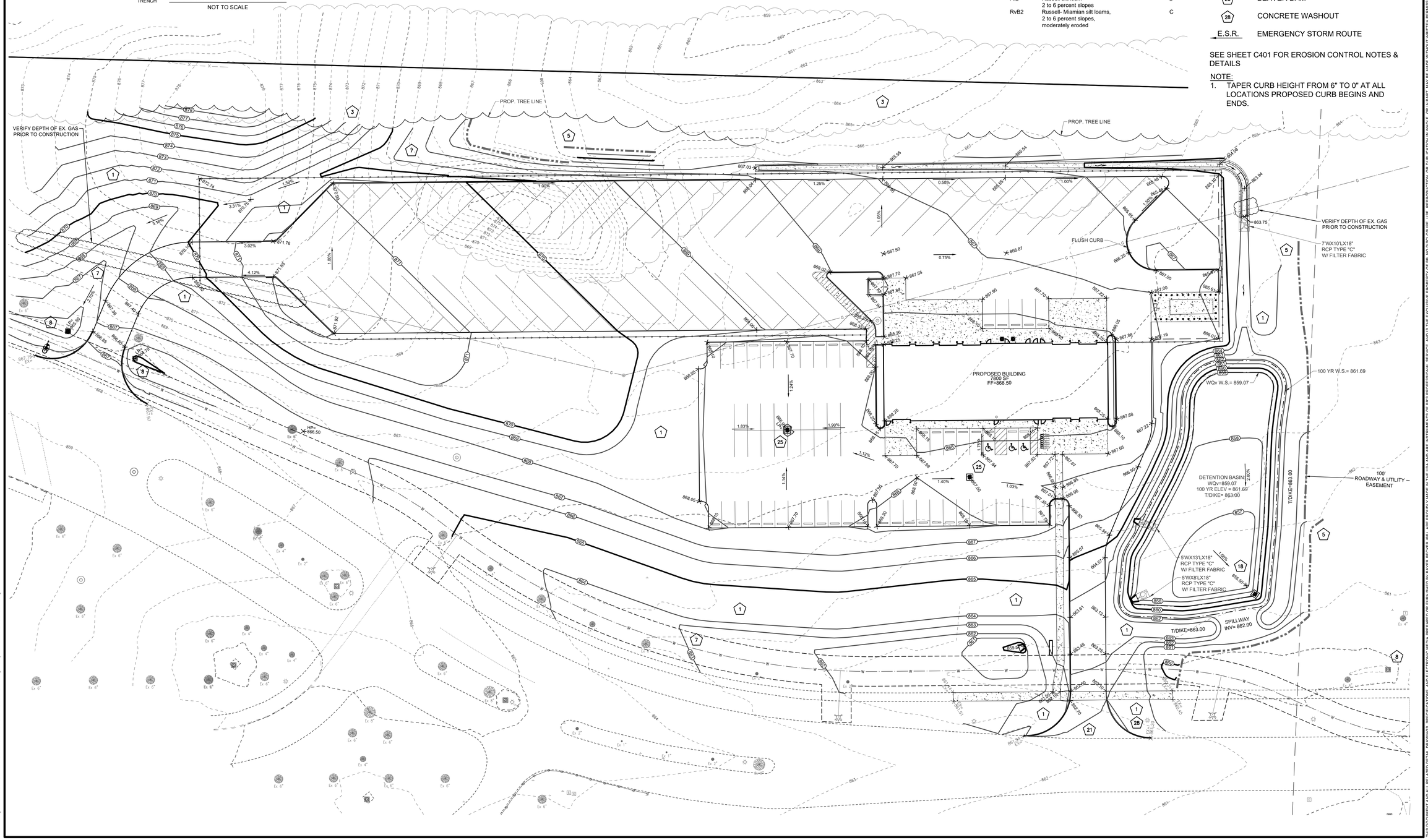
SYMBOL	SOIL NAME	HSG
FcA	Fincastle silty loam, southern ohio till plain, 0 to 2 percent slopes	B/D
RtB	Russell silt loam 2 to 6 percent slopes	B
RvB2	Russell- Miamian silt loams, 2 to 6 percent slopes, moderately eroded	C

LEGEND

1	SEEDING AND MULCHING
3	PRESERVE EXISTING VEGITATION
5	SILT FENCE
7	ROCK CHECK DAM
8	INLET PROTECTION
18	SEDIMENT BASIN (SEE DETAIL 2/C302)
21	CONSTRUCTION ENTRANCE
25	DANDY BAG INLET SEDIMENT FILTER
26	BEAVER DAM
28	CONCRETE WASHOUT
E.S.R.	EMERGENCY STORM ROUTE

SEE SHEET C401 FOR EROSION CONTROL NOTES & DETAILS

NOTE:
1. TAPER CURB HEIGHT FROM 6" TO 0" AT ALL LOCATIONS PROPOSED CURB BEGINS AND ENDS.



Basis of Bearing:
State Plane NAD83 (2011)

0 30 45
SCALE: 1" = 30'

Item	Revision Description	Date	Drwn:	Chk:

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT

5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

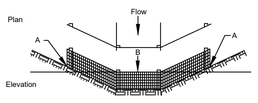
SITE GRADING & EROSION CONTROL PLAN

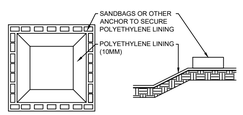
bayer becker
www.bayerbecker.com
110 S. Cherry Street, Suite 101
Oxford, OH 45056 - 513.523.4270

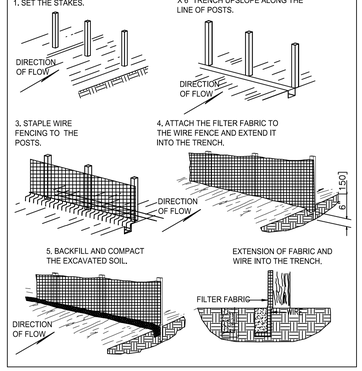
Drawing:
Drawn by: JLE
Checked By: EMR
Issue Date: 05/19/22

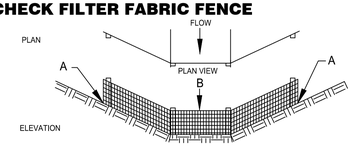
Sheet:
C400

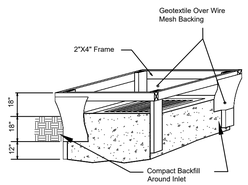
Plot time: May 19, 2022 - 10:38am
Drawing name: J:\2021\21-0202\CV\DWG\21-0202 CD.dwg - Layout Tab: C400 Grading

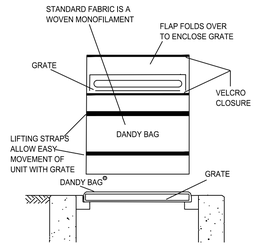


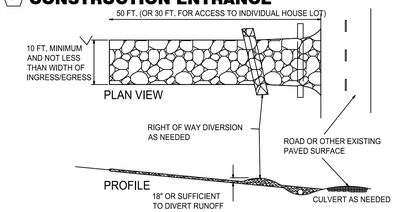


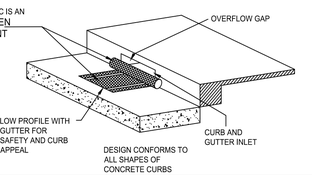












PERMANENT SEEDING 1

Permanent seeding includes the seedbed preparation, seeding, and the establishment of perennial vegetation used to permanently stabilize soil, prevent sediment pollution, reduce runoff by promoting infiltration, and provide storm water quality benefits offered by dense vegetation.

CONDITIONS WHERE PRACTICE APPLIES

Permanent seeding should be applied to:

- Areas or portions of construction-sites which can be brought to final grade. Applications of permanent seeding should not be delayed while construction on limited portions of the site being completed.
- Areas on that will be regraded, but will be dormant for a year or more.

PLANNING CONSIDERATIONS

Healthy dense turf will have a dramatic long lasting effect on stormwater quality as well as promoting infiltration and reducing the amount of runoff. To establish quality vegetation, careful preparation of the seedbed, soil, even subsoil is highly encouraged.

Soil Compaction--Stormwater quality and the amount of runoff both vary significantly with soil compaction. Non-compacted soils improve stormwater by promoting:

- dense vegetation.
- high infiltration & lower runoff rates.
- pollutant filtration, deposition & absorption, and
- beneficial biologic activity in the soil.

Construction activity can cause highly compacted soils but also offers the opportunity to improve soil condition. The best time for improving soil condition is during the establishment of permanent vegetation. It is highly recommended that subsoilers, plows or others implements be specified as part of final seedbed preparation. Use discretion in slip-prone areas.

Minimum Soil Conditions--Vegetation cannot be expected to stabilize soil that is unstable due to its texture, structure, water movement or excessively steep slope. The following minimum soil conditions are needed for the establishment and maintenance of a long-lived vegetation cover. If these conditions cannot be met, see the Standards and Specifications for Resoiling.

- Soils must include enough fine-grained material to hold at least a moderate amount of available moisture.
- The soil must be free from material that is toxic or otherwise harmful to plant growth.

Permanent Seeding			
Seed Mix	Seeding Rate		Notes:
	lb./ac.	lb./1,000 ft.^{2}	
General Use			
Creeping Red Fescue Ryegrass Kentucky Bluegrass	20-40 10-20 10-20	1/2-1 1/4-1/2 1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cut Slopes			
Tall Fescue	40	1	
Crown Vetch Tall Fescue	10 20	1/4 1/2	Do not seed later than August
Flat Pea Tall Fescue	20 20	1/2 1/2	Do not seed later than August
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue Kentucky Bluegrass	90 5	2 1/4	
Lawns			
Perennial Ryegrass Kentucky Bluegrass	60 60	1 1/2 1 1/2	
Creeping Red Fescue Kentucky Bluegrass	60 60	1 1/2 1 1/2	For shaded areas
Note: Other approved seed species may be substituted.			

Maintenance for Permanent Seedings Fertilization and Mowing					
Mixture	Formula	lb./ac.	lb./1,000 sq. ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Dwarf Fescue	10-10-10	500	12		Not closer than 2"
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 yrs. thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow
Note: Following soil test recommendations is preferred to fertilizer rates shown above.					

SITE PREPARATION

1. A subsoiler, plow or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Resoil shall be applied where needed to establish vegetation.

SEEDBED PREPARATION

1. Lime--Agricultural group limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 lb./1,000 sq. ft. or 2 tons/ac.
2. Fertilizer--Fertilizer shall be applied as recommended by a soil test. In lieu of a soil test, fertilizer shall be applied at a rate of 12 lb./1,000 sq. ft. or 500 lb./ac. of 10-10-10- or 12-12-12 analysis.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 in. On sloping land the soil shall be worked on the contour.

SEEDING DATES AND SOIL CONDITIONS

Seeding should be done March 1 to May 31 or August 1 to September 30. These seeding dates are ideal but, with the use of additional mulch and irrigation, seedings may be made any time throughout the growing season. Tillage/seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

MULCHING

1. Mulch material shall be applied immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization. Dormant seeding shall be mulched.
2. Materials

- Straw--If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq. ft. sections and spread two 45-lb. bales of straw in each section.
- Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
- Other--Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

- Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped by, generally, be left longer than 6 in.

MAINTENANCE

1. Permanent seeding shall not be considered established for at least 1 full yr. from the time of planting. Seeded areas shall be inspected for failure and vegetation conditions, it may be necessary to irrigate, fertilize, overseed, or reestablish plantings in order to provider permanent vegetation for adequate erosion control.
2. Maintenance fertilization rates shall be established by soil test recommendations or by using the rates shown in the following table.

28 CONCRETE WASHOUT BASIN

1. INSTALL ON RELATIVELY FLAT AREAS.
2. INSPECT WEEKLY AND AS DIRECTED IN THE STORMWATER POLLUTION PREVENTION PLAN, REPAIR/REPLACE AS NEEDED
3. REMOVE COLLECTED CONCRETE WHEN THE APPEARS 1/3 FULL
4. DISPOSE OF INORGANIC MATERIAL PROPERLY.

TEMPORARY SEEDING 1

Temporary seeding provides erosion control on areas in between construction operations. Grasses which are quick growing are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction-site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

CONDITIONS WHERE PRACTICE APPLIES

Temporary seeding should be applied on exposed soil where additional work (grading,etc.) is not scheduled for more than 14 days. Permanent seeding should be applied if the areas will be idle for more than a year.

PLANNING CONSIDERATIONS

This practice has the potential to drastically reduce the amount of sediment eroded from a construction-site. Control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction-sites, its liberal use is highly recommended.

Temporary Seeding Species Selection			
Seeding Dates	Species	Lb./1,000 ft.^{2}	Per Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	4 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
August 16 to November 1	Rye Tall Fescue Annual Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Wheat Tall Fescue Annual Ryegrass	3 1 1	2 bushel 40 lb. 40 lb.
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 lb. 40 lb. 40 lb.
November 1 to Spring Seeding	Use mulch only, sodding practices or dormant seeding.		
Note: Other approved seed species may be substituted.			

1. Structural erosion- and sediment-control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction-site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 14 days or more. These idle areas should be seeded as soon as possible after grading or shall be seeded within 7 days. Several applications of temporary seeing are necessary on typical construction projects.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. However, temporary seeding shall not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments--Applications of temporary vegetation shall establish adequate stands of vegetation which may require the use of soil amendments. Soil tests should be taken on the site to predict the need for lime and fertilizer.
5. Seeding Method--Seed shall be applied uniformly with a cyclone seeder, drill cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

MULCHING TEMPORARY SEEDING

1. Applications of temporary seeding shall include mulch which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates and with favorable soil conditions and on very flat areas may not need mulch to achieve adequate stabilization.

2. Materials:

- Straw--If straw is used, it shall be unrotted small-grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
- Hydroseeders--If wood cellulose fiber is used, it shall be used at 2,000 lb/ac. or 46 lb./1,000 sq. ft.
- Other--Other acceptance mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 tons/ac.

3. Straw mulch shall be anchored immediately to minimize loss by wind or water. Anchoring Methods:

- Mechanical--A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 in.
- Mulch Nettings--Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentration runoff and on critical slopes.
- Asphalt Emulsion--Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
- Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
- Wood-Cellulose Fiber--Wood-cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal.

DORMANT SEEDINGS.

1. Seeding shall not be planted from October 1 through November 20. During this period the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for "Dormant Seeding":

- From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
- From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
- Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.
- Mulch Nettings--Nettings shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Asphalt Emulsion--Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gal./ac.
- Synthetic Binders--Synthetic binders such as Acrylic DLR (Agri-Tac), DAC-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer.
- Wood Cellulose Fiber--Wood cellulose fiber binder shall be applied at a net dry weight of 750 lb./ac. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

IRRIGATION

1. Permanent seeding shall include irrigation to establish vegetation during dry or hot weather or on adverse site conditions as needed for adequate moisture for seed germination and plant growth.
2. Excessive irrigation rates shall be avoided and irrigation monitored to prevent erosion and damage from runoff.

DITCH CHECK 7

Points A should be higher than point B

PROPER PLACEMENT OF A STRAW BALE BARRIER IN DRAINAGE WAY

Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

5 SILT FENCE

INSTALLATION

1. PUT UP BEFORE ANY OTHER WORK IS DONE.
2. INSTALL ON DOWNSLOPE SIDE(S) OF SITE WITH ENDS EXTENDED UP SIDESLOPES A SHORT DISTANCE.
3. PLACE PARALLEL TO THE CONTOUR OF THE LAND AND AT THE FLATTEST AREA AVAILABLE TO ALLOW WATER TO POND BEHIND FENCE.
4. STAKE TO BE A MINIMUM OF 32 INCHES LONG
5. MINIMUM HEIGHT SILT FENCE 16 INCHES ABOVE ORIGINAL GROUND SURFACE
6. LEAVE NO GAPS BETWEEN SECTIONS OF SILT FENCE INSPECT AND REPAIR ONCE A WEEK AND AFTER EVERY 1/2 INCH RAIN. REMOVE SEDIMENT IF DEPOSITS REACH HALF THE FENCE HEIGHT.
7. MAXIMUM DISTANCE FROM TOE OF THE SLOPE, LEAVING AT LEAST 5' DISTANCE.
8. STAKE ON DOWNHILL SIDE OF GEOTEXTILE WITH 8" OF CLOTH CLOTH BELOW THE GROUND SURFACE; EXCESS MATERIAL TO LAY ON THE BOTTOM OF 6" TRENCH
9. ODOT TYPE "C" GEOTEXTILE FABRIC OR EQUAL
10. MAINTAIN UNTIL A LAWN IS ESTABLISHED.

MATERIALS: FILTER FABRIC SHALL MEET THE REQUIREMENTS OF CMS 712.09, TYPE C. SUPPORT STAKES SHALL BE A MINIMUM OF 1.5"X1.5" [38X38], NOMINAL, AND SHALL BE HARDWOOD OF SOUND QUALITY. THE STAKES SHALL BE DRIVEN A MINIMUM OF 6" [150] BELOW THE BOTTOM OF THE FILTER FABRIC. THE MAXIMUM SPACING BETWEEN SUPPORT STAKES SHALL BE 10' [3 M].

CONSTRUCTION: THE BOTTOM OF THE FABRIC SHALL BE BURIED 6" [150] BELOW THE GROUND. THE ENDS OF ADJACENT SECTIONS OF FENCE SHALL BE OVERLAPPED WITH THE END STAKE OF EACH SECTION WRAPPED TOGETHER PRIOR TO INSTALLATION. THE GROUND ELEVATION OF THE FENCE SHALL BE HELD CONSTANT EXCEPT THAT THE END ELEVATIONS SHALL BE RAISED UPSLOPE TO PREVENT FLOW AROUND THE END OF THE FENCE. MAINTENANCE: THE FILTER FABRIC FENCE SHALL BE MAINTAINED TO BE FUNCTIONAL. THIS SHALL INCLUDE REMOVAL OF TRAPPED SEDIMENT AND REQUIRED CLEANING, REPAIR, AND REPLACEMENT OF THE FILTER FABRIC. THE MAINTENANCE OR REPLACEMENT COST WILL BE PAID FOR BY THE DEPARTMENT UNDER UNIT BID PRICES, AGREED UNIT PRICES, OR CMS 109.04.

PAYMENT: THE COST OF ALL MATERIALS, CONSTRUCTION AND REMOVAL SHALL BE PAID FOR UNDER ITEM 207 - TEMPORARY PERIMETER FILTER FABRIC FENCE OR TEMPORARY DITCH CHECK FILTER FABRIC FENCE, LINEAR FOOT [METER].

CONSTRUCTION OF A FILTER BARRIER

PLACEMENT AND CONSTRUCTION OF DITCH CHECK FILTER FABRIC FENCE

POINTS A SHOULD BE HIGHER THAN POINT B

INLET PROTECTION IN SWALES, DITCH LINES OR YARD INLETS 8

1. Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
2. The earth around the inlet shall be excavated completely to the depth at least 18in.
3. The wooden frame shall be constructed of 2-by-4-in. construction grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
5. Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
6. Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
7. A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a setting pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

25 DANDY BAG® INLET SEDIMENT FILTER

THE PATENTED DANDY BAG® IS DESIGNED FOR USE WITH FLAT GRATES (INCLUDING ROUND) AND MOUNTABLE CURBS TO DETAIN SEDIMENT-LADEN STORM WATER. THE SUSPENDED SOLIDS ARE ALLOWED TO SETTLE OUT OF THE SLOWED FLOW PRIOR TO ENTERING THE DANDY BAG.®

INSTALLATION

1. STAND THE GRATE ON END
2. PLACE THE DANDY BAG® OVER THE GRATE
3. ROLL THE GRATE OVER SO THAT THE OPEN END IS UP
4. PULL UP THE SLACK
5. TUCK THE FLAP IN
6. PRESS THE VELCRO STRIPS TOGETHER
7. BE SURE THAT THE END OF THE GRATE IS COMPLETELY COVERED BY THE FLAP OR THE DANDY BAG® WILL NOT WORK PROPERLY
8. HOLDING THE HANDLES, CAREFULLY PLACE THE DANDY BAG® WITH THE GRATE INSERTED INTO THE CATCH BASIN FRAME

MAINTENANCE

TO INSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OR STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR. REMOVE FINE MATERIAL FROM INSIDE DANDY BAG® AS NEEDED. DISPOSE OF DANDY BAG® NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

INLET INSPECTION

TO INSPECT INLET, REMOVE DANDY BAG® WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE DANDY BAG® BACK INTO GRATE FRAME.

PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE DANDY BAG® MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE. THE DANDY BAG® IS NOT INTENDED FOR ANY OTHER USE AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

Erosion Prevention and Sediment Control Site Inspection Form

Introduction: By using some simple Best Management Practices (BMP's) developers and contractors can do their share to protect the City of Oxford's water resources from the harmful effects of sediment. The topography of the site and the extent of the construction activities will determine which of these practices are applicable to any given site, but the BMP's listed here are applicable to most construction sites. For details on the installation and maintenance of these BMP's, please refer to the approved plans and or the Rainwater **and Land Development, Ohio's Standards for Storm Water Management, Land** *Development and Urban Stream Protection (ODNR, 1996).*

Temporary Stabilization is the most effective BMP. All disturbed areas that will lie dormant for 14 days or more must be stabilized within 7 days of the date the area becomes inactive. The goal of temporary stabilization is to provide cover quickly. Areas within 50 feet of a stream must be stabilized within 2 days of reaching final grade. This is accomplished by seeding with fast-growing grasses, then covering with straw mulch. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. To minimize your costs of temporary stabilization, leave natural cover in place for as long as possible by only disturbing areas worked within the next 14 days.

Construction Entrances are installed to minimize off-site tracking of sediments. A roughstone access drive underlain with woven geotextile shall be installed at every point where vehicles enter or exit the site. Every individual lot should also have its own drive once construction on the lot begins. Maintenance is performed by top dressing with stone and/or street sweeping.

Sediment Basins/Traps are the sediment control of choice for areas, which exceed the design capacity of silt fence (see page 119 of the Rainwater manual) or to control concentrated flows or runoff. There are two types: sediment basins and sediment traps. A trap is appropriate where the contributing drainage area is 10 acres or less. The outlet is an earthen embankment with a simple stone spillway underlain with woven geotextile. A sediment basin is appropriate for drainage areas larger than 10 acres. The outlet is an engineered riser pipe. Often a permanent storm water management pond, such as a retention or detention basin, can be retrofitted to act as a sediment basin during construction. All sediment ponds, regardless of whether they are a trap or a basin, or whether they will become a permanent storm water pond, must provide a minimum storage of 67 cubic yards per acre of total contributing drainage area. Sediment ponds must be installed prior to mass clearing and grading. Maintenance must be performed once the basin loses 40% of capacity, and 30% for storm water basins retrofitted as sediment basins.

Silt Fence or Mulch Berms are typically used at the perimeter of a disturbed area. They are only for small drainage areas on relatively flat slopes or around small soil storage piles; not suitable where runoff is concentrated in a ditch, pipes or though streams. For large drainage areas where flow is concentrated, collect runoff in diversion berms or channels and pass it through a sediment pond prior to discharging it from the site. Combination barriers constructed of silt fence supported by welded wire fencing, mulch berms supported by rock check dams, or silt fence embedded within rock check dams may be effective within small channels. As with all sediment controls, silt fence or mulch berms must be capable of ponding runoff so that sediment can settle out of suspension. These must be installed within 7 days of first grubbing the area it controls. Whenever practical they should be installed before clearing or grubbing the area it controls.

Inlet Protection must be installed on all yard drains and curb drains when these inlets do not drain to a sediment trap or basin. Even if there is a sediment trap or basin, inlet protection is still recommended, as it will reduce the amount of sediment entering the basin and increase the overall sediment removal efficiency. Best used on roads with little or no traffic. If working properly, inlet protection will cause water to pond. If used on curb inlets, streets will flood temporarily during heavy storms, (overflow should be built-in.) Check with the authority that has jurisdiction over the roads before installing. They may prefer an alternate BMP. Care should be taken when placing inlet protection so that the runoff is not diverted to public roads or other areas where it could cause a hazard.

Permanent Stabilization must occur on areas at final grade within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. This is particularly true in drainage ditches or on steep slopes. These measures include the addition of topsoil, erosion control matting, rock riprap or retaining walls. See the Rainwater and Land Development Manual for seasonally adjusted seeding specifications. At all times of the year, the area should be temporarily stabilized until a permanent seeding can be applied.

Inspections shall be performed at least once a week and within 24 hours after a storm event greater than 1/2 inch of rainfall within a 24-hour duration using the enclosed Inspection Form. Inspections can be tracked using the enclosed Inspection Log. These shall be maintained throughout the development process and kept on file for three years per OEPA requirements. Erosion prevention and sediment control (EP&SC) measures shall be observed to ensure correct operation. Discharge locations shall be inspected to determine effectiveness of EP&SC measures in preventing significant impacts to the receiving waters. Where practices require repair or maintenance, it must be accomplished within three days of the inspection or as soon as site conditions allow. Repairs to sediment ponds shall be completed within 10 days or as soon as site conditions allow. Most of these BMP's are easy to implement with a little bit of planning and go a long way toward keeping your site clean and organized if they are properly installed and maintained. Please be sure to inform all parties on site how these BMPs affect their operations on the site, particularly those that will be working near a stream.

Inspection Log

The site shall be inspected before and after storm events with 0.5 inches or greater predicted or actual precipitation, and documented on the Construction Site Inspection Form. Incidents of noncompliance must be reported to the Engineer. A log of all inspections, as shown below, shall be kept current.

Date:	Inspector:	Corrective Actions Performed/Date:

21 CONSTRUCTION ENTRANCE

1. STONE SIZE--ODOT # 2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH--THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS).
3. THICKNESS -THE STONE LAYER SHALL BE AT LEAST 10 INCHES THICK.
4. WIDTH -THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE -A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:
6. TIMING--THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1x10-3 cm/sec.

7. CULVERT -A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR -A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
9. MAINTENANCE -TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
10. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
11. REMOVAL--THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

Erosion Prevention and Sediment Control Site Inspection Form

Inspector: ______________________ Date: _____________

General:

Amount of rainfall since last inspection: _________inches

Overall site conditions: ____

Construction Entrances:

Is the entrance installed correctly according to the approved plan? YES NO N/A

(Check for mud in stones/street, runoff diverted from street, etc..)

Action Needed: ____

Sediment Basins/Traps:

Are all Basins installed correctly according to the approved plan? YES NO N/A

(Check for runoff directed to basin, down slope areas stabilized, riser pipe wrapped with wire fence/filter fabric, emergency overflow, accumulated sediment more than 40% of volume, etc..)

Action Needed: ____

Silt Fence/Mulch Berms:

Are all Silt Fence/Mulch Berm (SF/MB) installed correctly according to the approved plan? YES NO N/A (Check for fabric trenched in, follow contour, turned upslope at ends, silt accumulated, broken stakes, tight fabric, installed in all areas where sediment could leave the site)

Action Needed: ____

Inlet Protection:

Are all Inlet Protections installed correctly according to the approved plan? YES NO N/A

Check for runoff ponding, in good shape, silt accumulated, etc..)

Action Needed: ____

Temporary Stabilization:

Are all disturbed areas that will lie dormant for 14 days or more stabilized with seed/straw or mulch? (stockpiles, hillsides, etc..) YES NO N/A

Are all areas stabilized still in good condition and not eroding? YES NO N/A

Permanent Stabilization:

Have areas that achieved final grade within the last 7 days been stabilized? YES NO N/A

Do all storm water outflow areas have riprap or concrete to prevent scouring? YES NO N/A

Stream Crossing:

Are the Stream Crossings installed correctly according to the approved plan? YES NO N/A

(Check for stabilized edges, runoff diverted from stream, mud over stones, end of useful life, etc..)

Action Needed: ____

26 BEAVER DAM

Installation and Maintenance Guidelines

INSTALLATION: THE EMPTY BEAVER DAM SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW ON POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME (STREET SIDE FIRST), THEN LOWER BACK EDGE WITH DAM INTO PLACE. THE BEAVER DAM SHOULD BE PARTIALLY BLOCKING THE CURB HOOD WHEN INSTALLED PROPERLY.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE BEAVER DAM AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS; REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

CONSTRUCTION SEQUENCE & EROSION CONTROL NOTES

1. CLEAR AND GRUB AREAS NECESSARY FOR THE INSTALLATION OF EROSION AND SEDIMENT PERIMETER CONTROL MEASURES.
2. INSTALL CONSTRUCTION ENTRANCE.
3. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
4. GRADING AND STRIPPING OF THE REMAINING AREAS OF THE DEVELOPMENT SITE OR PROJECT AREA.
5. INSTALL STORMWATER MANAGEMENT SYSTEMS.
6. TEMPORARY VEGETATIVE STABILIZATION OF EROSION AND SEDIMENT CONTROL MEASURES.
7. GRADING OF ROADS, STREETS, OR PARKING AREAS, ETC.
8. INSTALLATION OF ALL UTILITIES.
9. SITE CONSTRUCTION.
10. FINAL GRADING, STABILIZATION, AND LANDSCAPING.
11. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES.
12. THE CONTRACTOR MUST INSPECT ALL EROSION AND SEDIMENT CONTROLS ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL OF ½ INCH OR GREATER.
13. THE CONTRACTOR MUST CONDUCT NECESSARY REPAIRS WITHIN 72 HOURS.
14. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO THE DISTURBED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
15. AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.

Item	Revision Description	Date	Drawn	Chk.

NEW MAINTENANCE & BUS GARAGE
TALAWANDA CITY SCHOOL DISTRICT
5301 UNIVERSITY PARK BLVD
CONGRESS LANDS WEST OF THE MIAMI RIVER
SECTION 35, TOWN 5, RANGE 1
CITY OF OXFORD
BUTLER COUNTY, OHIO

EROSION CONTROL NOTES & DETAILS

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