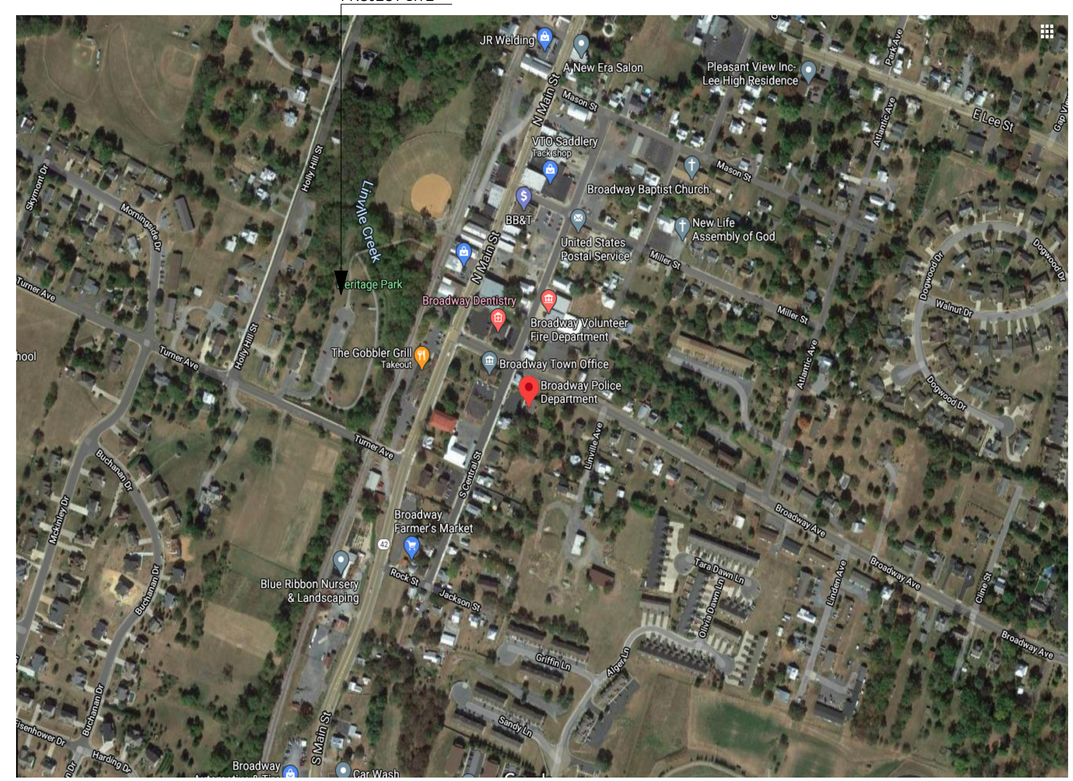
BROADWAY PARK RESTROOMS

HERITAGE PARK, BROADWAY, VIRGINIA 22815

PROJECT SITE



VICINITY MAP

PROJECT TEAM	
OWNER	TOWN OF BROADWAY 116 BROADWAY AVENUE BROADWAY, VA 22815 (540) 896-5152 CONTACT: KYLE O'BRIAN
ARCHITECT:	BLUE RIDGE ARCHITECTS dba BLUELINE 126 W. BRUCE ST, SUITE 102 HARRISONBURG, VA 22801 (540) 421-4871 CONTACT: ANNA CAMPBELL

PROJECT BUILDING CODES

THIS PROJECT IS DESIGNED AND IS TO BE CONSTRUCTED IN CONFORMANCE WITH THE FOLLOWING CODES:

BUILDING CODE

2018 VIRGINIA EXISTING BUILDING CODE

PLUMBING CODE

2018 INTERNATIONAL PLUMBING CODE

MECHANICAL CODE

2018 INTERNATIONAL MECHANICAL CODE.

ELECTRICAL CODE

2017 NATIONAL ELECTRICAL CODE

FIRE PREVENTION CODE:

2018 INTERNATIONAL FIRE PREVENTION CODE.

CODE COMPLIANCE

CODE REQUIREMENTS		REFERENCES
OCCUPANCY TYPE	**U**	**VCC 312.1**
CONSTRUCTION TYPE	**IIIB**	**VCC TABLE 601**
FLOOR AREA:	**874 SQ. FT.**	
SPRINKLER SYSTEM	**NOT REQUIRED**	**VCC 903.2**
FIRE ALARM	**NOT REQUIRED**	**VCC 907.2.2**
ACCESS PROVIDED FOR THE DISABLED	**YES**	**1102.1**

DRAWING INDEX

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SN1 STRUCTURAL NOTES 1
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BROADWAY PARK RESTROOMS
TURNER AVENUE
BROADWAY, VA 22815

COMMONWEALTH OF VIRGINIA
Anna Sarnowska-Campbell
Lic. No. 0401014655
12/12/2022
ARCHITECT

PROJ NO: 01-22-039

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T1

TITLE SHEET

12/15/2022 1:09 PM

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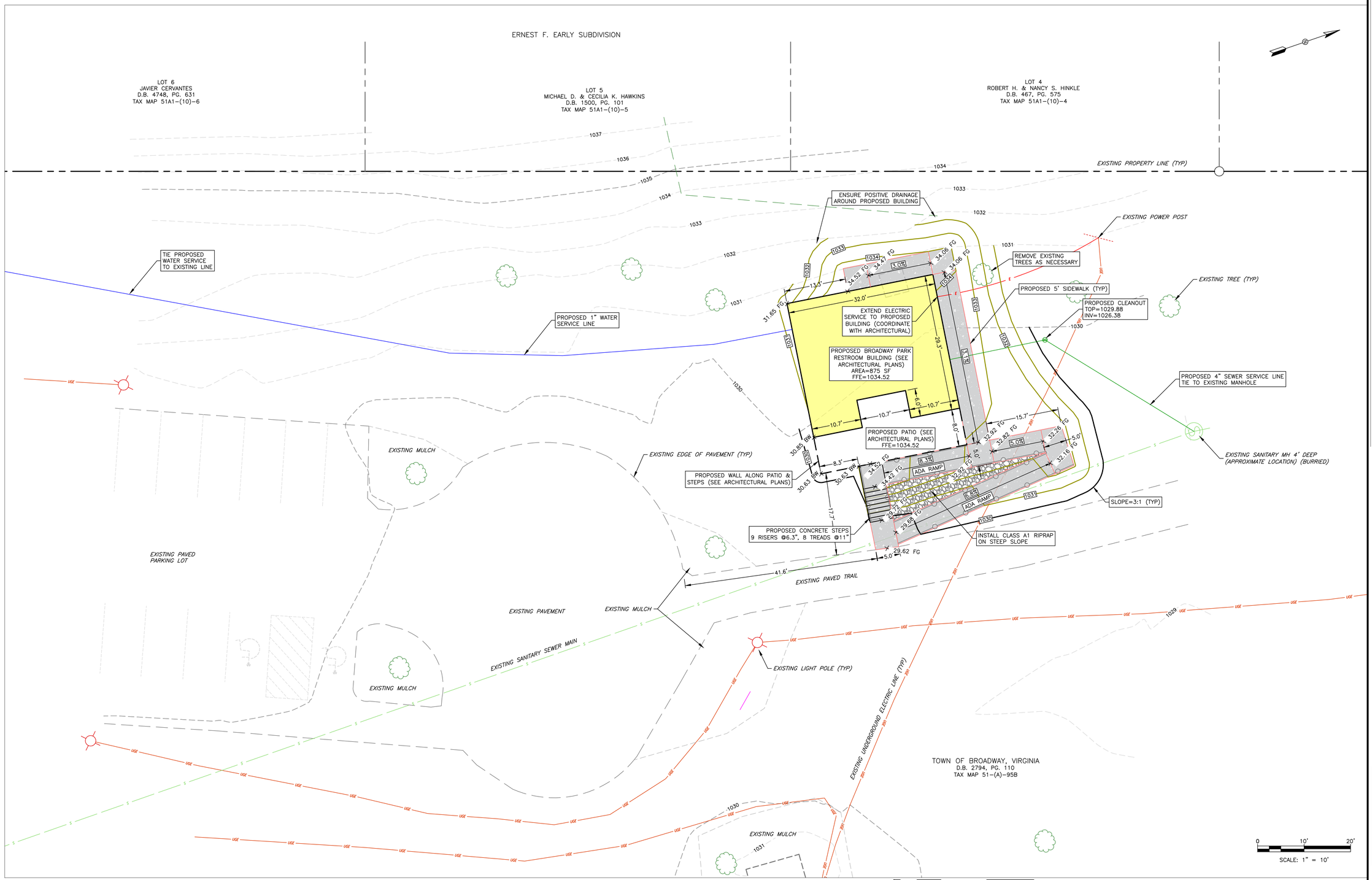

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COMMONWEALTH OF VIRGINIA
GUILLERMO L. COLMAN
Lic. No.045776
12/12/22
PROFESSIONAL ENGINEER

PROJ NO: 01-22-039

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C1

Site Design

12/12/2022 10:36 AM

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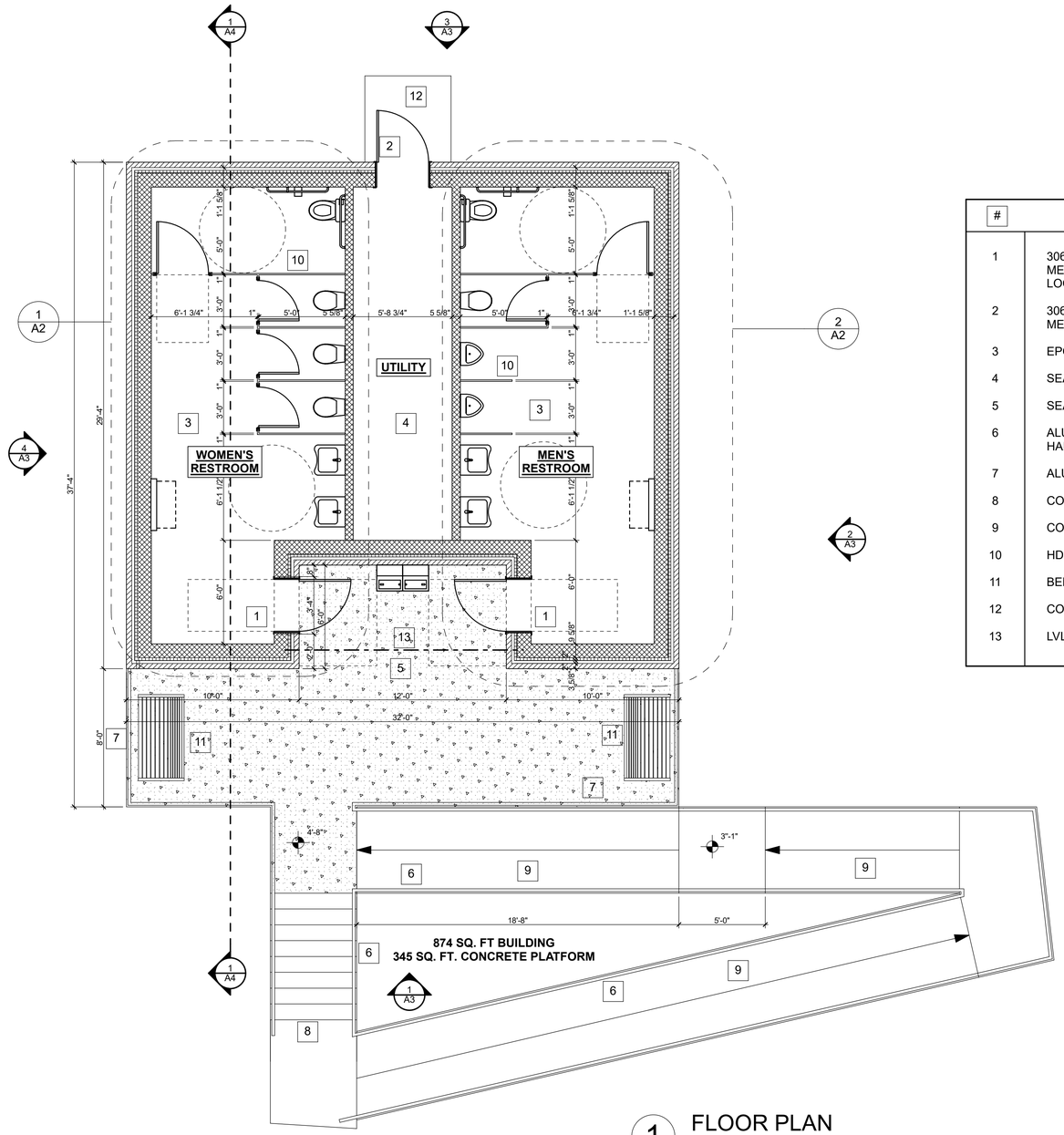

1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

#	FLOOR PLAN KEYNOTES:
1	3068 INSULATED STEEL DOOR IN INSULATED PAINTED HOLLOW METAL FRAME WITH PUSH-PULL HARDWARE. PROVIDE ENTRY LOCKSET AND CMU HEADER
2	3068 INSULATED STEEL DOOR IN INSULATED PAINTED HOLLOW METAL FRAME WITH STORAGE LOCKSET AND CMU HEADER
3	EPOXY FLOORING ON CONCRETE SLAB (SLOPE TO DRAIN)
4	SEALED CONCRETE SLAB (FLOAT FINISH)
5	SEALED CONCRETE SLAB (LIGHT BROOM FINISH)
6	ALUMINUM GUARDRAIL (@ 42" AFF) AND HANDRAIL (@ 36" AFF). HANDRAIL TO EXTEND 1' BEYOND TOP AND BOTTOM STEP
7	ALUMINUM GUARDRAIL (@ 42" AFF)
8	CONCRETE STEPS (7" MAX RISWER, 11" MINIMUM TREAD)
9	CONCRETE RAMP (1:12 MAX SLOPE)- SEE CIVIL DRAWINGS
10	HDPA (SOLID PLASTIC) RESTROOM PARTITIONS (TYPICAL)
11	BENCH BY OWNER
12	CONCRETE STOOP
13	LVL BEAM WRAPPED IN ALUMINUM (SEE STRUCTURAL)

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TURNER AVENUE
BROADWAY, VA 22815

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12/12/2022
ARCHITECT

PROJ NO: 01-22-039

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A1

FLOOR PLAN

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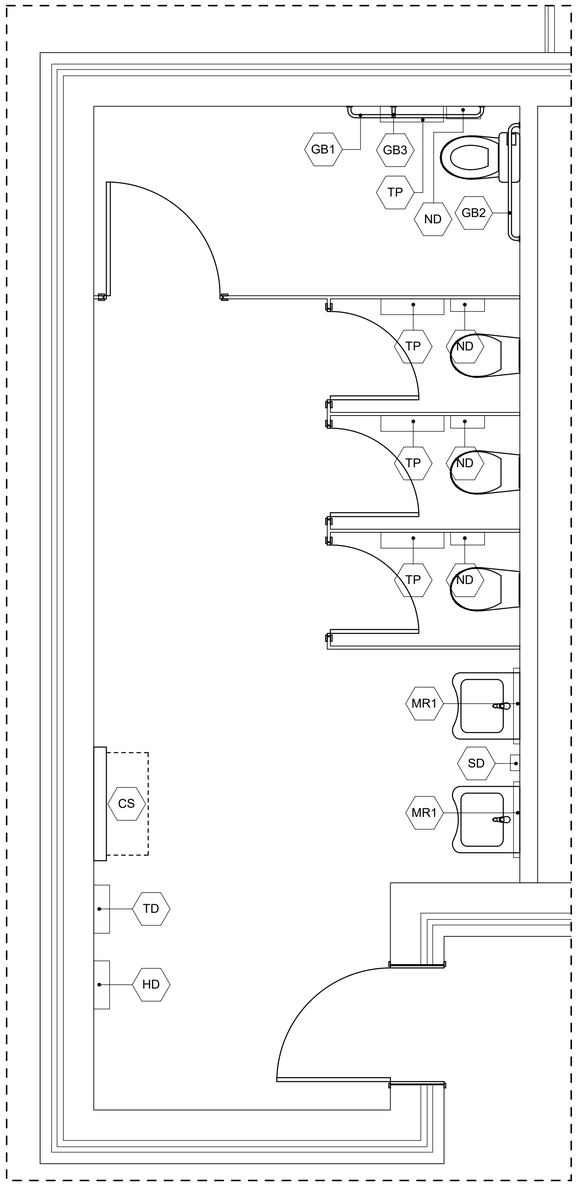
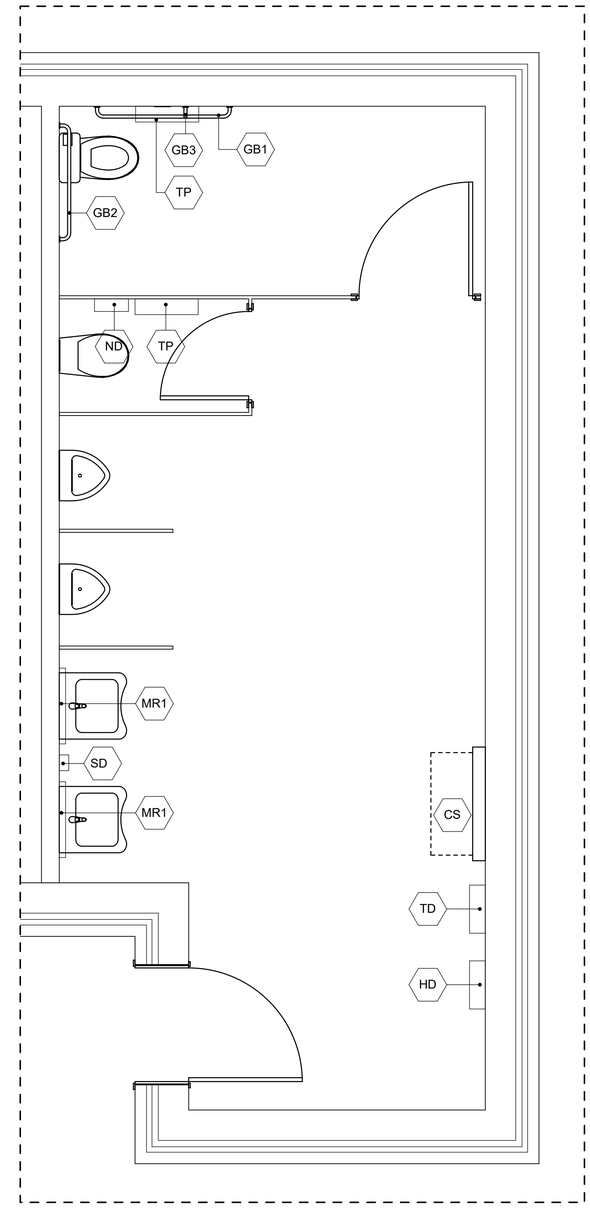


1 ENLARGED WOMEN'S RESTROOM PLAN
SCALE: 1/2" = 1'-0"

TOILET ACCESSORY SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	MODEL NUMBER
GB1	42" GRAB BAR	BRADLEY	812-42
GB2	36" GRAB BAR	BRADLEY	812-36
GB3	18" GRAB BAR	BRADLEY	812-18
MR1	24"x36" MIRROR	BRADLEY	780-2436
TD	SURFACE MOUNTED COMBINATION TOWEL DISPENSER / WASTE RECEPTACLE	BRADLEY	2A05-11
SD	SOAP DISPENSER	BRADLEY	6562-73
TP	TOILET TISSUE DISPENSER	BRADLEY	5425
CS	BABY CHANGING STATION	BRADLEY	962-11
ND	NAPKIN DISPOSAL	BRADLEY	4722-15
HD	HAND DRYER	XCELERATOR	XL-W
RP	RESTROOM PARTITIONS	SCRANTON	HDPE

MODELS ABOVE ARE BASIS OF DESIGN. EQUAL SUBSTITUTIONS ARE PERMITTED



2 ENLARGED MEN'S RESTROOM PLAN
SCALE: 1/2" = 1'-0"

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A2
ENLARGED RESTROOM PLANS
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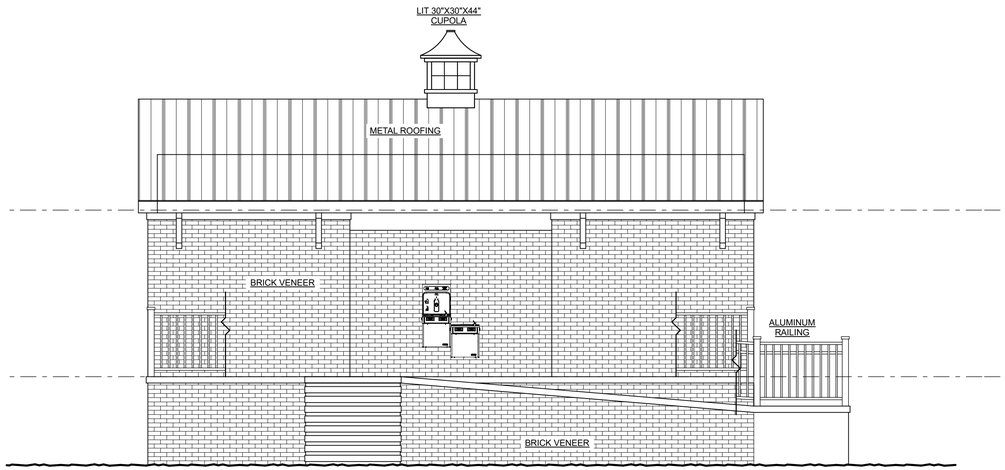
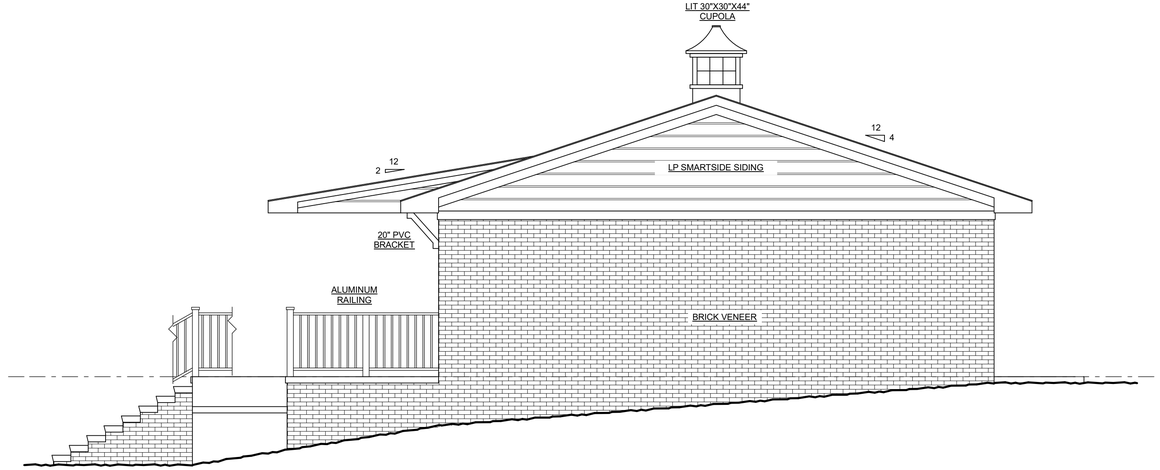
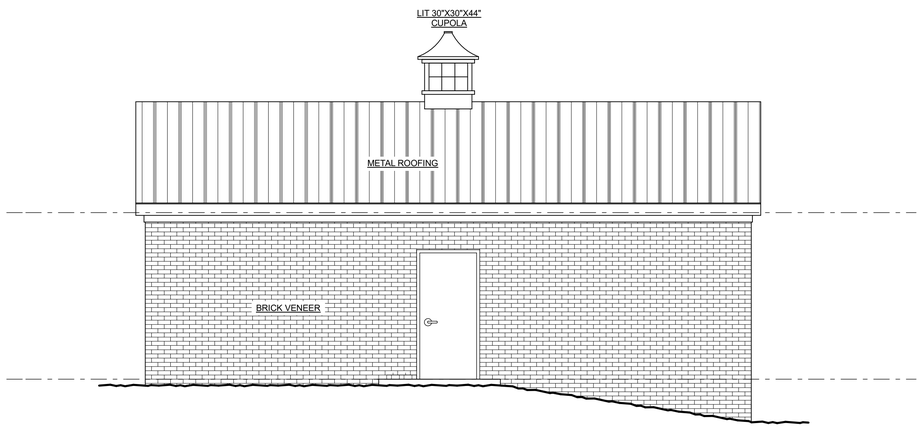


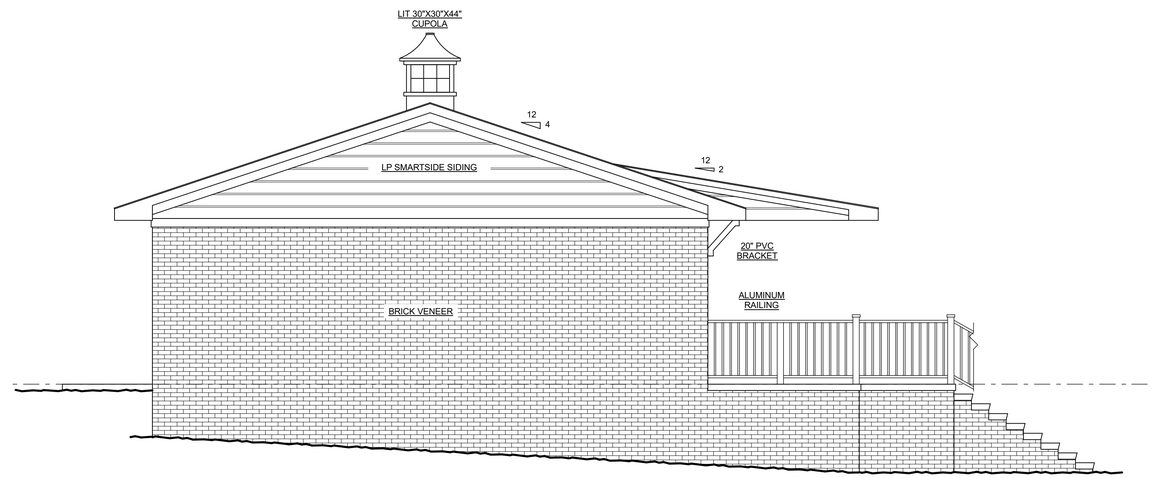
1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"



2 RIGHT ELEVATION
SCALE: 1/4" = 1'-0"



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



4 LEFT ELEVATION
SCALE: 1/4" = 1'-0"

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12/12/2022
ARCHITECT

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A3

ELEVATIONS

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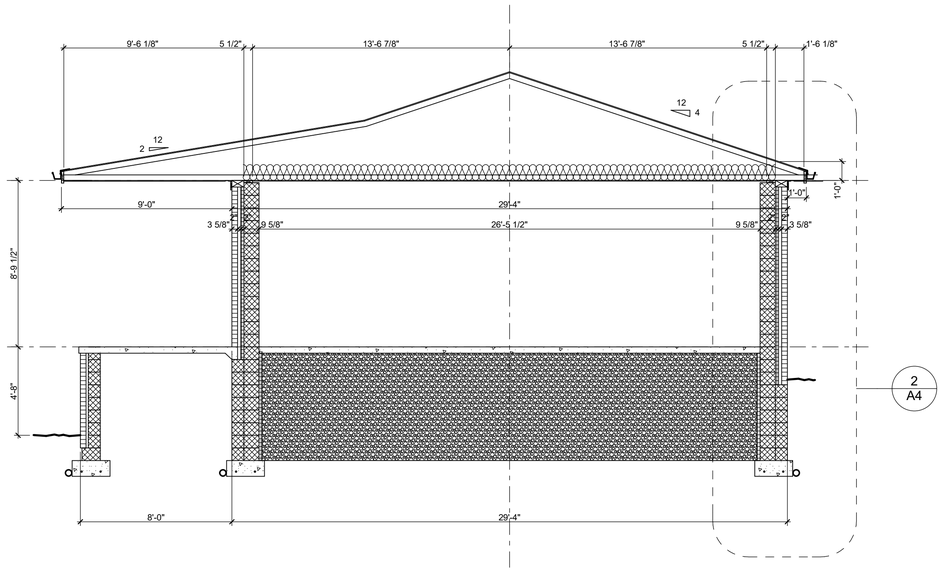
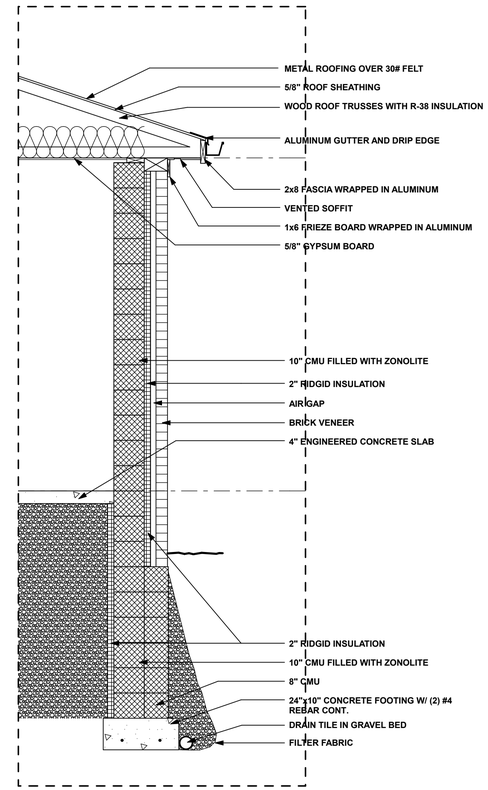


1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



2 TYPICAL WALL SECTION
SCALE: 1/2" = 1'-0"

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A4

SECTIONS AND NOTES

12/15/2022 11:45 AM

Structural Scope of Work

Provide structural design of foundations, stem walls, and wall systems to support engineered wood trusses as well as accompanying poured concrete slabs for a concrete masonry unity bathroom facility based on the architectural layout provided by Blueline.

Design Load and Parameter Table		
Governing Code:	VUSBC 2018	
Risk Category:	II	
Loads:		
LL	100 psf	Floor Load
Pg	42.5 psf	Ground Snow Load
V	115 mph	Ultimate Wind Speed
	C	Wind Exposure Category
	B	Seismic Design Category

General Notes

1. All structural work shall be coordinated with architectural and mechanical drawings and shall conform to the project specifications, including the 2018 IB, as modified by the Virginia Uniform Statewide Building Code (VUSBC 2018).
2. Contractor shall provide temporary shoring, bracing and sheeting and make safe all floors, roofs, walls and adjacent property as project conditions require. Shoring and sheeting shall be designed by a registered professional engineer licenced in the project jurisdiction, hired by the contractor, who shall submit shop drawings and calculations for the owner's review.
4. The contract drawings and specifications are complimentary. These notes highlight rather than replace the specifications contained in the project manual. Where discrepancies exist the more stringent as determined by the Structural Engineer of Record (SER) shall govern.
5. The term "provide", where used in these drawings, is to be interpreted as a combination of both "furnish" and "install".
6. Use structural and architectural drawings in close coordination. Direct any dimensional discrepancy or omission to the architect for resolution prior to commencement of construction.
7. Coordinate configuration and location of equipment supports and openings with approved mechanical or other approved shop drawings.
8. Provide lateral support for the tops of masonry partitions. Refer to the details on the structural and architectural drawings. If details are not indicated, provide clip angles L4x3x1/4 at 4'-0" intervals along the tops of the partitions, each face. Anchor the clips to beams, joists, deck and slabs, or to steel struts connected to structural members above.
9. Where structural members pass through or above non-load-bearing partitions, provide clearances to permit the structure to deflect without loading the partitions. Where specific clearances are not indicated, provide not less than 1" around the members. Pack the clearance spaces with safing, mineral wool, fiberglass, or specific UL rated or listed assemblies indicated.
10. During the erection of the building, the contractor shall be responsible for the temporary bracing to withstand all loads to which the structure may be subjected, including lateral loads, stockpiles of material and equipment. Such bracing shall be left in place as long as required for safety and until all framing including roof deck is in place.
11. Where standards are referenced herein, it shall be assumed the edition is the current referenced standard by the governing jurisdiction.

Foundations

1. Design based on assumed soil bearing capacity of 2,000 psf.
2. Establish exterior footing elevations such that the bottoms of footings are not less than 24" below final finished grades. Geotechnical engineer may require additional depth if unsuitable soils are encountered.
3. Establish tops of footings on masonry coursing.
4. Provide construction site drainage to prevent surface runoff from entering footing excavations.
5. Consolidate granular fill below slabs on grade with vibrating compactors according to the directions of the geotechnical engineer, but not less than 95% of maximum density in accordance with ASTM D698 or D1557.
6. The contractor shall protect the footing and slabs from damage from frost heave during construction until the final design structure is complete.
7. Backfill against walls spanning vertically between floors shall not be placed until both floors are in place and concrete has reached 75% of its 28-day strength.
8. At non-retaining walls below grade, backfill against both sides of wall simultaneously so that grade difference is no more than 1'-0" at any time.

03300 Cast in Place Concrete

03300.1 General

1.1 All concrete work shall conform to the ACI following governing standards.
- a. American Concrete Institute (ACI) "Code Requirements for Structural Concrete" (ACI 318), latest edition per governing building code.
- b. ACI "Manual of Concrete Practice", latest edition per governing building code.
- c. Concrete Steel Reinforcing Institute (CRSI) "Manual of Standards Practice", latest edition per governing building code.

1.2
- a. Shop drawings shall be submitted to the structural engineer for review and approval. No concrete work shall commence without approved shop drawings.
- b. Concrete Mix Designs - Concrete mix designs shall be prepared in accordance with the most recent edition of ACI 318.

03300.2 Products

2.1 Refer to Concrete Manual of Practice for allowable concrete materials including cement, aggregate, water and admixtures.

2.2 Reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60 or A775 epoxy coated when called out on plan. Reinforcing steel shall be detailed according to the ACI "Details and Detailing of Reinforcement", (ACI 315), latest edition per governing building code.

2.3 Welded wire fabric (WWF) shall conform to ASTM A1064, with a minimum yield strength of 65,000 PSI.

2.4 Steel fibers shall be deformed, type 1 cold drawn wire in accordance with ASTM A820. Fibers shall be a minimum of 1" and maximum of 2-1/2" long. Fibers shall be added to concrete in accordance with ASTM C1116.

2.5 All grout shall be non-shrink with a minimum compressive strength of 5,000 PSI.

03300.3 Execution

3.1 Provide clearance from face of concrete to reinforcement as follows unless noted otherwise:
- a. Slabs: 3/4"
- b. Beams and columns: 1-1/2"
- c. Footings: 3"
- d. Exterior walls: 2" for #6 or larger, 1-1/2" for #5 or smaller

3.2 Clean and roughen to 1/4" amplitude all existing concrete surfaces to receive new concrete prior to placement.

3.3 Welded wire fabric reinforcement in composite construction shall have tension splices and be anchored at discontinuous edges.

3.4 Reinforcing dowels, waterstops and other embed items shall be installed and secured prior to concrete. No wet setting of anchors is permitted.

3.5 Coordinate size and location of all openings and pipe sleeves with all other disciplines drawings. Minimum concrete between sleeves shall be 6".

3.6 Aluminum shall not be placed, touching or embedded in concrete.

Location	f'c(psi)	W/CM Ratio	Air Content	Max Aggregate Size	Other Requirements
Footings	4000	0.5	2%	3/4"	
Foundation Walls	4000	0.5	6%	3/4"	
Slab on Grade	4000	0.5	6%	3/4"	

04220 Masonry Work

04220.1 General

1.1 Governing Standards:
- a. American Society for Testing and Materials
  1. ASTM C141/ C141M - Standard Specification for Hydrated Hydraulic Lime for Structural Purposes.
  2. ASTM C144 - Standard Specification - Aggregate for Masonry Mortar.
  3. ASTM C404 - Standard Specification for Aggregates for Masonry Grout.
  4. ASTM C476 - Standard Specification for Grout for Masonry.
  5. ASTM C1019 - Standard Specification for Method of Sampling and Testing Grout.
- b. National Concrete Masonry Association Specifications, latest edition.
- c. ACI 530 - Building Code Requirements for Masonry Structures, latest edition.

1.2 Submittals - Submit data on design mix including required enviromental conditions.

04220.2 Products

2.1 Concrete Block
- a. ASTM C90, Grade N1
- b. Block unit strength shall be 2000 psi minimum, unless otherwise noted on plan.
- c. All concrete block dimensions indicated on structural plans are nominal dimensions.

2.2 Clay Masonry
- a. Units shall be in accordance with ASTM C216 for facing brick, see arch for weathering and appearance requirements.
  1. In absence of Architectural specification, units shall be SW type FBS. Color to be selected by owner.
- b. Clay Masonry Unit strength shall be 1500psi, unless noted otherwise on plan.
- c. All clay masonry dimensions indicated on structural plans are nominal dimensions. See arch for dimensions not shown.

2.3 Mortar
- a. Mortar shall be ASTM C270, Type N Portland Cement Lime, by proportion.
  1. Repair mortar shall in addition be rapid set, example is Simpson FX-263 repair mortar.

2.4 Grout

Grout filling for cells shall be ASTM C476 with minimum compressive strength of 2500 psi but not less than the compressive strength of the masonry assembly, f'm. Where grout cells do not exceed 4" in diameter, fine grout shall be used.

2.5 Sealant
- a. Elastomeric sealants used for expansions should conform to ASTM C920 Class 50, Grade NS, Use M.
  1. Example is SIKA SIKASIL WS-295.

2.6 Ties
- a. Wall (unit) ties
  1. "Box ties" and "Z" ties shall be fabricated from cold-drawn steel wire conforming to ASTM A82 and wire shall be W1.7 or 9 gauge, unless otherwise noted.
     - i. When specified as stainless steel, ties shall conform to ASTM A580.
  2. Corrugated sheet steel ties conform to ASTM A1008 and sheet shall be 16 gauge, unless otherwise noted.
     - i. When specified as stainless steel, ties shall conform to ASTM A240.
- b. Helical ties
  1. Where helical ties are specified, ties shall be type 304 stainless steel.
     - i. Example is Simpson Heli-Tie.

2.7 Loose Steel Lintels
- a. Steel shall be constructed in accordance with steel notes
- b. Lintels shall be in accordance with table below:

Brick Veneer Steel Lintel Schedule	
Opening Width	**Lintel Shape**

04220.3 Execution

3.1 Typical masonry construction
- a. Unless otherwise noted on plans and/ or elevations, all masonry walls shall be reinforced with #4 @48" on center vertically. Grout all reinforced cells solid. Provide dowels to match vertical reinforcing at foundation.
- b. Install standard weight ladder joint reinforcement at 16" on center (spaced vertically).
- c. All concrete block below grade shall be filled solid with grout.
- d. Concrete block below beam or truss bearing points shall be filled solid for a minimum of two courses in depth and a minimum of 32" in width, unless otherwise noted.
- e. Provide a #4 bond beam at the top of all masonry walls.
- f. Where brick veneer is tied to CMU walls, provide rectangular brick ties spaced at 16" on center vertically and 32" on center horizontally. Reinforce ties with ladder type reinforcement assembly. Provide 1" cavity between brick and CMU.

3.2 Movement Joints
- a. Expansion Joints - Clay Masonry
  1. Vertical expansion - Spacing shall not exceed 25'-0" in wall without openings (20'-0" for walls with 2 or more openings).
     - i. A joint shall be within one-half typical expansion joint spacing from corners
     - ii. A joint shall be within 8" of either side of openings exceeding 6'-0"
     - iii. A joint shall be at changes in wall height
  2. Horizontal expansion - Shall be installed at all joints beneath a shelf relieving angle.
- b. Control Joints - CMU
  1. Vertical Joints - Spacing shall not exceed the lesser of 1.5 x wall height or 25'-0"
     - i. A joint shall be within one-half typical control joint spacing from corners
     - ii. A joint shall be within 16" of either side of openings exceeding 6'-0"
     - iii. A joint shall be at changes in wall height
- c. For CMU walls with brick veneer, expansion joint and control joints shall not be within 2'-0" from each other.

3.3 Masonry Crack Repair
- a. Crack repair with helical tie
  1. Chase bed joint 20" on either side of the crack to a depth of 1-1/4", clean all loose debris.
  2. Place repair mortar to fill approximately two-thirds the depth of the void.
  3. Embed helical tie at one-half the depth of the void.
  4. Trowel grout to full encapsulate the tie.
  5. Fill remaining void with repair mortar.
  6. Fill remaining vertical or horizontal cracks with repair mortar.

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Lic. No. 055116
12 DEC 22
PROFESSIONAL ENGINEER

ES PROJ NO: 0521-373

SN1
STRUCTURAL NOTES I
12/14/2022 8:27:14 AM

03250 Post Installed Anchors

03250.1 General

1.1 Submittals in Accordance with the Contract

a. Product specifications with recommended design values and physical characteristics for epoxy dowels, expansion and undercut anchors.

b. Samples: Representative length and diameters of each type anchor shown on the drawings.

c. ICC ES Evaluation Reports

d. Installer qualifications - training referenced herein shall be documented via submittal and shall be current within 5-years.

03250.2 Products

2.1 Unless otherwise indicated, post installed anchorage shall be adhesive type Hilti HIT-HY200a into concrete or stone base material or Hilti HIT-HY270 into brick masonry material.

2.2 Undercut type anchors are not allowed.

03250.3 Execution

3.1 Post installed anchorage shall be installed per manufacturer technical data to intact base material. Notify Engineer of Record prior to installation if base material conditions deviate from structural drawings or manufacturer technical data.

3.2 Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors.

a. Relocate in accordance with engineer's instructions

b. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling

c. Take precautions as necessary to avoid damaging prestressing tendons, electrical and telecommunications conduit, and gas lines.

3.3 Remove and replace misplaced or malfunctioning anchors. Fill empty anchor holes and patch failed anchor locations with high-strength non-shrink, nonmetallic grout. Anchors that fail to meet proof load or installation torque requirements shall be regarded as malfunctioning.

3.4 Adhesive anchors under sustained tension loads installed in any direction: shall be installed by certified installers in accordance with ACI 318, latest edition per governing building code.

3.5 Other adhesive anchors: shall be installed by individuals whom have been trained by a manufacture's representative for the type of anchor being installed.

3.6 Expansion and tread-cutting type anchors: shall be installed by individuals whom have been trained by a manufactures representative for the type of anchor being installed.

3.7 Unless otherwise notes on the plans embedment into base material shall be as follows:

Epoxy Anchors		Expansion and Thread-cutting Type Anchors	
Diameter	Min. Ebedment	Diameter	Min. Ebedment
1/2"	3-3/4"	1/4"	2"
5/8"	5"	3/8"	2-3/4"
3/4"	6-3/4"	1/2"	3"
1"	8"	5/8"	4"
		3/4"	5"
		1"	6-3/4"

06100 Rough Carpentry

06100.1 General

1.1 Framing lumber work shall conform to the following governing standards:

a. American Institute of Timber Construction, "Timber construction Manual" latest edition.

b. National Forest Products Association "National Design Specifications for Wood Construction", latest edition.

1.2 Shop drawings shall be submitted to the structural engineer for review and approval of manufactured floor and roof trusses.

06100.2 Products

2.1 Framing lumber shall have each piece grade stamped, shall be surfaced dry (except studs, which shall be kiln dried) and shall conform to the following species and grade:

a. Rafters and joists: Southern Yellow Pine #2

b. Beams, girders and headers: Southern Yellow Pine #2

c. Plates: Southern Yellow Pine #2

2.2 Timber lumber shall conform to the following species and grade, unless noted otherwise:

a. Post and timber: Southern Yellow Pine #2

b. Beams and stringers: Southern Yellow Pine #2

2.3 Preservative-treated wood shall conform to the following:

a. Provide treated southern yellow pine #2 lumber complying with ACQ-D (carbonate). Copper azole (CA-B) or sodium borate (SBX (dot) with NAS10/2)

b. ACZA treatment is not permitted.

c. Field treatment for cut or drilled treated wood shall be copper naphthenate. The concentration shall contain a minimum of 2% copper metal.

2.4 Engineered wood products shall conform to the following:

a. Micro-lam (LVL) or Parallam (PSL) beams: provide engineered beams, sizes as shown, as manufactured by Weyerhaeuser or approved equal.

b. Roof trusses: provide manufactured roof trusses, as shown on plan, to resist loads tabulated (including net uplift).

2.5 Wood structural panel sheathing shall conform to the following:

a. Provide structural I plywood sheathing with bond classifications appropriate to the use:

i. Exterior - permanent exposure

ii. Exposure I - construction exposure only

b. Roof sheathing:

i. Standard: nominal 5/8" T&G plywood (48/24 span rating), unless noted otherwise.

ii. Under slate or clay tile: nominal 3/4" thick T&G plywood (32/16 span rating), unless noted otherwise.

2.6 All wood framing fasteners and hangers shall conform to the following:

a. Nails

i. Fasteners shall match the hanger finish and material.

ii. See Typical Nailing Schedule for fastening of various typical connections.

b. Light gauge hangers:

i. Standard: required loads, finish and suggested hanger as indicated in the connection schedule.

ii. In contact with preservative treated wood: hanger shall meet or exceed G1885 (1.85 oz. of zinc per square foot) or shall be stainless steel.

06100.3 Execution

3.1 All wood framing including details for bridging, blocking, fire stopping, etc., shall conform to the latest edition of the "National Design Specification for Wood Construction" and its supplements and shall be installed in accordance with the NFPA "Manual for House Framing" or the governing local/ state building code.

3.2 All flush framed connections shall be made with approved galvanized steel joist or beam hangers, minimum 18 gauge, installed according to manufacturer's recommendations, unless noted otherwise.

3.3 No new or existing joists shall be cut or notched without approval.

3.4 All lumber in contact with concrete or masonry, or otherwise indicated on plan, shall be pressure treated. All lumber in permanent exposure to the exterior shall be pressure treated.

3.5 All sill plates shall be pressure treated and anchored to foundation walls with 1/2" diameter headed anchor bolts (ASTM F1554) 4'-0" on center and within 12" of all sill plates splices. (minimum 7" embedment)

3.6 Treated lumber and/ or plywood that is cut or drilled after treatment shall be field treated with copper naphthenate by repeating brushing, dipping, or soaking until the wood absorbs no more preservatives.

3.7 Use ply clips or other edge support as required for plywood sheathing.

3.8 Leave 1/16" space at all plywood panel end joints and 1/8" space at all panel edge joints.

3.9 Unless noted otherwise, roof sheathing shall fastened to framing with 8d common nails @6" on center at each sheet perimeter and 12" on center in field.

3.10 Install engineered wood products in accordance with manufacturer's standard recommendations and details.

3.11 Install rim boards at the perimeter of all floor platforms.

3.12 Double floor joists under all parallel partitions.

Nail Capacity		
Common Wire	**Lateral (lbs)**	**Pull Out (lbs)**
6d (0.113x2)	-	17
7d (0.113x2.25)	79	26
8d (0.113x2.5)	106	41
10d (0.148x3)	128	69
12d (0.148x3.25)	128	80
16d (0.169x3.5)	154	100

06192 Manufactured Wood Trusses

06192.1 General

1.1 Work Included

Manufacture, supply and erect wood trusses as shown on the drawings and as specified. Work to include anchorage, blocking, curbing, miscellaneous framing and bracing.

1.2 Design

a. Trusses shall be designed in accordance with National Design Specification for Wood Construction, AF&PA, and National Design Standard for Metal Plate Connected Wood Truss Construction, ANSI/TPI 1-1995, and the local code jurisdiction.

b. Manufacturer shall furnish truss design drawings bearing the seal and registration number of registered engineer licenced in the state where trusses are to be installed.

c. Truss drawings shall be approved by Architect and / or Engineer-of-Record prior to manufacture.

06192.2 Products

2.1 Materials

a. Lumber used shall be identified by grade mark of a lumber inspection bureau or agency approved by board of review of American Lumber Standards Committee, and shall be the size, species and grade in accordance with the truss design drawings.

b. Connector plates shall be manufactured by WTCA member plate supplier and shall meet or exceed ASTM A653/A653M requirements for structural steel.

2.2 Manufacturing

Trusses shall be manufactured as set forth in ANSI/TPI 1-1995 and the final approved truss design drawings.

06192.3 Handling and Installation

a. Trusses shall be handled during manufacturing, delivery and at jobsite so as not to be subjected to excessive lateral bending.

b. Erection shall be in accordance with Commentary and Recommendations for Handling, Installing and Bracing Metal Plate Connected Wood Trusses, HIB-91, TPI, or the procedures specified by the Architect and/ or Engineer-of-Record. Trusses shall be set and secured level and plumb, and in correct location.

c. Trusses shall be sufficiently braced during erection to prevent toppling or dominoing. Install all bracing before placing concentrated loads atop trusses.

d. Cutting and altering of trusses is not permitted.

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STRUCTURAL NOTES II

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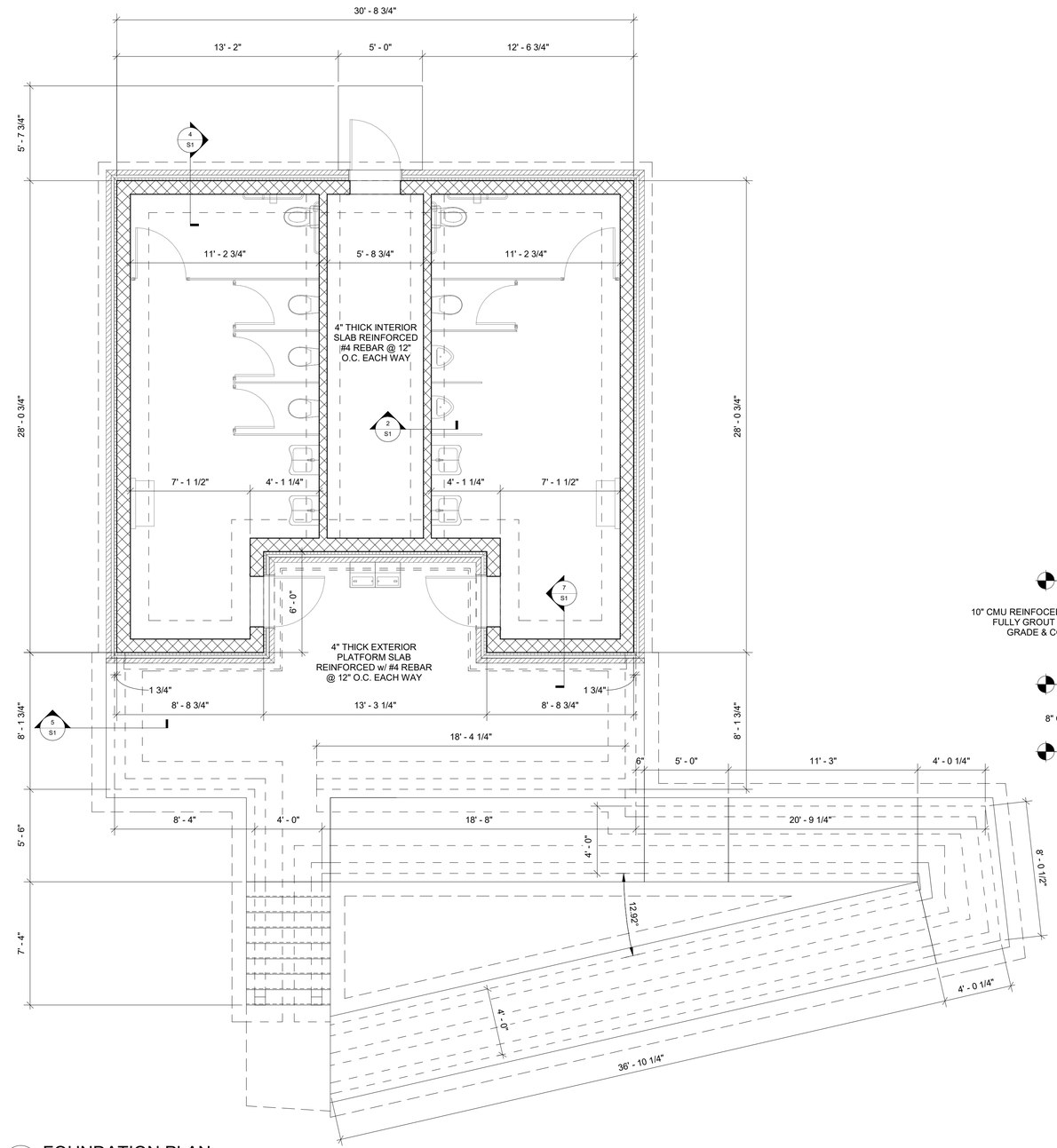
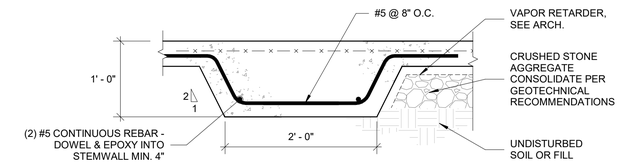
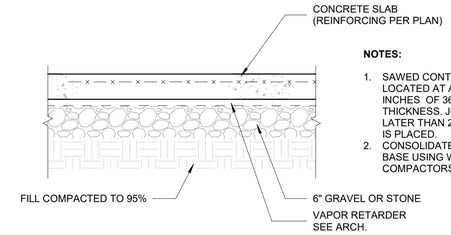


1 S1|S1 FOUNDATION PLAN
1/4" = 1'-0"



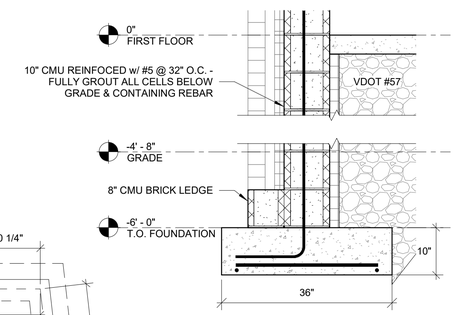
2 S1|S1 TYPICAL THICKENED SLAB
1" = 1'-0"



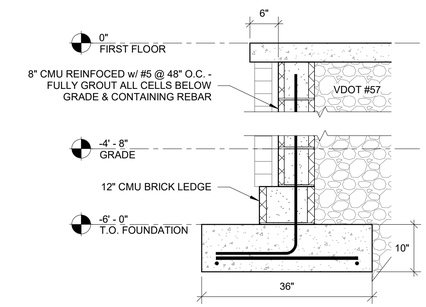
NOTES:

1. SAWED CONTRACTION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING IN INCHES OF 36 TIMES THE SLAB THICKNESS. JOINTS SHALL BE SAWED NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED.
2. CONSOLIDATE CRUSHED STONE SLAB BASE USING WALK-BEHIND PLATE COMPACTORS.

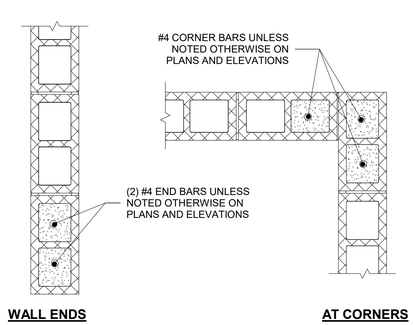
3 S1 TYPICAL SLAB ON FILL
1" = 1'-0"



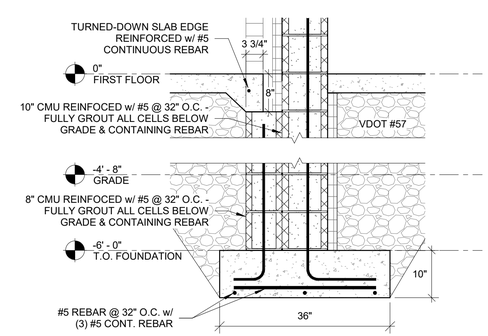
4 S1|S1 TYP. BUILDING STEMWALL
3/4" = 1'-0"



5 S1|S1 TYP. PLATFORM STEMWALL
3/4" = 1'-0"



6 S1 TYPICAL MASONRY WALL DETAILS
1" = 1'-0"



7 S1|S1 TYP. BUILDING STEMWALL @ PLATFORM
3/4" = 1'-0"

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S1
FOUNDATION PLAN

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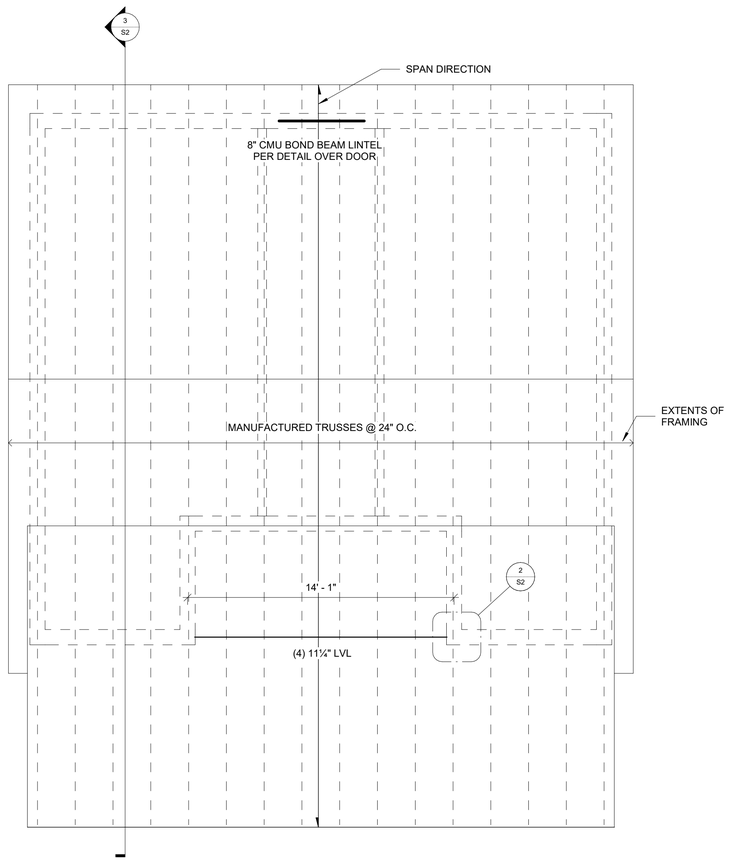
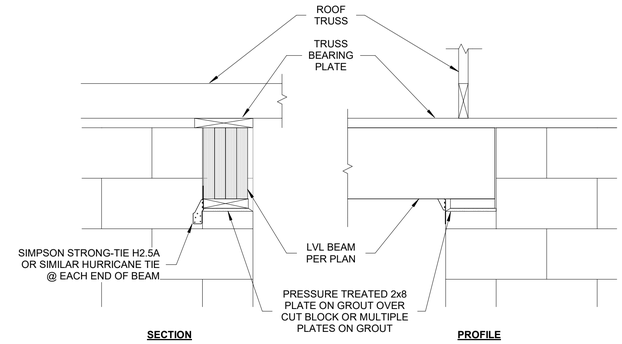
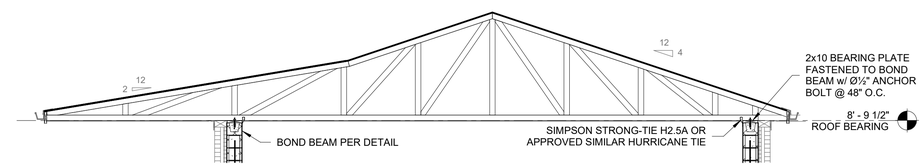


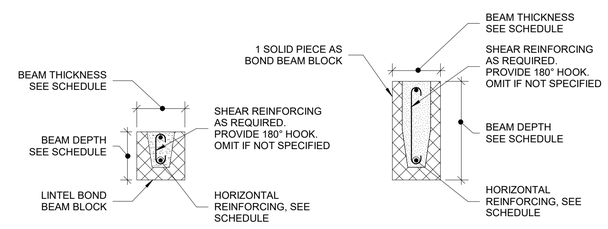
1 S2/S2 ROOF FRAMING PLAN
1/4" = 1'-0"



2 S2/S2 TYP. BEAM POCKET IN CMU
1" = 1'-0"



3 S2/S2 TYP. ROOF SECTION
1/4" = 1'-0"



CMU BOND BEAM LINTEL SCHEDULE				
LENGTH	BEAM THICKNESS	BEAM DEPTH	HORIZONTAL REINF.	SHEAR REINF.
0'-0" - 4'-0"	MATCH WALL	8" (1 COURSE HIGH)	(1) #5	NONE
4'-0" - 8'-0"	MATCH WALL	16" (1 COURSE HIGH)	(1) #5	NONE

NOTES:

1. ALL BOND BEAM LINTELS TO BE GROUTED SOLID FOR FULL LENGTH OF BEAM.
2. ALL CMU BOND BEAM LINTELS TO HAVE MIN. 6" BEARING ON EACH END.
3. ALL BOND BEAM LINTELS (SPANNING) WITH NO MASONRY ABOVE TO BE SINGLE COURSE WITH (1) #5 HORIZONTAL REINFORCING.
4. ALL OTHER (NON-SPANNING) BOND BEAM LINTELS TO BE SINGLE COURSE WITH (2) #4 HORIZONTAL REINFORCING.
5. VERTICAL PLACEMENT OF HORIZONTAL REINFORCEMENT IN ALL BOND BEAMS SHALL BE 3" FROM THE BOTTOM OF THE BEAM TO CENTER OF BAR, UNLESS NOTED OTHERWISE LINTEL REINFORCEMENT SHALL BE SUPPORTED BY WIRE CHAIRS.
6. HORIZONTAL PLACEMENT BETWEEN PARALLEL BARS SHALL NOT BE LESS THAN THE NOMINAL DIAMETER OF THE BARS OR 1".

4 S2 TYPICAL CMU LINTEL BOND BEAM
1" = 1'-0"

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S2
ROOF FRAMING PLAN
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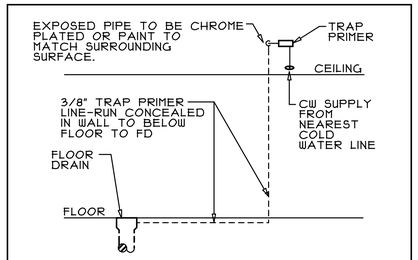
PLUMBING FIXTURE SCHEDULE

NO.	DESCRIPTION	W	V	CW	HW	MFR. MODEL FIXTURE	MFR. MODEL FITTINGS	MFR. MODEL ACCESS.	NTS
W1	ACCESSIBLE FLUSH VALVE WATER CLOS.	3	1.5	1	--	AMER. STD. 2257.101	SLOAN ECOS III-1.6/1.1-HW	SEAT: AMER. STD. 5901.100	1
W2	FLUSH VALVE TYPE WATER CLOSET	3	1.5	1	--	AMER. STD. 2257.101	SLOAN ECOS III-1.6/1.1-HW	SEAT: AMER. STD. 5901.100	
U1	ACCESSIBLE URINAL	2	1.5	3/4	--	AMER. STD. 590.001	SLOAN ROYAL ECOS 186 HW-1.0-OR-HW	CARRIER: WADE 400 SERIES	1,2
U2	URINAL	2	1.5	3/4	--	AMER. STD. 590.001	SLOAN ROYAL ECOS 186 HW-1.0-OR-HW	CARRIER: WADE 400 SERIES	2
L1	ACCESSIBLE WALL HUNG LAVATORY	1.5	1.5	1/2	1/2	AMER. STD. 0355.012	SLOAN SENSOR FAUCET SF-2300-PLG-BDM-CP-0.5GPM-MLM-IR-FCT		1,2,3
DF	ACCESSIBLE DRINKING FOUNTAIN	1.5	1.5	1/2	--	ELKAY LK4408BFORN			1,2
EWH	ELEC. WATER HEATER	--	--	3/4	3/4	EEMAX SPEX75T ML	240V, 1PH 7.5kW		
WH	WALL HYDRANT	--	--	3/4	--	WOODFORD B65			2
SA	WATER HAMMER ARRESTOR	--	--	X	--	WADE SHOKSTOPS			4
COTG	CLEANOUT TO GRADE	4	--	--	--	WADE 6000-Z-5			5
FD	FLOOR DRAIN	3	1.5	--	--	WADE 1103STD6-27		W/ TRAP PRIMER	

NOTES:

1. INSTALL FIXTURES IN ACCORDANCE WITH APPLICABLE STANDARDS.
2. PROVIDE PROPER ACCESSORIES FOR WALL THICKNESS & CONSTRUCTION.
3. PROVIDE PIPE INSULATION KIT. TRUEBRO MODEL 105W OR EQUAL.
4. SIZE PER MANUFACTURER'S RECOMMENDATIONS FOR NUMBER OF FIXTURES SERVED.
5. MOUNT IN 16" ROUND CONCRETE RING FLUSH W/ PAVEMENT OR GRADE.



FLOOR DRAIN TRAP PRIMER DIAGRAM

PLUMBING SPECIFICATIONS

1. GENERAL

1.1 DESCRIPTION OF WORK:

A. ALL FIXTURES, EQUIPMENT, ACCESSORIES, MATERIALS, AND LABOR REQUIRED TO PROVIDE COMPLETE, COORDINATED, AND FULLY FUNCTIONAL PLUMBING SYSTEMS GENERALLY AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
1. SANITARY SEWER
2. DOMESTIC WATER

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THE CIVIL, ARCHITECTURAL, STRUCTURAL, HVAC, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL APPLY TO AND BE CONSIDERED A PART OF THE PLUMBING WORK IN-SO-FAR AS THEY APPLY TO THE PLUMBING WORK AND ARE REQUIRED FOR COORDINATION.

1.3 JOB CONDITIONS:

A. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF THE WORK DESCRIBED AND INDICATED.

B. PROVIDE FITTINGS, OFFSETS, TRANSITIONS, AND ACCESSORIES REQUIRED TO MEET CONDITIONS OF THE PROJECT.

C. PROVIDE SERVICE ACCESS FOR EQUIPMENT, CONTROL COMPONENTS, VALVES, AND SPECIALTIES.

D. PROVIDE ACCESS PANELS FOR VALVES, ACCESS DOORS, ETC. CONCEALED BEHIND FINISHED SURFACES.

1.4 CONFORMANCE TO REGULATIONS:

A. WORK SHALL CONFORM WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, NFPA, AND LOCAL ORDINANCES.

1.5 QUALITY ASSURANCE:

A. COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NOTES AND DETAILS SHOWN HEREIN FOR INSTALLATION OF EQUIPMENT.

1.6 MATERIALS AND EQUIPMENT:

A. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE EQUIVALENT TO PRODUCTS SPECIFIED.

B. CONTRACTOR SHALL GUARANTEE EQUIVALENCE AND IS RESPONSIBLE FOR MODIFICATIONS REQUIRED AND COORDINATION WITH OTHER TRADES TO FIT SUBSTITUTED PRODUCT INTO THE PROJECT.

C. MATERIALS AND EQUIPMENT OF THE SAME TYPE AND USE SHALL BE FROM A SINGLE MANUFACTURER.

D. PROTECT STORED MATERIALS AND EQUIPMENT FROM WEATHER.

1.7 UTILITIES AND CONNECTIONS:

A. OWNER WILL PAY FOR ALL WATER AND SEWER UTILITY CONNECTION FEES.

B. COORDINATE CONNECTIONS WITH SITE UTILITY DRAWINGS. WORK TO LOCATIONS AND INVERTS INDICATED ON SITE DRAWINGS. PROVIDE TRANSITIONS IN SIZE AND MATERIAL AT POINT OF CONNECTION.

1.8 SUBMITTALS:

A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR FIXTURES AND EQUIPMENT SPECIFIED HEREIN AND ON THE DRAWINGS. SHOP DRAWINGS AND PRODUCT DATA SHALL BE IDENTIFIED PER INDICATIONS ON DRAWINGS, SHALL BE MARKED TO INDICATED SPECIFIC ITEM BE PROPOSED, AND SHALL BE ORGANIZED IN AN ORDERLY MANNER. SUBMIT SHOP DRAWINGS ELECTRONICALLY IN PDF FORMAT.

B. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT INSTALLED IN THIS PROJECT. INCLUDE COPIES OF SPECIFIC EQUIPMENT WARRANTIES IN MANUAL.

C. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH TWO COPIES OF AS-BUILT DOCUMENTATION. ALL CHANGES TO THE BIDDING DOCUMENTS SHALL BE NEATLY AND CLEARLY IDENTIFIED ON THE AS-BUILT DOCUMENTATION.

1.9 PROJECT CLOSEOUT:

A. REPLACE OR REPAIR DAMAGED EQUIPMENT AND CLEAN ALL EXPOSED SURFACES.

B. TOUCH-UP SHOP APPLIED FINISHES TO RESTORE DAMAGED OR SOILED AREAS.

C. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF EQUIPMENT UTILIZING OPERATION AND MAINTENANCE MANUAL.

2. PRODUCTS

2.1 PIPING SYSTEMS:

A. DOMESTIC WATER PIPING - DOMESTIC TYPE L COPPER W/ NO LEAD SOLDER JOINTS, CPVC OR PEX. UNDERSLAB WATER - TYPE K SOFT COPPER OR PEX W/ NO JOINTS.

B. WATER SERVICE - DUCTILE IRON.

C. SANITARY DRAINAGE - SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS, OR NO-HUB CAST IRON PIPING.

D. VENT PIPING - SCHEDULE 40 PVC W/ SOLVENT WELD FITTINGS, OR COPPER DWV WITH 50/50 SOLDER FITTINGS.

2.2 PLUMBING FIXTURES AND EQUIPMENT:

A. REFER TO FIXTURE SCHEDULE AND EQUIPMENT LIST ON DRAWINGS FOR MANUFACTURER'S AND MODEL NUMBERS.

3. EXECUTION

3.1 PIPING SYSTEMS

A. VERIFY INVERT ELEVATIONS PRIOR TO EXCAVATION.

B. BACKFILL BURIED PIPE IN TRENCHES WITH DIRT FREE OF ROCK, STONE OR DEBRIS.

C. VERIFY EXACT LOCATION OF EQUIPMENT AND FIXTURES PRIOR TO ROUGH-IN.

D. COORDINATE ROUTING OF WORK WITH OTHER TRADES AND INSTALL TO ALLOW MAXIMUM HEADROOM CLEARANCES, SERVICE ACCESS AND MAINTAIN PROPER PITCH OF SLOPING LINES.

E. INSULATE PIPING SYSTEMS AS FOLLOWS:
1. DOMESTIC WATER - 1/2" FIBERGLASS W/ ASJ UP TO 1.5"; 1" FIBERGLASS W/ ASJ OVER 1.5" PIPE SIZE
2. SEAL VAPOR BARRIERS. SECURE WITH ADHESIVE AND SEAL JOINTS WITH SEALANT.
3. PROVIDE GALVANIZED STEEL SADDLE AT HANGERS SURROUNDING INSULATED PIPE.
4. DO NOT COMPRESS INSULATION EXCEPT IN AREAS OF STRUCTURAL INTERFERENCE.
5. INSTALL PRE-FITTED PLASTIC ELBOWS OR APPLY CANVAS JACKET IN THREE LAYERS AT ELBOWS.
6. INSULATE FITTINGS, VALVES AND EQUIPMENT BODIES.

F. PROVIDE SLEEVES FOR PIPING PENETRATING WALLS. INSULATION SHALL BE CONTINUOUS THROUGH SLEEVES.

G. FIRESTOP PIPING PASSING THROUGH FIRE RATED WALLS OR CEILINGS.

H. PATCH FINISHED AREAS DISTURBED BY WORK TO MATCH SURROUNDING AREAS.

I. WELDING SHALL BE DONE BY CERTIFIED WELDERS FOR THE APPROPRIATE SYSTEM BEING WELDED.

J. MAKE CONNECTIONS OF DISSIMILAR METALLIC PIPING WITH DIELECTRIC UNIONS.

K. PROVIDE CHROME PLATED ESCUTCHEON FOR EXPOSED PIPING PENETRATING A FINISHED SURFACE.

L. PROVIDE SHUT OFF VALVES AT EQUIPMENT CONNECTIONS. PROVIDE STOPS FOR ALL PLUMBING EQUIPMENT AND FIXTURES.

M. HANGERS SUPPORTING COPPER PIPING SHALL BE COPPER PLATED OR PLASTIC COVERED. HANGERS SUPPORTING INSULATED PIPING SHALL BE SIZED TO SURROUND INSULATION AND STEEL SADDLE.

N. PROVIDE VACUUM BREAKERS AT WALL HYDRANTS.

O. TEST PIPING SYSTEMS AS FOLLOWS:
1. WATER PIPING - TEST AT PRESSURE NOT LESS THAN WORKING PRESSURE OF THE SYSTEM. MAINTAIN SUCH PRESSURE FOR MINIMUM OF 1 HOUR.
2. SANITARY, STORM AND VENT PIPING - W/ 10 FT. HEAD OF WATER, MAINTAINING SUCH PRESSURE FOR MINIMUM OF 1 HOUR.
3. TESTS SHALL SHOW NO SUBSTANTIAL LOSS IN PRESSURE.
4. PIPING RUN IN CONCEALED AREAS SHALL BE LEAK TESTED PRIOR TO BEING CONCEALED.

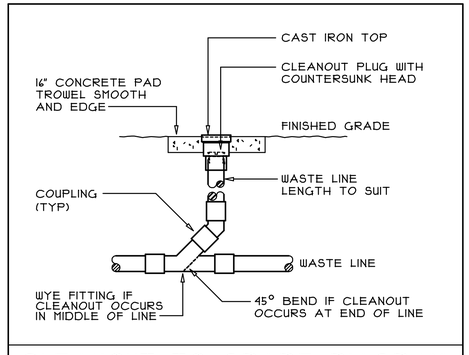
3.2 PLUMBING FIXTURES

A. PROVIDE CHROME PLATED STOPS FOR FIXTURES.

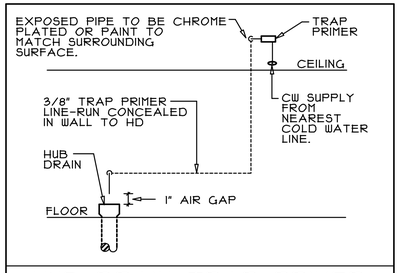
B. PROVIDE TAILPIECE AND TRAP WITH CLEANOUT FOR LAVATORIES.

C. CAULK BETWEEN FIXTURE AND FINISHED SURFACES WITH WHITE SILICONE CAULKING.

D. PROVIDE BOLT CAPS FOR WATER CLOSETS AND URINALS.



CLEANOUT TO GRADE DIAGRAM



HUB DRAIN TRAP PRIMER DIAGRAM

LEGEND

- SOIL OR WASTE PIPING
- W — WATER SERVICE PIPING
- VENT PIPING
- COLD WATER PIPING
- HOT WATER PIPING
- BALL OR GATE VALVE
- CHECK VALVE
- RPZ BACKFLOW PREVENTER
- PRESSURE REDUCING VALVE
- DROP IN PIPING
- SHOCK ARRESTOR
- W/I — RISER MARK - SEE DIAGRAM

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
CO	CLEANOUT
COTG	CLEANOUT TO GRADE
VTR	VENT THRU ROOF
WH	WALL HYDRANT
HB	HOSE BIBB W/ VACUUM BREAKER
EWH	ELECTRIC WATER HEATER
CW	COLD WATER
HW	HOT WATER
TW	TEMPERED WATER
HWR	HOT WATER RECIRC.
DN	DOWN
WC	WATER CLOSET
UR	URINAL
LAV	LAVATORY
HD	HUB DRAIN W/ TRAP PRIMER
FD	FLOOR DRAIN W/ TRAP PRIMER
DFU	DRAINAGE FIXTURE UNIT
SFU	SUPPLY FIXTURE UNIT

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P1

PLUMBING SPECS., SCHEDS. & DETAILS

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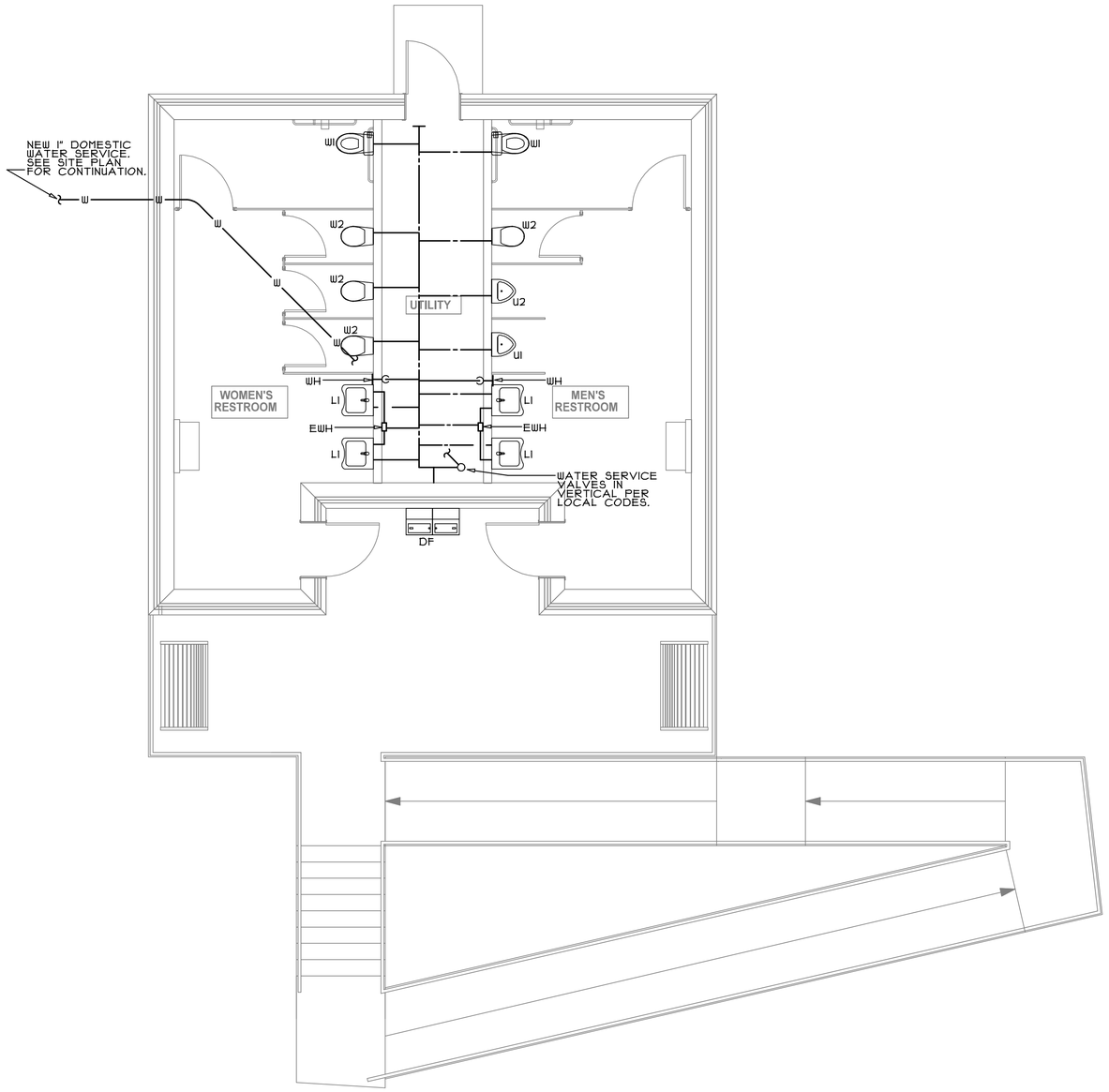
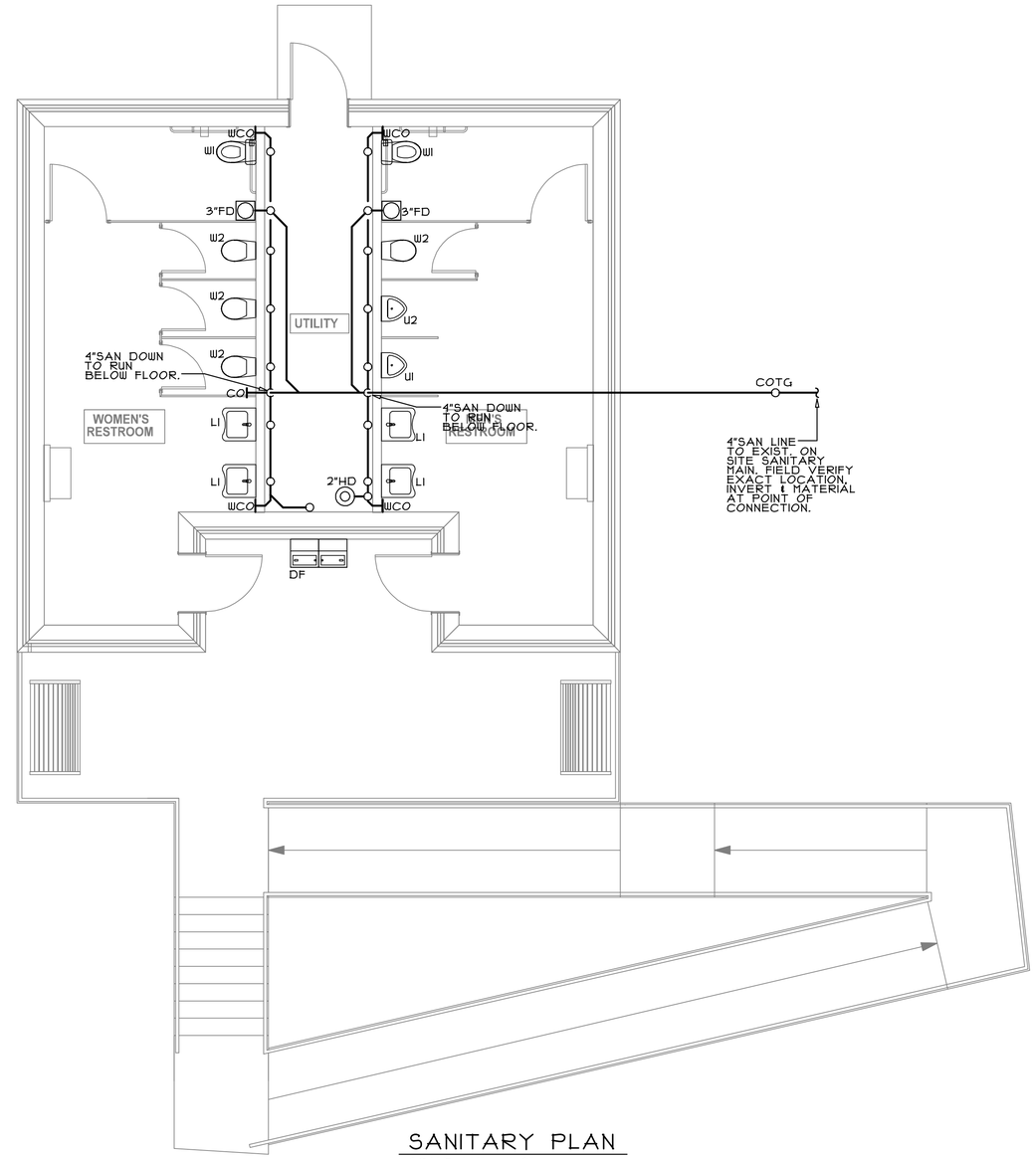


WATER PLAN

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



SANITARY PLAN

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

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PLUMBING PLANS

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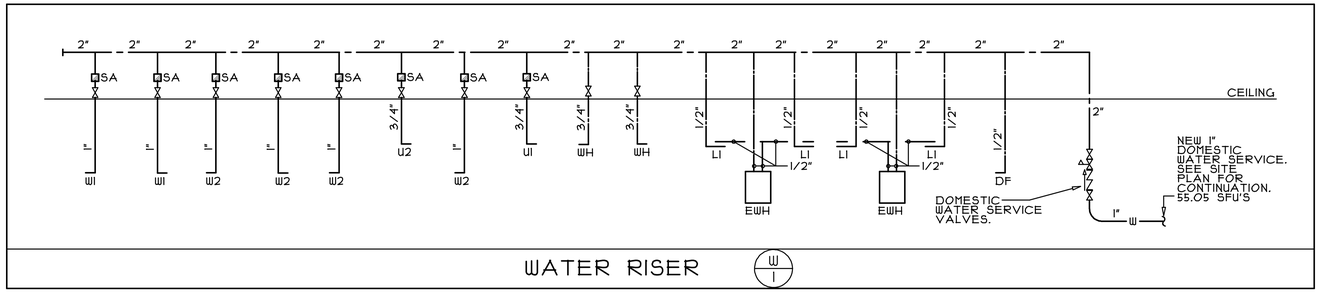
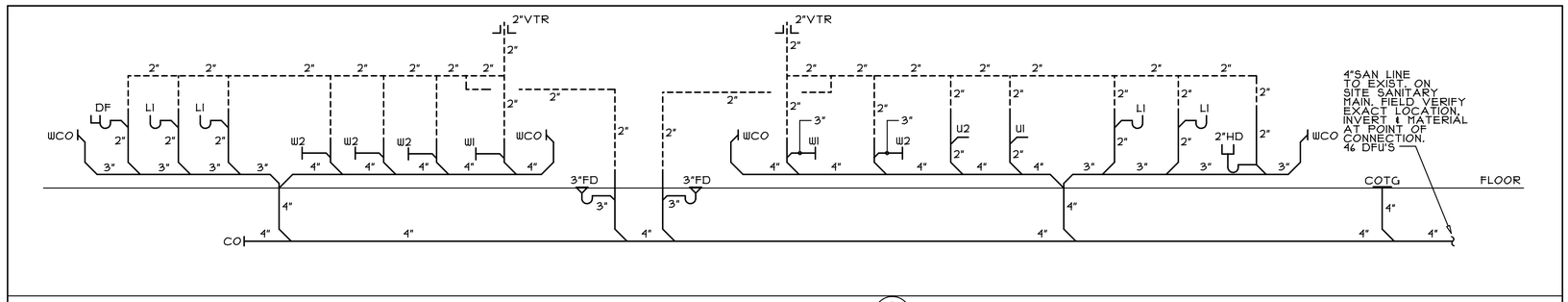


WATER RISER (W/1)



SANITARY RISER (S/1)

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P3
PLUMBING RISERS
12/2/2022 12:35 PM

HVAC SPECIFICATIONS

1. GENERAL

1.1 DESCRIPTION OF WORK:

A. ALL FIXTURES, EQUIPMENT, ACCESSORIES, MATERIALS, AND LABOR REQUIRED TO PROVIDE COMPLETE, COORDINATED, AND FULLY FUNCTIONAL HVAC SYSTEMS GENERALLY AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
1. HEATING SYSTEM
2. VENTILATION SYSTEM
3. EXHAUST SYSTEMS

1.2 RELATED DOCUMENTS:

A. THE REQUIREMENTS OF THE CIVIL, ARCHITECTURAL, STRUCTURAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS SHALL APPLY TO AND BE CONSIDERED A PART OF THE HVAC WORK IN-SO-FAR AS THEY APPLY TO THE HVAC WORK AND ARE REQUIRED FOR COORDINATION.

1.3 JOB CONDITIONS:

A. DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED TO PROVIDE A COMPLETE INSTALLATION OF THE WORK DESCRIBED AND INDICATED.

B. PROVIDE FITTINGS, OFFSETS, TRANSITIONS, CONTROL TRANSFORMERS AND ACCESSORIES REQUIRED TO MEET CONDITIONS OF THE PROJECT.

C. PROVIDE SERVICE ACCESS FOR EQUIPMENT, CONTROL COMPONENTS, VALVES, FILTERS AND SPECIALTIES.

D. PROVIDE ACCESS PANELS FOR VALVES, ACCESS DOORS, ETC. CONCEALED BEHIND FINISHED SURFACES.

E. MODIFY DUCT DIMENSIONS AS REQUIRED BY BUILDING STRUCTURE OR OTHER WORK AT NO ADDITIONAL COSTS TO THE OWNER. MAINTAIN EQUIVALENT FREE AREA SIZES.

1.4 CONFORMANCE TO REGULATIONS:

A. WORK SHALL CONFORM WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, NFPA, AND LOCAL ORDINANCES.

B. COMPLY WITH TOWN OF BROADWAY REQUIREMENTS FOR INSTALLATION OF WORK.

1.5 QUALITY ASSURANCE:

A. COMPLY WITH MANUFACTURER'S REQUIREMENTS AND NOTES AND DETAILS SHOWN HEREIN FOR INSTALLATION OF EQUIPMENT.

B. COMPLY WITH RECOMMENDATIONS OF SMACNA AND ASHRAE.

1.6 MATERIALS AND EQUIPMENT:

A. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE EQUIVALENT TO PRODUCTS SPECIFIED.

B. CONTRACTOR SHALL GUARANTEE EQUIVALENCE AND IS RESPONSIBLE FOR MODIFICATIONS REQUIRED AND COORDINATION WITH OTHER TRADES TO FIT SUBSTITUTED PRODUCT INTO THE PROJECT.

C. MATERIALS AND EQUIPMENT OF THE SAME TYPE AND USE SHALL BE FROM A SINGLE MANUFACTURER.

D. PROTECT STORED MATERIALS AND EQUIPMENT FROM WEATHER.

E. IF HVAC EQUIPMENT IS OPERATED DURING CONSTRUCTION, PROVIDE TEMPORARY FILTERS TO PROTECT AIR HANDLING EQUIPMENT.

1.7 SUBMITTALS:

A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT SPECIFIED HEREIN AND ON THE DRAWINGS. SHOP DRAWINGS AND PRODUCT DATA SHALL BE IDENTIFIED PER INDICATIONS ON DRAWINGS, SHALL BE MARKED TO INDICATED SPECIFIC ITEM BE PROPOSED, AND SHALL BE ORGANIZED IN AN ORDERLY MANNER. SUBMIT IN .PDF FORMAT VIA EMAIL.

B. SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT INSTALLED IN THIS PROJECT. INCLUDE COPIES OF SPECIFIC EQUIPMENT WARRANTIES IN MANUAL.

C. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH TWO COPIES OF AS-BUILT DOCUMENTATION. ALL CHANGES TO THE BIDDING DOCUMENTS SHALL BE NEATLY AND CLEARLY IDENTIFIED ON THE AS-BUILT DOCUMENTATION.

1.8 PROJECT CLOSEOUT:

A. REPLACE OR REPAIR DAMAGED EQUIPMENT AND CLEAN ALL EXPOSED SURFACES.

B. TOUCH-UP SHOP APPLIED FINISHES TO RESTORE DAMAGED OR SOILED AREAS.

C. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF EQUIPMENT UTILIZING OPERATION AND MAINTENANCE MANUAL. MINIMUM INSTRUCTION PERIOD SHALL BE TWO HOURS.

D. REPLACE FILTERS IN AIR HANDLING EQUIPMENT AT TIME OF PROJECT TURNOVER TO OWNER.

E. VACUUM INTERIORS OF DUCTWORK AND EQUIPMENT WHICH BECOMES DIRTY, PRIOR TO PROJECT TURNOVER TO OWNER. CLEAN ANY DIRTY EQUIPMENT COILS.

2. PRODUCTS

2.1 HVAC EQUIPMENT:

A. REFER TO SCHEDULE SHEETS AND EQUIPMENT LIST FOR MANUFACTURERS AND MODEL NUMBERS.

B. ALTERNATE MANUFACTURER'S ARE: LENNOX, YORK, MCQUAY, TITUS, CARRIER, SANYO, MITSUBISHI, TRANE, COOK, CARNES, TWIN CITY, ACME, METALAIRE

2.2 AIR DISTRIBUTION:

A. METAL DUCTWORK: SHOP FABRICATED AS FOLLOWS.
1. MATERIALS: GALVANIZED STEEL SHEET, ASTM A 527-85.
2. CONSTRUCTION: PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS FOR LOW PRESSURE SYSTEM UP TO 2" W.C. CONSTRUCTION.
3. JOINT SEALANT: UL LISTED FOSTER MASTIC, HARDCAST FTA-20, KINGCO 18-136.
4. WALL CAP SHALL BE ALUMINUM CONSTRUCTION WITH BACKDRAFT DAMPER, BIRDSCREEN AND HOOD. COLOR TO MATCH BUILDING FINISHES.

B. DAMPERS – AS MANUF. BY RUSKIN, CESCO, ARROW, CREATIVE METALS, PREFCO
1. MOTORIZED DAMPERS – REFER TO EQUIPMENT LIST ON DRAWINGS.

C. ACCESS DOORS –
1. FACTORY BUILT WITH SASH LOCKS, BUTT HINGE, GASKET, 24 GA. DOOR AND 22 GA. FRAME.
2. ACCESS DOOR IN INSULATED DUCT SHALL BE DOUBLE CONSTRUCTION, WITH INSULATION ENCASED.
3. MINIMUM SIZE TO BE 75% SIZE OF DUCT IN WHICH INSTALLED, OR 10" X 10".
4. CESCO MODEL HAD-10, LOUVERS AND DAMPERS, KEES, INC. OR AIR BALANCE.

2.3 CONTROLS:

A. PROVIDE ALL RELAYS, TRANSFORMERS, CONTROL WIRING, TERMINAL BLOCKS, ETC. FOR A COMPLETE SYSTEM.
1. COMPONENT MANUFACTURER'S AND MODEL NUMBERS AS SPECIFIED ON DRAWINGS.

B. THE WARRANTY PERIOD SHALL COMMENCE AFTER 60 DAYS OF BENEFICIAL USE, MEASURED FROM THE DATE OF ACCEPTANCE FROM THE OWNER.

3. EXECUTION

3.1 HVAC EQUIPMENT:

A. PROVIDE PERMANENT TAG ON EQUIPMENT INDICATING EXPIRATION DATE OF WARRANTIES. LOCATE TAG IN A READILY VISIBLE LOCATION.

B. PROVIDE FACTORY AUTHORIZED START-UP OF EQUIPMENT AND SUBMIT TEST REPORTS. (INCLUDE IN O&M MANUAL). COMPLY WITH MANUFACTURER REQUIREMENTS AND NOTES STATED ON THE CONSTRUCTION DOCUMENTS FOR INSTALLATION OF EQUIPMENT. BALANCE THE OUTSIDE AIR CFM TO QUANTITIES LISTED.

C. FANS:
I. ASSURE PROPER BACKDRAFT DAMPER OPERATION.

3.2 AIR DISTRIBUTION:

A. DUCTWORK:
1. SEAL JOINTS IN DUCTWORK WITH COATING OF HARDCAST SEALANT OR UL LISTED FSK DUCT TAPE.
2. INSTALL INTERNAL ENDS OF SLIP JOINTS IN DIRECTION OF AIRFLOWS.
3. MAXIMUM ANGLE OF OFFSETS AND TRANSITIONS SHALL NOT EXCEED 30 DEGREES.
4. ADEQUATELY SUPPORT DUCT AS PER CODE REQUIREMENTS –ELIMINATE SAGGING AND COMPRESSION OF DUCT.
5. TRANSITION DUCTS TO FIT EQUIPMENT.
6. USE LONG RADIUS RIGID DUCT FITTINGS AT ELBOWS IN FLEXIBLE DUCT FLEXIBLE DUCT EXCEEDING 60 DEGREE ANGLE. ELBOWS IN FLEXIBLE DUCT LESS THAN 60 DEGREE ANGLE SHALL BE LONG SWEEP TYPE.

B. INSULATE DUCT SYSTEMS PER CODE OR AS FOLLOWS, WHICHEVER IS MORE STRINGENT:
1. WITHIN BUILDING STRUCTURE AND INSIDE OF BUILDING INSULATION ENVELOPE INSULATE OUTSIDE AIR: ONE LB./CU.FT. DENSITY, 2" THICK FIBERGLASS, WITH FSK JACKET; OR WITH 3/8" THICK FOIL FACED, AIR CELL INSULATION, REFLECTIX OR EQUAL.
2. INSULATE OUTSIDE AIR DUCTS OUTSIDE OF BUILDING INSULATION WITH 3" THICK FIBERGLASS WITH FSK JACKET – MINIMUM R = 8.0 INSTALLED.
3. EXHAUST AIR DUCTS: DO NOT INSULATE.
4. SECURE INSULATION TO DUCTS W/ ADHESIVE AT 60% COVERAGE AND SECURE WITH MECHANICAL FASTENERS AND WASHERS AT 18" CENTERS – SEAL VAPOR BARRIER.

C. DAMPERS: ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE.
1. ACTUATORS AND PUSH-RODS SHALL BE ACCESSIBLE.
2. PROVIDE COMBINATION DAMPER/EXTRACTOR/SPIN-IN FOR ROUND DUCT CONNECTIONS TO TRUNK DUCTS. PROVIDE 45 DEGREE BEVEL INLET WITH BALANCE DAMPER FOR RECTANGULAR DUCT CONNECTIONS TO TRUNK DUCT. DAMPER ADJUSTMENT TO BE LOCATED ON BOTTOM SIDE OF DUCT.

D. ACCESS DOORS – PROVIDE IN DUCT FOR ACCESS TO COILS, FILTERS, FIRE & MOTORIZED DAMPERS, AND ALL OTHER EQUIPMENT NOT OTHERWISE ACCESSIBLE. INSTALL TO ALLOW SERVICE ACCESS. PROVIDE LABEL ON ACCESS DOOR INDICATING DEVICE SERVED.

3.3 CONTROLS:

A. SEAL PROBE PENETRATIONS FOR DUCT MOUNTED SENSORS.

B. PROVIDE JUNCTION BOX HOUSING FOR CONTROL WIRING INTERLOCK TO COMPONENTS.

C. ROUTE CONDUCTORS NEATLY AND PARALLEL OR PERPENDICULAR TO BUILDING CONSTRUCTION. WIRING AND CONDUCTORS IN FINISHED SPACES TO BE RUN CONCEALED.

D. SEQUENCE OF CONTROL
1. WHEN EXHAUST FAN OPERATES, AN OA MOTORIZED DAMPER OPEN WILL OPEN.
2. ON A CALL FOR HEAT – ELECTRIC HEATER AND FAN WILL OPERATE.

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SPECIFICATIONS

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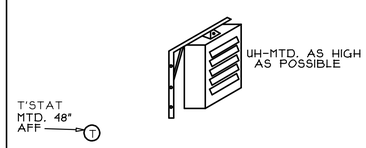
SYMBOLS

⧄	RETURN OR EXHAUST DUCT
(T)	THERMOSTAT-MTD. 48" AFF
(M)	MOTORIZED DAMPER (MOD)

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
EA	EXHAUST AIR
EF	EXHAUST FAN
MTD.	MOUNTED
OA	OUTSIDE AIR
RG	RETURN GRILLE
TYP	TYPICAL
UH	UNIT HEATER
WC	WALL CAP



UNIT HEATER DIAGRAM
NOT TO SCALE

GRILLES, REGISTERS, DIFFUSERS AND LOUVERS

TYPE	DESCRIPTION	NECK	FRAME	FINISH	MFR. MDL.	REMARKS
RI	RETURN AIR GRILLE	10X10	FLANGE	WHITE	PROSELECT PSRGW1010	
LI	INTAKE LOUVER	18X18	FLANGE	SEL. BY ARCHIT.	DAYTON 20UA08	DRAINABLE W/ BIRDSCREEN

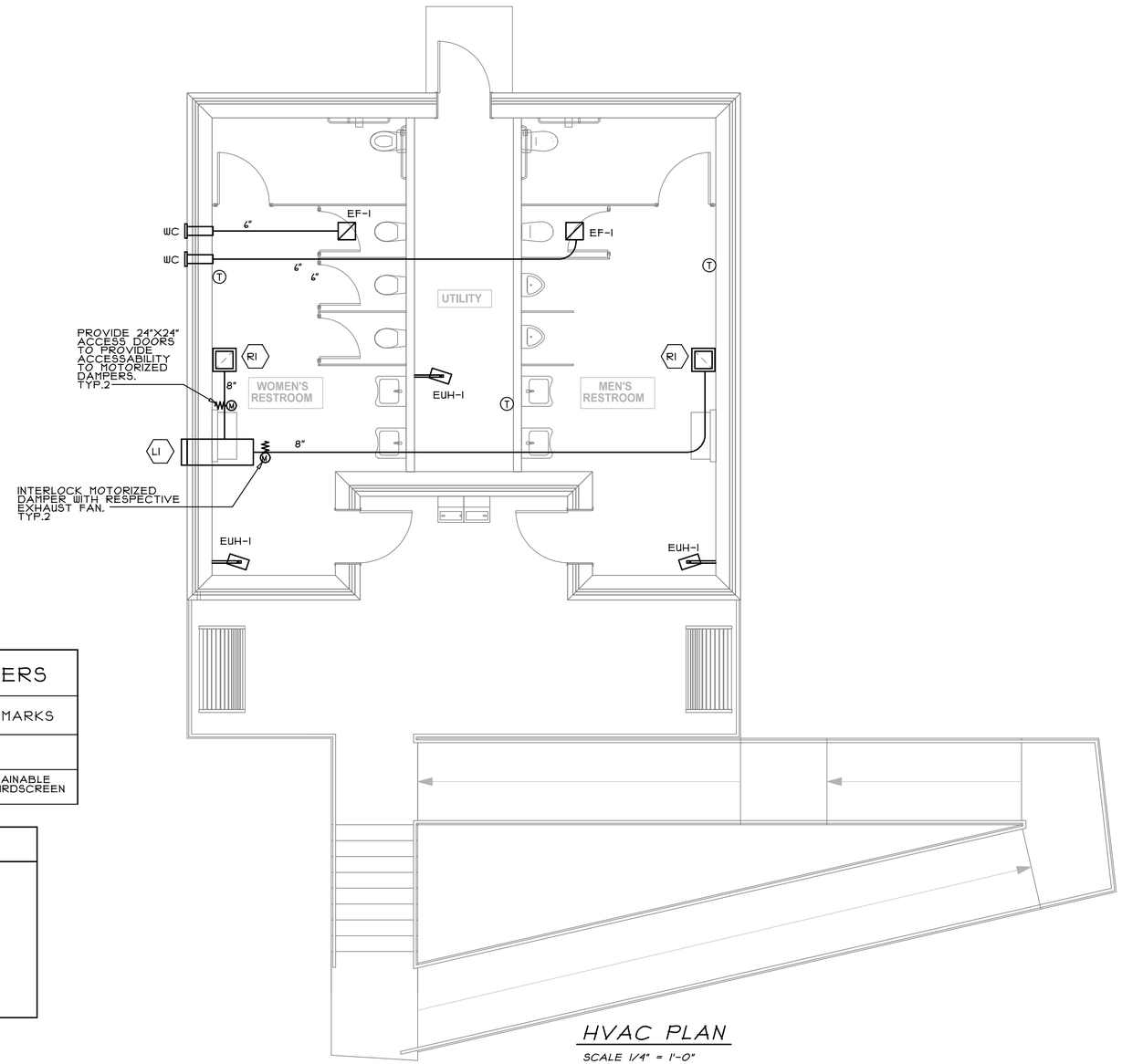
EQUIPMENT LIST

EQUIPMENT: EQUIVALENT MANUFACTURERS MAY BE SUBSTITUTED. EQUIPMENT TO BE UL OR ETL LISTED.

EF-1 - CENTRIFUGAL CEILING EXHAUSTER, 120 VAC, BACKDRAFT DAMPER, SAFETY SWITCH, 309CFM @ 0.1" SP, 90 RPM, 212 WATTS, 2.6A, BRAON L300.

EUH-1 - ELECTRIC UNIT HEATER, HOTIZONTAL FLOW, INTEGRAL THERMOSTAT, DISCONNECT, 350 CFM, 5000W, 21A, 240V/1PH, TAMPER RESISTANT Q-MARK MUH0521-PRO. USE WALL MOUNTING KIT B10.

MOD - 24VAC MOTORIZED DAMPER, 2 POSITION TYPE, W/ ACTUATOR AND LINKAGE MTD. OUTSIDE OF AIRSTREAM, NORMALLY CLOSED, SIZE TO FIT DUCT, HONEYWELL OR EQUAL.



HVAC PLAN
SCALE 1/4" = 1'-0"

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HVAC PLAN, DETAILS, AND SCEDULES

12/7/2022 12:14 PM

ELECTRICAL SPECIFICATIONS

1. GENERAL

1.1 RELATED DOCUMENTS:

A. REQUIREMENTS OF THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND SPECIAL CONDITIONS APPLY TO THIS SECTION.
B. ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS.

1.2 WORK INCLUDED:

A. ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
B. PERMITS AND INSPECTIONS REQUIRED FOR WORK.
C. TEMPORARY ELECTRIC FOR SITE DURING CONSTRUCTION AS REQUIRED.
D. COORDINATION OF FINAL SELECTIONS, LOCATIONS, CONNECTIONS, ELECTRICAL CHARACTERISTICS, ETC. OF EQUIPMENT SUPPLIED BY OTHERS ON PROJECT.

1.3 JOB CONDITIONS:

A. COORDINATE WITH BUILDING CONSTRUCTION AND WITH OTHER TRADES.
B. IN CASE OF CONFLICT BETWEEN SPECIFICATIONS AND DRAWINGS, CONSULT ARCHITECT IMMEDIATELY FOR DETERMINATION OF PROCEDURE METHOD.

1.4 CONFORMANCE TO REGULATIONS:

A. WORK SHALL CONFORM WITH 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2017 NEC, CURRENT NFPA, LOCAL ORDINANCES AND THE RULES AND REGULATIONS OF THE UTILITIES.
B. WORK SHALL BE IN ACCORDANCE WITH THE OWNER'S CRITERIA AND REQUIREMENTS.

1.5 QUALITY ASSURANCE:

A. MEET OR EXCEED RECOMMENDATIONS OF: IEEE, IES, NEMA AND UL.
B. NOTIFY ARCHITECT IMMEDIATELY OF CONFLICTS AND DEFICIENCIES. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN RESOLVED.

1.6 MATERIALS AND EQUIPMENT:

A. PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS OTHERWISE NOTED.
B. FURNISH (INCLUDING FREIGHT AND UNLOADING) AND INSTALL UNLESS OTHERWISE NOTED.
C. EQUIPMENT PROVIDED FOR THIS PROJECT SHALL BE NEW UNLESS NOTED OTHERWISE.

1.7 UTILITIES AND CONNECTIONS:

A. OWNER WILL PAY ANY UTILITY SERVICE FEES DIRECTLY TO THE RESPECTIVE UTILITY COMPANIES.
B. PROVIDE ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED BUT NOT PROVIDED OR FURNISHED BY THE UTILITY COMPANIES TO BRING SERVICE INTO THE BUILDING.

1.8 SUBMITTALS:

A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR EQUIPMENT IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS.
B. UPON COMPLETION OF THE INSTALLATION, AND PRIOR TO ACCEPTANCE BY THE OWNER, CONTRACTOR SHALL FURNISH AS-BUILT DOCUMENTATION AND O&M MANUALS IN ACCORDANCE WITH THE ARCHITECT'S REQUIREMENTS.
C. PROVIDE WIRING DIAGRAMS SPECIFIC TO THIS PROJECT FOR ALL ROOMS WITH LOW VOLTAGE DEVICES SHOWING INTERCONNECTIONS BETWEEN POWER PACK, SWITCHES, AND OCCUPANCY SENSORS.

1.9 PROJECT CLOSEOUT:

A. REPAIR DAMAGED AND DEFECTIVE EQUIPMENT AND MATERIALS. REPLACE ITEMS THAT CANNOT BE PROPERLY REPAIRED.
B. CLEAN EXPOSED AND SEMI-EXPOSED SURFACES OF EQUIPMENT AND MATERIALS.
C. TOUCH-UP SHOP-APPLIED FINISHES TO RESTORE DAMAGED AND SOILED AREAS.
D. INSTRUCT OWNER'S REPRESENTATIVE IN OPERATION AND MAINTENANCE OF ELECTRICAL SYSTEMS UTILIZING THE OPERATION AND MAINTENANCE MANUAL.
1. INSTRUCTION PERIOD SHALL OCCUR AFTER SUBSTANTIAL COMPLETION OF ELECTRICAL SYSTEMS AND PRIOR TO COMPLETION OF THE PROJECT. COORDINATE WITH THE ARCHITECT AND OWNER.

2. PRODUCTS

2.1 RACEWAYS AND FITTINGS:

A. CONDUIT SIZES SHALL BE AS REQUIRED BY THE CODE (UNLESS INDICATED OR SPECIFIED OTHERWISE) FOR THE NUMBER AND SIZE OF WIRE INDICATED. MINIMUM SIZE CONDUIT SHALL BE 1/2" ELECTRICAL TRADE SIZE. FLEXIBLE METAL CONDUIT USED FOR LIGHTING FIXTURE WHIPS MAY BE 3/8" WHERE ALLOWED BY THE CODE.
B. USE ELECTRICAL METALLIC TUBING EXCEPT AS FOLLOWS. USE RIGID NONMETALLIC CONDUIT IN OR UNDER ON GRADE CONCRETE SLABS. USE FLEXIBLE METAL CONDUIT FOR MOTOR AND EQUIPMENT CONNECTIONS IN DRY LOCATIONS. USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN WET OR DAMP LOCATIONS.

2.2 WIRE AND CABLE:

A. CONDUCTORS SHALL BE COPPER, MINIMUM SIZE NO. 12 AWG. OTHER WIRE SIZES SHALL BE AS NOTED OR AS REQUIRED FOR THE CIRCUIT SIZE. CONDUCTOR INSULATION SHALL BE THHN/THWN.
B. BRANCH CIRCUIT WIRING WHERE CONCEALED IN WALLS AND ABOVE CEILINGS MAY BE TYPE MC (METAL CLAD) CABLE WHERE ALLOWED BY THE CODE.

2.3 BOXES:

A. GALVANIZED SHEET STEEL TYPE. SINGLE DEVICE BOX SHALL BE "NON-GANGABLE" TYPE AND FOR MULTIPLE DEVICES "GANGABLE" TYPE SHALL BE USED. BOXES FOR EXPOSED WORK SHALL BE 4" SQUARE TYPE. BOXES FOR EXPOSED WORK IN WET LOCATIONS SHALL BE DIE CAST TYPE WITH THREADED HUBS. SECTIONAL BOXES SHALL NOT BE USED IN MASONRY OR CONCRETE. SIZED FOR NUMBER OF CONDUCTORS, FITTINGS AND DEVICES AS REQUIRED BY THE CODE.

2.4 WIRING DEVICES:

A. 20 AMPERE SPECIFICATION GRADE.
B. COVERPLATES SHALL BE AS FOLLOWS: INTERIOR RECESSED - SMOOTH UNBREAKABLE NYLON; SURFACE - 4" SQUARE RAISED COVER, GALVANIZED; WEATHERPROOF - DIE CAST ALUMINUM, GFCI TYPE, WATERTIGHT WHILE IN USE TYPE, USE EXTERNAL OPERATING TYPE FOR WEATHERPROOF SWITCHES.
C. DEVICE AND PLATE COLOR SHALL BE AS SELECTED BY ARCHITECT.
D. GFCI OUTLETS TO BE SELF-TESTING TYPE.

2.5 DISCONNECT SWITCHES:

A. SAME MANUFACTURER AS THE PANELBOARDS, NEMA 3R FOR OUTDOOR USE.
B. DISCONNECT SWITCHES SHALL BE FUSED OR NON-FUSED AS INDICATED AND BE VISIBLE BLADE TYPE WITH EXTERNAL OPERATING HANDLE AND COVER INTERLOCK AND PAD LOCKING.

2.6 GROUNDING:

A. CONNECTIONS TO BUILDING STEEL, GROUND RODS AND PIPING SYSTEMS SHALL BE MADE WITH BRONZE OR BRASS BOLTED TYPE FITTINGS DESIGNED FOR THE USE.
B. GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZE AS INDICATED ON THE DRAWINGS AND AS DESCRIBED IN ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.

2.7 PANELBOARDS:

A. PANELBOARDS SHALL BE AS SCHEDULED OR BY: SQUARE-D, CUTLER HAMMER, GENERAL ELECTRIC OR SIEMENS. PANELS TO HAVE MINIMUM 20" WIDE CABINETS AND COPPER BUS BARS.
B. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC, MOLDED CASE, BOLT-ON TYPE. MULTI-POLE SHALL BE COMMON TRIP TYPE. BREAKERS FOR HVAC EQUIPMENT SHALL BE "HACR" RATED WHERE REQUIRED.
C. PANELBOARDS SHALL HAVE LOCKABLE DOORS, LOCKS SHALL BE KEYED ALIKE.
D. PANELBOARDS SHALL BE FULLY RATED OR HAVE A UL LISTED SERIES CONNECTED RATING OF A MINIMUM 65,000 AIC. OBTAIN AND SUBMIT FAULT CURRENT VERIFICATION LETTER FROM THE POWER COMPANY TO THE LOCAL AUTHORITY HAVING JURISDICTION IF REQUIRED.

2.8 FUSES:

A. SERVICE SWITCH FUSES SHALL BE CURRENT LIMITING CLASS L.

2.9 ELECTRIC SERVICE:

A. SERVICE SHALL BE 120/240 VOLT, 1 PHASE, 3 WIRE.

2.11 LAMPS:

A. NUMBER, SIZE AND TYPE OF LAMPS SHALL BE AS SPECIFIED ON THE DRAWINGS.

2.12 DRIVERS AND ACCESSORIES:

A. LED DRIVERS SHALL BE ELECTRONIC TYPE WITH EQUAL TO OR LESS THAN 10% THD AND A 3 YEAR WARRANTY, VOLTAGE TO MATCH SYSTEM VOLTAGE.
B. ACCESSORIES SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING FOR A COMPLETE LIGHTING FIXTURE INSTALLATION: PLASTER FRAMES, TEE BAR HANGERS, FIXTURE STUDS AND HOLD DOWN CLIPS FOR SUSPENDED CEILINGS.

2.13 LIGHTING FIXTURES:

A. LIGHTING FIXTURES SHALL BE AS SPECIFIED ON THE DRAWINGS.
B. PHOTOCELLS: SWIVEL MOUNT, 1800 WATT, TORK SERIES 2020 OR EQUAL.
C. TIMECLOCKS: ASTRONOMIC, 7 DAY, 100 HOUR BATTERY BACKUP, TORK SERIES EWZ100 OR EQUAL.
D. CONTACTOR: MECHANICALLY HELD, ELECTRICALLY OPERATED, NUMBER OF POLES AS REQUIRED.

2.14 EMPTY CONDUIT SYSTEMS:

A. PROVIDE FOR USE BY THE OWNER'S CABLING CONTRACTOR. CONDUIT SYSTEM SHALL BE AS DESCRIBED ON THE DRAWINGS FOR DATA, TELEPHONE, TELEVISION, SOUND, SECURITY, ETC.

2.15 POWER OUTLET PEDESTALS:

A. PEDESTALS SHALL BE UL LISTED 125 AMP, 120/240 VOLT, SINGLE PHASE RATED, UNMETERED.
B. TYPE 3R WELDED ENCLOSURE OR OUTDOOR USE, 14 GAUGE GALVANIZED STEEL POST, 16 GAUGE STEEL ENCLOSURE.
C. WIRE TERMINATIONS SHALL ACCEPT COPPER OR ALUMINUM CONDUCTORS FOR LOOP FEED WIRING.
D. CAPABLE OF ACCEPTING UP TO #350MCM CONDUCTORS AND #2/0 GROUND.
E. PLATED COPPER INTERIOR.
F. FACTORY WIRED COMPONENTS WITH COPPER WIRE.
G. LOCKABLE HINGE COVER.
H. WITH INTEGRATED 120V NIGHT LIGHT.
I. WITH (1) 2P-50A, (1) 1P-30A, AND (1) 1P-20A RECEPTACLES AND MATCHING CIRCUIT BREAKERS. 20A RECEPTACLE SHALL BE TAMPER RESISTANT AND GFCI TYPE.
J. SINGLE POWERHEAD TYPE.
K. POWDER COAT FINISH.
L. MILBANK, EATON, MIDWEST, OR EQUAL.

3. EXECUTION

3.1 RACEWAYS AND FITTINGS:

A. INSTALL CONDUITS CONCEALED IN WALLS, CEILINGS OR FLOORS UNLESS INDICATED OR SPECIFIED OTHERWISE. CONDUITS MAY BE INSTALLED EXPOSED IN UNFINISHED AREAS (IE: EQUIPMENT ROOMS). INSTALL EXPOSED CONDUITS IN RUNS PARALLEL OR PERPENDICULAR TO WALLS STRUCTURAL MEMBERS, OR INTERSECTIONS OF VERTICAL PLANES OR CEILINGS. EXPOSED AND CONCEALED CONDUITS SHALL PASS THROUGH WALLS, FLOORS OR CEILINGS AT RIGHT ANGLES. UNDERGROUND CONDUITS SHALL HAVE BURY DEPTH AS REQUIRED BY THE CODE.
B. INSURE THAT CONDUITS ARE IN ALIGNMENT BETWEEN BENDS, ELBOWS AND TERMINATIONS; THAT BENDS ARE FREE OF CRIMPS; THAT JOINTS AND TERMINATIONS ARE TIGHT AND SECURE; THAT INTERIORS ARE SMOOTH AND FREE OF BURRS AND FOREIGN OBJECTS; AND THAT INTERIORS ARE FULL SIZE ENTIRE LENGTH. DURING CONSTRUCTION, CLOSE ENDS OF CONDUITS WITH METAL OR PLASTIC CAPS INTENDED FOR THE PURPOSE.
C. FIELD BENDING OF CONDUITS AND TUBING SHALL BE MADE WITH HAND OR POWERED EQUIPMENT APPROVED FOR THE PURPOSE. USE OF TORCHES TO BEND NONMETALLIC CONDUIT IS NOT APPROVED. RADIUS OF BENDS SHALL BE AS PER THE CODE FOR TYPE OF CONDUIT AND TUBING USED. CONDUITS PASSING THROUGH A FIRE RATED WALL OR FLOOR SHALL NOT LESSEN THE RATING OF THE STRUCTURE THROUGH WHICH THEY PASS. FINAL INSTALLATION OF CONDUITS PENETRATING WATERPROOF CONSTRUCTION SHALL BE COMPLETELY WATERTIGHT.
D. SLEEVE CONDUITS PASSING THROUGH CONCRETE FLOOR SLABS AND CONCRETE, MASONRY, TILE AND GYPSUM WALLS.
E. CONDUIT SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE AT INTERVALS REQUIRED BY THE CODE. USE STANDARD CONDUIT HANGERS, ONE HOLE SNAP STRAPS, THIN WALL CONDUIT CLAMPS, MALLEABLE IRON PIPE STRAPS, STRUT CHANNEL, BEAM CLAMPS, U-BOLTS AND ALL-THREAD RODS. DO NOT USE WIRE TIES, STAB-ON CLIPS OR PERFORATED STRAP IRON.
F. PAINT ANY EXPOSED CONDUITS NOT WITHIN UTILITY ROOMS TO MATCH SURROUNDINGS.

3.2 WIRE AND CABLE:

A. SPLICE CONDUCTORS NO. 10 AND SMALLER WITH STEEL SPRING WIRE CONNECTOR WITH THERMOPLASTIC SHELL. SPLICE CONDUCTORS NO.8 AND LARGER WITH MECHANICAL TYPE, TAP CONNECTORS WITH INSULATED COVERS OR SPLIT BOLTS TAPED TO CONDUCTOR INSULATION VALUE.
B. INSTALL CONDUCTORS IN RACEWAYS. CONDUCTORS SHALL BE CONTINUOUS FROM POINT OF ORIGIN TO PANEL OR EQUIPMENT TERMINATION WITHOUT RUNNING SPLICES IN INTERMEDIATE BOXES. CONDUCTORS OF DIFFERENT VOLTAGES SHALL NOT BE PULLED INTO SAME RACEWAY.
C. CABLE SHALL BE SUPPORTED DIRECTLY FROM THE BUILDING STRUCTURE WITH STAPLES OR ONE-HOLE STRAPS AT INTERVALS REQUIRED BY THE CODE. BORED HOLES SHALL NOT EXCEED 1" DIAMETER AND SHALL BE A MINIMUM OF 2'-0" FROM STRUCTURAL BEARING POINTS, NOTCHING OF STRUCTURAL MEMBERS IS PROHIBITED. PROVIDE GUARD STRIPS AT LEAST AS HIGH AS CABLE WHERE RUN ACROSS TOP OF STRUCTURE IN ACCESSIBLE ATTIC SPACES.
D. DO NOT RUN ANY WIRE OR CABLE IN PLUMBING WALLS UNTIL PIPING SYSTEMS HAVE BEEN COMPLETED. PLUMBING SHALL PRESIDE IN THESE WALLS.
E. DO NOT SHARE NEUTRAL CONDUCTORS FOR 120 VOLT CIRCUITS.
F. COLOR CODE CONDUCTORS TO INDUSTRY STANDARDS.
G. INCREASE WIRE SIZES AS REQUIRED TO COMPENSATE FOR VOLTAGE DROP BASED ON FEEDER/BRANCH CIRCUIT LENGTH.

3.3 BOXES:

A. SECURE BOXES TO STRUCTURE BY MEANS OF SCREWS, BOLTS, ROD HANGERS OR OTHER APPROVED MEANS. RACEWAYS ENTERING OR LEAVING BOX SHALL NOT BE USED AS SUPPORT. BOXES SHALL BE LEVEL AND PLUMB. BOXES FOR FLUSH EQUIPMENT SHALL BE PLACED TO WITHIN 1/4" OF THE FINISHED SURFACE. PROVIDE EXTENSIONS OR PLASTER RINGS AS REQUIRED. JUNCTION AND PULL BOXES SHALL BE INSTALLED READILY ACCESSIBLE, UNOBSTRUCTED BY PIPING, DUCTS OR OTHER EQUIPMENT.
B. BOXES SHALL BE MOUNTED AT HEIGHT INDICATED ON THE DRAWINGS OR DIRECTLY ADJACENT TO PIECE OF EQUIPMENT SERVED. SEAL SPARE OR UNUSED OPENINGS IN BOXES WITH APPROVED FITTINGS. FOR BOXES INSTALLED IN WET LOCATIONS PROVIDE CLEAR SILICONE CAULK BETWEEN BOX AND SURROUNDING SURFACE TO PREVENT WATER ENTRY.
C. BOXES IN RATED CONSTRUCTION SHALL BE SUITABLE FOR THE USE AND INSTALLED IN ACCORDANCE WITH THE CODE.

3.4 WIRING DEVICES:

A. INSTALL DEVICES APPROXIMATELY AT THE LOCATIONS INDICATED ON THE DRAWINGS. DETERMINE EXACT LOCATION BY CONDITIONS OF CONSTRUCTION. COORDINATE LOCATIONS TO AVOID CONFLICT WITH OTHER EQUIPMENT BEING INSTALLED. INSTALL DEVICES STRAIGHT AND SOLID TO BOX. MOUNTING HEIGHTS OF WALL OUTLETS SHALL BE AS INDICATED ON THE DRAWINGS AND SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTER OF THE OUTLET. WHERE DEVICES ARE SHOWN GROUPED TOGETHER, PROVIDE A SINGLE, MULTIPLE GANG PLATE.
B. COORDINATE PLACEMENT IN AND AROUND KNEE SPACES, LAVATORIES AND OTHER EQUIPMENT TO AVOID CONFLICTS WITH MIRRORS AND OTHER APPURTENANCES. REFER TO ARCHITECTURAL DRAWINGS. SWITCHES SHALL BE LOCATED TO STRIKE SIDE OF THE DOOR. VERIFY FINAL DOOR SWINGS.
C. WHERE GFCI OUTLETS ARE USED TO PROVIDE FEED-THRU PROTECTION FOR DOWNSTREAM OUTLETS ON SAME CIRCUIT, DO NOT FEED-THRU WIRE ACROSS PARTITIONS, USE A SEPARATE DEVICE.
D. VERIFY THE NEMA CONFIGURATIONS OF ALL OUTLETS WITH OWNER.

3.5 DISCONNECT SWITCHES:

A. MOUNT SWITCHES ON WALL OR AT ASSOCIATED PIECE OF EQUIPMENT. WALL MOUNTED SWITCHES SHALL BE 48 INCHES ABOVE FINISHED FLOOR. PROVIDE ENGRAVED PLASTIC LAMINATE NAMEPLATE FOR EACH DISCONNECT SWITCH LOCATED ON FRONT OUTSIDE COVER. NAMEPLATE SHALL INDICATE ITEM SERVED.
B. SWITCHES SCHEDULED ARE FOR DESIGN BASED EQUIPMENT. REVIEW OTHER TRADES' SUBMITTALS TO DETERMINE IF SUBSTITUTIONS HAVE BEEN MADE. PROVIDE SWITCH TO MATCH EQUIPMENT SUPPLIED.

3.6 GROUNDING:

A. CONDUIT SYSTEM SHALL NOT BE USED FOR GROUNDING.
B. FOR BONDING OF SERVICE EQUIPMENT PROVIDE BONDING BUSHINGS AND JUMPERS WHERE REQUIRED. WELDING OF CONDUIT AND FITTINGS WILL NOT BE CONSIDERED ACCEPTABLE FOR THE PURPOSE OF BONDING.
C. PROVIDE PROTECTION FROM PHYSICAL DAMAGE FOR ANY EXPOSED SECTION OF THE GROUNDING ELECTRODE CONDUCTOR SYSTEM.

3.7 PANELBOARDS:

A. NEATLY PRINT CIRCUIT DESIGNATIONS ON DIRECTORY CARD. NOTATIONS SHALL INDICATE THE NATURE AND LOCATION OF LOADS SERVED. DO NOT USE A PERMANENT MARKER TO LABEL CIRCUIT DESIGNATIONS ON PANEL HOUSING.
B. PROVIDE ENGRAVED LAMINATE NAMEPLATE FOR EACH NEW PANELBOARD LOCATED ON OUTSIDE OF DOOR. NAMEPLATE SHALL INCLUDE PANELBOARD DESIGNATION ON THE DRAWINGS, SERVICE VOLTAGE, PHASE AND AMPERAGE.
C. BREAKERS SCHEDULED ARE FOR DESIGN BASED EQUIPMENT. REVIEW OTHER TRADES' SUBMITTALS TO DETERMINE IF SUBSTITUTIONS HAVE BEEN MADE. PROVIDE BREAKERS TO MATCH EQUIPMENT SUPPLIED.**3.8 ELECTRIC SERVICE:**

A. PROVIDE LABOR AND MATERIALS NOT FURNISHED BY THE POWER COMPANY. DO WORK REGARDING THE ELECTRICAL SERVICE AND ITS EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE POWER COMPANY. IF THE CONTRACT DOCUMENTS INDICATE WORK THAT IS TO EXCEED THESE REQUIREMENTS, FOLLOW THE CONTRACT DOCUMENTS.
B. LABEL EQUIPMENT FOR THE ELECTRIC SERVICE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THIS DIVISION. MAIN SWITCHES OR BREAKERS ARE TO BE IDENTIFIED AS SUCH IN ADDITION TO IDENTIFYING THE ITEM FED.
C. NOTIFY THE POWER COMPANY OF THE TIMING REQUIREMENTS FOR THE PROJECT AND ARRANGE FOR METERING EQUIPMENT, CONNECTIONS AND SERVICE.
D. COORDINATE INSTALLATION OF NEW SERVICE AND REMOVAL OF EXISTING TO MINIMIZE DOWNTIME. COORDINATE TIMING WITH THE OWNER.

3.9 FUSES:

A. INSTALL FUSES IN SWITCHES.
B. BRANCH CIRCUIT FUSES SCHEDULED ARE FOR DESIGN BASED EQUIPMENT. REVIEW OTHER TRADES' SUBMITTALS TO DETERMINE IF SUBSTITUTIONS HAVE BEEN MADE. PROVIDE FUSES TO MATCH EQUIPMENT SUPPLIED.

3.10 LAMPS:

A. PERMANENT LAMPS SHALL NOT BE USED AS TEMPORARY LIGHTING DURING CONSTRUCTION. IF FIXTURES ARE TO BE USED, TEMPORARY LAMPS SHALL BE PROVIDED AND PERMANENT LAMPS SHALL NOT BE INSTALLED UNTIL TIME OF OWNER'S ACCEPTANCE OF BUILDING.

3.11 LIGHTING FIXTURES:

A. INSTALLATION OF FIXTURES SHALL BE IN A NEAT, WORKMANLIKE MANNER. PROVIDE STRAPS, SUPPORTS, HANGERS AND OTHER MATERIALS REQUIRED FOR PROPER INSTALLATION.
B. SURFACE MOUNTED FIXTURES SHALL NOT HAVE GAPS BETWEEN THE FIXTURE AND ATTACHING SURFACE UNLESS MOUNTING IS DESIGNED TO HOLD FIXTURE OFF CEILING, OR EXCEPT WHERE REQUIRED BY THE CODE REGULATION. CONTINUOUS ROWS OF FIXTURES SHALL BE INSTALLED SO AS TO PROVIDE PERFECT ALIGNMENT.
C. SUPPORT SURFACE MOUNTED FIXTURES DIRECTLY FROM THE BUILDING STRUCTURE AND NOT FROM THE CEILING GRID SYSTEM. USE ALL-THREAD RODS, BEAM CLAMPS, PIPE CLAMPS AND PIPE OR PERFORATED STEEL CHANNEL FOR SUPPORT. WIRE TIES AND STAB-ON CLIPS WILL NOT BE ACCEPTED. THE SUPPORT ASSEMBLY SHALL BE CAPABLE OF SUPPORTING 150 POUNDS IN ADDITION TO THE FIXTURE WEIGHT INDEFINITELY.
D. CONNECT EMERGENCY LIGHTING FIXTURES TO BRANCH CIRCUIT SERVING NORMAL LIGHTING IN AREA AHEAD OF LOCAL SWITCHING.
E. MOUNT CONTACTORS AND TIMECLOCKS ADJACENT TO PANELBOARD AND SET TIMECLOCK TO HOURS DIRECTED BY THE OWNER. PHOTOCELLS SHALL BE LOCATED IN AN ACCESSIBLE LOCATION EITHER BELOW SOFFIT OR ABOVE ROOF LINE FACING NORTH, DO NOT ATTACH PHOTOCELLS ON FACE OF BUILDING.

3.12 EMPTY CONDUIT SYSTEMS:

A. LEAVE CONDUITS WITH PULL CORDS. AT COMPLETION OF THE PROJECT, PROVIDE BLANK COVERPLATES FOR ANY OUTLET BOXES NOT UTILIZED AND LEFT SPARE BY THE OWNER'S CABLING CONTRACTOR.
B. COORDINATE WITH THE UTILITIES SELECTED BY THE OWNER AND PROVIDE ALL MEANS REQUIRED FOR SERVICES TO THE BUILDING.

3.13 POWER OUTLET PEDESTALS:

A. UTILIZE LOOP FEED WIRING FOR PEDESTALS.
B. INCREASE WIRE SIZES BASED ON FINAL TOTAL DEVELOPED LENGTH OF EACH CIRCUIT.
C. INSTALL IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
D. LABEL PEDESTALS AS DIRECTED BY OWNER. INCLUDE LABELS THAT INDICATE CIRCUIT NUMBER AND PANEL SERVING EACH PEDESTAL. ALL LABELS SHALL BE UV RESISTANT.

MARK	DATE	DESCRIPTION
	12/12/22	PERMIT DRAWINGS

BLUELINE
discover | design | deliver

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COMMONWEALTH OF VIRGINIA
WESLEY FRANKLIN SIEVER
Lic. No. 0402 043863
12/12/22
PROFESSIONAL ENGINEER

PROJECT NO.: 22070

E1
ELECTRICAL SPECIFICATIONS
12/14/2022 3:57 PM

NEW PANEL A

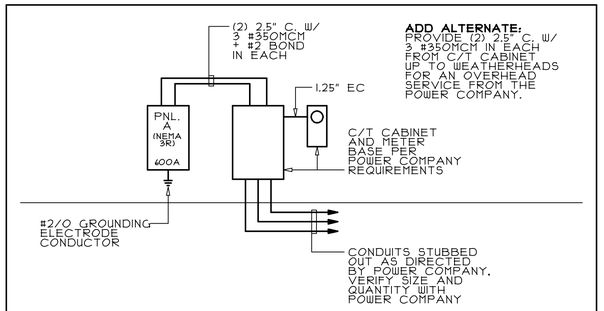
VOLTS: 120/240 | PHASE: 1 | WIRES: 3 | MOUNTING: SURFACE
AMPS: 600 | MAIN: 600A MCB | RATING: NEMA 3R

BRKR P	BRKR A	DESCRIPTION	CIRCUIT AMPS	CIRCUIT DEMAND	CIRCUIT NO.	PHASE LOAD A	PHASE LOAD B	CIRCUIT NO.	CIRCUIT DEMAND	CIRCUIT AMPS	DESCRIPTION	BRKR A	BRKR P
2	50	WTR HTR	34.6	100%	1	55.6		2	100%	21.0	EUH-1 W.	30	2
-	--	----	34.6	100%	3		55.6	4	100%	21.0	----	--	-
2	50	WTR HTR	34.6	100%	5	55.6		6	100%	21.0	EUH-1 UTIL.	30	2
-	--	----	34.6	100%	7		55.6	8	100%	21.0	----	--	-
1	20	EXT. QUAD REC.	3.0	100%	9	24.0		10	100%	21.0	EUH-1 M.	30	2
1	20	EXT. QUAD REC.	3.0	100%	11		24.0	12	100%	21.0	----	--	-
1	20	SECURITY SYSTEM	3.0	100%	13	4.5		14	100%	1.5	EXT. DUPLEX REC.	20	1
1	20	EX. STAGE RECS [2]	6.0	100%	15		7.5	16	100%	1.5	EXT. DUPLEX REC.	20	1
1	20	EX. STAGE RECS [2]	6.0	100%	17	21.0		18	100%	15.0	SUB PANEL [2]	40	2
1	20	EX. STAGE LIGHTS [2]	6.0	125%	19		22.5	20	100%	15.0	----	--	-
1	20	EX. TRAIL RECS [2]	6.0	100%	21	14.8		22	125%	7.0	EX. LIGHTS [2]	20	1
1	20	BR EXT. LIGHTS	0.7	125%	23		0.9	24	100%	0.0	SPARE	20	1
1	20	BR INT. LIGHTS	3.0	125%	25	3.8		26	100%	0.0	SPARE	20	1
1	20	BATHROOM RECS	3.0	100%	27		3.0	28	100%	0.0	SPARE	20	1
1	20	SOFFIT RECS [1]	3.0	100%	29	3.0		30	100%	0.0	SPARE	20	1
1	20	SOFFIT RECS [1]	3.0	100%	31		3.0	32	100%	0.0	SPARE	20	1
1	20	UTILITY RECS	4.5	100%	33	4.5		34	100%	0.0	SPARE	20	1
1	20	HAND DRYER M [3]	10.0	100%	35		130.0	36	100%	120.0	POWER PEDESTALS W	125	2
1	20	HAND DRYER W [3]	10.0	100%	37	130.0		38	100%	120.0	--	--	-
1	20	PROVISIONAL	0.0	100%	39		120.0	40	100%	120.0	POWER PEDESTALS E	125	2
1	20	PROVISIONAL	0.0	100%	41	120.0		42	100%	120.0	--	--	-
						436.7	422.1						

[1]= GFCI BREAKER
[2]= CIRCUIT REWORKED FROM DEMO'D SITE ELECTRIC PANEL (SEE SHEET E4).
[3]= PROVIDE BREAKER WITH HANDLE LOCK.

SQUARE-D NQ OR EQUAL, SERVICE ENTRANCE RATED, NEMA 3R
SEE SPEC. NOTES

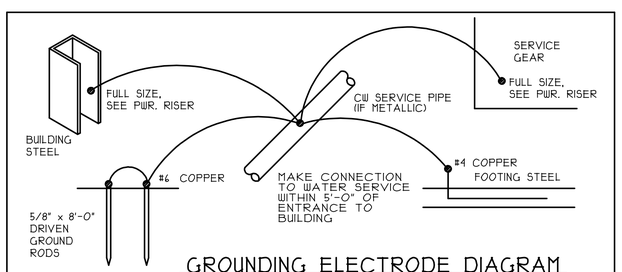
WITH INTEGRAL 160KA TVSS



ADD ALTERNATE: PROVIDE (2) 2.5" C. W/ 3 #350MCM IN EACH FROM C/T CABINET UP TO WEATHERHEADS FOR AN OVERHEAD SERVICE FROM THE POWER COMPANY.

POWER RISER DIAGRAM

NO SCALE



GROUNDING ELECTRODE DIAGRAM

NO SCALE

NOTE:
THIS DIAGRAM IS SCHEMATIC IN NATURE AND IS NOT INTENDED TO BE THE ONLY ACCEPTABLE ROUTING METHOD FOR THE GROUNDING ELECTRODE SYSTEM. ALL ITEMS SHOWN (WHERE AVAILABLE) SHALL BE BONDED TOGETHER

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER/CATALOG NO.	LAMPS & WATTAGE	MOUNTING	REMARKS
1	LITHONIA LIGHTING ZLIN-L48-ASR-5000LM-FST-MVOLT-35K-80CRI-WH	5000 LUMEN LED ARRAY, 34 WATTS	SURFACE	
2	LITHONIA LIGHTING OLCFM-15-DBB	1500 LUMEN LED ARRAY, 12 WATTS	SURFACE	
3	LITHONIA LIGHTING WPX0-LED-ALO-SWW2-MVOLT-PE-DDBXD	SELECTABLE, 13 WATTS	WALL 7'-6" AFF	WITH INTEGRAL PHOTOCELL, NOTE 1
4	GOTHAM LIGHTING EVO6SH-35/10-DF*-SMO-MVOLT-EZ1	1000 LUMEN LED ARRAY, 10 WATTS	RECESSED	NOTE 3
4E	GOTHAM LIGHTING EVO6SH-35/10-DF*-SMO-MVOLT-EZ1	1000 LUMEN LED ARRAY, 10 WATTS	RECESSED	NOTES 2 & 3

SCHEDULE NOTES

-- EQUIVALENT FIXTURES ACCEPTED BY ALTERNATE MANUFACTURERS: SIGNIFY, CREE, AXIS.
-- ALL FINISHES SHALL BE AS SELECTED BY ARCHITECT.

1. ADJUSTIBLE LUMEN & COLOR TEMPERATURE FIXTURE. FIELD ADJUST TO OWNER'S SATISFACTION.
2. PROVIDE FIXTURE WITH REMOTE MOUNTED EMERGENCY DRIVER. LOCATE DRIVER IN UTILITY ROOM AND LABEL AS TO FIXTURE SERVED. BODINE BSL20B2 OR EQUAL. WIRE IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. EMERGENCY LEAD SHALL BE WIRED AHEAD OF ALL NORMAL POWER SWITCHING.
3. VERIFY TRIM COLOR WITH ARCHITECT.

EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	VOLTS	PH	FLA	WIRE	GND	MOCP	DISCONNECT	PNL.&CKT.	REMARKS
1	ELEC. UNIT HEATER	240	1	21.0	2#10	#10	30A	FURNISHED WITH UNIT	SEE PLAN	
2	ELEC. WATER HEATER	240	1	34.6	2#8	#10	50A	2P-60-NFSS	SEE PLAN	

SCHEDULE NOTES

-- VERIFY FINAL CONNECTIONS, ELECTRICAL CHARACTERISTICS, ETC. WITH FINAL EQUIPMENT SELECTIONS. CONTRACTOR IS RESPONSIBLE FOR CORRECTNESS OF ALL BREAKERS, WIRES, ETC.

LIGHTING FIXTURE CONTROLS SYMBOLS LIST

PASSIVE INFRARED DUAL TECHNOLOGY MICROPHONIC LINE VOLTAGE CEILING MOUNT SENSOR, EXTENDED RANGE TYPE

AFF ABOVE FINISHED FLOOR

LIST NOTES

1. ACCEPTABLE MANUFACTURERS SHALL BE DOUGLAS, LEVITON AND SENSOR SWITCH.
2. ALL COMPONENTS AND WIRING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
3. ADJUST SENSITIVITY, OVERRIDE SWITCHES (WHERE APPLICABLE) AND TIME DELAYS TO THE SATISFACTION OF THE OWNER.

SYMBOLS LIST

- A-1 — OUTLET FOR CEILING OR WALL MOUNTED LED LIGHTING FIXTURE WITH CIRCUIT NUMBER
- A-1 — OUTLET FOR CEILING OR WALL MOUNTED LED LIGHTING FIXTURE WITH BATTERY BACKUP, WITH CIRCUIT NUMBER
- A-1 — OUTLET FOR CEILING OR WALL MOUNTED LED LIGHTING FIXTURE WITH CIRCUIT NUMBER
- A-1 — OUTLET FOR CEILING OR WALL MOUNTED EMERGENCY EGRESS LIGHTING FIXTURE WITH BATTERY BACKUP WITH CIRCUIT NUMBER
- 1 — LIGHTING FIXTURE TYPE SEE SCHEDULE
- A-1 — GENERAL PURPOSE DUPLEX RECEPTACLE AT 18" AFF TO BOTTOM OF BOX WITH CIRCUIT NUMBER
- GFCI A-1 — GROUND FAULT CIRCUIT INTERRUPTER AT 18" AFF TO BOTTOM OF BOX WITH CIRCUIT NUMBER
- A-1 — GENERAL PURPOSE QUADRAPLEX RECEPTACLE AT 18" AFF TO BOTTOM OF BOX, WITH CIRCUIT NUMBER
- S — SINGLE POLE WALL SWITCH AT 48" AFF TO TOP OF BOX
- J — JUNCTION BOX AT 18" AFF TO BOTTOM OF BOX OR AT ASSOCIATED PIECE OF EQUIPMENT
- EF — EXHAUST FAN (120V-1PH) FURNISHED AND INSTALLED BY HVAC WIRED BY ELECTRICAL
- POWER PEDESTAL, SEE SPECIFICATION NOTES ON SHEET E1
- A-1 PC — PHOTOCELL, LOCATE IN ACCESSIBLE LOCATION AND SHIELD FROM SURROUNDING LIGHT SOURCES, WITH CIRCUIT NUMBER
- PANELBOARD
- X — DRAWING NOTE TAG
- 20 — EQUIPMENT CONNECTION DESIGNATION SEE SCHEDULE
- SWITCH LEG WIRING, 2 #12 - CROSS MARKS INDICATE NUMBER OF CONDUCTORS IF MORE THAN TWO
- AFF — ABOVE FINISHED FLOOR
- C/EC — CONDUIT/EMPTY CONDUIT
- EUH — ELECTRIC UNIT HEATER
- FSS/NFSS — FUSIBLE/NON-FUSIBLE SAFETY SWITCH
- WP — WEATHERPROOF

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COMMONWEALTH OF VIRGINIA
WESLEY FRANKLIN SIEVER
Lic. No. 0402 043863
12/12/22
PROFESSIONAL ENGINEER

PROJECT NO.: 22070

MARK	DATE	DESCRIPTION
	12/12/22	PERMIT DRAWINGS

E2
ELEC. RISER AND SCHEDS.
12/15/2022 11:53 AM

GENERAL DRAWING NOTES

-- WIRE ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT FROM ABOVE TO AVOID FLOODPLAIN. ALL ELECTRICAL DEVICES AND PANELS SHALL BE A MINIMUM OF 24" ABOVE FLOOR.

X KEYED DRAWING NOTES

1. JUNCTION BOX FOR SECURITY SYSTEM CONTROL PANEL. VERIFY EXACT LOCATION AND POINT OF CONNECTION WITH OWNER PRIOR TO ROUGH-IN.

2. VERIFY LOCATION OF WALL SWITCH WITH OWNER PRIOR TO ROUGH-IN. LABEL SWITCHES "SOFFIT RECEPTACLES".

3. ROUTE 3" CONDUIT STUBBED UP INTO UTILITY ROOM TO COMMUNICATIONS SERVICE DEMARK LOCATION. VERIFY EXACT POINT OF TERMINATION AND REQUIREMENTS WITH OWNER. BID ALLOWANCE: $4,000.00.

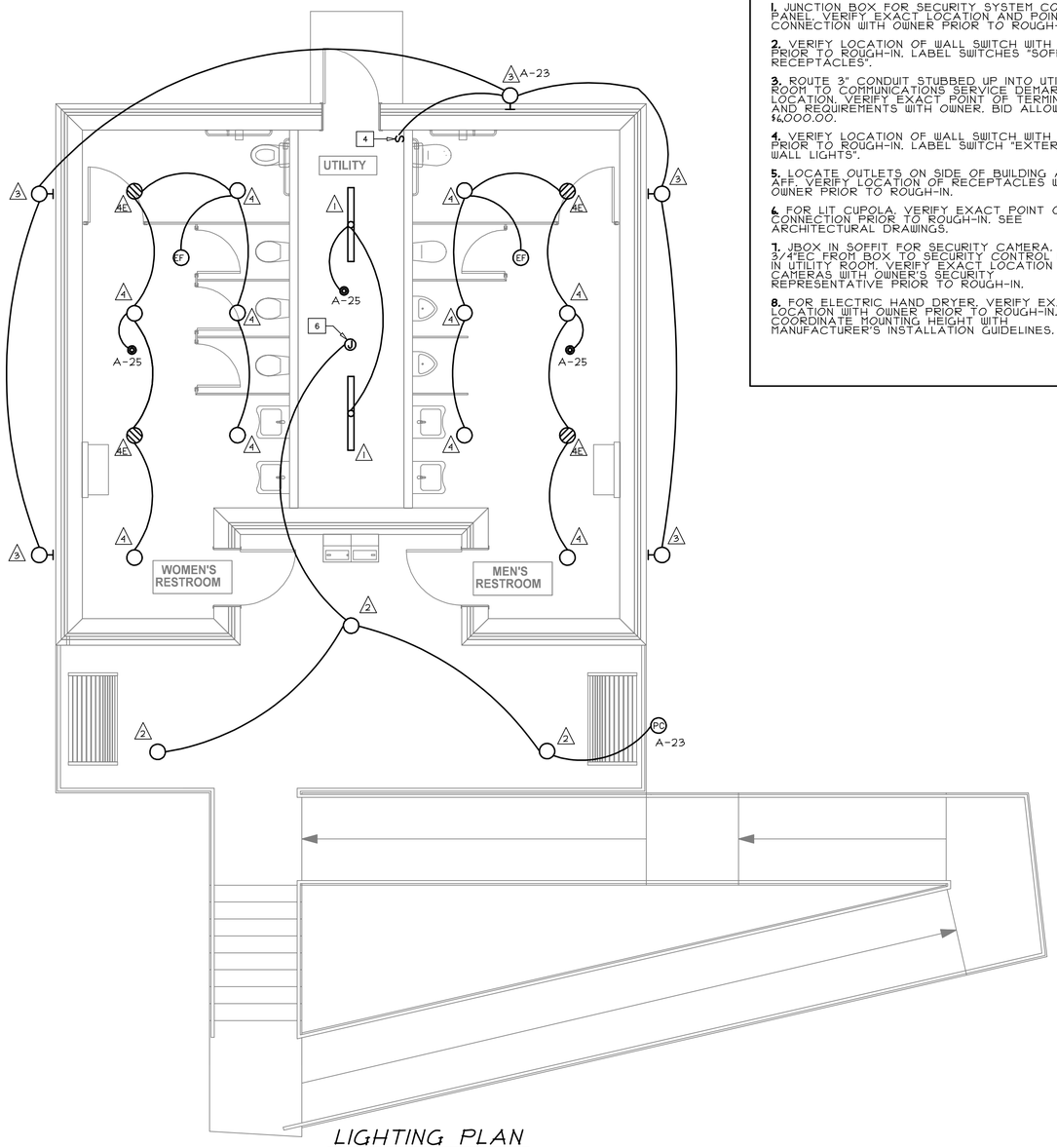
4. VERIFY LOCATION OF WALL SWITCH WITH OWNER PRIOR TO ROUGH-IN. LABEL SWITCH "EXTERIOR WALL LIGHTS".

5. LOCATE OUTLETS ON SIDE OF BUILDING AT 48" AFF. VERIFY LOCATION OF RECEPTACLES WITH OWNER PRIOR TO ROUGH-IN.

6. FOR LIT CUPOLA. VERIFY EXACT POINT OF CONNECTION PRIOR TO ROUGH-IN. SEE ARCHITECTURAL DRAWINGS.

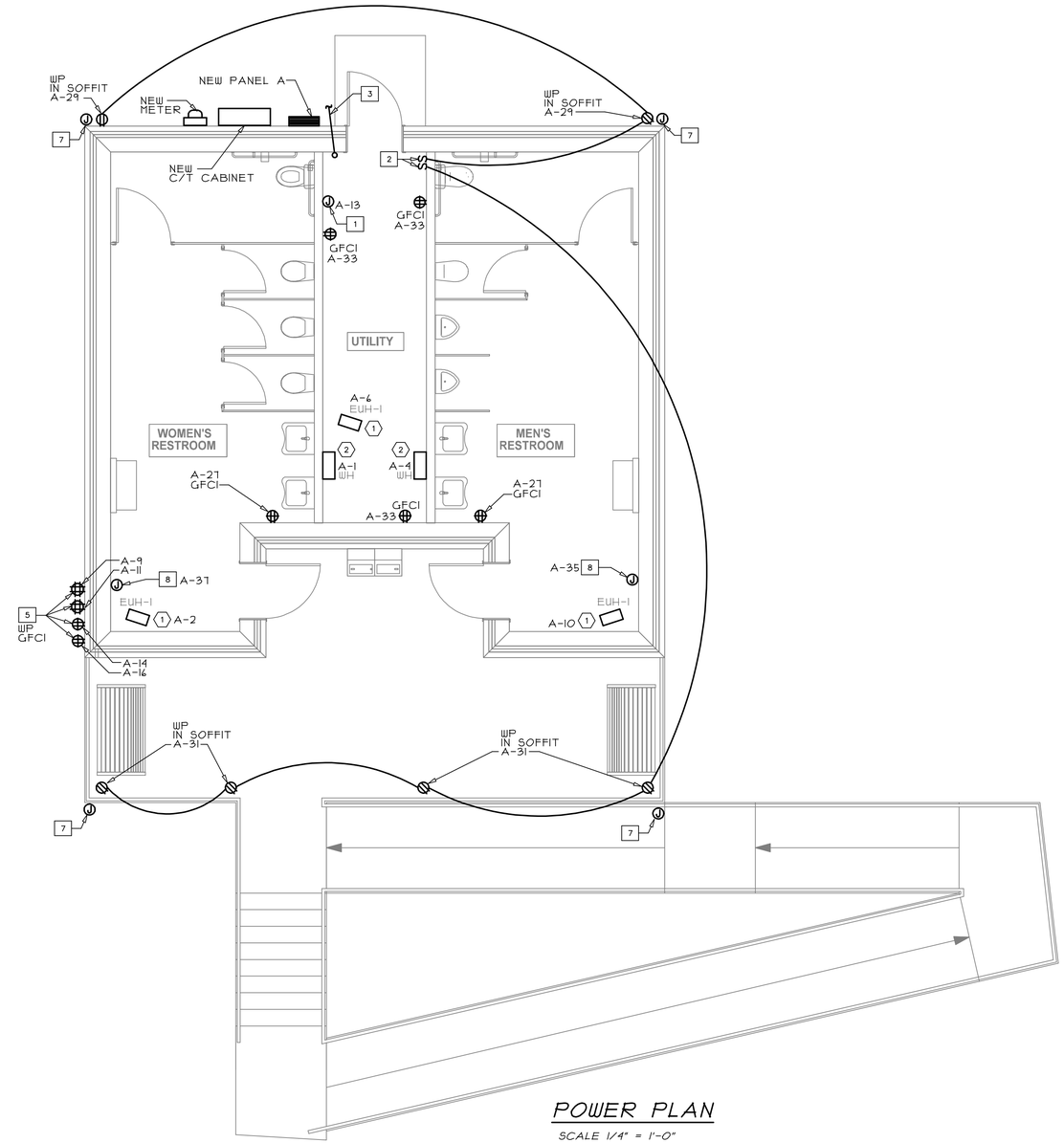
7. JBOX IN SOFFIT FOR SECURITY CAMERA. ROUTE 3/4"EC FROM BOX TO SECURITY CONTROL PANEL IN UTILITY ROOM. VERIFY EXACT LOCATION FOR CAMERAS WITH OWNER'S SECURITY REPRESENTATIVE PRIOR TO ROUGH-IN.

8. FOR ELECTRIC HAND DRYER. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. COORDINATE MOUNTING HEIGHT WITH MANUFACTURER'S INSTALLATION GUIDELINES.



LIGHTING PLAN

SCALE 1/4" = 1'-0"



POWER PLAN

SCALE 1/4" = 1'-0"

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MARK	DATE	DESCRIPTION
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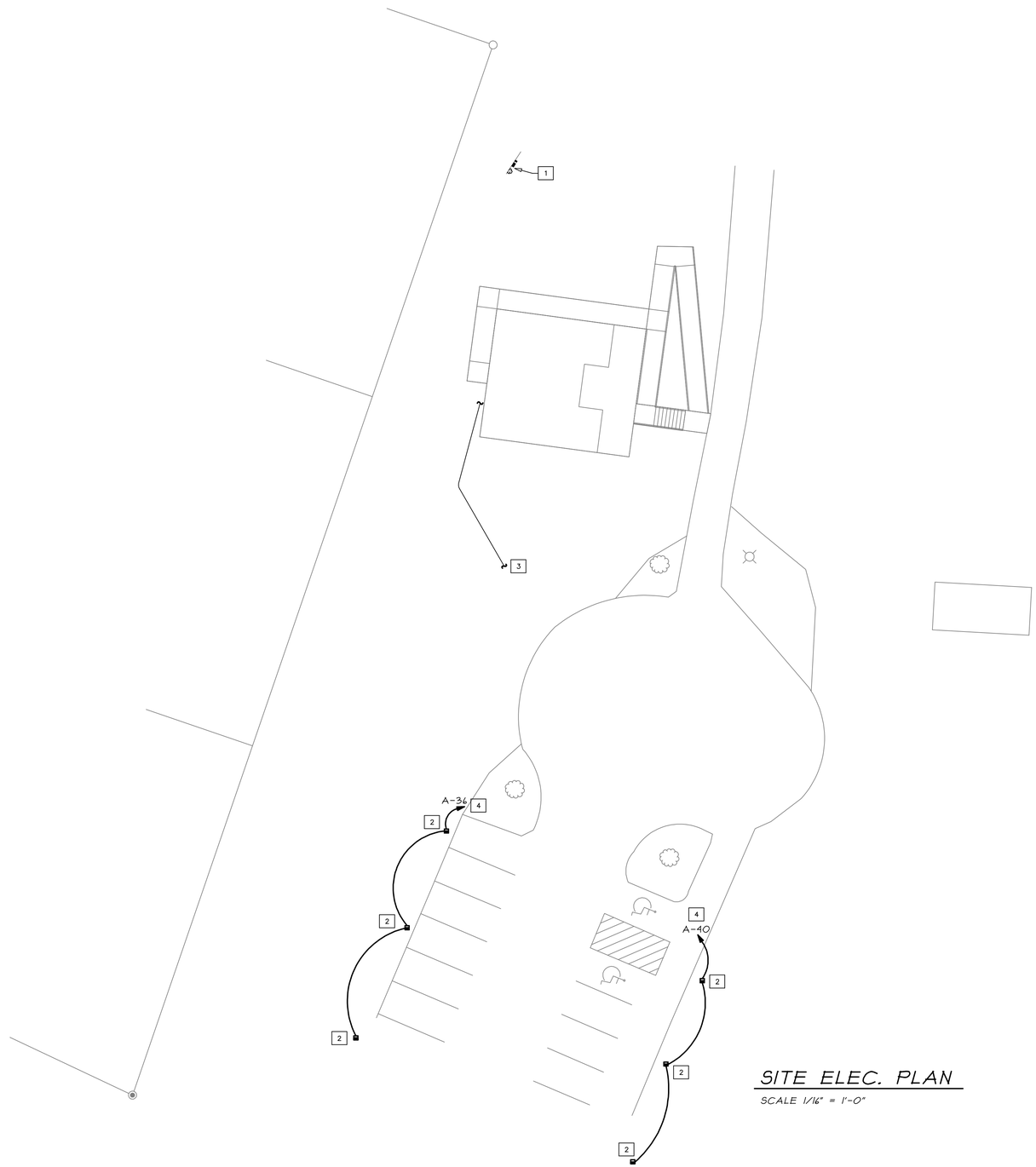
E3
ELECTRICAL PLANS
12/15/2022 11:50 AM



SITE ELEC. PLAN

SCALE 1/16" = 1'-0"

X KEYED DRAWING NOTES

1. REMOVE EXISTING ELECTRICAL POWER BACKBOARD, SERVICE, DEVICES, AND EQUIPMENT THIS LOCATION. REWORK BRANCH CIRCUITS & EMPTY CONDUITS SERVED FROM REMOVED PANELBOARD TO NEW PANEL A ON NEW RESTROOM BUILDING. EXTEND BRANCH CIRCUIT WIRING AND RECONNECT TO NEW CIRCUIT BREAKERS.

2. POWER OUTLET PEDESTAL FOR FOOD TRUCK. SEE SPECIFICATIONS ON SHEET E1 FOR DETAILS. VERIFY FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.

3. ROUTE 2"EC FROM NEW PANEL A TO STUB OUT INTO YARD AREA NEAR CUL-DE-SAC FOR FUTURE USE. CAP AND MARK END WITH DRIVEN IRON PIN. LEAVE WITH PULL STRING. COORDINATE EXACT TERMINATION POINT WITH OWNER PRIOR TO ROUGH-IN.

4. WIRE EACH PEDESTAL LOOP WITH 3#1+#6 GND COPPER.

MARK	DATE	DESCRIPTION
	12/12/22	PERMIT DRAWINGS

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E4

SITE ELEC. PLAN

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