

TABLE OF CONTENTS FOR RFB NO. 317028 (REBID)

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

- Project Manual Cover Page
- Table of Contents
- Advertisement for Bids (Legal Notice)
- Best Value Contracting Application
- Instructions to Bidders
- Bid Form
- Fair Labor Practices Certification
- Sample Public Works Contract
- Sample Bid Bond
- Sample Performance Bond
- Sample Payment Bond
- Equal Benefits Compliance Payment Certification
- Supplementary Conditions

DIVISION 01 – GENERAL REQUIREMENTS

- 01 00 00 – Basic Requirements
- 01 23 00 – Alternates
- 01 57 13 – Construction Site Erosion Control
- 01 74 19 – Construction Waste Management, Disposal & Recycling

DIVISION 03 – CONCRETE

- 03 30 00 – Cast-in-Place Concrete

DIVISION 04 – MASONRY

- 04 23 00 – Glass Unit Masonry

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

- 06 10 00 – Rough Carpentry & Subflooring
- 06 40 23 – Interior Architectural Woodwork
- 06 64 00 – Plastic Paneling

DIVISION 07 – THERMAL & MOISTURE PROTECTION


- 07 21 00 – Thermal Insulation
- 07 81 23 – Intumescent Mastic Fireproofing Coatings

DIVISION 08 – OPENINGS

- 08 11 13 – Hollow Metal Doors and Frames
- 08 14 16 – Flush Wood Doors
- 08 71 00 – Door Hardware
- 08 83 00 – Mirrors

DIVISION 09 – FINISHES

- 09 29 00 – Gypsum Board
- 09 30 00 – Tiling
- 09 51 23 – Acoustical Tile Ceilings
- 09 65 13 – Resilient Base & Accessories
- 09 91 23 – Interior Painting



**DANE COUNTY DEPT. OF
PUBLIC WORKS, HIGHWAY &
TRANSPORTATION**

1919 Alliant Energy Center Way
Madison, Wisconsin 53713
Office: 608/266-4018 ♦ Fax: 608/267-1533
Public Works Engineering Division
Public Works Solid Waste Division

ADDENDUM

December 15, 2017

ATTENTION ALL REQUEST FOR BID(RFB) HOLDERS

RFB NO. 317028 - ADDENDUM NO. 1

SCHUMACHER BARN REMODEL/SITE IMPROVEMENTS (REBID)

BIDS DUE: THURSDAY, JANUARY 4, 2018, 2:00 PM. DUE DATE AND TIME ARE NOT CHANGED BY THIS ADDENDUM.

This Addendum is issued to modify, explain or clarify the original Request for Bid (RFB) and is hereby made a part of the RFB. Please attach this Addendum to the RFB.

PLEASE MAKE THE FOLLOWING CHANGES:

- 1. Table of Contents**
Delete current Table of Contents; replace with new Table of Contents, issued with this Addendum.
- 2. Bid Form**
Delete current Bid Form and replace with new Bid Form issued with this Addendum.
- 3. Sample Public Works Contract**
Delete Sample Public Works Contract and Replace with the new Sample Public Works Contract.
- 4. ALL Spec sections Div 03 through Div 28 should be numbered RFB317028.**
- 5. Section 01 00 00**
Delete current Section 01 00 00; replace with new Section 01 00 00 issued with this addendum
- 6. Section 01 23 00**
Insert Section 01 23 00 Alternates Section, issued with this Addendum.
- 7. Section 08 71 00**
Page 12 Item 3.3 Hardware Sets: Set 09: After this item insert the following:

SET 10

Door 108

2	EA	SURFACE CLOSER	4111 CUSH	689	LCN
2	EA	AUTOMATIC FLUSH BOLT	FB31P	630	IVE
2	EA	LEVER SET	JAL	626	SCH
1	EA	COORDINATOR	COR72	626	IVE

8. Section 21 00 00

Replace current Specification Section 21 00 00 "Fire Protection Systems" with new Specification Section 21 00 00 "Fire Protection Systems" issued with this Addendum.

Fire Pump has been added.

9. Sheet C1.1 - LEGEND & NOTES

Delete current Sheet C1.2 and replace with new Sheet C1.2, issued with this Addendum

10. Sheet C1.0 - EXISTING SITE PLAN

Delete current Sheet C1.0 and replace with new Sheet C1.0, issued with this Addendum

11. Sheet C2.0 - OVERALL PROPOSED SITE PLAN

Delete current Sheet C2.0 and replace with new Sheet C2.0, issued with this Addendum

12. Sheet C2.1 - PROPOSED SITE PLAN

Delete current Sheet C2.1 and replace with new Sheet C2.1, issued with this Addendum

13. Sheet C3.0 - PROPOSED GRADING SITE PLAN

Delete current Sheet C3.0 and replace with new Sheet C3.0, issued with this Addendum

14. Sheet C4.0 - UTILITY SITE PLAN

Delete current Sheet C4.0 and replace with new Sheet C4.0, issued with this Addendum

15. Sheet C4.1 - STORMWATER DEVICES DETAILS

Delete current Sheet C4.1 and replace with new Sheet C4.1, issued with this Addendum

16. Sheet C5.0 - SPOT ELEVATION SITE PLAN-ROAD

Delete current Sheet C5.0 and replace with new Sheet C5.0, issued with this Addendum

17. Sheet C5.1 - SPOT ELEVATION SITE PLAN - PROJECT

Delete current Sheet C5.1 and replace with new , issued with this Addendum

18. Sheet C6.0 - MISC.CONSTRUCTION DETAILS

Delete current Sheet C6.0 and replace with new Sheet C6.0, issued with this Addendum

19. Sheet C7.0 - WATERMAIN CONSTRUCTION DETAILS

Delete current Sheet C7.0 and replace with new Sheet C7.0, issued with this Addendum

20. Sheet C8.0 - EROSION CONTROL DETAILS

Delete current Sheet C8.0 and replace with new Sheet C8.0, issued with this Addendum

21. Sheet C9.0 - EROSION CONTROL SPECIFICATIONS

Delete current Sheet C9.0 and replace with new Sheet C9.0, issued with this Addendum

22. Sheet G0.1 - COVER SHEET - ARCHITECTURAL

Delete current Sheet G0.1 and replace with new Sheet G0.1, issued with this Addendum

Revised RFB Number

Added "Addendum 1" and date

23. Sheet A5.0 - RESTROOM PLANS AND KITCHENETTE ELEVATIONS - ARCHITECTURAL

Delete current Sheet A5.0 and replace with new Sheet A5.0, issued with this Addendum
Revised detail 7-FIRE SPRINKLER ROOM SECTION
Revised detail 6-FIRE SPRINKLER ROOM PLAN

24. Sheet A6.0 - DOOR AND WALL TYPES AND SCHEDULES - ARCHITECTURAL

Delete current Sheet A6.0 and replace with new Sheet A6.0, issued with this Addendum
Revised door 108

25. Sheet A8.0 - DETAILS - ARCHITECTURAL

Modify current Sheet A8.0, Detail 1 as follows:
Remove Ceiling Type "c1"

26. Sheet FP1.1 - GROUND FLOOR PLAN – FIRE PROTECTION

Delete current Sheet FP1.1 and replace with new Sheet FP1.1, issued with this Addendum
Added Fire Pump assembly in new room – Fire Pump 108.

27. Sheet P1.1 - FLOOR PLANS – PLUMBING

Delete current Sheet P1.1 and replace with new Sheet P1.1, issued with this Addendum.
Added floor drain in Fire Pump 108.

28. Sheet P2.0 - PLUMBING RISERS, SCHEDULES & DETAILS

Delete current Sheet P2.0 and replace with new Sheet P2.0, issued with this Addendum.
Modified water pressure service to 32 psig and related water sizing calculations.
Modified waste and water risers.

29. Sheet H1.1 - GROUND FLOOR PLANS – HVAC

Delete current Sheet H1.1 and replace with new Sheet H1.1, issued with this Addendum.
Added Fire Pump 108.

30. Sheet H1.3 - GROUND FLOOR PLAN – RADIANT HEAT

Delete current Sheet H1.3 and replace with new Sheet H1.3, issued with this Addendum.
Modified radiant floor for Fire Pump 108.

31. Sheet H2.0 - HVAC SCHEDULES

Delete current Sheet H2.0 and replace with new Sheet H2.0, issued with this Addendum..
Modified radiant floor schedules.

32. Sheet E1.1 - GROUND FLOOR PLANS - ELECTRICAL

Delete current Sheet E1.1 and replace with new Sheet E1.1, issued with this Addendum.
Disconnect existing 1-phase service and panelboard.
Revised electric service to 3-phase with fire pump feeder.
Modified electrical plans for Fire Pump 108, fire and jockey pumps, and related fire alarm requirements.

33. Sheet E1.2 - ATTIC FLOOR PLANS - ELECTRICAL

Delete current Sheet E1.2 and replace with new Sheet E1.2, issued with this Addendum.
Deleted upper attic lights and associated switch.

34. Sheet E2.0 - ELECTRICAL SCHEDULE

Delete current Sheet E2.0 and replace with new Sheet E2.0, issued with this Addendum.
Revised Panel 'A' to 3-phase and 60-pole panel with jockey pump feeder.
Added fire pump and jockey pumps to motor equipment schedules.

35. Sheet E3.0 - ELECTRICAL DETAILS

Addendum No. 1

Delete current Sheet E3.0 and replace with new Sheet E3.0, issued with this Addendum.
Modified electric riser for 3-phase with fire pump feeder.

36. Sheet SE1.0 - SITE ELECTRICAL PLAN

Delete current Sheet SE1.0 and replace with new Sheet SE1.0, issued with this Addendum.
Added new transformer location and new meter location.

If any additional information about this Addendum is needed, please call Eric Urtes, AIA – Project Manager at 608/266-4798, urtes.eric@countyofdane.com. or Ryan Shore, CPESC at 608/266-4475 shore@countyofdane.com

Sincerely,

JJ. Eric Urtes, AIA and Ryan Shore, CPESC
Project Managers

Enclosures:

Bid Table of Contents
Bid Form
Public Works Construction Contract Sample
Section 01 00 00
Section 01 20 00
Section 01 23 00
Section 21 00 00
Sheet G1.1
Sheet C1.0
Sheet C2.0
Sheet C2.1
Sheet C3.0
Sheet C4.0
Sheet C4.1
Sheet C5.0
Sheet C5.1
Sheet C6.0
Sheet C7.0
Sheet C8.0
Sheet C9.0
Sheet G0.1
Sheet A5.0
Sheet A6.0
Sheet FP1.1
Sheet FP1.2
Sheet P1.1
Sheet P2.0
Sheet H1.1
Sheet H1.2
Sheet H1.3
Sheet H2.0
Sheet H3.0
Sheet E1.1
Sheet E1.2
Sheet E2.0
Sheet E3.0
Sheet SE1.0
Pre-Bid Site Tour Attendee List

DIVISION 10 – SPECIALTIES

- 10 21 13 – Toilet Compartments
- 10 28 00 – Toilet & Bath Accessories
- 10 44 16 – Fire Extinguishers, Cabinets and Accessories

DIVISION 21 – FIRE SUPPRESSION

- 21 00 00 – Fire Protection Systems

DIVISION 22 – PLUMBING

- 22 00 00 – Plumbing

DIVISION 23 – HVAC

- 23 00 00 – HVAC

DIVISION 26 – ELECTRICAL

- 26 00 00 – Electrical

DIVISION 28 – ELECTRONIC SAFETY & SECURITY

- 28 30 00 – Fire Alarm Systems

DIVISION 31 – EARTHWORK

- 31 22 00 – Site Preparation and Earthwork
- 31 23 33 – Utility Excavation, Backfill and Compaction
- 31 37 16 - Riprap

DIVISION 32 – EXTERIOR IMPROVEMENTS

- 32 11 23 – Crushed Aggregate Base Course
- 32 12 16 – Asphaltic Concrete Pavement
- 32 13 13 – Concrete Sidewalk
- 32 17 23 – Pavement Markings
- 32 92 19 – Soil Preparation and Seeding

DIVISION 33 – UTILITIES

- 33 11 13 - Water Main Construction
- 33 41 13 – Storm Sewer Construction

DRAWINGS

Plot drawings on (ARCH C), 22” x 34” paper for correct scale or size.

CIVIL

- G1.0 – TITLE PAGE
- G1.1 – LEGEND & NOTES
- C1.0 – EXISTING SITE PLAN
- C2.0 – OVERALL PROPOSED SITE PLAN
- C2.1 – PROPOSED SITE PLAN
- C3.0 – PROPOSED GRADING SITE PLAN
- C4.0 – UTILITY SITE PLAN
- C4.1 – STORMWATER DEVICES DETAILS
- C5.0 – SPOT ELEVATION SITE PLAN-ROAD
- C5.1 – SPOT ELEVATION SITE PLAN-PROJECT
- C6.0 – MISC. CONSTRUCTION DETAILS
- C7.0 – WATERMAIN CONSTRUCTION DETAILS

C8.0 – EROSION CONTROL DETAILS
C9.0 – EROSION CONTROL SPECIFICATIONS

ARCHITECTURAL

G0.1 – COVER SHEET
A1.1 – FLOOR PLANS AND REFLECTED CEILING PLAN
A3.0 – BUILDING SECTIONS
A5.0 – RESTROOM PLANS AND KITCHENETTE ELEVATIONS
A6.0 – DOOR AND WALL TYPES AND SCHEDULES
A7.0 – INTERIOR ELEVATIONS
A9.0 – FLOOR FINISH PLAN

FIRE PROTECTION

FP1.1 – GROUND FLOOR PLAN – FIRE PROTECTION
FP1.2 – ATTIC FLOOR PLANS – FIRE PROTECTION

PLUMBING

P1.1 – FLOOR PLANS – PLUMBING
P2.0 – PLUMBING RISERS, SCHEDULES & DETAILS

HVAC

H1.1 – GROUND FLOOR PLANS – HVAC
H1.2 – ATTIC FLOOR PLANS – HVAC
H1.3 – GROUND FLOOR PLAN – RADIANT HEAT
H2.0 – HVAC SCHEDULES
H3.0 – HVAC DETAILS

ELECTRICAL

E1.1 – GROUND FLOOR PLANS – ELECTRICAL
E1.2 – ATTIC FLOOR PLANS – ELECTRICAL
E2.0 – ELECTRICAL SCHEDULES
E3.0 – ELECTRICAL DETAILS
SE1.0 – SITE ELECTRICAL PLAN

Name of Bidding Firm: _____

BID FORM

BID NO. 317028

**PROJECT: SCHUMACHER FARM COUNTY PARK SITE IMPROVEMENTS
SCHUMACHER FARM COUNTY PARK**

**TO: DANE COUNTY DEPARTMENT OF PUBLIC WORKS, HIGHWAY &
TRANSPORTATION PROJECT MANAGER
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713**

**NOTE: WISCONSIN STATUTE 77.54 (9M) ALLOWS FOR NO SALES & USE TAX ON
THE PURCHASE OF MATERIALS FOR COUNTY PUBLIC WORKS PROJECTS.**

BASE BID - LUMP SUM:

Dane County is inviting Bids for construction services at Schumacher Farm County Park. The project will include roadway grading, roadway paving, basin grading, seeding, and other assorted project tasks as outlined in the construction documents. The undersigned, having examined the site where the Work is to be executed and having become familiar with local conditions affecting the cost of the Work and having carefully examined the Drawings and Specifications, all other Construction Documents and Addenda thereto prepared by Dane County Department of Public Works, Highway & Transportation hereby agrees to provide all labor, materials, equipment and services necessary for the complete and satisfactory execution of the entire Work, as specified in the Construction Documents, for the Base Bid stipulated sum of:

_____ and _____ /100 Dollars
Written Price

\$ _____
Numeric Price

ALTERNATE BID 1 - LUMP SUM:

State the amount to be added to the base bid for all work associated with installing colored concrete in Gathering Space 100 and Kitchenette 105. Base bid is for sealed concrete for these two rooms.

_____ and _____ /100 Dollars
Written Price

\$ _____
Numeric Price (Add)

ALTERNATE BID 2 - LUMP SUM:

State the amount to be added to the base bid for all work associated with furnishing and installing in the kitchenette 105:

- 1. Cabinetry equivalent to Dura Supreme® Homestead Panel Full Overlay in hickory wood species in natural finish,

2. Plastic laminate countertop,
3. Elkay® Lustertone stainless steel 33" x 22" x 6-1/2" equal double bowl top mount sink model LRAD332265PD with Moen® Belfield two-handle faucet model 7250 in spot resistant stainless finish, and electrical light fixture D.

Base bid has these items furnished and installed by Others.

_____ and _____ /100 Dollars
 Written Price

\$ _____
 Numeric Price (Add)

ALTERNATE BID 3 - LUMP SUM:

State the amount to be added to the base bid to furnish and install low voltage wiring and devices from the phone and data outlets to the phone and data service location in Mechanical Room 103; to furnish and install low voltage wiring from electric door strike E100 and E102 to Office 104 west wall location and to provide the software system with training for controlling the locking and unlocking of these doors. Base bid is for these items to be furnished and installed by Others.

_____ and _____ /100 Dollars
 Written Price

\$ _____
 Numeric Price (Add)

ALTERNATE BID 4 - LUMP SUM:

State the amount to be added to the base bid for all work associated with installing in-floor radiant heating. Base bid is for non-heated slabs.

_____ and _____ /100 Dollars
 Written Price

\$ _____
 Numeric Price (Add)

ALTERNATE BID 5 - LUMP SUM:

State the amount to be added to the base bid for all work associated with re-staining the exterior siding (including trim) of the building in a matching color.

_____ and _____ /100 Dollars
 Written Price

\$ _____
 Numeric Price (Add)

Receipt of the following addenda and inclusion of their provisions in this Bid is hereby acknowledged:

Addendum No(s). _____ through _____

Dated _____

Dane County Land and Water Resources Department must have this project completed by September 15, 2018. Assuming this Work can be started by February 6, 2018, what dates can you commence and complete this job?

Commencement Date: _____ Completion Date: _____
(final, not substantial)

I hereby certify that all statements herein are made on behalf of:

(Name of Corporation, Partnership or Person submitting Bid)

Select one of the following:

- 1. A corporation organized and existing under the laws of the State of _____, or
- 2. A partnership consisting of _____, or
- 3. A person conducting business as _____;

Of the City, Village, or Town of _____ of the State of _____.

I have examined and carefully prepared this Bid from the associated Construction Documents and have checked the same in detail before submitting this Bid; that I have full authority to make such statements and submit this Bid in (its) (their) (my) behalf; and that the said statements are true and correct. In signing this Bid, we also certify that we have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition; that no attempt has been made to induce any other person or firm to submit or not to submit a Bid; that this Bid has been independently arrived at without collusion with any other bidder, competitor, or potential competitor; that this Bid has not been knowingly disclosed prior to the Bids Due Date to another bidder or competitor; that the above statement is accurate under penalty of perjury.

The undersigned further agrees to honor the Base Bid and the Alternate Bid(s) for sixty (60) calendar days from date of Award of Contract.

SIGNATURE: _____
(Bid is invalid without signature)

Print Name: _____ Date: _____

Title: _____

Address: _____

Telephone No.: _____ Fax No.: _____

Email Address: _____

Contact Person: _____

THIS PAGE IS FOR BIDDERS' REFERENCE AND NEED NOT BE SUBMITTED WITH BID FORM.

BID CHECK LIST:

These items **must** be included with Bid:

- Bid Form Bid Bond Fair Labor Practices Certification
 Project Experience / Reference Summary - Attach additional sheet(s) as needed.

BIDDERS SHOULD BE AWARE OF THE FOLLOWING:

DANE COUNTY VENDOR REGISTRATION PROGRAM

Any person bidding on any County contract must be registered with the Dane County Purchasing Division & pay an annual registration fee. A contract will not be awarded to an unregistered vendor. Obtain a *Vendor Registration Form* by calling 608/266-4131 or complete a new form or renewal online at:
www.danepurchasing.com/registration

DANE COUNTY BEST VALUE CONTRACTING PRE-QUALIFICATION

Contractors must be pre-qualified as a Best Value Contractor with the Dane County Public Works Engineering Division before the award of contract. Obtain a *Best Value Contracting Application* by calling 608/266-4018 or complete one online at:
www.countyofdane.com/pwht/BVC_Application.aspx

EQUAL BENEFITS REQUIREMENT

By submitting a Bid, the contractor acknowledges that a condition of this contract is to provide equal benefits as required by Dane County Code of Ordinances Chapter 25.13. Contractor shall provide equal benefits as required by that Ordinance to all required employees during the term of the contract. Equal Benefits Compliance Payment Certification shall be submitted with final pay request. For more information:
www.danepurchasing.com/partner_benefit.aspx

COUNTY OF DANE

PUBLIC WORKS CONSTRUCTION CONTRACT

Contract No. _____ Bid No. 316028 (REBID)

Authority: 2017 RES - _____

THIS CONTRACT, made and entered into as of the date by which authorized representatives of both parties have affixed their signatures, by and between the County of Dane (hereafter referred to as "COUNTY") and _____ (hereafter, "CONTRACTOR"), and

WITNESSETH:

WHEREAS, COUNTY, whose address is c/o Assistant Public Works Director, 1919 Alliant Energy Center Way, Madison, WI 53713, desires to have CONTRACTOR provide Schumacher Farm County Park Site Improvements, including Alternate Bids 1,2,3,4 & 5 (if accepted); ("the Project"); and

WHEREAS, CONTRACTOR, whose address is _____ is able and willing to construct the Project, in accordance with the Construction Documents;

NOW, THEREFORE, in consideration of the above premises and the mutual covenants of the parties hereinafter set forth, the receipt and sufficiency of which is acknowledged by each party for itself, COUNTY and CONTRACTOR do agree as follows:

1. CONTRACTOR agrees to construct, for the price of \$ _____ the Project and at the CONTRACTOR'S own proper cost and expense to furnish all materials, supplies, machinery, equipment, tools, superintendence labor, insurance, and other accessories and services necessary to complete the Project in accordance with the conditions and prices stated in the Bid Form, General Conditions of Contract, the drawings which include all maps, plats, plans, and other drawings and printed or written explanatory matter thereof, and the specifications therefore as prepared by Dimension IV, Inc. (DIM IV) and General Engineering Company (hereinafter referred to as "the Architect / Engineer"), and as enumerated in the Project Manual Table of Contents, all of which are made a part hereof and collectively evidence and constitute the Contract.
2. COUNTY agrees to pay the CONTRACTOR in current funds for the performance of the Contract subject to additions and deductions, as provided in the [General Conditions of Contract, Conditions of Contract], and to make payments on account thereof as provided in Article entitled, "Payments to Contractor" of the [General Conditions of Contract, Conditions of Contract].
3. During the term of this Contract, CONTRACTOR agrees to take affirmative action to ensure equal employment opportunities. The CONTRACTOR agrees in accordance with Wisconsin Statute 111.321 and Chapter 19 of the Dane County Code of Ordinances not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs.

Such equal opportunity shall include, but not be limited to, the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation. CONTRACTOR agrees to post in conspicuous places, available to all employees and applicants for employment, notices setting forth the provisions of this paragraph.

4. CONTRACTOR shall file an Affirmative Action Plan with the Dane County Contract Compliance Officer in accord with Chapter 19 of the Dane County Code of Ordinances. CONTRACTOR must file such plan within fifteen (15) business days of the effective date of this Contract. During the term of this Contract CONTRACTOR shall also provide copies of all announcements of employment opportunities to COUNTY'S Contract Compliance Office, and shall report annually the number of persons, by race, ethnicity, gender, and disability status, which apply for employment and, similarly classified, the number hired and number rejected.

5. During the term of this Contract, all solicitations for employment placed on CONTRACTOR'S behalf shall include a statement to the effect that CONTRACTOR is an "Equal Opportunity Employer".

6. CONTRACTOR agrees to comply with provisions of Chapter 25.13 of the Dane County Code of Ordinances, which pertains to domestic partnership benefits.

7. CONTRACTOR agrees to furnish all information and reports required by COUNTY'S Contract Compliance Officer as the same relate to affirmative action and nondiscrimination, which may include any books, records, or accounts deemed appropriate to determine compliance with Chapter 19, Dane County Code of Ordinances, and the provisions of this Contract.

8. This Contract is intended to be a Contract solely between the parties hereto and for their benefit only. No part of this Contract shall be construed to add to, supplement, amend, abridge or repeal existing rights, benefits or privileges of any third party or parties including, but not limited to, employees of either of the parties.

9. The entire agreement of the parties is contained herein and this Contract supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that the express terms of this Contract shall not be amended in any fashion except in writing, executed by both parties.

10. CONTRACTOR must be pre-qualified as a Best Value Contractor with Dane County Public Works Engineering Division before award of Contract. Subcontractors must be pre-qualified ten (10) business days prior to commencing Work under this Contract.

IN WITNESS WHEREOF, COUNTY and CONTRACTOR, by their respective authorized agents, have caused this Contract and its Schedules to be executed, effective as of the date by which all parties hereto have affixed their respective signatures, as indicated below.

* * * * *

FOR CONTRACTOR:

Signature Date

Printed or Typed Name and Title

Signature Date

Printed or Typed Name and Title

NOTE: If CONTRACTOR is a corporation, Secretary should attest. In accordance with IRS Regulations, unincorporated entities are required to provide either their Social Security or Employer Number in order to receive payment for services rendered.

* * * * *

This Contract is not valid or effectual for any purpose until approved by the appropriate authority designated below, and no work is authorized until the CONTRACTOR has been given notice to proceed by COUNTY'S Assistant Public Works Director.

FOR COUNTY:

Joseph T. Parisi, County Executive Date

Scott McDonell, County Clerk Date

SECTION 01 00 00
BASIC REQUIREMENTS

PART 1 GENERAL

1.1 SECTION SUMMARY

- A. Section Includes:
1. Section Summary
 2. Summary of the Work
 3. Contractor Use of Premises
 4. Application for Payment
 5. Change Procedures
 6. Alternates
 7. Coordination
 8. Conferences
 9. Progress Meetings
 10. Submittal Procedures
 11. Proposed Products List
 12. Manufacturers' Instructions
 13. Manufacturers' Certificates
 14. Quality Assurance / Quality Control of Installation
 15. References
 16. Interior Enclosures
 17. Protection of Installed Work
 18. Parking
 19. Staging Areas
 20. Occupancy During Construction and Conduct of Work
 21. Protection
 22. Products
 23. Transportation, Handling, Storage and Protection
 24. Product Options
 25. Substitutions
 26. Starting Systems
 27. Demonstration and Instructions
 28. Contract Closeout Procedures
 29. Adjusting
 30. Operation and Maintenance Data
 31. Spare Parts and Maintenance Materials
 32. As-Built and Record Drawings and Specifications

1.2 SUMMARY OF THE WORK

- A. Project Description: Dane County is inviting Bids for construction services at Schumacher Farm County Park. The project will be for interior construction in the existing barn (including development of restroom facilities) and miscellaneous site

improvements (grading, basins, paving, etc.) . Perform the Work as specified and detailed in Construction Documents package.

- B. Work by Owner: Not applicable.
- C. Permits: Prior to commencement of the Work, Contractor to secure any and all necessary permits for completion of the Work and facility occupancy.
- D. Diggers Hotline:
 - 1. It is General Contractor's responsibility to contact Diggers Hotline to have all utility locations marked prior to excavation and planning an excavation in a timely manner so as not to delay the Work.
 - 2. Diggers Hotline shall also be used to obtain information on safe working clearances from overhead lines.
 - 3. Completely comply with all requirements of each affected utility company.
 - 4. It is General Contractor's responsibility to contact & hire private utility locating services if necessary.

1.3 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow work by Contractors or Subcontractors and access by Owner.
- B. Coordinate utility outages and shutdowns with Owner.

1.4 APPLICATIONS FOR PAYMENT

- A. Submit one (1) original copies with "wet" signatures of each application on AIA G702™ and G703™ forms or approved contractors invoice form.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: Monthly.
- D. Submit Applications for Payment to Architect / Engineer for initial approval. Architect / Engineer will forward approved copies to Owner who will also approve & process for payment.

1.5 CHANGE PROCEDURES

- A. Contractor's costs for Products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from contingency allowance.

1.6 ALTERNATES

- A. Alternates quoted on Bid Form shall be reviewed and accepted or rejected at Owner's option.

- B. Coordinate related work and modify surrounding work as required.
- C. Schedule of Alternates: Refer to Specification Section 01 23 00 - ALTERNATES

1.7 COORDINATION

- A. Coordinate scheduling, submittals, and work of various sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
- C. Coordinate space requirements and installation of mechanical and electrical work that are indicated diagrammatically on Drawings.
- D. Contractor shall provide Public Works Project Engineer with work plan that ensures the Work will be completed within required time of completion.
- E. Public Works Project Manager may choose to photograph or videotape site or workers as the Work progresses.

1.8 CONFERENCES

- A. There will be pre-bid conference for this project; see Instructions to Bidders.
- B. Owner will schedule a preconstruction conference after Award of Contract for all affected parties.
- C. Contractor shall submit Construction Schedule at pre-construction meeting.
- D. When required in individual Specification section, convene a pre-installation conference at project site prior to commencing work of Section.

1.9 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at minimum of one (1) bi-weekly, at time agreed upon with Public Works Project Manager.
- B. Preside at meetings, record minutes, and distribute copies within two (2) business days to those affected by decisions made.
- C. Contractors shall give verbal reports of progress on the Work, discuss schedule for upcoming period and present all conflicts, discrepancies or other difficulties for resolution.
- D. Day & time of progress meetings to be determined at pre-construction meeting.

1.10 SUBMITTAL PROCEDURES

- A. Submittal form to identify Project, Contractor, Subcontractor or supplier; and pertinent Construction Documents references.
- B. Apply Contractor's stamp, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction work, and coordination of information is in accordance with requirements of the Work and Construction Documents.
- C. Identify variations from Construction Documents and Product or system limitations that may be detrimental to successful performance of completing the Work.
- D. Revise and resubmit submittals as required; identify all changes made since previous submittal.

1.11 PROPOSED PRODUCTS LIST

- A. Within fifteen (15) business days after date of Award of Contract, submit complete list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.

1.12 MANUFACTURERS' INSTRUCTIONS

- A. When specified in individual Specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

1.13 MANUFACTURERS' CERTIFICATES

- A. When specified in individual Specification sections, submit manufacturers' certificate to Public Works Project Manager for review, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

1.14 QUALITY ASSURANCE / QUALITY CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions.
- C. Comply with specified standards as minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1.15 REFERENCES

- A. Conform to reference standard by date of issue current as of date for receiving bids.
- B. Should specified reference standard conflict with Construction Documents, request clarification from Public Works Project Manager before proceeding.

1.16 INTERIOR ENCLOSURES

- A. Not Applicable

1.17 PROTECTION OF INSTALLED WORK

- A. Protect installed work and provide special protection where specified in individual Specification sections.

1.18 PARKING

- A. Parking shall be available at the Work site.
- B. All contractors and their employees shall cooperate with General Contractor and others in parking of vehicles to avoid interference with normal operations and construction activities.
- C. Do not obstruct existing service drives and parking lots with equipment, materials and / or vehicles. Keep accessible for Owner's use at all times.

1.19 STAGING AREAS

- A. Coordinate staging areas with Public Works Project Manager prior to starting the Work.
- B. On-site space for use as staging areas and storage of materials is available. Each Contractor shall be responsible for safety of equipment and materials that are stored on site.

1.20 OCCUPANCY DURING CONSTRUCTION AND CONDUCT OF WORK

- A. Areas of existing site will be occupied during period when the Work is in progress. Work may be done from (7:00 am to 7:00 pm), but confer with Owner, schedule work and store materials so as to interfere as little as possible with normal use of premises.
- B. Work shall be done and temporary facilities furnished so as not to interfere with access to any occupied area and so as to cause least possible interference with normal operation of site or any essential service thereof.
- C. Contractor shall, at all times, provide approved, safe walkways and site entrances for use by Owner, employees and public.

- D. Contractor shall provide adequate protection for all parts of site, its contents and occupants wherever the Work under this Contract is to be performed.
- E. Contractor is not responsible for providing & maintaining temporary toilet facilities.
- F. Each Contractor shall arrange with Owner to make necessary alterations, do new work, make connections to all utilities, etc., at such times as will not cause interruption of utility services to facility. Contractor doing this work shall protect, cap, cut off and / or replace and relocate existing pipes, electrical work and other active utilities encountered which may interfere with new construction work.
- G. New work in extension of existing work shall correspond in all respects with that to which it connects or similar existing work unless otherwise indicated or specified.
 - 1. Existing work shall be cut, altered, removed or replaced as necessary for performance of Contract obligations.
 - 2. Work remaining in place, damaged or defaced by reason of work done under this Contract shall be restored equal to its condition at time of Award of Contract.
 - 3. If removal of work exposes discolored or unfinished surfaces or work out of alignment, such surfaces shall be refinished or materials replaced as necessary to make continuous work uniform and harmonious.

1.21 PROTECTION

- A. Contractor shall protect from damage / injury all trees, shrubs, hedges, plantings, grass, mechanical, electrical & plumbing equipment, walks and driveways and pay for any damage to same resulting from insufficient or improper protection.
- B. Contractor shall provide and maintain barricades & signage to prohibit public access to construction site.

1.22 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically identified or allowed by Construction Documents.

1.23 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

1.24 PRODUCT OPTIONS

- A. Where definite material is specified, it is not intentional to discriminate against "equal" product made by another manufacturer. Intention is to set definite standard of material

quality. Should bidder choose to bid materials other than those specified, bidder shall submit said materials specifications to Public Works Project Manager for approval at least seven (7) business days prior to Bid Due Date.

- B. Products and materials that are not specified, but have been approved for use by Public Works Project Manager shall be identified in addenda to all bidding contractors.
- C. Requests for material or product substitutions submitted after Bid Due Date may be considered. Owner reserves right to approve or reject substitutions based on Specification requirements and intended use.

1.25 SUBSTITUTIONS

- A. Public Works Project Manager shall consider requests for Substitutions only within fifteen (15) calendar days after date of Public Works Construction Contract.
- B. Document each request with complete data substantiating compliance of proposed Substitution with Construction Documents.
- C. Submit three (3) copies of requests for Substitution for consideration. Limit each request to one (1) proposed Substitution.
- D. Substitutions shall not change contract price established at Bid Due Date.

1.26 STARTING SYSTEMS

- A. Provide written notification prior to start-up of each equipment item or system.
- B. Ensure that each piece of equipment or system is ready for operation.
- C. Execute start-up under supervision of responsible persons in accordance with manufacturers' instructions.
- D. Submit written report that equipment or system has been properly installed and is functioning correctly.

1.27 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of final inspection.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at designated location.
- C. Owner may choose to photograph or videotape demonstration session; demonstration and demonstrator shall be to level of satisfaction of Owner.

1.28 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Construction Documents have been reviewed, the Work has been inspected, and the Work is complete in accordance with Construction Documents and ready for Public Works Project Manager's inspection.
- B. Submit final Application for Payment identifying total adjusted Contract Sum / Price, previous payments, and amount remaining due.

1.29 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.30 OPERATION AND MAINTENANCE MANUAL

- A. Provide two (2) thumb-drive electronic copies of operation and maintenance manuals that include all systems, materials, products, equipment, mechanical and electrical equipment and systems supplied and installed in the Work.

1.31 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide Products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.

1.32 AS-BUILT AND RECORD DRAWINGS AND SPECIFICATIONS

- A. Contractor-produced Drawings and Specifications shall remain property of Contractor whether Project for which they are made is executed or not. Contractor shall furnish Architect / Engineer with original marked up redlines of Construction Documents' drawings and specifications that shall include all Addendums, Change Orders, Construction Bulletins, on-site changes, field corrections, etc. These are project As-Built Drawings & Specifications
- B. Architect / Engineer shall update original Construction Documents to include all Addendums & any other changes including those provided by Contractor in As-Built Drawings & Specifications. These updates are project Record Drawings & Specifications.
- C. Architect / Engineer shall furnish Public Works Project Manager with Record Drawings as detailed in Professional Services Agreement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 23 00

ALTERNATES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section describes the alternates to the project. Refer to the Product/Execution Articles of the Contract Documents for information pertaining to the work of each alternate.
- B. Each proposal under an alternate shall include all incidental work and all adjustments necessary to accommodate the changes. All work shall meet the requirements of the Contract Documents.
- C. Each alternate proposal shall be submitted as an individual cost for the particular alternate and shall be proposed under the premise that no other alternates have been accepted. Should the work of an alternate called for by the Bid Form not affect the cost of the work, "No Change" shall be stated.
- D. Owner may, at his option, vary the scope of the work by authorizing alternates which will add to the work, deduct from the work or substitute materials, equipment or methods.
- E. Immediately following Award of Contract, prepare and distribute to each party involved, notification of the status of each alternate. Indicate whether alternates have been accepted, rejected or deferred for consideration at a later date. Include a complete description of negotiated modifications to alternates, if any.

1.2 ALTERNATES

- A. Alternate #1 – State the amount to be added to the base bid for all work associated with installing colored concrete in Gathering Space 100 and Kitchenette 105. Base bid is for sealed concrete for these two rooms.
- B. Alternate #2 – State the amount to be added to the base bid for all work associated with furnishing and installing in the kitchenette 105:
 - 1. Cabinetry equivalent to Dura Supreme® Homestead Panel Full Overlay in hickory wood species in natural finish,
 - 2. Plastic laminate countertop,
 - 3. Elkay® Lustertone stainless steel 33" x 22" x 6-1/2" equal double bowl top mount sink model LRAD332265PD with Moen® Belfield two-handle faucet model 7250 in spot resistant stainless finish, and electrical light fixture D.

Base bid has these items furnished and installed by Others.

- C. Alternate #3 – State the amount to be added to the base bid to furnish and install low voltage wiring and devices from the phone and data outlets to the phone and data service location in Mechanical Room 103; to furnish and install low voltage wiring from electric door strike E100 and E102 to Office 104 west wall location and to provide the software system with training for controlling the locking and unlocking of these doors. Base bid is for these items to be furnished and installed by Others.
- D. Alternate #4 – State the amount to be added to the base bid for all work associated with installing in-floor radiant heating. Base bid is for non-heated slabs.

- E. Alternate #5 – State the amount to be added to the base bid for all work associated with restaining of the exterior wood siding (including all trim) on all sides of the building.

PART 2 - PRODUCTS – Not Used

PART 3 - EXECUTION – Not Used

END OF SECTION

SECTION 21 00 00 - FIRE PROTECTION SYSTEMS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. This outline specification for fire protection work is a "Performance" specification and intended to be an expression of the design intent and criteria, and is not intended to be complete, encompassing or proprietary to any equipment or product. The Fire Protection Contractor shall prepare drawings in accordance with the basic design shown on the Plumbing-Fire Protection Drawings and Specifications, herein, per IBC, and NFPA 13 and 20.
1. Fire Protection Contractor shall finalized Fire Protection Drawings and calculations, submit for approval from state/city and local authorities having jurisdiction.
 2. Fire Protection Contractor shall be responsible for complete system as amended or required by state and local authorities, as well as, obtain necessary approvals for installation of the fire protection system.
 3. Fire Protection System design shall be performed by a state of Wisconsin certified fire protection designer and related fire protection design drawings and calculations shall be sealed by the Fire Protection Designer.
- B. Work includes furnishing of all labor, materials, equipment and performing all operations necessary to install Fire Protection Systems, including piping, fittings, valves, hangers and any other supplemental items necessary to complete the Fire Protection System.
- C. *Work Included:*
1. Sprinkler system design, approved drawings, submittals and calculations;
 2. Automatic sprinkler NFPA 13 system;
 3. Stationary electric-driven fire pump per NFPA 20;
 3. Wet fire protection system.
 4. Dry fire protection system.
- D. *Coordination of Work by Others:*
1. Combination 8" potable and fire protection water service to the facility is existing.
 2. Cutting and patching of openings for new fire protection piping shall be the responsibility of the Fire Protection Contractor.
 3. Exterior Fire Alarm audio/visual device and Fire Department Connections shall meet the requirements of the Village of Waunakee Fire Department.
 4. Supervision of flow switches, valves, and related shall be provided by the Electrical Contractor as part of the fire alarm system.

1.2 QUALITY ASSURANCE:

- A. **CODES:** The plumbing systems for this facility will meet all codes and standards set forth in the Wisconsin Administrative Codes, Village of Waunakee, local codes, national codes and related, including but not limited to the following:
1. IBC Section 903 Automatic Sprinkler Systems;
 2. NFPA 13;
 3. NFPA 20.

- B. Prior to installation, complete working drawings and calculations must be approved by the City of Town of Waunakee Fire Department and Fire Marshall. Approved drawings must then be presented to Architect for approval.
- C. Hydraulic Calculations and Pipe Sizing: All Fire Protection piping distribution and standpipe requirements shall be hydraulically sized in accordance with NFPA 13, using approved calculation software and protection criteria as shown on the Drawings and specified herein.
- D. DESIGN CRITERIA:
 - 1. Measured static water pressure = 32 psig.
 - 2. Measured residual water pressure = To be determined.
 - 3. Measured Flow rate = To be determined.
 - 4. Verify final design criteria with approved flow tests at site.
- E. Occupancy/Protection Classifications:
 - 1. NFPA 13 - Light Hazard Protection: All common spaces.
 - 2. NFPA 13 - Ordinary Hazard Protection - Group I: Mechanical rooms, electrical rooms and storage rooms.

1.3 DESIGN CONCEPT

- A. Common Areas: Automatic Sprinkler System: NFPA 13 complete coverage, fast-response upright, side-wall and semi-recessed heads.
- B. Fire Pump: The State of Wisconsin and NFPA requirements for a fire pump to satisfy the design flow and pressure requirements of the sprinkler system.
 - 1. Fire pump test header at exterior of building.
- C. Fire Department Connection and Alarm Audio-Visual Device.
- D. Double check backflow preventer on fire protection water supply.
- E. Zones:
 - 1. Wet sprinkler system - ground floor.
 - 2. Dry sprinkler system - second & attic floor.

1.4 IDENTIFICATION

- A. Valve Tags: Identify each valve in system with valve tags in conformity with Fire Underwriters and City of Ft Atkinson Fire Department's requirements.
- B. Operational Tags: Identify and tag operational control, maintenance, testing and safety equipment for the fire protection system with operational tags in conformity with NFPA, UL, Fire Underwriters and City of Ft Atkinson Fire Department's requirements.
- C. Charts: Furnish three charts, listing all valves and operational equipment, giving their location in building and their function in the system. One chart with glass cover and neat frame; two charts, without frames, delivered to Architect.

1.5 CLEANING OF PIPING SYSTEMS AND EQUIPMENT

- A. At completion of the work, remove protective material from all equipment, all paint and plaster splatterings, and clean entire piping systems under this section of work; all items shall be left clean and ready for use.

1.6 TESTS

- A. Parts of completed system shall be subjected to hydrostatic pressure test at 200 pounds per square inch for minimum two-hour period. Prior to testing any portion of the system, Contractor shall notify Construction Inspector and City Inspector to witness test and sign Contractor's test certificates.
- B. Perform required fire protection testing per NFPA and Village of Waukegan Fire Department's requirements.

1.7 SHOP DRAWINGS

- A. Submit to Architect six (6) copies for approval for:
 - 1. Sprinklers heads;
 - 2. Fire protection piping and fittings;
 - 3. Fire protection valves, backflow preventers, and specialty fittings;
 - 4. Fire department connections;
 - 5. Flow switches;
 - 6. Fire pump, controller and test header;
 - 7. Jockey pump and controller;
 - 8. Air pressure switches and air maintenance device;
 - 9. Related equipment;
 - 10. Approved Fire Protection System Installation Drawings
 - 11. Approved Hydraulic Calculations

1.8 OPERATING INSTRUCTIONS

- A. Contractor shall furnish Owner with two(2) complete sets of printed instructions and/or data covering the proper operation and maintenance of all equipment furnished under these specifications. Contractor shall instruct Owner's representative in operation, maintenance, testing and safety operations of all fire protection equipment. Training time shall be a minimum of 4 hours.

1.9 CUTTING AND PATCHING

- A. Perform all cutting and patching including necessary materials required, unless noted otherwise.

1.10 HOUSEKEEPING AND CLEANUP

- A. Periodically remove waste materials and leave areas of work broom clean.

1.11 FLOOR, WALL AND ROOF PENETRATIONS

- A. Coordinate the location of openings, chases, furred spaces, etc., with the appropriate contractors. Provide all sleeves and inserts. Penetration through fire and smoke rated construction shall maintain the integrity of that construction.

1.12 EQUIPMENT ACCESS

- A. Install all work to permit access to equipment for maintenance. Require access doors to be of a style applicable to the surrounding surface.

1.13 EQUIPMENT SUPPORTS

- A. Provide all supporting steel not indicated on the Drawings as required for installation of equipment and materials, including angles, channels, beams, hangers, etc.

PART 2 - PRODUCTS

2.1 FIRE PROTECTION PIPING

- A. Schedule 10 and 40 black and galvanized steel pipe;
 - 1. Welded, threaded or mechanical joint fittings.
 - 2. Dry pipe shall be galvanized on interior and exterior surfaces.
- B. Copper tube, type K, L or M;
 - 1. Soldered, threaded or mechanical joint fittings.
- C. Fire and smoke rated schedule 40 CPVC plastic piping;
 - 1. Solvent welded joints and fittings.
- D. Standpipes and mains shall be schedule 40 welded or mechanical joint fittings.
- E. UL approved flexible piping extensions may be used for final connections to heads.

2.2 VALVES

- A. All valves must be approved by NFPA.
- B. Gate Valves: All gate and globe valves 2" and smaller shall be brass or bronze.
- C. All valves 2-1/2" in size or larger shall be of the OS&Y flanged type, 175 psi working pressure.

2.3 HANGERS AND SLEEVES

- A. Hangers: Provide all necessary approved hangers in place for supporting the sprinkler piping.
- B. Sleeves: Pipe sleeves to be Schedule 40 galvanized steel pipe flush with wall and ceiling surfaces.
- C. Seal all openings around sleeves with fiberglass and silicone caulking.
 - 1. Provide fire stopping caulk and approved assemblies at rated penetrations.

2.4 SPRINKLER HEADS

- A. Unfinished areas: Upright cast brass head.
- B. Exposed ceiling areas: Upright and sidewall cast brass sprinklers.
- C. Gypsum board and acoustic suspended ceilings areas: Pendant sprinklers shall be semi-recessed, height adjustable, white finish with white finished trim plate. Center heads in 2x2 ceiling tiles, where applicable.

2.5 FIRE PUMP

- A. Estimated rated flow: 250 GPM @ 95 feet TDH(41 psig); 10 HP 208 volt/3-phase, 3565 RPM
 - 1. Final rated flow shall be confirmed by Fire Protection Contractor from hydraulic calculations for sprinkler system design.
- B. Fire Pump Assembly: Vertically-mounted inline centrifugal pump; UL listed and Factory Mutual approved.
 - 1. Design Basis: AC Fire Pump 1580 series packaged fire pump mounted on common skid.
 - 2. Fire Pump: Vertical inline centrifugal pump with bronze impeller, bronze case wear ring, packing gland and shaft sleeve. AC Fire Pump 3x3x7F or approved equal.
 - 3. Electric Driver: Motor shall be UL listed and have maximum of 10 horsepower, 3-phase, 60 hertz, and 208 volts with 1.15 service factor. Motor shall comply with provisions of NFPA 70 and 20, as well as , NEC requirements.
 - 4. Jockey Pump: Closed coupled with TEFC motor sized by Fire Protection Contractor and shall operate on 208 volt, 1-phase power.
- C. Controller: Shall operate on normal power as listed by UL for fire service and FM approved for a maximum of 10 HP, 3-phase, 208 volts. The controller enclosure shall be NEMA 2 and completely assembled with contractors, overload devices and output disconnect. The controller shall be pre-wired and tested prior to shipment.
 - 1. Jockey Pump Controller: Complete with contractors, overload devices, output disconnect, pre-piped pressure switch, H-O-A selector switch and overload relays.
- D. Accessories:
 - 1. Suction and discharge pressure gauges.
 - 2. Isolating valves at suction and discharge for fire and jockey pumps.
 - 3. Discharge check valve for fire and jockey pumps.
 - 4. Arrange fire pump bypass pipe outlets for vertical bypass.

2.6 FIRE PROTECTION EQUIPMENT

- A. Siamese fire department connection;
- B. Flow switches with auxiliary FA contacts;
- C. Air pressure switch with auxiliary FA contacts;
- D. Air maintenance device(compressor);

- E. Double-check valve backflow preventer- Wisconsin approved - existing;
- F. Supervisor switches with auxiliary FA contacts;
- G. Alarm Audio-Visual, exterior;
- H. Auxiliary Equipment:
 - 1. Pressure gauges;
 - 2. Sight and test drains;
 - 3. Auxiliary drains;
 - 4. Line tester;
 - 6. Related fittings and valves per NFPA 13 and 14.

PART 3 - EXECUTION

3.1 EXECUTION

- A. Water service to automatic sprinkler system shall be provided by the Plumbing/Site Contractors to inside the building with a blind flange for continuation by the Fire Protection Contractor as indicated on Contract Drawings and Specified herein.
- B. Branch piping, tamper and flow switches shall be provided at each zone.
- C. Turn over required fire bells to Electrical Contractor for wiring at locations necessary.
- D. Coordinate the power and control wiring requirements of the fire pump, jockey pump and controllers with the Electrical Contractor.
- E. Provide final testing requirements per NFPA 13, 20 and Local Fire Department's requirements.
- F. Arrange for main and auxiliary drains to be discharged to exterior areas, floor drains or open site drains as approved by the Architect.
 - 1. Provide and arrange for routing auxiliary drains lines to the lowest level open site drains by the Plumbing Trade or to approved exterior discharge.

3.2 IDENTIFICATION

- A. Identify all piping and equipment as specified and required per NFPA 13, 14 and by the local Fire Department.

END OF SECTION

CONSTRUCTION NOTES

GENERAL

1. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED, BY CONTRACTOR, PRIOR TO CONSTRUCTION.

WATER MAIN

1. EXISTING WATER MAIN LOCATIONS, SIZES, AND TYPES SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO MAKING ANY CONNECTIONS.
2. UNLESS OTHERWISE INDICATED BY DESIGN GRADE, MAINTAIN A 7.0' MINIMUM DEPTH OF COVER OVER PROPOSED WATER MAIN AND WATER MAIN LATERALS.
3. UNLESS OTHERWISE INDICATED FOR WATER MAIN CROSSINGS BELOW STORM SEWER & SANITARY SEWER PIPES CONTRACTOR SHALL MAINTAIN A MINIMUM 18" OF SEPARATION FROM EDGE OF PIPE TO EDGE OF PIPE.

STORM SEWER

1. STORM SEWER PIPE LENGTHS ARE SHOWN MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

GRADING & EROSION CONTROL NOTES

1. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION.
2. SILT FENCE, TEMPORARY SEDIMENT BASIN, & ROCK CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES, INCLUDING CLEARING & GRUBBING.
3. ALL STORM SEWER INLETS SHALL HAVE INLET PROTECTION TYPE-D INSTALLED UPON INLET INSTALLATION.
4. CONTRACTOR IS RESPONSIBLE FOR WEEKLY DNR INSPECTION REPORTS IN ACCORDANCE WITH NR 216.46(9).
5. ADDITIONAL EROSION CONTROL MEASURES MAY BE ADDED ON AN AS-NEEDED BASIS.
6. THE POND SHALL BE CONSTRUCTED PRIOR TO MASS LAND DISTURBANCE.
7. ANY AREAS WHERE GRADING IS COMPLETE SHALL BE STABILIZED WITH FERTILIZER, SEED, & MULCH AS SOON AS POSSIBLE.
8. ALL BEST MANAGEMENT PRACTICES WILL BE INSTALLED BY THE TIME THE CONSTRUCTION SITE IS CONSIDERED STABILIZED.
9. A COPY OF THIS EROSION CONTROL PLAN SHALL BE KEPT ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
10. STOCKPILES LEFT INACTIVE FOR 7 DAYS SHALL BE SEEDED AND SURROUNDED BY SILT FENCE.
11. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, OR OTHER CONSTRUCTION MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED BY RUNOFF INTO RECEIVING CHANNEL.
12. ALL VEHICLE TRAFFIC IS PROHIBITED WITHIN THE UNDISTURBED LAND BUFFER WHENEVER PRACTICAL.
13. EROSION CONTROL MAT CLASS I, TYPE A WILL BE USED IN NON-CHANNEL AREAS AND CLASS I, TYPE B WILL BE USED IN CHANNEL AREAS.
14. ALL DEWATERING PERMITTING, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH DNR TECHNICAL STANDARD 1061.
15. STREETS SHALL BE SWEEPED AT THE END OF EACH WORK DAY OR AS DIRECTED BY THE MUNICIPALITY.
16. TRACKING PADS SHALL BE USED AT THE CONSTRUCTION ENTRANCE AND EXITS.
17. ALTHOUGH ROCK CONSTRUCTION TRACKING PADS MAY NOT BE SHOWN ON THE PLANS, THE CONTRACTOR SHALL INSTALL THEM AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO MINIMIZE TRACKING ONTO ADJACENT STREETS. THESE PADS ARE CONSIDERED INCIDENTAL TO THE WORK AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY.
18. CONTRACTOR WILL BE RESPONSIBLE FOR ALL DUST CONTROL.
19. ALL BANK AREAS DISTURBED SHALL BE STABILIZED WITH EROSION CONTROL MAT IMMEDIATELY.
20. POSITIVE DRAINAGE AWAY FROM THE BUILDING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE CONFIRMED BY THE ENGINEER.
21. DOWN SPOUTS SHALL BE DIRECTED IN A SAFE MANNER AND COMPLY WITH ALL LOCAL AND STATE REGULATIONS.
22. ALL FILL PLACED UNDER BUILDING AND PAVED AREAS SHALL BE STRUCTURALLY SOUND.
23. SEDIMENT WILL BE REMOVED FROM BEHIND SEDIMENT FENCES AND BARRIERS BEFORE IT REACHES A DEPTH THAT IS EQUAL TO HALF THE BARRIER'S HEIGHT.
24. BREAKS AND GAPS IN SEDIMENT FENCES AND BARRIERS WILL BE REPAIRED IMMEDIATELY. DECOMPOSING STRAW BALES WILL BE REPLACED (TYPICAL BALE LIFE IS THREE MONTHS).
25. ALL SEDIMENT THAT MOVES OFF-SITE DUE TO CONSTRUCTION ACTIVITY OR STORM EVENTS WILL BE CLEANED UP BEFORE THE END OF THE SAME WORKDAY.
26. ALL INSTALLED EROSION CONTROL PRACTICES WILL BE MAINTAINED UNTIL THE DISTURBED AREAS THEY PROTECT ARE STABILIZED.
27. ALL EROSION CONTROL MAT SHALL BE INSTALLED WITHIN 24 HOURS OF FINAL GRADES BEING ESTABLISHED.

EXISTING LINETYPES LEGEND

- San — SANITARY SEWER
- ST — STORM SEWER
- WM — WATER MAIN
- FM — FORCE MAIN
- E — ELECTRIC
- OE — OVERHEAD ELECTRIC
- G — GAS
- FO — FIBER OPTIC
- T — TELEPHONE
- TV — TV
- X — FENCE
- GR — GUARD RAIL
- GL — GRADING LIMITS
- SF — SILT FENCE
- DB — DOUBLE SEDIMENT BARRIER
- ||||| TRAIN TRACKS
- ~~~~~ TREELINE

SYMBOLS LEGEND

- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING HYDRANT
- PROPOSED HYDRANT
- ⊗ VALVE
- ⊗ CURB STOP
- ⊗ TRACER WIRE TERMINAL BOX
- △ WELL
- PROPERTY CORNER
- LIGHT POLE
- POWER / TELEPHONE POLE
- GUY WIRE
- UTILITY PEDESTAL
- SIGN
- ⊗ SOIL BORING
- ⊗ MONITORING WELL
- ⊗ MAILBOX
- ⚠ POTENTIAL HAZARD
- ⊗ BENCHMARK
- ⊗ GEC-CP # CONTROL POINT
- ⊗ DECIDUOUS TREE
- ⊗ CONIFEROUS TREE
- ♿ HANDICAP SYMBOL

ABBREVIATION LIST

- B-B = BACK TO BACK
- BOC = BACK OF CURB
- BOP = BOTTOM OF PIPE
- BOW = BOTTOM OF WALL
- C-C = CENTER TO CENTER
- CL = CENTERLINE
- CP = CONTROL POINT
- DIA = DIAMETER
- ELEV = ELEVATION
- EOG = EDGE OF GRAVEL
- EOP = EDGE OF PAVEMENT
- EX = EXISTING
- FL = FLOW LINE
- FM = FORCE MAIN
- HC = HORIZONTAL CURVE
- HP = HIGH POINT
- IE = INVERT ELEVATION
- INL = INLET
- INV = INVERT
- IOS = INSIDE OF STRUCTURE
- L = LENGTH
- LN = LINE
- LP = LOW POINT
- MH = MANHOLE
- MIN = MINIMUM
- MP = MIDPOINT
- PC = POINT OF CURVE
- PI = POINT OF INTERSECTION
- PRO = PROPOSED
- PT = POINT OF TANGENT
- PVC = POINT OF VERTICAL CURVE
- PVI = POINT OF VERTICAL INTERSECTION
- PVMT = PAVEMENT
- PVT = POINT OF VERTICAL TANGENT
- R = RADIUS
- ROW = RIGHT OF WAY
- S = SANITARY SEWER SERVICE LATERAL
- SAN = SANITARY SEWER
- SE = SPOT ELEVATION
- ST = STORM SEWER
- STA = STATION
- STD = STANDARD
- TC = TOP OF CURB
- TOP = TOP OF PIPE
- TOW = TOP OF WALL
- TYP = TYPICAL
- UOS = UNLESS OTHERWISE SPECIFIED
- VC = VERTICAL CURVE
- W = WATER MAIN SERVICE LATERAL
- WM = WATER MAIN

DIGGERS HOTLINE NOTE

To Obtain Location of Participants Underground Facilities Before You Dig in Wisconsin

CALL DIGGERS HOTLINE
1-800-242-8511

Wis Statute 182.0175 (1974)
Requires Min. 3 Work Days Notice Before You Excavate

OWNER

DANE COUNTY PARKS
5201 FEN OAK COURT, ROOM 208
MADISON WI 53718-8812
PHONE: (608) 224-3730

UTILITIES

- ELECTRIC**
MGE
133 S. Blair St
Madison, WI 53788
PHONE: (608) 441-2800
- TELEPHONE**
TDS
103 Bacon St
Waunakee, WI 53597
PHONE: (888) 225-5837
- GAS**
MGE
133 S. Blair St
Madison, WI 53788
PHONE: (608) 441-2800
- CABLE TV**
CHARTER COMMUNICATION
2710 Daniels St
Madison, WI
PHONE: (608) 284-8056
- WATER & SEWER**
WAUNAKEE UTILITIES
322 Moravian Valley Rd.
Waunakee WI, 53597
PHONE: (608) 849-8111



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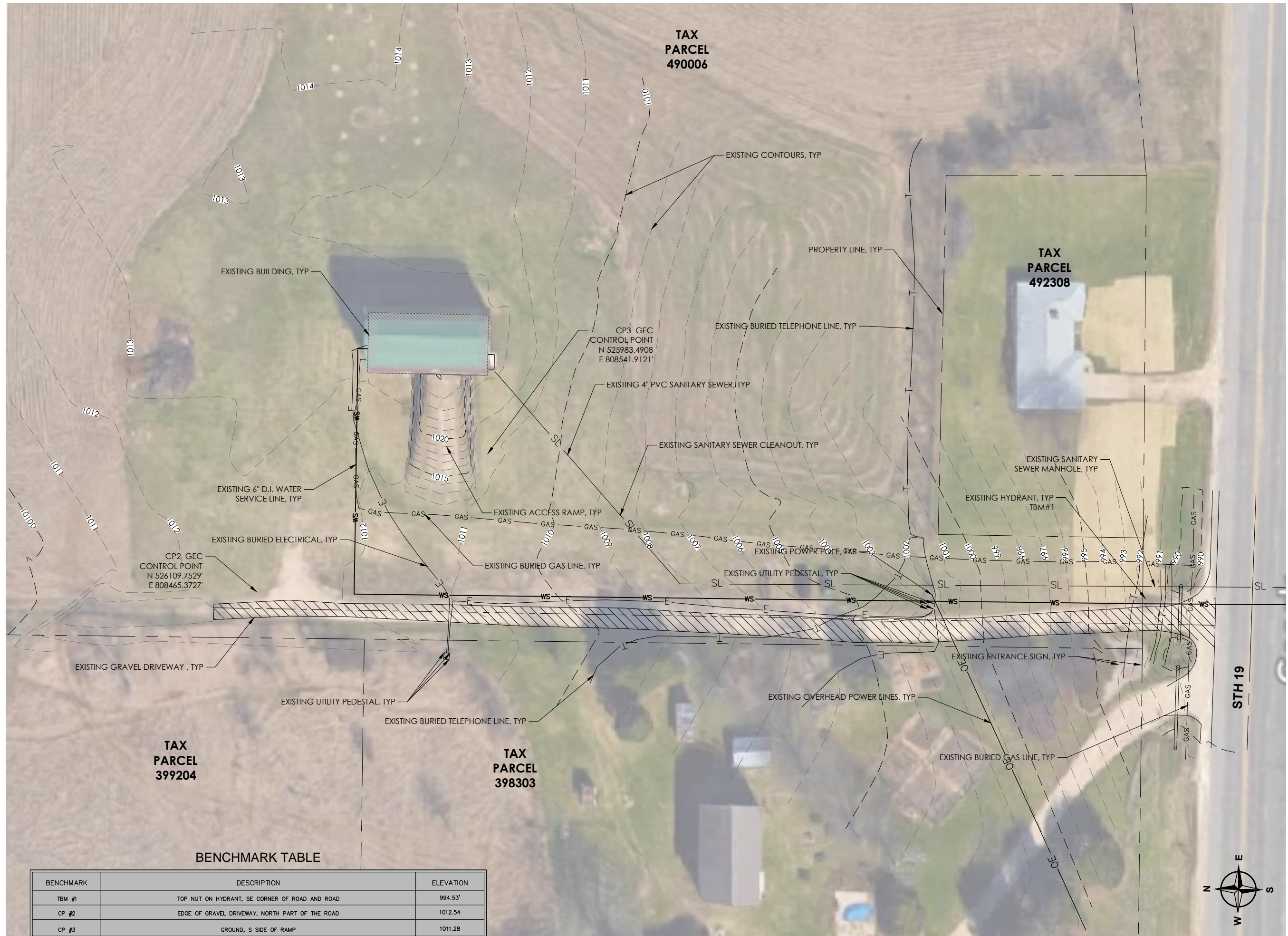
LEGEND & NOTES
Schumacher Farm Center for Rural Heritage

Town of Westport
Dane County, WI

REVISIONS	NO.	BY	DATE
Utility Location Update	1	LAL	03/13/2017
Bidding Documents	2	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	



BENCHMARK TABLE

BENCHMARK	DESCRIPTION	ELEVATION
TBM #1	TOP NUT ON HYDRANT, SE CORNER OF ROAD AND ROAD	994.53'
CP #2	EDGE OF GRAVEL DRIVEWAY, NORTH PART OF THE ROAD	1012.54
CP #3	GROUND, S SIDE OF RAMP	1011.28



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EXISTING SITE PLAN
Schumacher Farm Center for Rural Heritage

Town of Westport
 Dane County, WI

REVISIONS	NO.	BY	DATE
Utility Location Update	1	LAL	03/13/2017
Bidding Documents	2	LAL	05/09/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

C1.0

NOTES:

1. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
2. ALL GENERAL NOTES FOUND ON SHEET G1.1.



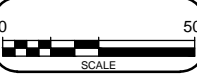
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OVERALL PROPOSED SITE PLAN
 Schumacher Farm Center for Rural Heritage

Town of Westport
 Dane County, WI

REVISIONS	NO.	BY	DATE
Utility Location Update	1	LAL	03/13/2017
Bidding Documents	2	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017

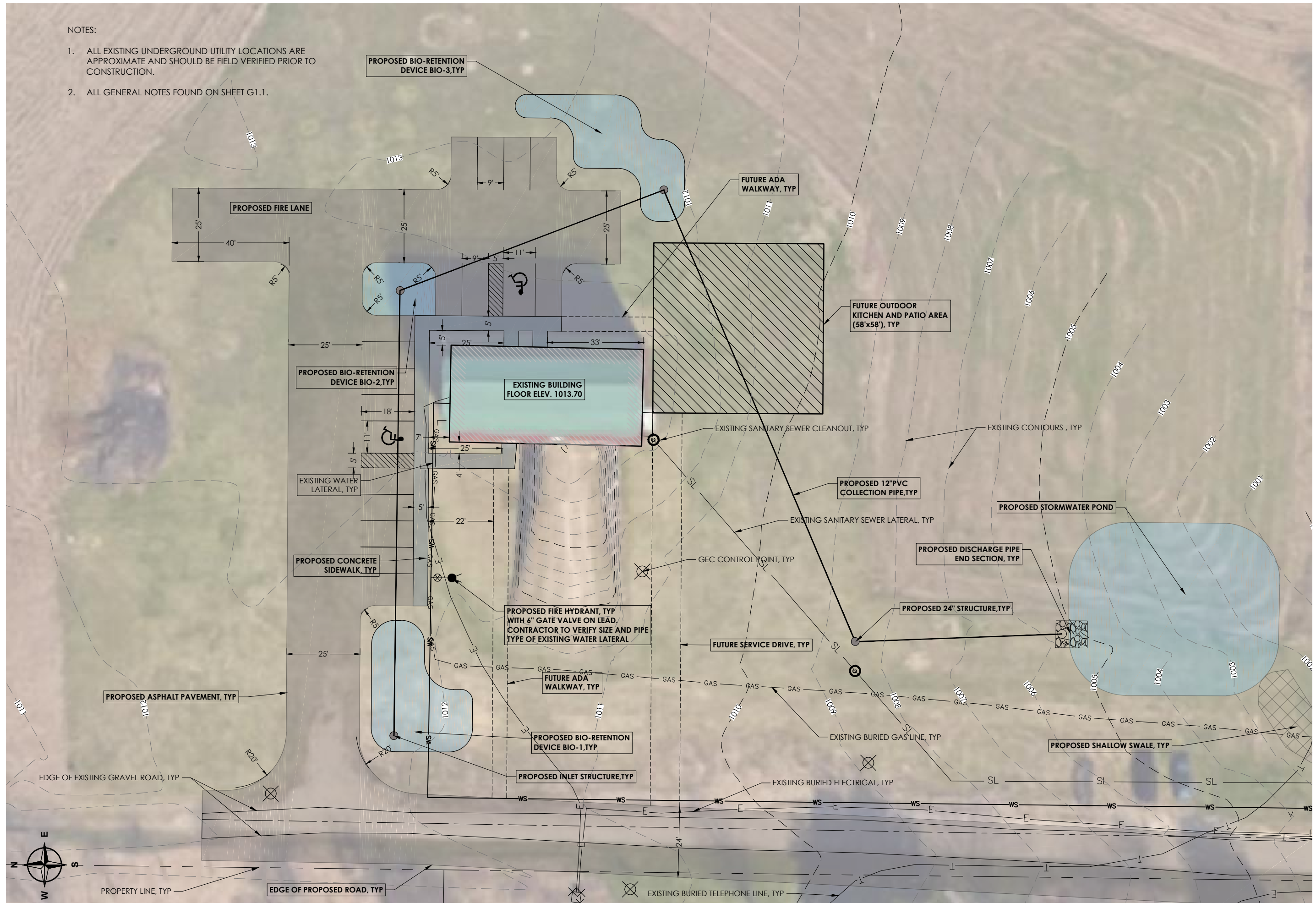


DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

C2.0

NOTES:

1. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
2. ALL GENERAL NOTES FOUND ON SHEET G1.1.



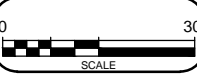
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PROPOSED SITE PLAN
 Schumacher Farm Center for Rural Heritage

Town of Westport
 Dane County, WI

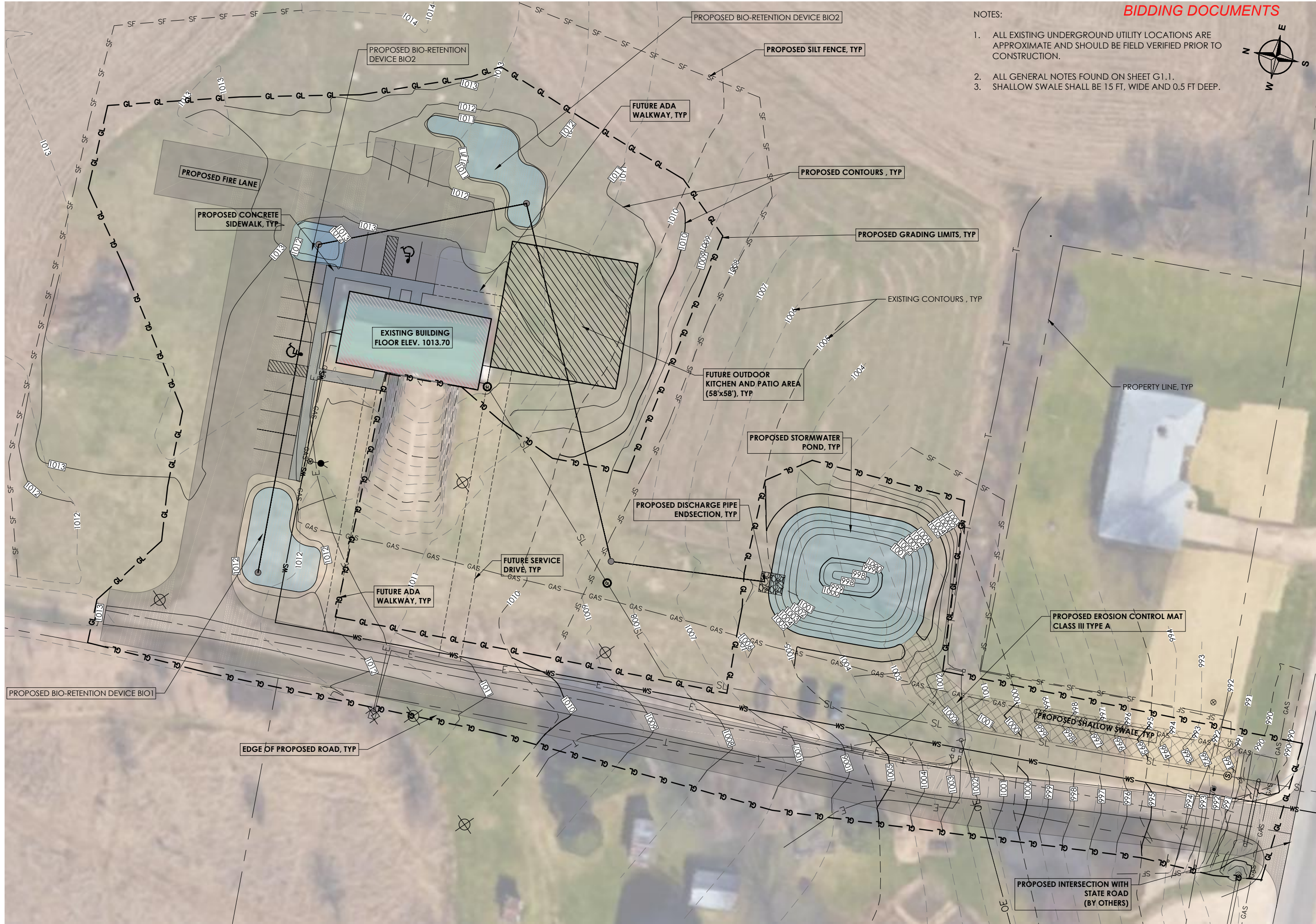
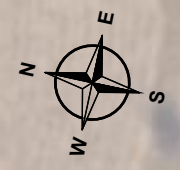
REVISIONS	NO.	BY	DATE
Utility Location Update	1	LAL	03/13/2017
Bidding Documents	2	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

NOTES:

1. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
2. ALL GENERAL NOTES FOUND ON SHEET G1.1.
3. SHALLOW SWALE SHALL BE 15 FT, WIDE AND 0.5 FT DEEP.



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PROPOSED GRADING SITE PLAN
 Schumacher Farm Center for Rural Heritage

Town of Westport
 Dane County, WI

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

Member
Utility System Interconnection

To Obtain Location of Participants Underground Facilities Before You Dig in Wisconsin

CALL DIGGERS HOTLINE
1-800-242-8511

Wis Statute 182.0175 (1974)
Requires Min. 3 Work Days
Notice Before You Excavate



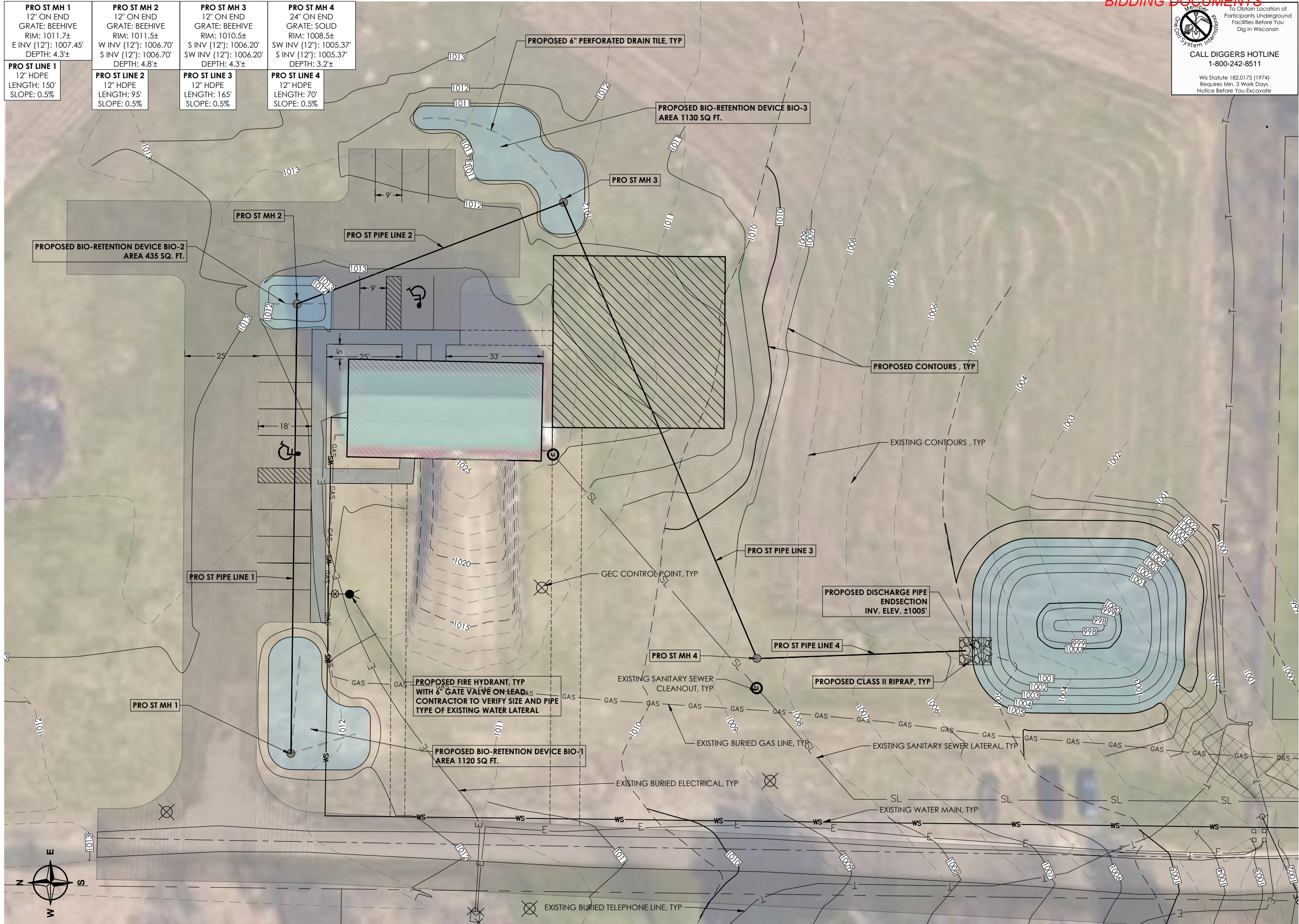
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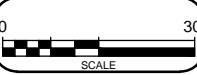
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UTILITY SITE PLAN
Schumacher Farm Center for Rural Heritage

Town of Westport
Dane County, WI



REVISIONS	NO.	BY	DATE
Utility Location Update	1	LAL	03/13/2017
Bidding Documents	2	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017



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ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

C4.0



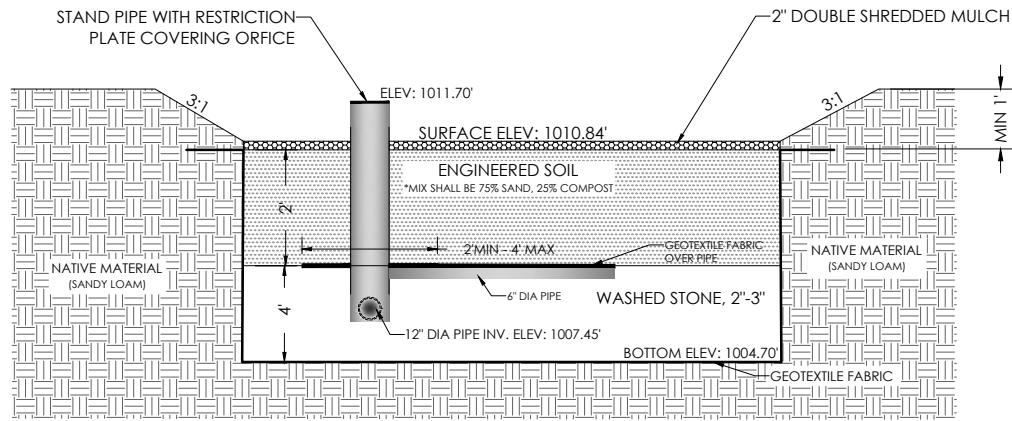
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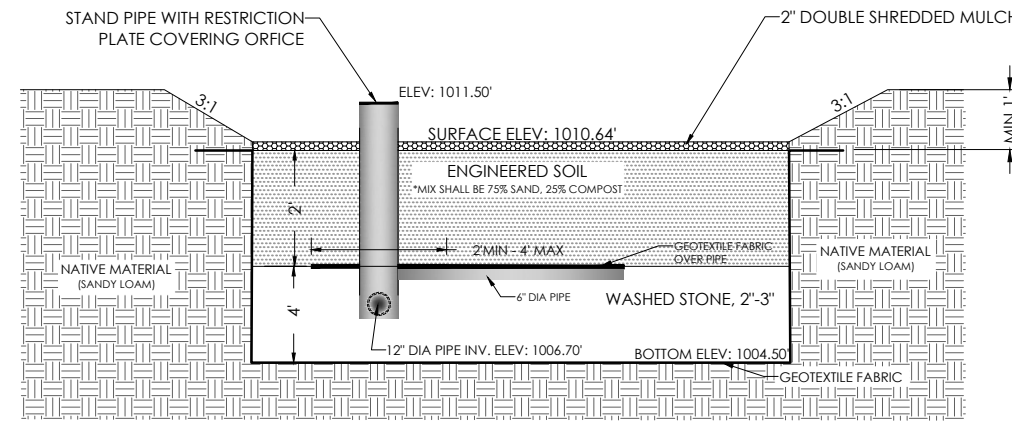
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STORMWATER DEVICES DETAILS
Schumacher Farm Center for Rural Heritage

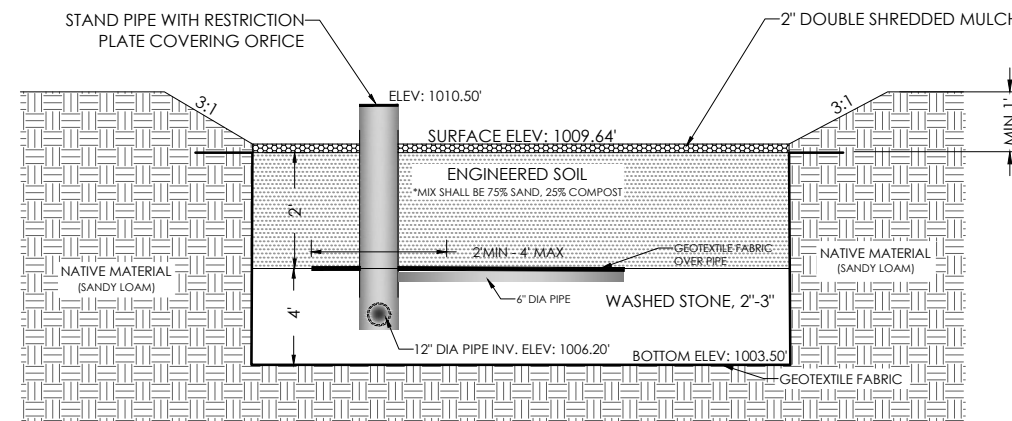
Town of Westport
Dane County, WI



BIOFILTRATION DEVICE CROSS SECTION BIO-1



BIOFILTRATION DEVICE CROSS SECTION BIO-2

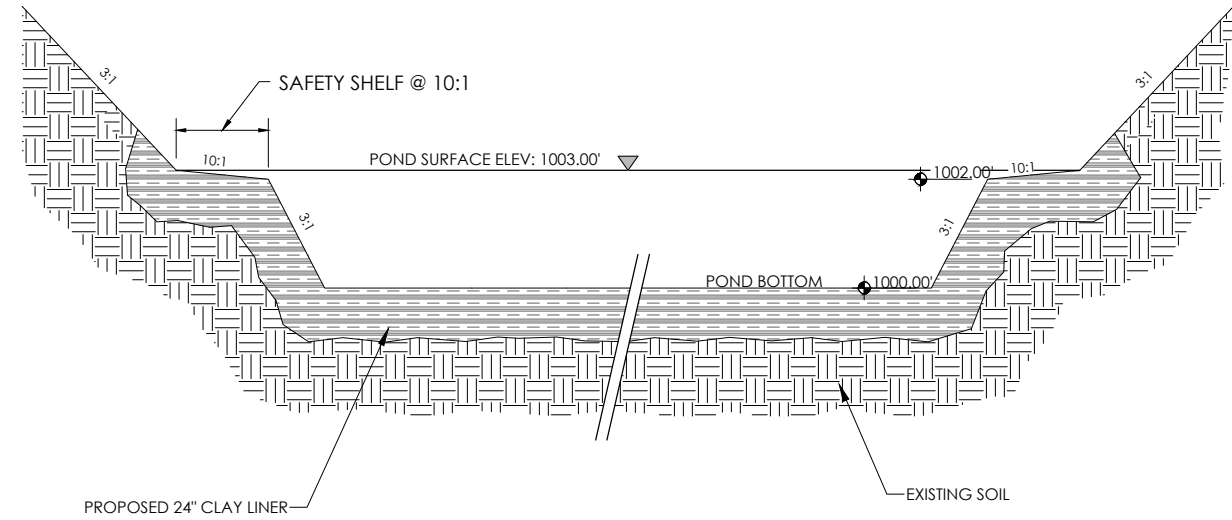


BIOFILTRATION DEVICE CROSS SECTION BIO-3

NOTES:

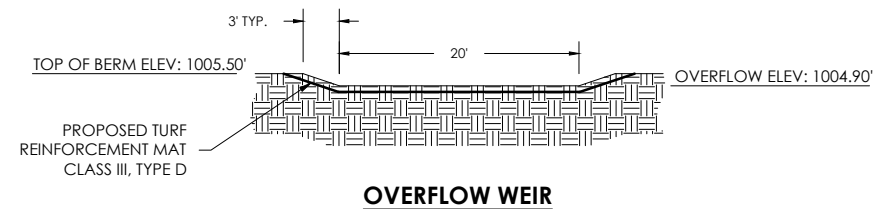
1. RUNOFF SHALL NOT BE ALLOWED IN THE BASIN UNTIL AFTER THE TRIBUTARY AREA IS STABILIZED.
2. CONSTRUCTION OF THE BASIN SHOULD ONLY OCCUR DURING SUITABLE SITE CONDITIONS - IF CONSTRUCTION OF THE BASIN OCCURS DURING SATURATED SOIL CONDITIONS, THE SOIL IN THE DEVICE COULD BE UNNECESSARILY COMPACTED.
3. EXCESS SEDIMENT IN THE BIORETENTION BASIN SHALL BE REMOVED AT THE END OF CONSTRUCTION.
4. COMPACTION OF THE SOILS USED FOR THE BIORETENTION DEVICE MUST BE AVOIDED - HEAVY EQUIPMENT SHOULD NOT BE USED IN THE CONSTRUCTION OF THE BASIN AND ONLY TRACKED EQUIPMENT SHALL BE PERMITTED IN THE BASIN.
5. THE ENGINEERED SOIL SHALL BE PREMIXED PRIOR TO PLACEMENT AND DRY ENOUGH TO PREVENT CLUMPING AND COMPACTION.
6. THE BASIN SHALL BE MULCHED WITH 2" THICK DOUBLE SHREDDED MULCH BEFORE THE PLANTING OF THE VEGETATION IN ORDER TO PREVENT COMPACTION.
7. THE MATERIALS USED FOR THE ENGINEERED SOIL SHALL COMPLY WITH WISCONSIN DNR TECHNICAL STANDARD 1004.
8. LIVE PLANT PLUGS GROWN TO AT LEAST 1.25" x 1.25" x 2.25" IN POTS SHALL BE PLANTED AT 1' ON CENTER THROUGHOUT THE PLANTING AREA. PLANTING SHALL BE CONDUCTED WHEN CONSTRUCTION ACTIVITIES HAVE CEASED.
9. PLANTS SHALL BE NATIVE PLANTS AS SPECIFIED BY AGRECOL OR OTHER APPROVED NURSERY.
10. CLASS II RIPRAP WITH GEOTEXTILE FABRIC SHALL BE PROVIDED AT ALL INLETS WITH CONCENTRATED FLOWS TO PREVENT EROSION OF THE MULCH AND ENGINEERED SOIL NEAR INLETS.
11. BIORETENTION BASIN SHALL BE DEEP TILLED AT THE END OF CONSTRUCTION PRIOR TO MULCHING AND PLANTING.
12. BIORETENTION BASIN SHALL BE WATERED TWICE A WEEK (IF NO RAIN) UNTIL PLANTS ARE ESTABLISHED.

BIOFILTRATION DEVICES NOTES

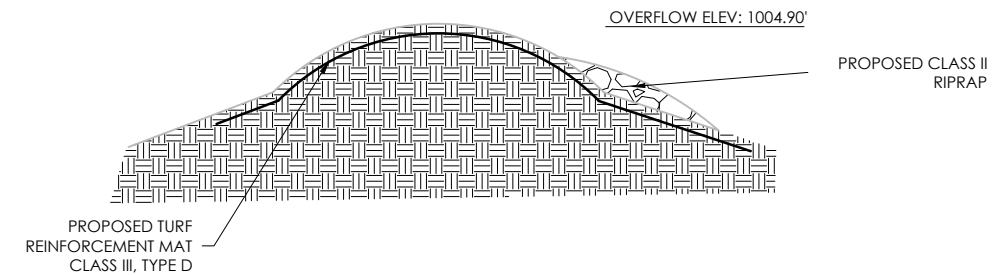


SECTION A-A

PROPOSED POND CROSS SECTION



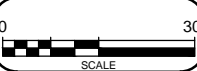
OVERFLOW WEIR



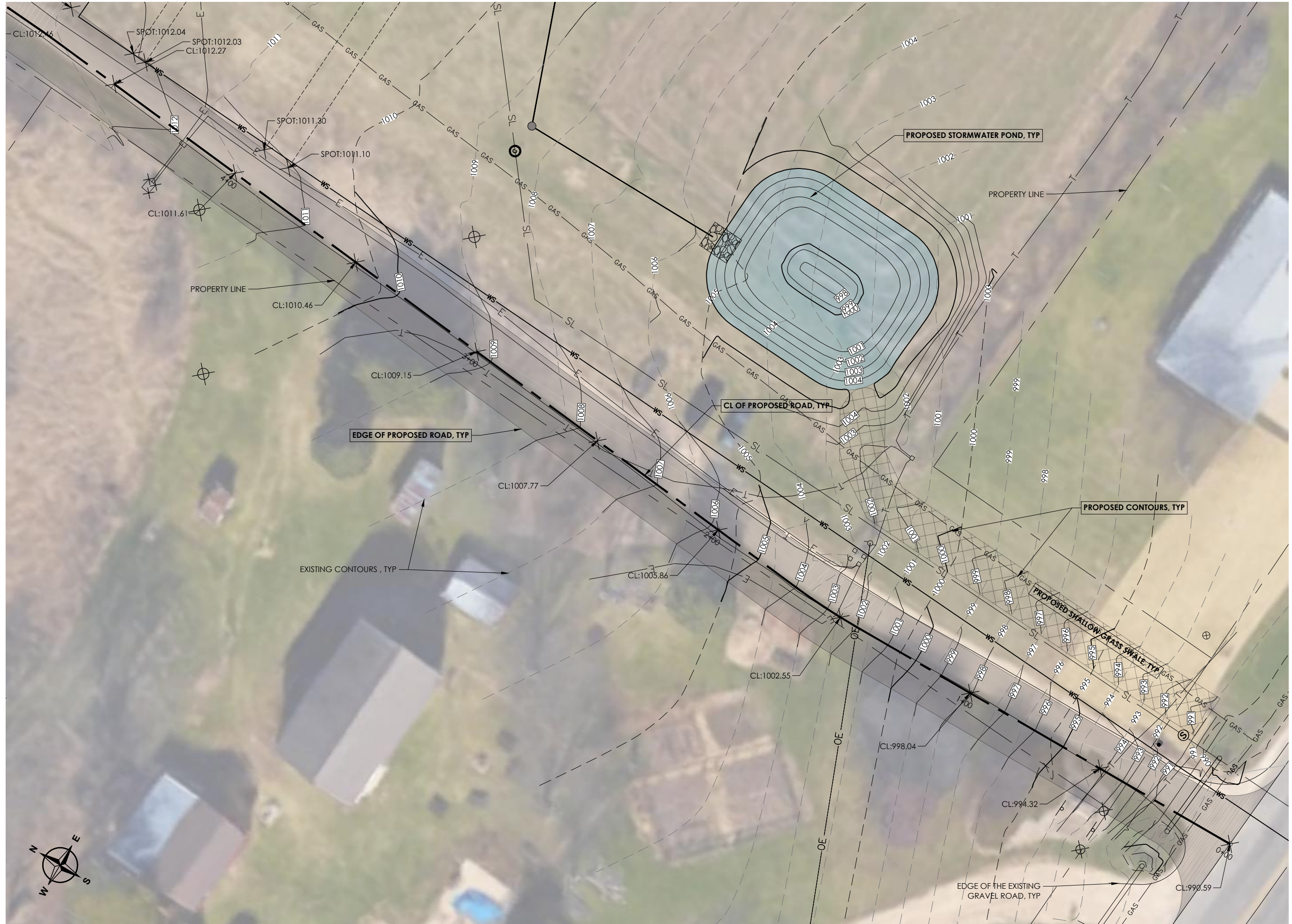
OVERFLOW WEIR CROSS SECTION

WEIR DETAIL

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	



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SPOT ELEVATION SITE PLAN - ROAD
 Schumacher Farm Center for Rural Heritage

Town of Westport
 Dane County, WI

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
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C5.0



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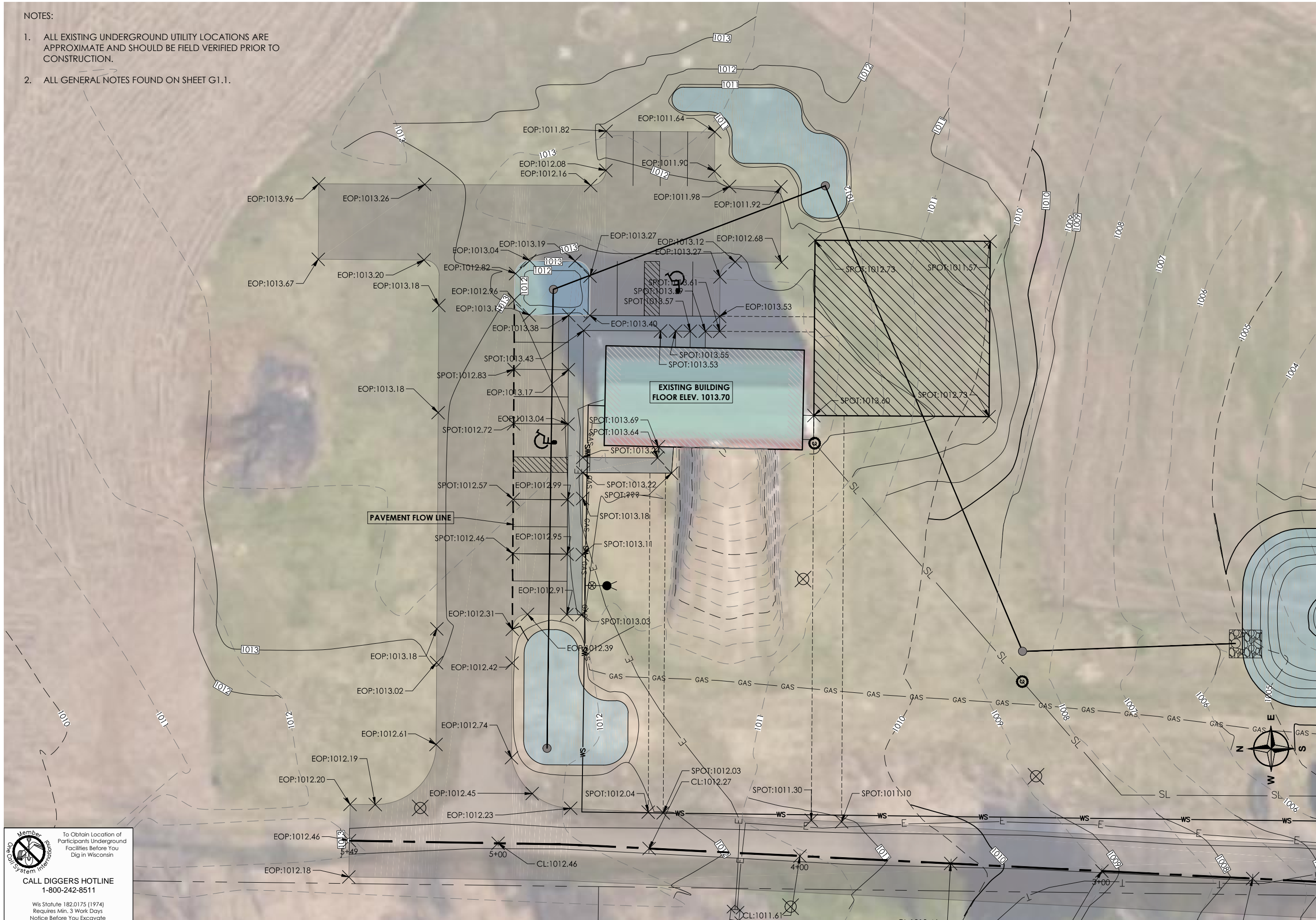
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SPOT ELEVATION SITE PLAN-PROJECT
Schumacher Farm Center for Rural Heritage

Town of Westport
Dane County, WI

NOTES:

1. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
2. ALL GENERAL NOTES FOUND ON SHEET G1.1.



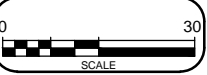
Member of the Wisconsin Call Diggers System

To Obtain Location of Participants Underground Facilities Before You Dig in Wisconsin

CALL DIGGERS HOTLINE
1-800-242-8511

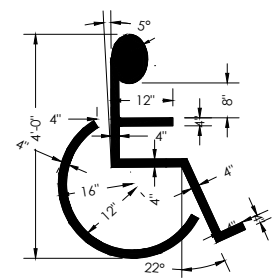
Wis Statute 182.0175 (1974)
Requires Min. 3 Work Days
Notice Before You Excavate

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017
Site Layout	3	LAL	10/21/2017



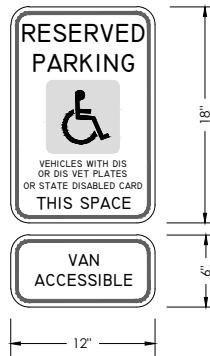
DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	Feb 2016
GEC FILE NO.	2-0116-72
SHEET NO.	

C5.1



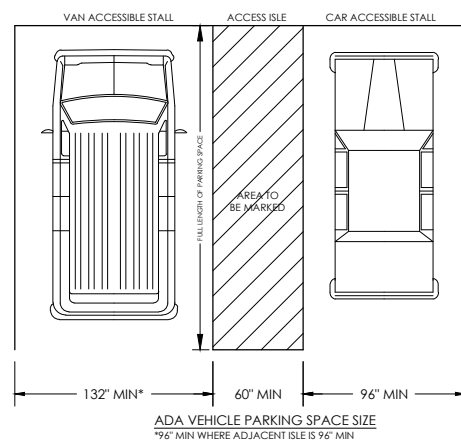
PAINTED ADA SYMBOL

- NOTES:
- SIGNAGE SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) SIGNAGE REGULATIONS.
 - PAINTED SYMBOL TO BE @ ALL ACCESSIBLE SPACES.



ADA ACCESSIBLE SIGN

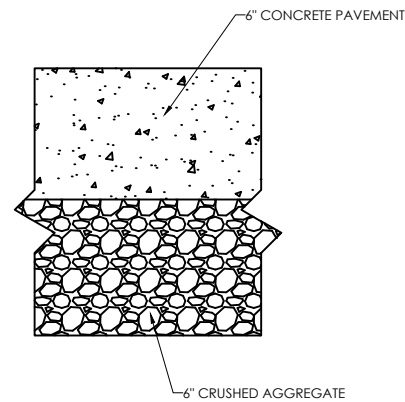
- NOTES:
- ONE SIGN REQUIRED FOR EACH PARKING SPACE.
 - SIGN SHALL BE 40" MIN ABOVE THE GROUND SURFACE OF THE PARKING SPACE, MEASURED TO THE BOTTOM OF THE SIGN.
 - SIGN SHALL CONSIST OF A WHITE RECTANGLE WITH LONGER DIMENSION VERTICAL, HAVING GREEN MESSAGE AND A BLUE & WHITE INTERNATIONAL SYMBOL FOR THE BARRIER-FREE ENVIRONMENTS.
 - THE SIGN MAY BE REFLECTIVE OR NON-REFLECTIVE.



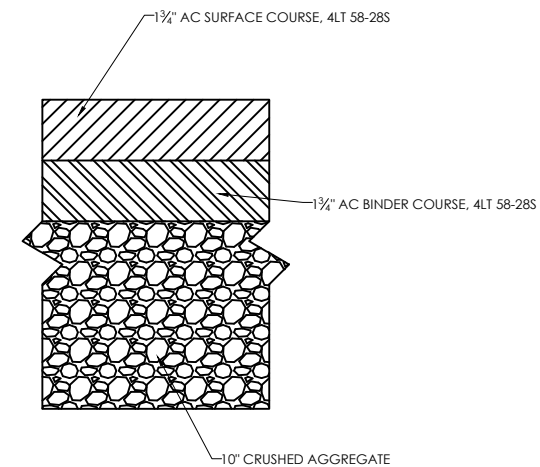
TOTAL PARKING SPACES PROVIDED	REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES*
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	25% OF TOTAL
1000 & OVER	20 PLUS 1 FOR EACH 100, OR FRACTION THEREOF, OVER 1000

*1 IN 8 ACCESSIBLE PARKING STALLS MUST BE VAN ACCESSIBLE. A MINIMUM OF 1 VAN ACCESSIBLE STALL IS REQUIRED IN ALL PARKING LOTS

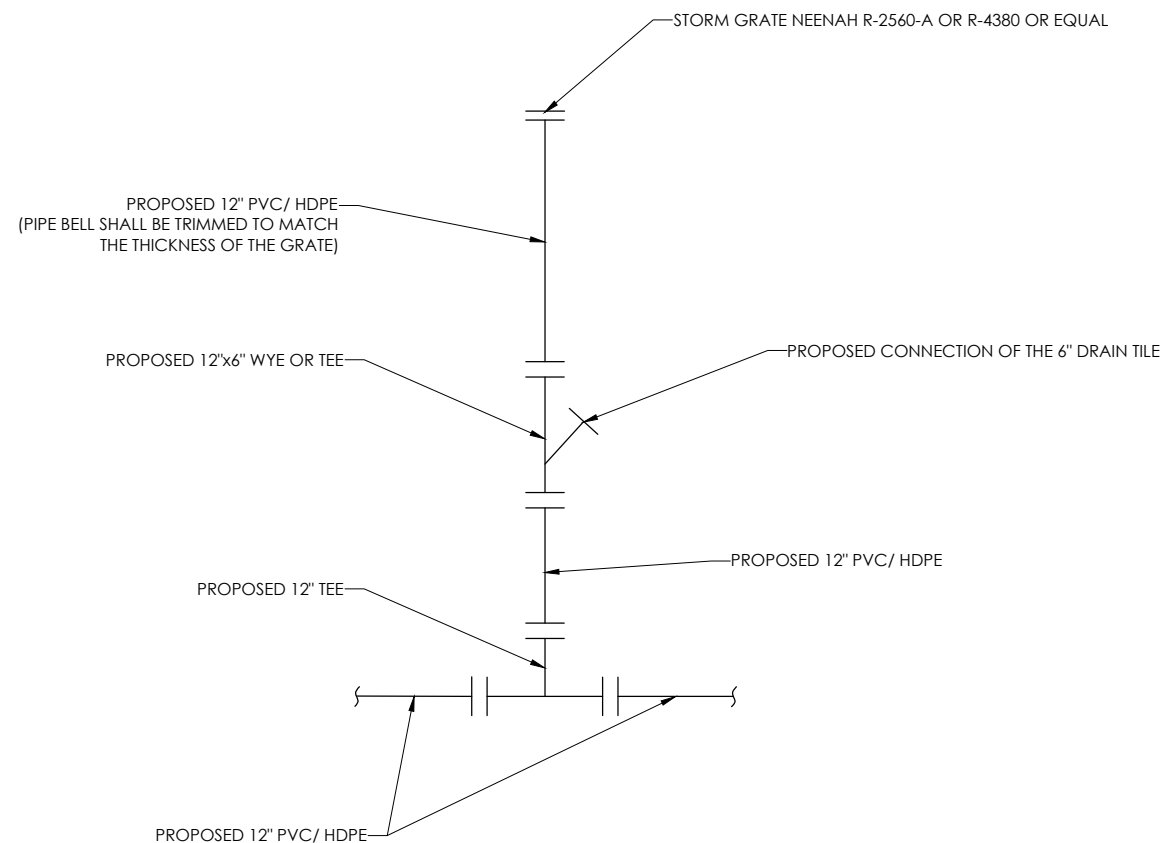
TYPICAL ADA DETAIL



CONCRETE SIDEWALK SECTION



ASPHALTIC PAVEMENT SECTION



BIOFILTRATION DEVICE PIPING DIAGRAM EXAMPLE



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MISC. CONSTRUCTION DETAILS
Schumacher Farm Center for Rural Heritage

Town of Westport
Dane County, WI

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017
Piping Diagram	2	LAL	10/23/2017



DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

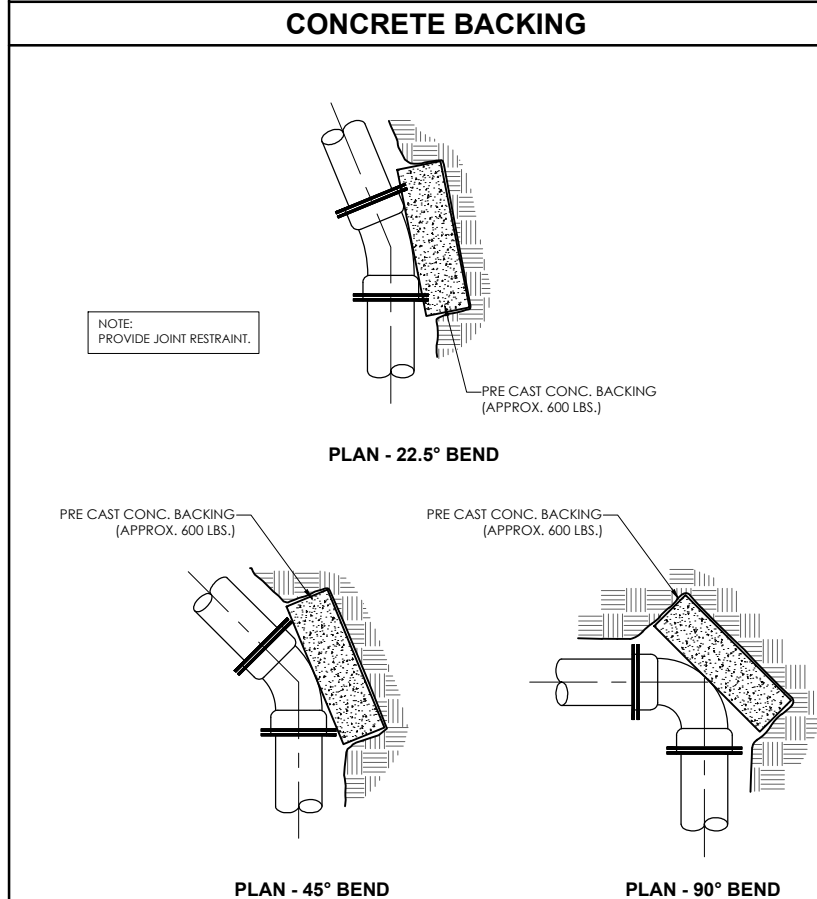
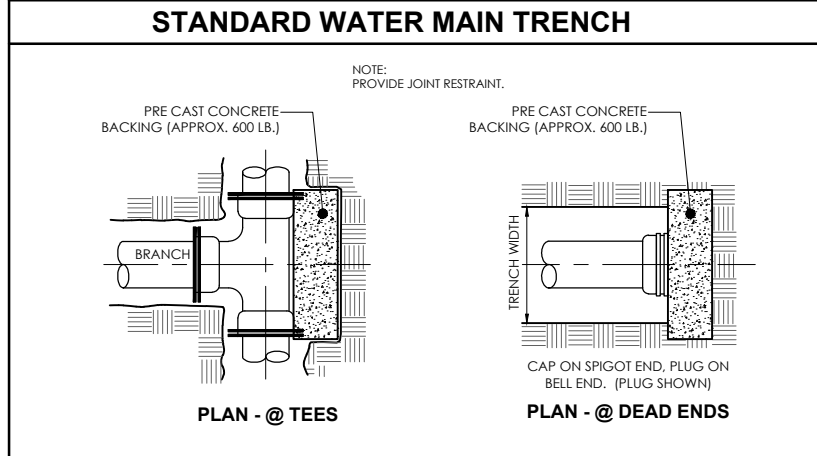
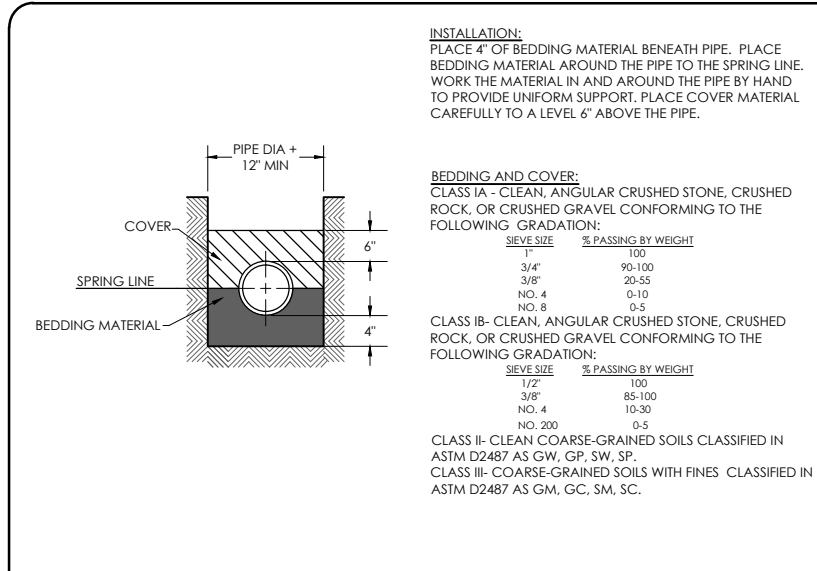
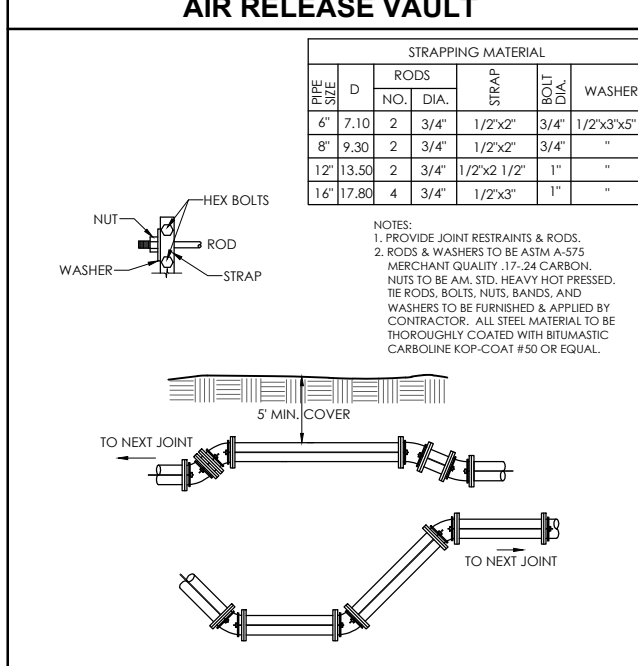
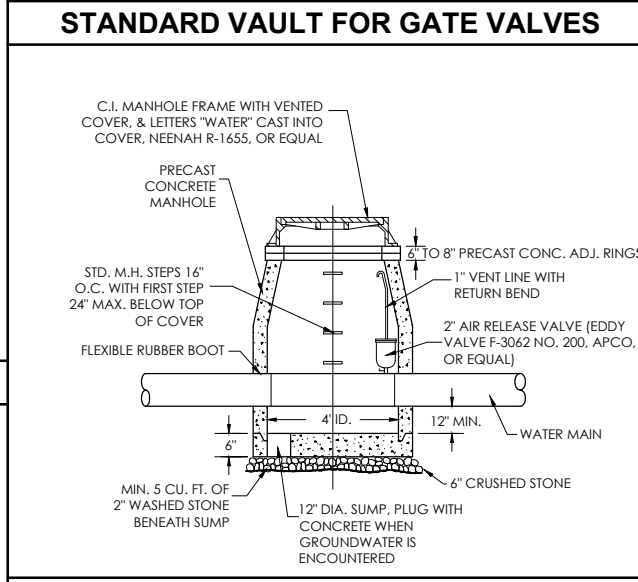
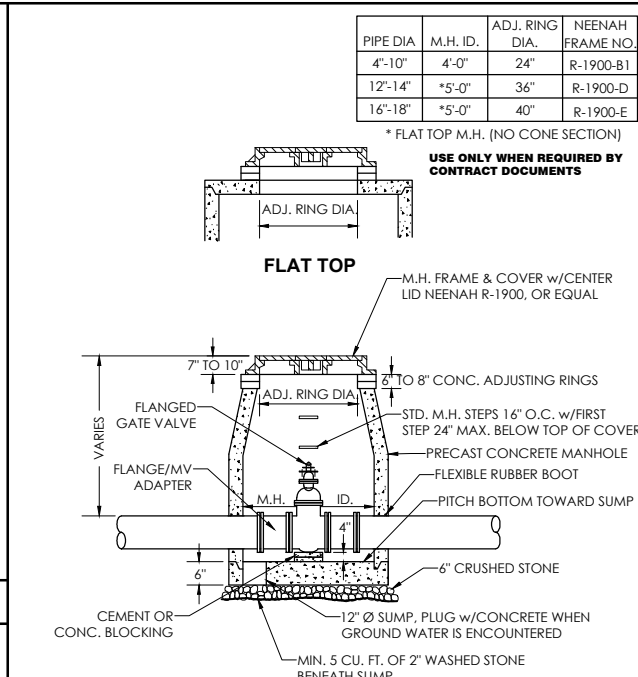
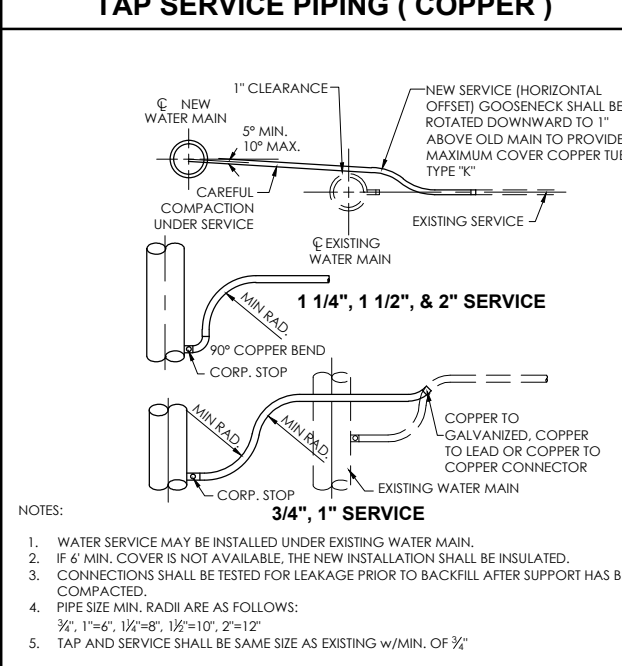
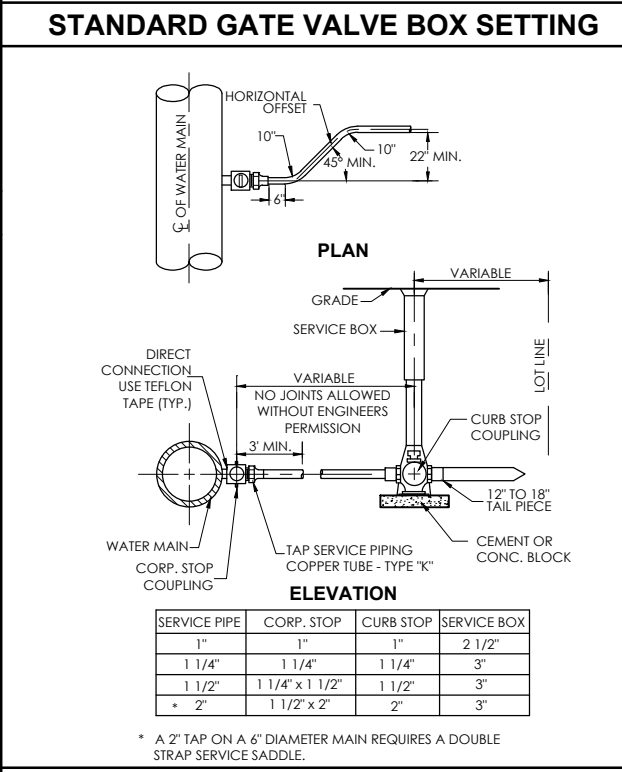
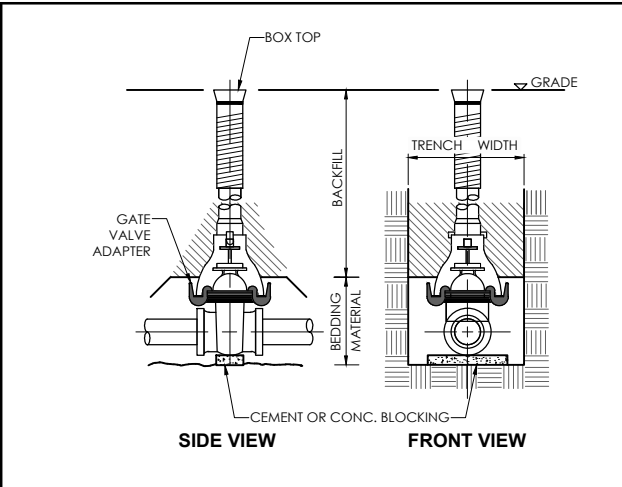
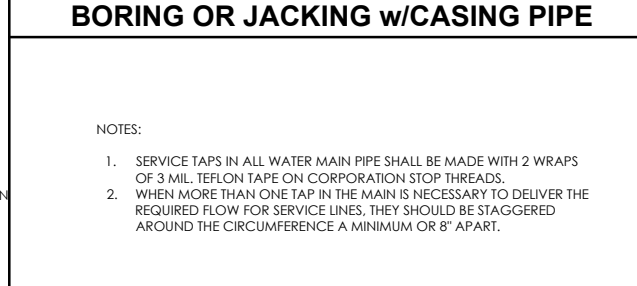
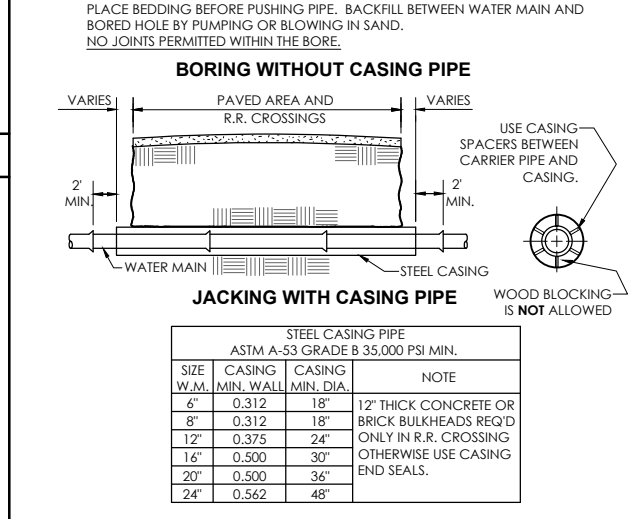
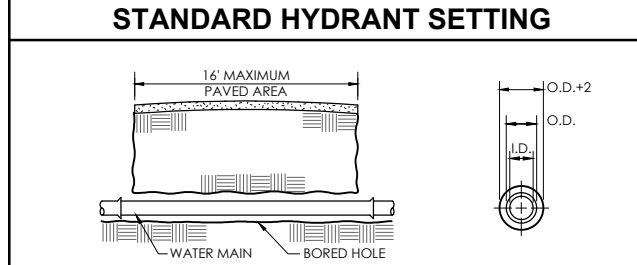
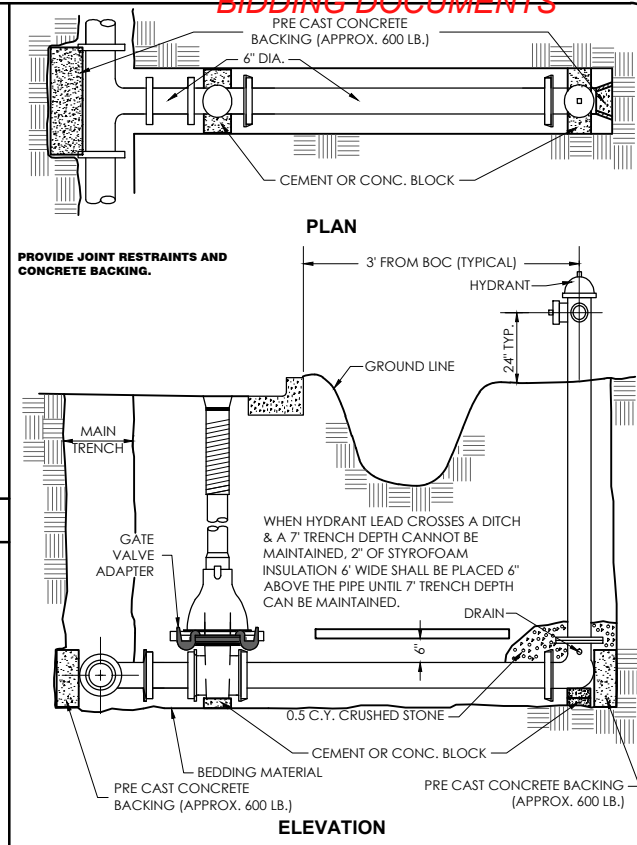


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WATER MAIN CONSTRUCTION DETAILS
 Schumacher Farm Center for Rural Heritage
 Town of Westport
 Dane County, WI

REVISIONS	NO.	DATE
Bidding Documents	1	05/09/2017

DRAWN BY	LAL
REVIEWED BY	KDA
ISSUE DATE	3/11/2016
GEC FILE NO.	2-0116-72
SHEET NO.	

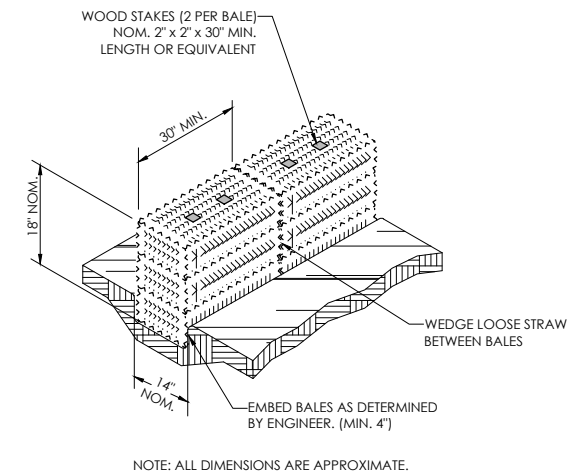




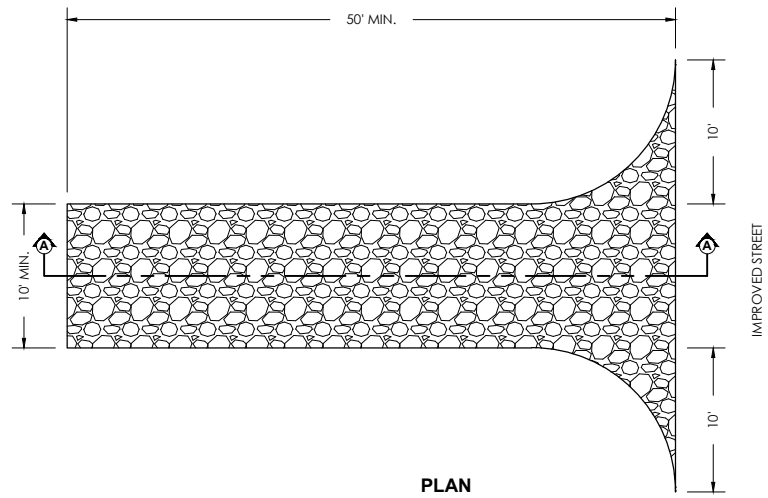
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EROSION CONTROL DETAILS
 Schumacher Farm Center for Rural Heritage

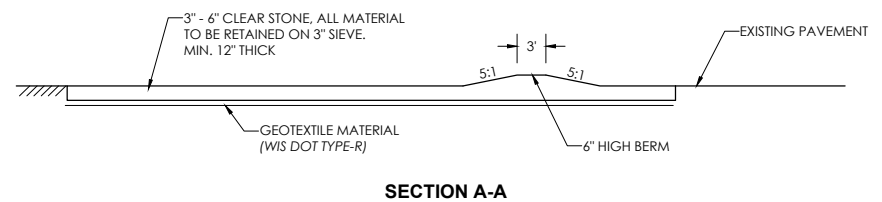
Town of Westport
 Dane County, WI



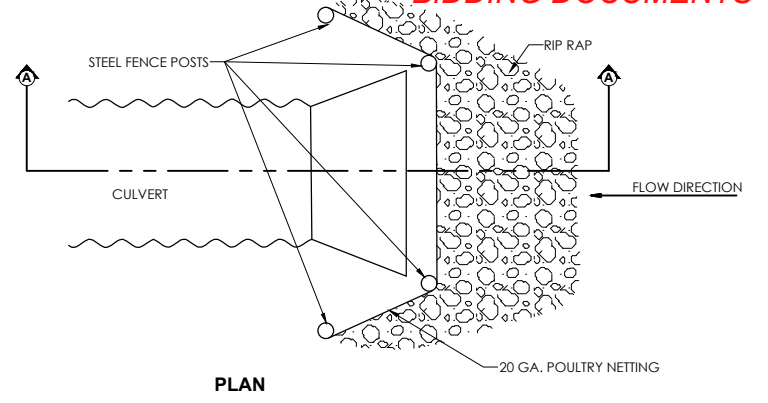
EROSION BALE INSTALLATION



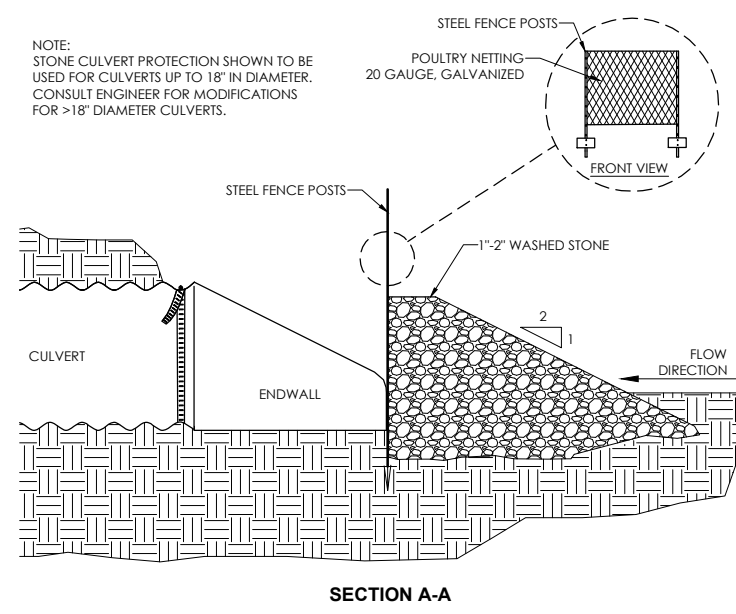
NOTE: MAINTAIN THE ROCK ENTRANCE TO PREVENT TRACKING ONTO PAVEMENT



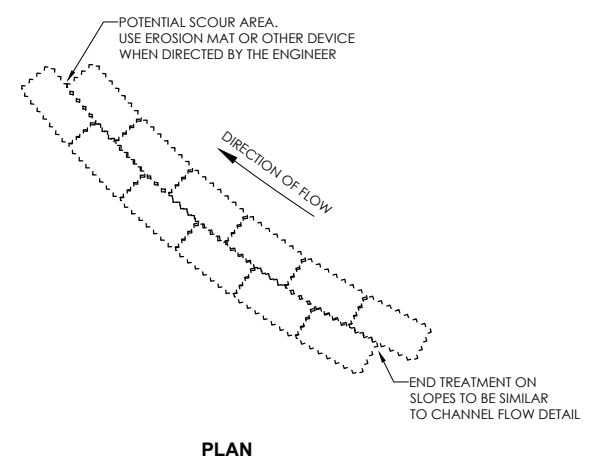
ROCK CONSTRUCTION ENTRANCE



NOTE: STONE CULVERT PROTECTION SHOWN TO BE USED FOR CULVERTS UP TO 18" IN DIAMETER. CONSULT ENGINEER FOR MODIFICATIONS FOR >18" DIAMETER CULVERTS.

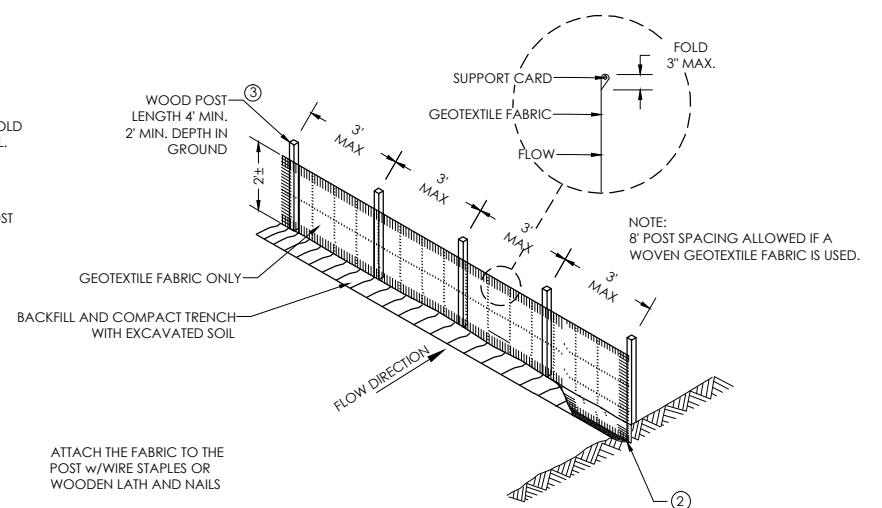
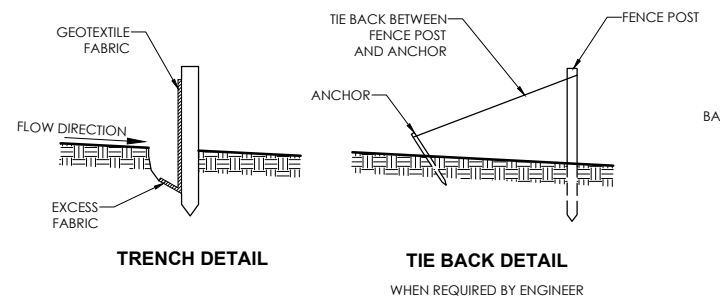


STONE CULVERT PROTECTION



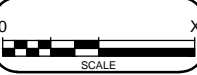
EROSION BALE WHEN ALTERING FLOW DIRECTION

- NOTES:
- HORIZONTAL BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POST AS DIRECTED BY THE ENGINEER.
 - TRENCH SHALL BE A MINIMUM OF 4" WIDE BY 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC, FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH AND COMPACT WITH EXCAVATED SOIL.
 - WOOD POST SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.



SILT FENCE

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017



DRAWN BY: LAL
 REVIEWED BY: KDA
 ISSUE DATE: 3/11/2016
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 SHEET NO.



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EROSION CONTROL SPECIFICATIONS
Schumacher Farm Center for Rural Heritage
Town of Westport
Dane County, WI

CONSTRUCTION SITE EROSION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- FURNISHING, INSTALLING, MAINTAINING, AND REMOVING EROSION AND SEDIMENT CONTROL FACILITIES AND MEASURES.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL EROSION CONTROL FACILITIES AND MEASURES NECESSARY TO CONTROL EROSION AND SEDIMENTATION AT THE WORK SITE. THESE FACILITIES AND MEASURES MAY OR MAY NOT BE SHOWN ON THE DRAWINGS AND THEIR ABSENCE ON THE DRAWINGS DOES NOT ALLEVIATE THE CONTRACTOR FROM PROVIDING THEM. ANY MEASURES AND FACILITIES SHOWN ON THE DRAWINGS ARE THE MINIMUM ACTIONS REQUIRED.

1.02 REFERENCES

- WDNR TECHNICAL STANDARDS - SEE DNR WEBSITE @ <http://dnr.state.wi.us/org/water/wm/nps/stormwater/techstds.htm>
- WISCONSIN DEPARTMENT OF TRANSPORTATION, EROSION CONTROL, PRODUCT ACCEPTABILITY LISTS FOR MULTI-MODAL APPLICATIONS PAL, CURRENT EDITION.

1.03 GENERAL

- REQUIREMENTS OF WDNR TECHNICAL STANDARDS SHALL BE FOLLOWED AT ALL TIMES.
- USE SURFACE WATER AND EROSION CONTROL FACILITIES AND MEASURES THROUGHOUT THE DURATION OF THE CONSTRUCTION ACTIVITY TO CONTROL THE MOVEMENT OF SURFACE WATER AND TO REDUCE THE POTENTIAL FOR EROSION. MAINTAIN THE FACILITIES AND MEASURES UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- ERODED SOIL MATERIAL SHALL NOT BE ALLOWED TO LEAVE THE CONSTRUCTION SITE OR TO ENTER A WATERWAY, LAKE, OR WETLAND.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING THE EROSION CONTROL FACILITIES, AND IN GENERAL, SHALL USE CONSTRUCTION PRACTICES THAT MINIMIZE EROSION.
- ERODED MATERIAL THAT HAS LEFT THE CONSTRUCTION SITE SHALL BE COLLECTED AND RETURNED TO THE SITE BY THE CONTRACTOR.
- PREVENT CONSTRUCTION SITE TRACKING WITH GRAVELED ROADS, ACCESS DRIVES, AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC AND PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY.

1.04 SEQUENCING AND SCHEDULING

- CONSTRUCT AND STABILIZE EROSION CONTROL MEASURES FOR DIVERSIONS OR OUTLETS PRIOR TO ANY GRADING OR DISTURBANCE OF THE CONSTRUCTION SITE.
- INSTALL FILTER FABRIC AND STRAW BALE FENCES AND BARRIERS PRIOR TO DISTURBING THE AREA.
- TURF AREAS THAT HAVE BEEN COMPLETED TO FINISH GRADE SHALL BE STABILIZED WITH PERMANENT SEEDING WITHIN SEVEN DAYS. TURF AREAS WHERE ACTIVITY HAS CEASED AND THAT WILL REMAIN EXPOSED FOR MORE THAN 20 DAYS BEFORE ACTIVITY RESUMES AND SOIL STOCKPILES SHALL BE STABILIZED WITH TEMPORARY SEEDING OR SOIL STABILIZER.
- OTHER EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO DISTURBANCE OF THE CONSTRUCTION SITE, AS APPLICABLE.

PART 2 - PRODUCTS

2.01 SILT FENCE

- FABRIC SHALL BE SHALL A WOVEN OR NONWOVEN POLYESTER, POLYPROPYLENE, STABILIZED NYLON, OR POLYETHYLENE GEOTEXTILE WITH THE FOLLOWING MINIMUM PROPERTIES:

PROPERTY	TEST METHOD	REQUIREMENT*
GRAB TENSILE STRENGTH, LBS MIN. MACHINE DIRECTION	ASTM D 4632	120
CROSS DIRECTION		100
MAX. APPARENT OPENING SIZE, US SIEVE	ASTM D 4751	NO. 30
PERMITTIVITY, SEC-1, MIN.	ASTM D 4491	0.05
MIN. UV STABILITY AT 500 HRS, %	ASTM D 4355	70%

* MINIMUM OR MAXIMUM AVERAGE ROLL VALUES.

2.02 STRAW BALES

- STRAW OR HAY BALES IN GOOD CONDITION WITH NOMINAL DIMENSIONS OF 14" W X 18" H X 30".
- STAKES: WOOD STAKES WITH MINIMUM NOMINAL DIMENSIONS OF 2" X 2" X 30".

2.03 SEDIMENT LOGS

- WOOD EXCELSIOR LOG WRAPPED IN BIODEGRADABLE FABRIC OR MESH AND LISTED IN THE EROSION CONTROL PRODUCT ACCEPTABILITY LISTS.
- STAKES: WOOD STAKES WITH MINIMUM NOMINAL DIMENSION OF 1" X 1" X 24".

2.04 TEMPORARY SEED

- AREAS NEEDING PROTECTION DURING PERIODS WHEN PERMANENT SEEDING IS NOT APPLIED SHALL BE SEED WITH ANNUAL SPECIES FOR TEMPORARY PROTECTION. PROVIDE SPECIES AS FOLLOWS:

SPECIES	% PURITY
OATS	98
CEREAL RYE	97
WINTER WHEAT	95
ANNUAL RYEGRASS	97

- PROVIDE OATS FOR SPRING AND SUMMER. PROVIDE CEREAL RYE, WINTER WHEAT, OR ANNUAL RYEGRASS FOR FALL SEEDING.

2.05 EROSION MAT

- ALL EROSION MAT PRODUCTS SHALL BE OF THE CLASS AND TYPE INDICATED AND SHALL BE CHOSEN FROM THE EROSION CONTROL PRODUCT ACCEPTABILITY LISTS.
- CLASS I: A SHORT-TERM DURATION (SIX MONTHS OR GREATER), LIGHT DUTY, ORGANIC MAT. NETTING SHALL BE NON-ORGANIC, PHOTODEGRADABLE OR BIODEGRADABLE NETTING. THE WEIGHT OF THE NETTING SHALL NOT EXCEED 15% OF THE TOTAL BLANKET WEIGHT. THE NETTING SHALL BE SUFFICIENTLY BONDED TO THE PARENT MATERIAL TO PREVENT SEPARATION FOR THE LIFE OF THE PRODUCT.
 - TYPE A: A NETTED PRODUCT FOR USE ON SLOPES 2.5 TO 1 OR FLATTER WITH A MINIMUM PRODUCT PERMISSIBLE SHEAR STRESS OF 50 PA (1.0 LBS/FT²). NOT TO BE USED IN CHANNELS.
 - TYPE B: A DOUBLE NETTED PRODUCT FOR USE ON SLOPES 2 TO 1 OR FLATTER OR IN CHANNELS WITH A MINIMUM PRODUCT PERMISSIBLE SHEAR STRESS OF 70 PA (1.5 LBS/FT²).
- CLASS II: A LONG-TERM DURATION (3 YEARS OR GREATER), ORGANIC MAT. THE WEIGHT OF THE NETTING SHALL NOT EXCEED 15% OF THE TOTAL BLANKET WEIGHT. THE NETTING SHALL BE BONDED SUFFICIENTLY TO THE PARENT MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL FOR THE LIFE OF THE PRODUCT.
 - TYPE A: JUTE FIBER ONLY TO BE USED FOR REINFORCING SOD.
 - TYPE B: FOR USE ON SLOPES 2:1 OR FLATTER, OR IN CHANNELS WITH A MINIMUM PRODUCT PERMISSIBLE SHEAR STRESS OF 95 PA (2.0 LBS/FT²). NON-ORGANIC, PHOTODEGRADABLE, OR BIODEGRADABLE NETTING ALLOWED.
 - TYPE C: FOR USE ON SLOPES 2:1 OR FLATTER, OR IN CHANNELS WITH A MINIMUM PRODUCT PERMISSIBLE SHEAR STRESS OF 95 PA (2.0 LBS/FT²). ONLY 100% ORGANIC FIBERS ALLOWED. WOVEN MATS ARE ALLOWED WITH A MAXIMUM OPENING OF ½ INCH. USE IN ENVIRONMENTALLY SENSITIVE AREAS THAT HAVE A HIGH PROBABILITY OF ENTRAPPING ANIMALS IN THE PLASTIC NETTING.
- STAPLES: U-SHAPED NO. 11 GAUGE OR GREATER WIRE WITH A SPAN WIDTH OF ONE TO TWO INCHES AND A LENGTH OF NOT LESS THAN 6 INCHES FOR FIRM SOIL AND 12 INCHES FOR LOOSE SOIL.

2.06 SOIL STABILIZER

- SOIL STABILIZER SHALL BE A POLYACRYLAMIDE (PAM) AND CALCIUM SOLUTION INTENDED TO REDUCE THE ERODIBILITY OF BARE SOILS. THE PRODUCT SHALL ACHIEVE AN 80% REDUCTION IN SOIL LOSS INDUCED BY A TWO INCH PER HOUR RAINFALL SIMULATOR.
- PAM MIXTURES SHALL BE ENVIRONMENTALLY BENIGN, HARMLESS TO FISH, AQUATIC ORGANISMS, WILDLIFE, AND PLANTS. ONLY ANIONIC PAM WILL BE PERMITTED.
- ANIONIC PAM, IN PURE FORM SHALL HAVE NO MORE THAN 0.05% FREE ACRYLIC MONOMER BY WEIGHT, AS ESTABLISHED BY THE FOOD AND DRUG ADMINISTRATION AND THE ENVIRONMENTAL PROTECTION AGENCY. THE ANIONIC PAM IN PURE FORM SHALL NOT EXCEED 200 POUNDS PER BATCH.
- THE PRODUCT PROVIDED SHALL BE LISTED IN THE WISDOT PAL FOR TYPE B SOIL STABILIZER.

2.07 INLET PROTECTION

- TYPE A: USE AROUND FIELD INLETS UNTIL PERMANENT STABILIZATION METHODS HAVE BEEN ESTABLISHED. USE ON PAVEMENT INLETS PRIOR TO INSTALLATION OF CURB AND GUTTER OR PAVEMENT.
- TYPE B: USE ON INLETS WITHOUT CURB HEAD AFTER CASTING AND GRATE ARE IN PLACE.
- TYPE C: USE ON STREET INLETS WITH CURB HEAD.
- TYPE D: USE IN AREAS WHERE OTHER TYPED OF INLET PROTECTION ARE INCOMPATIBLE WITH ROADWAY AND TRAFFIC CONDITIONS CAUSING POSSIBLE SAFETY HAZARDS WHEN PONDING OCCURS AT INLET.
- GEOTEXTILE: TYPE FF MEETING THE REQUIREMENTS OF THE LATEST EDITION OF WISDOT PAL.

PART 3 - EXECUTION

3.01 INSTALLATION OF DIVERSIONS

- TEMPORARY DIVERSIONS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH WDNR CONSERVATION PRACTICE STANDARD, CONSTRUCTION SITE DIVERSION (1066).

3.02 INSTALLATION OF SILT FENCE AND STRAW BALE BARRIERS

- INSTALL STRAW BALE BARRIERS IN ACCORDANCE WITH THE DRAWINGS AND WDNR CONSERVATION PRACTICE STANDARD, SEDIMENT BALE BARRIER (1055).
- INSTALL SILT FENCE IN ACCORDANCE WITH THE DRAWINGS AND WDNR CONSERVATION PRACTICE STANDARD, SILT FENCE (1056).
- SILT FENCE AND STRAW BALE BARRIERS SHALL BE PLACED ON THE CONTOUR TO THE EXTENT PRACTICABLE. PLACE FENCES PARALLEL TO THE SLOPE WITH THE ENDS OF THE FENCE TURNED UPSLOPE A DISTANCE OF ONE TO TWO FEET. THE PARALLEL SPACING SHALL NOT EXCEED THE MAXIMUM SLOPE LENGTHS AS INDICATED IN THE FOLLOWING TABLE:

FENCE AND BARRIER SPACING	
SLOPE	SPACING
<2%	100'
2 - 5%	75'
5 - 10%	50'
10 - 33%	25'
>33%	20'

3.03 TEMPORARY SEEDING

- PROVIDE A SEEDBED OF LOOSE SOIL TO A MINIMUM DEPTH OF 2 INCHES.
- APPLY SEED EVENLY AT THE RATE SHOWN IN THE FOLLOWING TABLE. RAKE OR DRAG TO COVER THE SEED TO A DEPTH OF 1/4 INCH.

SPECIES	LBS./ACRE
OATS	131
CEREAL RYE	131
WINTER WHEAT	131
ANNUAL RYEGRASS	80

3.04 EROSION MAT INSTALLATION

- REMOVE STONES, CLODS, STICKS, OR OTHER FOREIGN MATERIAL THAT WOULD DAMAGE THE MAT OR INTERFERE WITH THE MAT BEARING COMPLETELY ON THE SURFACE.
- INSTALL EROSION MAT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- AFTER SEEDING HAS BEEN COMPLETED, ROLL BLANKETS OUT PARALLEL TO THE DIRECTION OF WATER FLOW, WITH THE NETTING ON TOP. SPREAD THE BLANKETS WITHOUT STRETCHING, MAKING SURE THE FIBERS ARE IN CONTACT WITH THE SOIL. OVERLAP ADJACENT STRIPS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. OVERLAP STRIP ENDS A MINIMUM OF 10 INCHES WITH THE UPGRADE STRIP ON TOP. BURY THE UPGRADE END OF EACH STRIP IN A VERTICAL TRENCH AT LEAST 6 INCHES DEEP.
- STAPLE THE MAT STRIPS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. STAPLE LONGITUDINAL OVERLAPS AND OUTER EDGES AT MAXIMUM INTERVALS OF 3 FEET. STAPLE STRIP ENDS AT MAXIMUM INTERVALS OF 16 INCHES. PLACE STAPLES THROUGHOUT THE MAT AT MAXIMUM 3-FOOT INTERVALS. INSERT STAPLES FLUSH WITH THE GROUND SURFACE.

3.05 SOIL STABILIZER

- THE MANUFACTURER SHALL PROVIDE DETAILED WRITTEN INSTRUCTIONS ON THE STORAGE, MIXING, AND APPLICATION PROCEDURES.
- THE SOIL STABILIZER MAY BE APPLIED BY SPRAYING OR BY DRY SPREADING.
- APPLICATION RATES: APPLY AT THE RATE RECOMMENDED BY THE MANUFACTURER.
- DO NOT APPLY WITHIN 30 FEET OF BODY OF WATER (I.E. LAKE, RIVER, STORMWATER POND).

3.06 DITCH EROSION CONTROL

- THE FOLLOWING EROSION CONTROL MEASURES ARE MINIMUM REQUIREMENTS FOR ALL DITCHES. THE DRAWINGS MAY INCLUDE MORE SPECIFIC MEASURES.

DITCH EROSION CONTROL		
SLOPE RANGE	METHOD	BALE CHECKS
0 - 1%	SEED AND MULCH	NONE
1% - 4%	SEED AND MULCH WITH EROSION MAT	1% - 2%; EVERY 200' 2% - 4%; EVERY 100'
4% - 6%	STAKED SOD	EVERY 75'
>6%	STAKED SOD AND/OR RIPRAP AS SPECIFIED BY ENGINEER ON DRAWINGS	EVERY 75' FOR SOD

- STONE DITCH CHECKS: UNLESS OTHERWISE INDICATED ON THE DRAWINGS, INSTALL STONE DITCH CHECKS AT INTERVALS OF ONE DITCH CHECK FOR EVERY TWO FEET OF DROP IN CHANNEL GRADE.

3.07 INSTALLATION OF SOD IN DITCHES

- LAY SOD SO THAT JOINTS OF ABUTTING ENDS OF STRIPS ARE NOT CONTINUOUS. LAY EACH STRIP SNUGLY AGAINST PREVIOUSLY LAID STRIPS.
- ROLL OR FIRMLY TAMP SOD TO PRESS THE SOD INTO THE UNDERLYING SOIL.
- TURN THE UPPER EDGES OF THE STRIPS INTO THE SOIL.
- STAKE STRIPS ALONG THE LONGITUDINAL AXIS AT 18-INCH INTERVALS AND NEAR THE TOP EDGE OF THE STRIP. PROVIDE WOOD LATH OR SIMILAR STAKES, 12 INCHES LONG. LEAVE TOP OF STAKE APPROXIMATELY 1/2 INCH ABOVE SOD SURFACE.

3.08 INSTALLATION OF OTHER FACILITIES

- INLET PROTECTION BARRIERS, CHANNEL STABILIZATION, GRASSED WATERWAYS, ROCK LINED WATERWAYS, SEDIMENTS TRAPS, SEDIMENT BASINS, AND OTHER FORMS OF EROSION CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.

3.09 MAINTENANCE

- INSPECT DIVERSIONS WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING PERIODS OF PROLONGED RAINFALL, UNTIL THE VEGETATIVE COVER IS STABILIZED. MAKE NECESSARY REPAIRS IMMEDIATELY.
- INSPECT FILTER FABRIC FENCES AND BARRIERS WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING PERIODS OF PROLONGED RAINFALL. NECESSARY REPAIRS OR REPLACEMENT SHALL BE MADE IMMEDIATELY. REMOVE SEDIMENT DEPOSITS WHEN DEPOSITS REACH ONE-HALF THE HEIGHT OF THE FENCE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR REPLACING FABRIC DUE TO WEATHERING.
- INSPECT STRAW BALE FENCES AND BARRIERS WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING PERIODS OF PROLONGED RAINFALL. NECESSARY REPAIRS OR REPLACEMENT SHALL BE MADE IMMEDIATELY. REMOVE SEDIMENT DEPOSITS WHEN DEPOSITS REACH ONE-THIRD THE HEIGHT OF THE BALES. REPLACE BALES AFTER THREE MONTHS.
- INSPECT ALL SEEDING, SOD, MULCHES, MATS AND NETS WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING PERIODS OF PROLONGED RAINFALL. ADDITIONAL MULCH, NETTING OR MATTING SHALL BE APPLIED IMMEDIATELY WHEN NECESSARY TO MAINTAIN SUITABLE COVERAGE. MAKE INSPECTIONS UNTIL VEGETATIVE COVER IS ESTABLISHED. WATER SEEDING AND SOD WHEN NECESSARY TO PROMOTE ESTABLISHMENT.
- ALL OTHER SOIL EROSION CONTROL MEASURES SHOULD BE INSPECTED AND REPAIRED IMMEDIATELY, IF REQUIRED, WITHIN 24 HOURS AFTER STORM EVENT OR DAILY DURING PERIODS OF PROLONGED RAINFALL.

3.10 REMOVAL

- AFTER FINAL VEGETATION IS ESTABLISHED, REMOVE BALES, SILT FENCES, DITCH CHECKS, DIVERSIONS, AND OTHER EROSION CONTROL FACILITIES. RESTORE AREAS DISTURBED BY THE REMOVALS.

3.11 MONITORING FOR WPDES PERMIT

- UNLESS INDICATED OTHERWISE WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MONITORING REQUIREMENTS OF THE WPDES PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- EROSION AND SEDIMENT CONTROLS SHALL BE ROUTINELY INSPECTED AT LEAST EVERY SEVEN DAYS, AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5 INCHES OR GREATER. WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS SHALL BE MAINTAINED AND SUBMITTED TO THE ENGINEER. THE REPORTS SHALL CONTAIN THE FOLLOWING INFORMATION:
 - DATE, TIME, AND EXACT PLACE OF INSPECTION.
 - NAME(S) OF INDIVIDUAL(S) PERFORMING INSPECTION.
 - AN ASSESSMENT OF THE CONDITION OF EROSION AND SEDIMENT CONTROLS.
 - A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED.
 - A DESCRIPTION OF THE SITES PRESENT PHASE OF CONSTRUCTION.
- THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH THE APPROPRIATE DNR FORM TO USE FOR THE INSPECTIONS.

REVISIONS	NO.	BY	DATE
Bidding Documents	1	LAL	05/09/2017



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SCHUMACHER BARN REMODEL / SITE IMPROVEMENTS

5682 State Hwy 19
 Westport, WI 53597

RFB NO. 317028



PROJECT IMAGE

CODE INFORMATION SUMMARY:

APPLICABLE CODE
 2009 WISCONSIN COMMERCIAL BUILDING CODE
 2009 INTERNATIONAL EXISTING BUILDING CODE

CONSTRUCTION TYPE
 TYPE VB = 1-STORY BUILDING W/ UNOCCUPIED ATTIC ABOVE

OCCUPANCY
 A3 - ASSEMBLY

FIRE SPRINKLER
 BUILDING IS FULLY SPRINKLERED
 NFPA 13 - ENTIRE BUILDING
 - 1ST FLOOR: WET SYSTEM
 - ATTIC: DRY SYSTEM

FIRE RESISTANCE RATING BUILDING ELEMENTS
 STRUCTURAL FRAME (COLUMNS & BEAMS) = 0 HOURS
 BEARING WALLS (EXTERIOR) = 0 HOURS
 NON-BEARING WALLS (EXTERIOR) = 1 HOUR < 10' TO PROPERTY LINE
 NO RATING > 10' TO PROPERTY LINE
 FLOOR = 0 HOURS
 ROOF = 0 HOURS

REQUIRED FIRE BARRIER/PARTITION FIRE RESISTANT RATINGS:
 SHAFTS: 1 HOUR

SEE CODE COMPLIANCE PLAN FOR MORE INFORMATION

PROJECT/BUILDING DATA

RFB NO. 316058 SCHUMACHER BARN REMODEL / SITE IMPROVEMENTS
 ALTERATION OF 1ST FLOOR OF EXISTING BARN - UNOCCUPIED ATTIC SPACE ABOVE TO REMAIN UNCHANGED.

BUILDING AREAS
 EXISTING BUILDING AREA = 5,598 SQFT
 PROPOSED BUILDING AREA = 5,810 SQFT
 (INCLUDES INFILL OF 1ST FLOOR CEILING)

PARKING COUNTS
 SEE CIVIL DRAWINGS

GROSS BUILDING AREAS	
GROUND FLOOR	
EXISTING	2129 SF
INFILL	2129 SF
LOWER ATTIC	
EXISTING	1928 SF
INFILL	201 SF
UPPER ATTIC	
EXISTING	1552 SF
INFILL	1552 SF
TOTAL GROSS AREA	5810 SF

FLOOR AREA	
GROUND FLOOR	
AREA OF WORK	2053 SF
LOWER ATTIC	
EXISTING	1863 SF
INFILL OF EXISTING OPENINGS	201 SF
UPPER ATTIC	
EXISTING	1495 SF
INFILL	1495 SF
TOTAL AREA	5612 SF

PLUMBING FIXTURES					
REQUIRED FIXTURES	MEN		WOMEN		FIXTURES PROVIDED
	WC	LAV	WC	LAV	
WC	1	2	1	3	
LAV	1	1	1	1	
UR	-	-	2	-	
TOTAL OCCUPANTS: 159					
MEN: 80					
WOMEN: 80					
PER IFC 2009 TABLE 403.1					

Architecture :

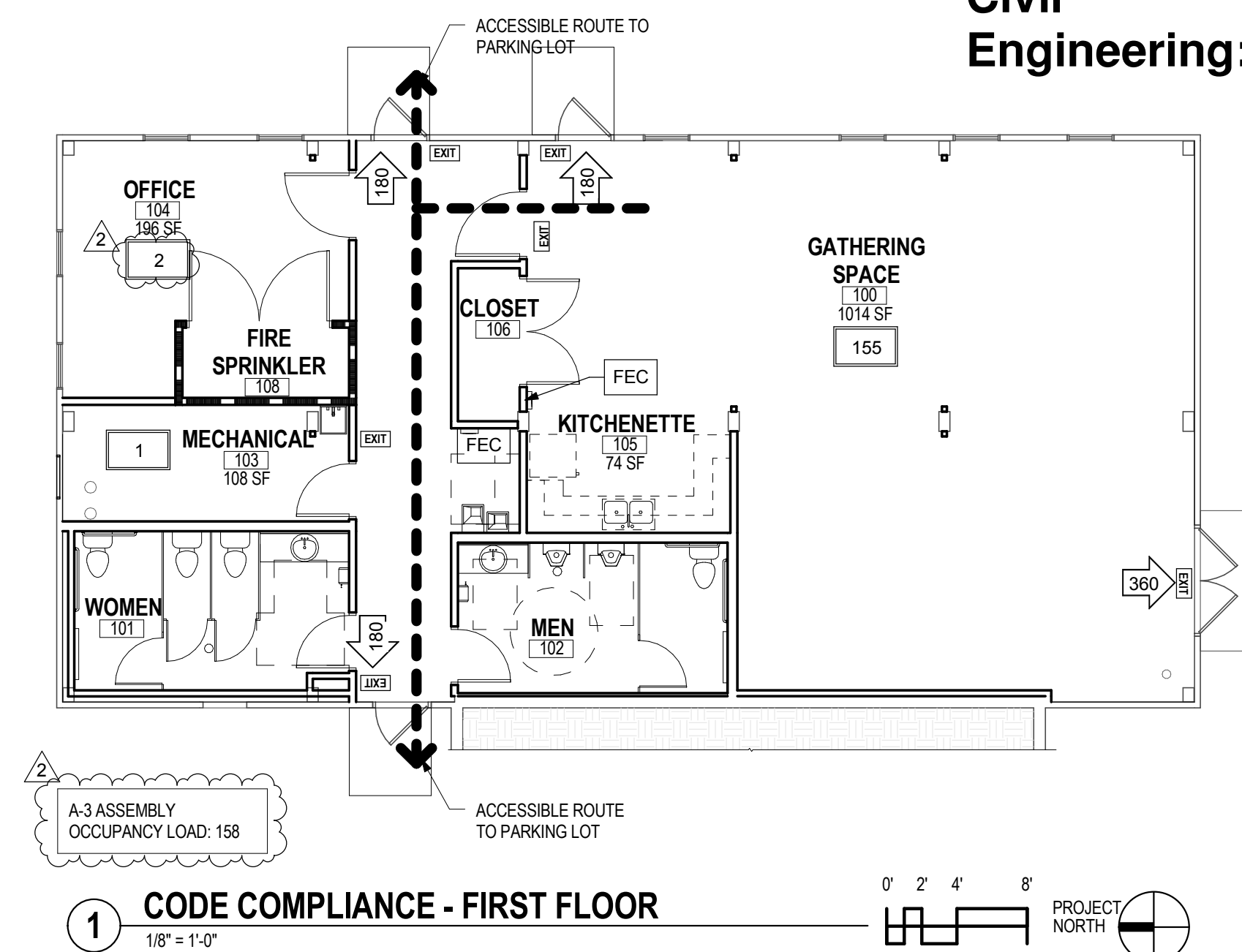
Dimension IV - Madison Design Group
 6515 Grand Teton Plaza, Suite 120, Madison, WI 53719
 p: 608.829.4444 www.dimensionivmadison.com

MEP Engineering:

Hein Engineering Group
 17 Applegate Court, Suite 200, Madison, WI 53713
 p: 608.288.9260

Civil Engineering:

General Engineering Company
 916 Silver Lake Dr, Portage, WI 53901
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1 CODE COMPLIANCE - FIRST FLOOR
 1/8" = 1'-0"

CODE COMPLIANCE GENERAL NOTES

A. GRAB BARS: (PER 2003 ICC/ANSI A117.1)
 INSTALLED GRAB BARS AT TOILETS WITH BLOCKING (INCLUDING VERTICAL GRAB BAR)

B. REFER TO SHEET A7.0 FOR ACCESSIBLE MOUNTING AND CLEARANCES INFORMATION.

C. ALL FIRE EXTINGUISHER CABINETS SHALL BE IN APPROVED LOCATIONS WITH A MAXIMUM TRAVEL DISTANCE TO EXTINGUISHER TO BE 75 FEET PER I.F.C.

D. EXIT ACCESS TRAVEL DISTANCE IS 250 FEET WITH SPRINKLERS PER TABLE 1016.1.

E. COMMON PATH OF EGRESS TRAVEL SHALL NOT EXCEED 75 FEET PER 1014.3.

CODE COMPLIANCE SYMBOLS LEGEND

FEC INDICATES FIRE EXTINGUISHER CABINET LOCATION

XXX INDICATES OCCUPANCY CAPACITY

--- INDICATES ADA ACCESSIBLE ROUTE

XXX INDICATES EXIT AND EXIT CAPACITY

--- INDICATES 1 HOUR FIRE RATED WALL (SEC 709)

LIST OF DRAWINGS

- GENERAL**
 G0.1 COVER SHEET
- CIVIL**
 G1.0 TITLE PAGE
 G1.1 LEGEND & NOTES
 C1.0 EXISTING SITE PLAN
 C2.0 OVERALL PROPOSED SITE PLAN
 C2.1 PROPOSED SITE PLAN
 C3.0 PROPOSED GRADING SITE PLAN
 C4.0 UTILITY SITE PLAN
 C4.1 STORMWATER DEVICES DETAILS
 C5.0 SPOT ELEVATION SITE PLAN-ROAD
 C5.1 SPOT ELEVATION SITE PLAN-PROJECT
 C6.0 MISC. CONSTRUCTION DETAILS
 C7.0 WATERMAIN CONSTRUCTION DETAILS
 C8.0 EROSION CONTROL DETAILS
 C9.0 EROSION CONTROL SPECIFICATIONS
- ARCHITECTURAL**
 A1.1 FLOOR PLANS AND REFLECTED CEILING PLAN
 A3.0 BUILDING SECTIONS
 A5.0 RESTROOM PLANS AND KITCHENETTE ELEVATIONS
 A6.0 DOOR AND WALL TYPES AND SCHEDULES
 A7.0 INTERIOR ELEVATIONS
 A8.0 DETAILS
 A9.0 FLOOR FINISH PLAN

LIST OF DRAWINGS

- FIRE PROTECTION**
 FP1.1 GROUND FLOOR PLAN - FIRE PROTECTION
 FP1.2 ATTIC FLOOR PLANS - FIRE PROTECTION
- PLUMBING**
 P1.1 FLOOR PLANS - PLUMBING
 P2.0 PLUMBING RISERS, SCHEDULES & DETAILS
- HVAC**
 H1.1 GROUND FLOOR PLANS - HVAC
 H1.2 ATTIC FLOOR PLANS - HVAC
 H1.3 GROUND FLOOR PLAN - RADIANT HEAT
 H2.0 HVAC SCHEDULES
 H3.0 HVAC DETAILS
- ELECTRICAL**
 E1.1 GROUND FLOOR PLANS - ELECTRICAL
 E1.2 ATTIC FLOOR PLANS - ELECTRICAL
 E2.0 ELECTRICAL SCHEDULES
 E3.0 ELECTRICAL DETAILS
 SE1.0 SITE ELECTRICAL PLAN



PROJECT LOCATION

AREA MAP

PROJECT # 14099

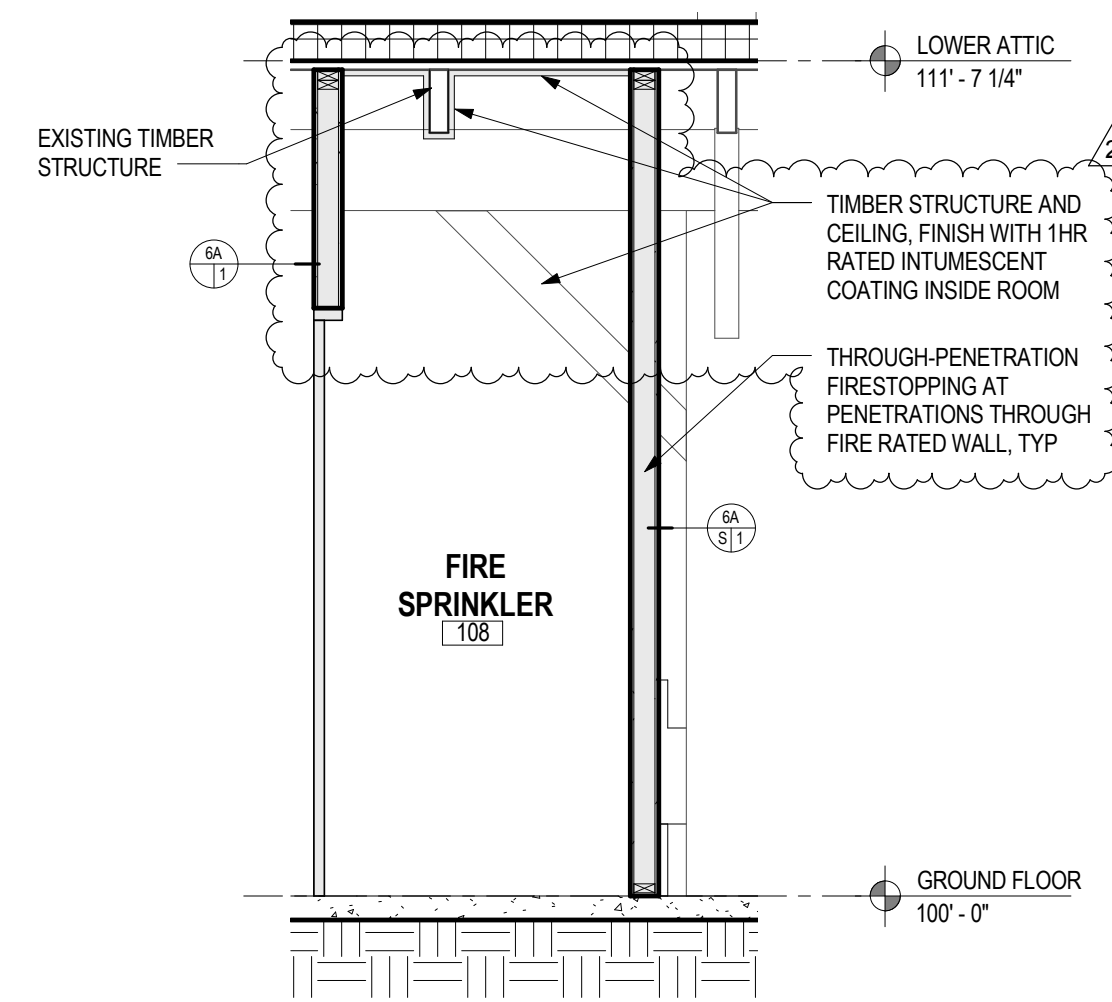
ADDENDUM 1

12/15/2017

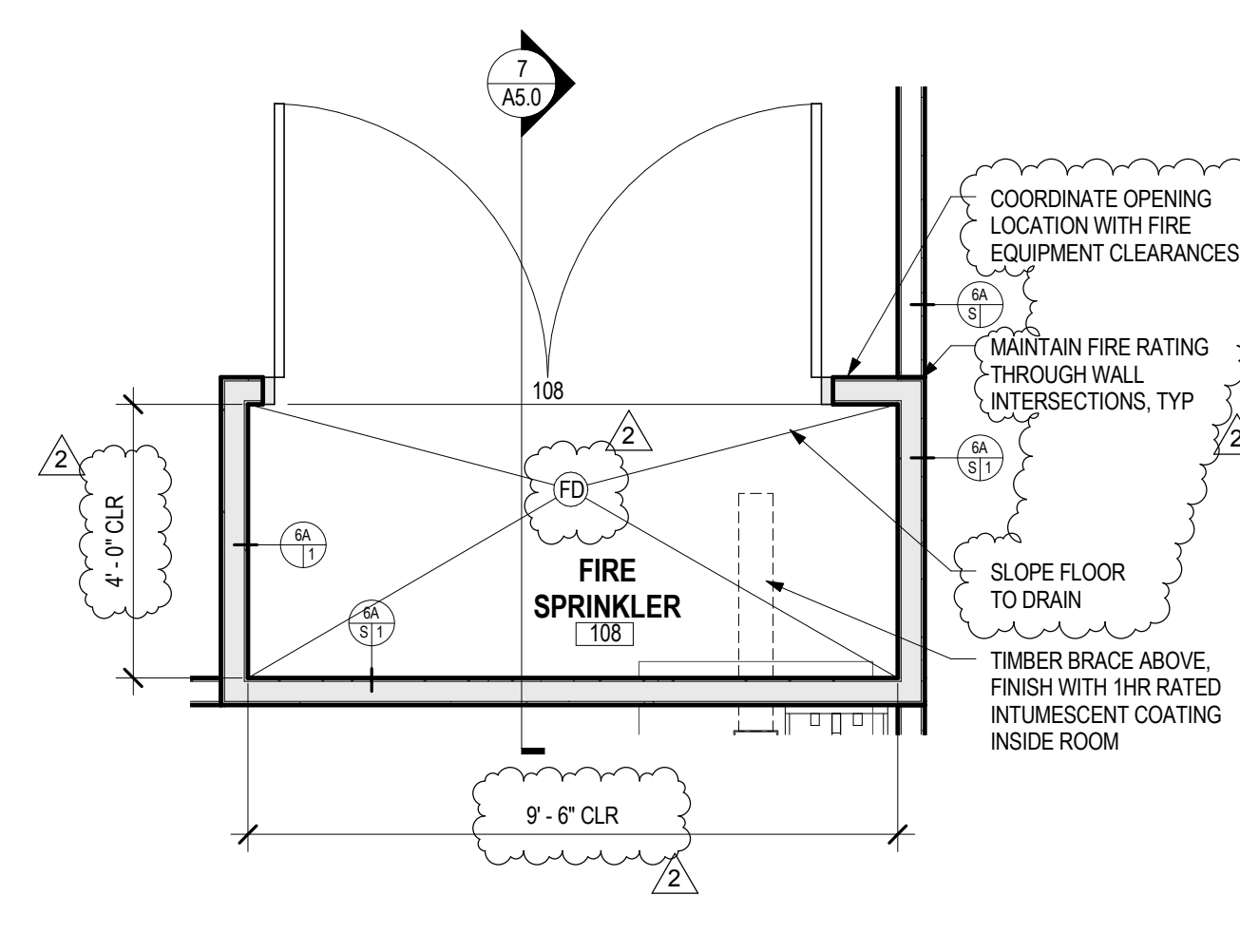
G0.1

**DANE COUNTY
SCHUMACHER BARN
REMODEL / SITE
IMPROVEMENTS**

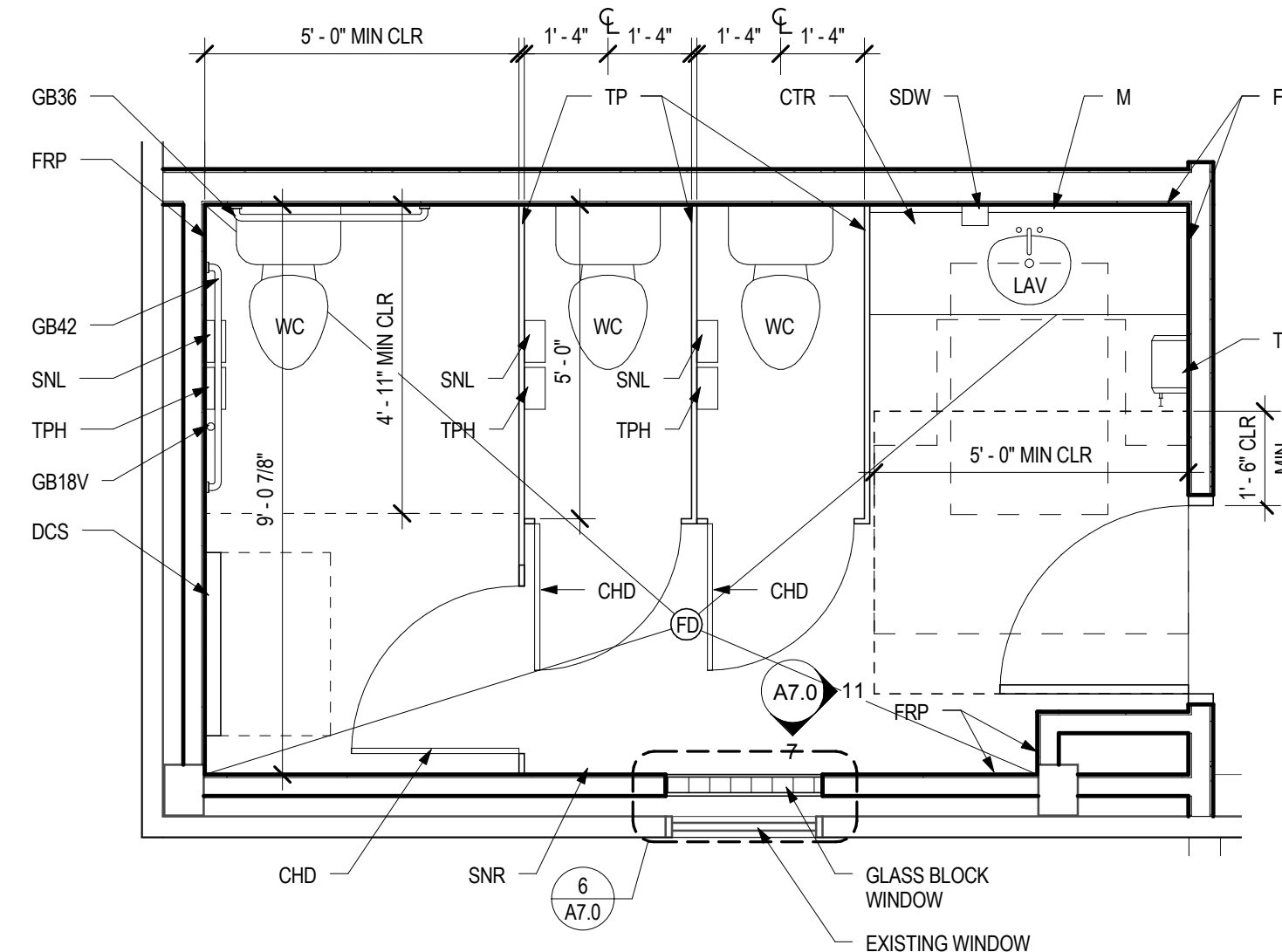
5682 State Hwy 19
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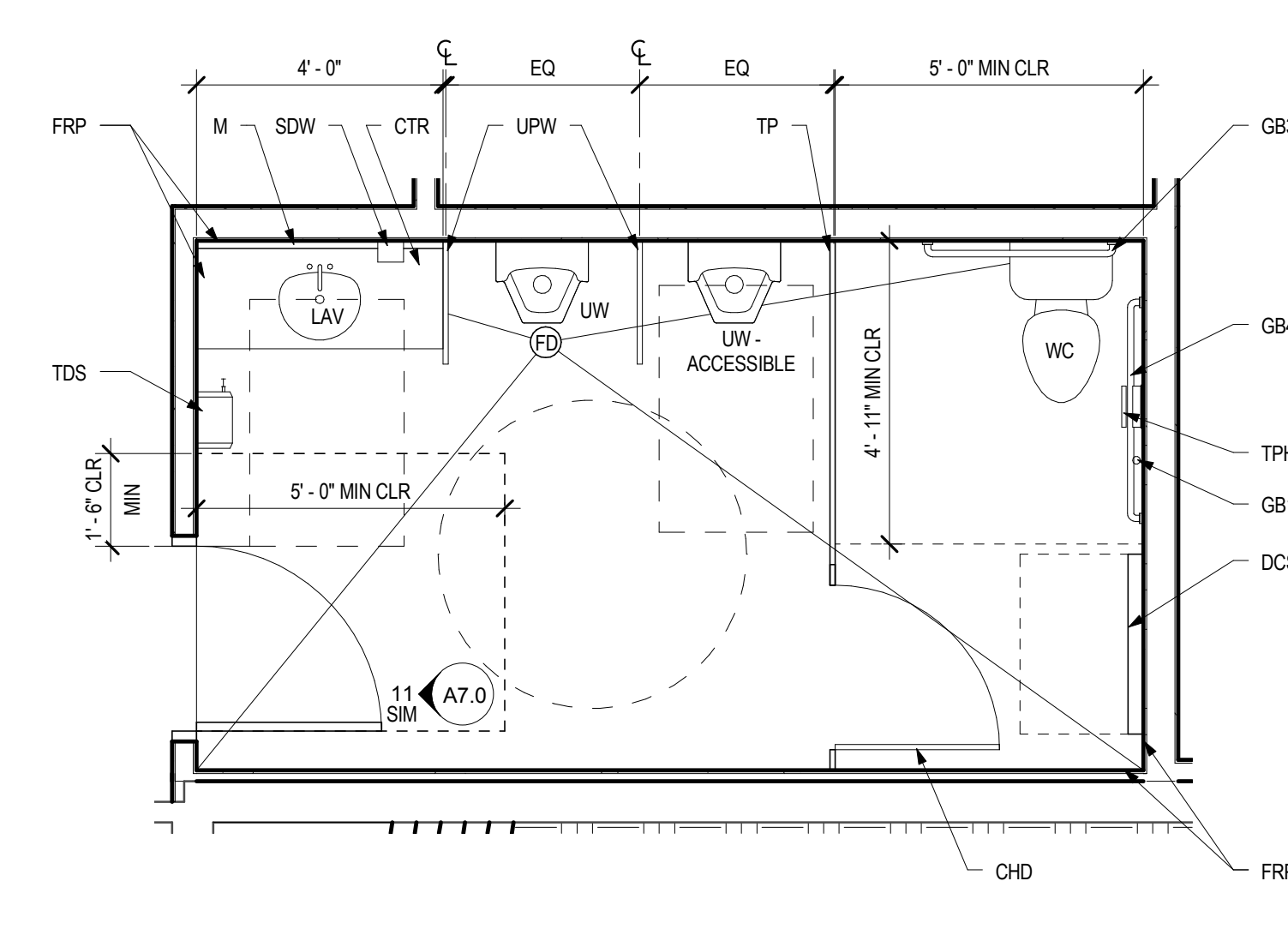
7 FIRE SPRINKLER ROOM SECTION
3/8" = 1'-0"



6 FIRE SPRINKLER ROOM PLAN
3/8" = 1'-0"



5 ENLARGED WOMEN'S RESTROOM PLAN
3/8" = 1'-0"

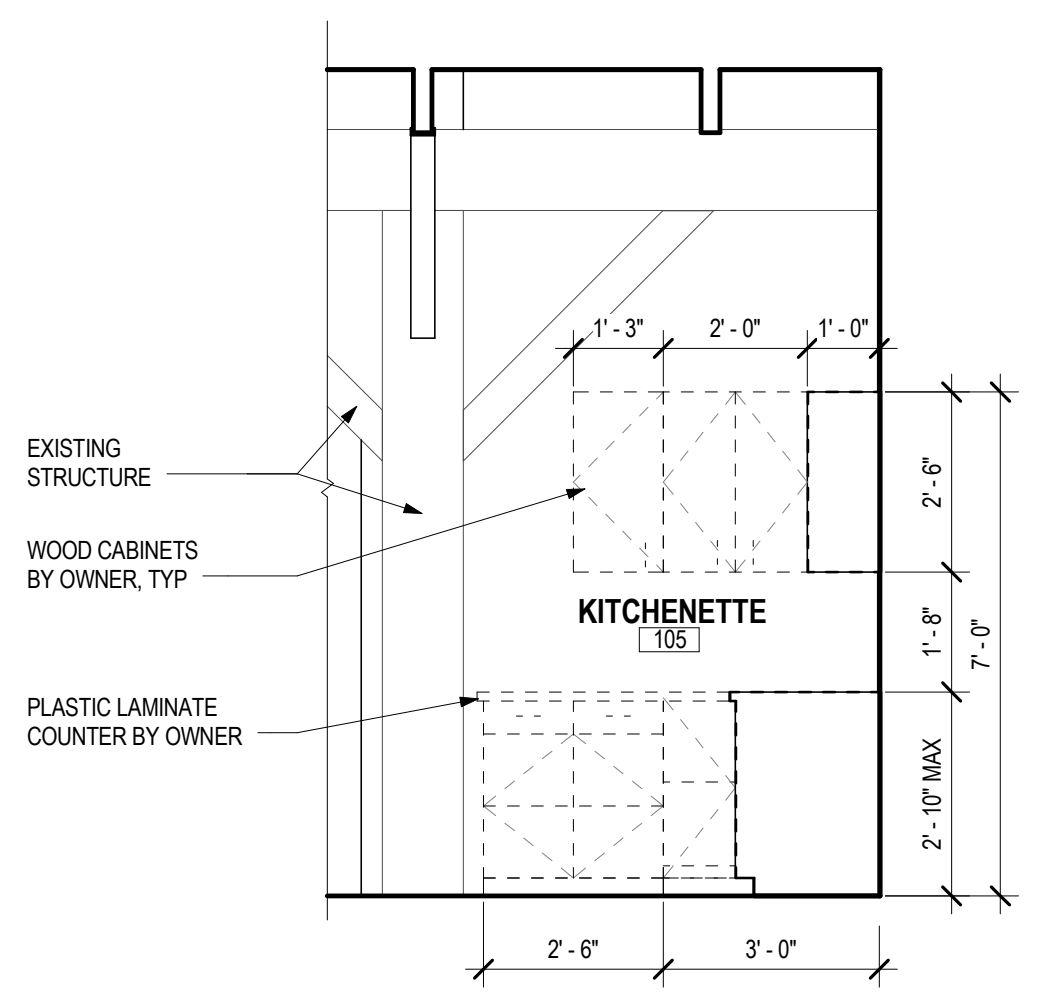


4 ENLARGED MEN'S RESTROOM PLAN
3/8" = 1'-0"

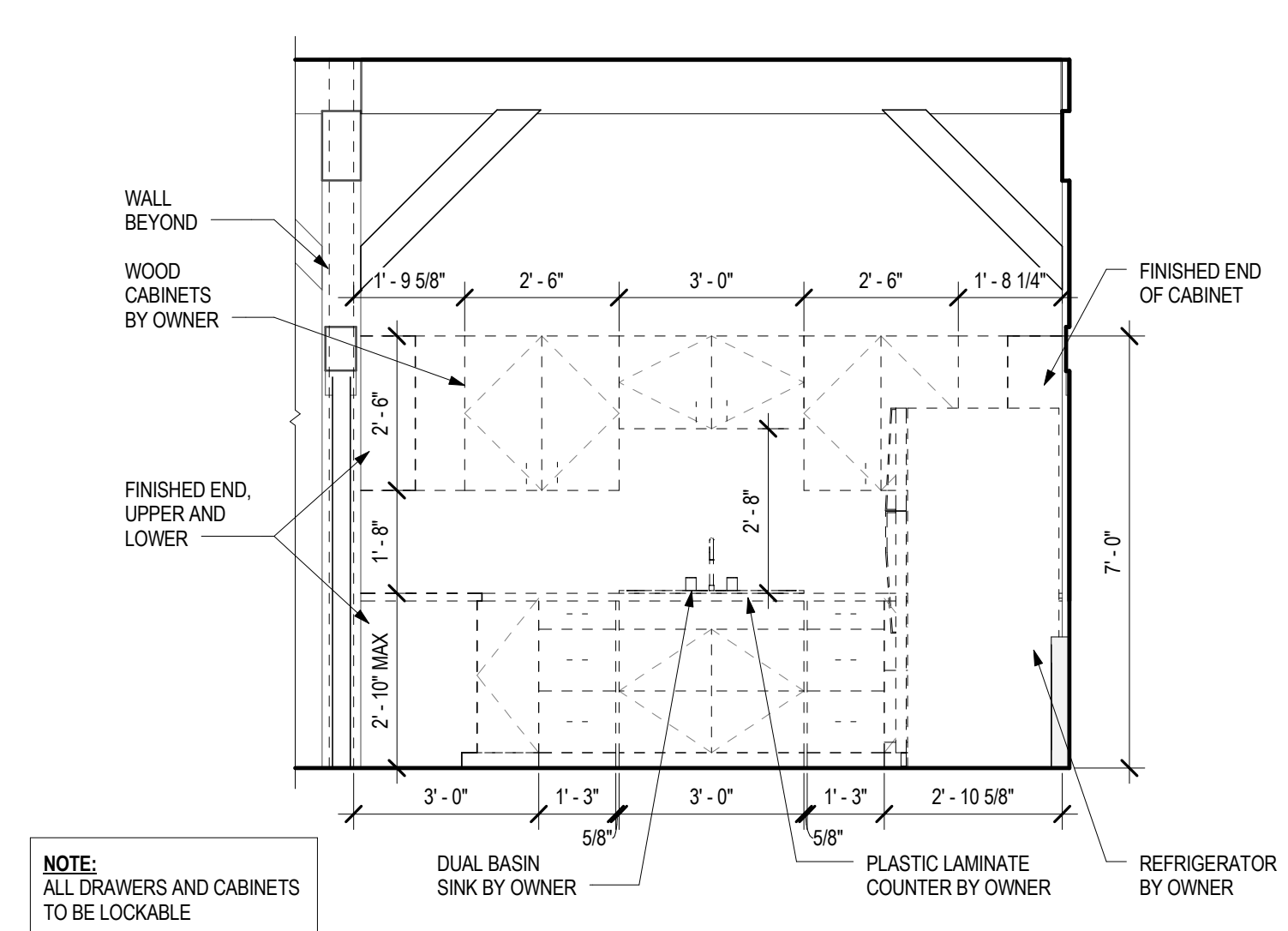
ACCESSORY SCHEDULE - PUBLIC TOILET ROOMS		
ABBREVIATION	ITEM	REMARKS
CHD	CLOTHES HOOK - MOUNTED ON PARTITION DOOR	-
CTR	COUNTER	-
DCS	DIAPER CHANGING STATION - WALL MOUNTED	SEE NOTE '3'
FD	FLOOR DRAIN	-
FRP	FIBER REINFORCED PANELS	FULL-HEIGHT FRP
GB18V	18" GRAB BAR - VERTICAL	-
GB36	36" GRAB BAR	-
GB42	42" GRAB BAR	-
LAV	LAVATORY	-
M	MIRROR - 24" WIDE x 36" HIGH	-
SDW	SOAP DISPENSER - WALL MOUNTED	-
SNR	SANITARY NAPKIN DISPENSER	-
SNL	SANITARY NAPKIN DISPOSAL	-
TDS	TOWEL DISPENSER - SURFACE MOUNTED	-
TP	TOILET PARTITION	-
TPH	TOILET PAPER HOLDER	-
UPW	URINAL PARTITION - 24" D X 48" H, WALL MOUNTED	-
UW	URINAL - WALL MOUNTED	-
WC	WATER CLOSET	-

- SCHEDULE NOTES:**
- TOILET ROOMS WITH MORE THAN ONE TDS. THE SECOND AND ADDITIONAL TDS WILL BE MOUNTED SO THAT THE TOWEL DISPENSER OUTLET IS 54" AFF
 - TRASH RECEPTACLES N.I.C.
 - DCS BABY STATION TO BE 34" AFF MAX. TO TOP OF CHANGING SURFACE WHEN OPEN COMPLETELY. TOTAL DEPTH OF UNIT WHEN OPEN TO BE NO MORE THAN 24" MEASURED FROM THE WALL ON WHICH IT IS MOUNTED.

- GENERAL TOILET ROOM NOTES:**
- PROVIDE BLOCKING AS NECESSARY FOR MOUNTING THERMOSTATS, GRAB BARS, DOOR STOPS FINISH CARPENTRY AND TRIM CABINETS, SHELVING, AND ALL ACCESSORIES AND FIXTURES
 - DASHED ADA CLEARANCE AREA, CIRCLES, RECTANGLES SHOWN FOR INFORMATIONAL PURPOSES ONLY
 - REFER TO PLUMBING DRAWINGS FOR PLUMBING FIXTURES
 - SEE A7.0 FOR ALL HEIGHTS GIVEN BY ELEVATION AND SCHEDULE NOTES FOR ADDITIONAL INFORMATION
 - RESTROOM FLOOR FINISH MATERIALS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE
 - PITCH FLOORS TO DRAIN, 1.48 MAX SLOPE

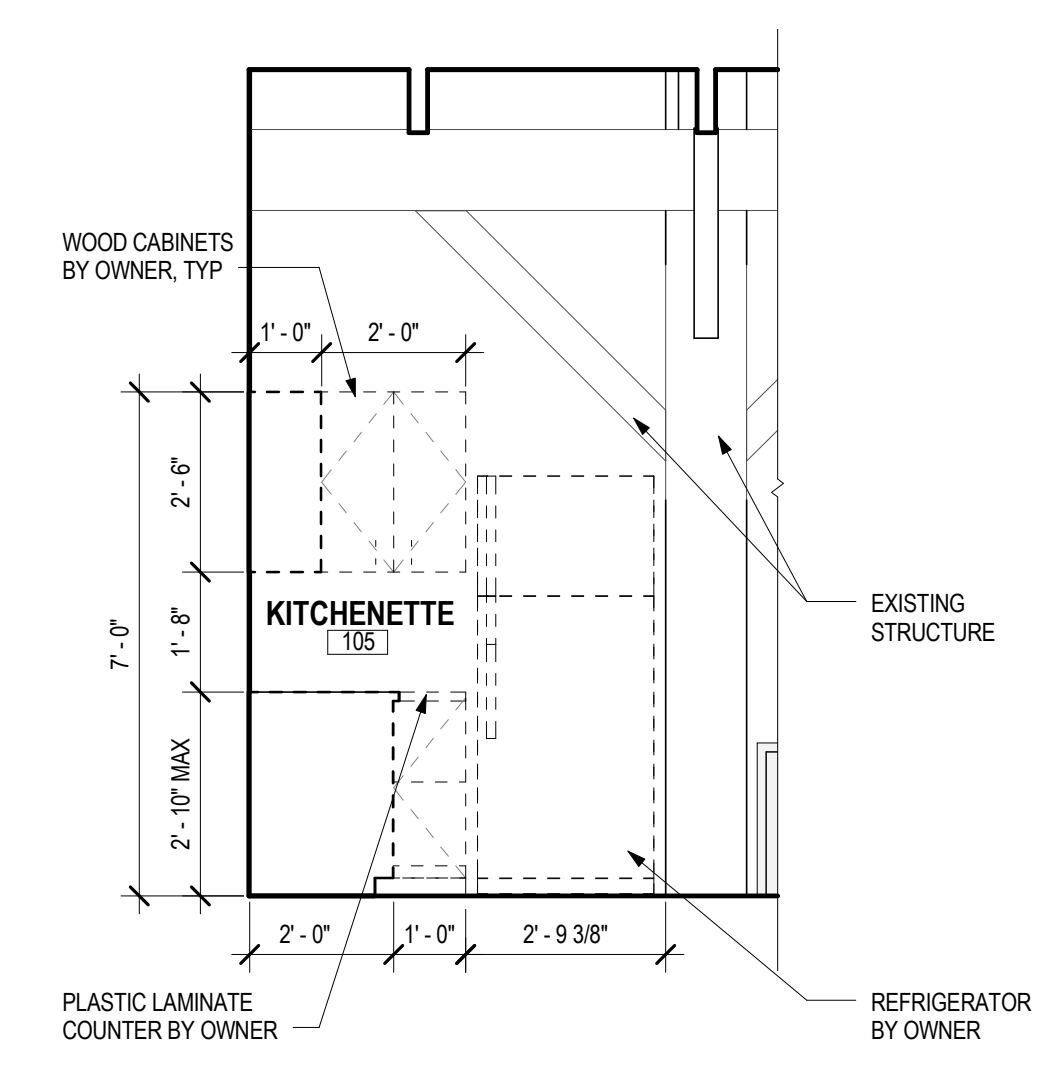


3 KITCHENETTE SOUTH ELEVATION
3/8" = 1'-0"



NOTE:
ALL DRAWERS AND CABINETS TO BE LOCKABLE

2 KITCHENETTE WEST ELEVATION
3/8" = 1'-0"



1 KITCHENETTE NORTH ELEVATION
3/8" = 1'-0"

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1	PROJECT REBID	11/17/2017
2	ADDENDUM 1	12/15/2017

PROJECT # 14099

**RESTROOM PLANS
AND KITCHENETTE
ELEVATIONS**

A5.0

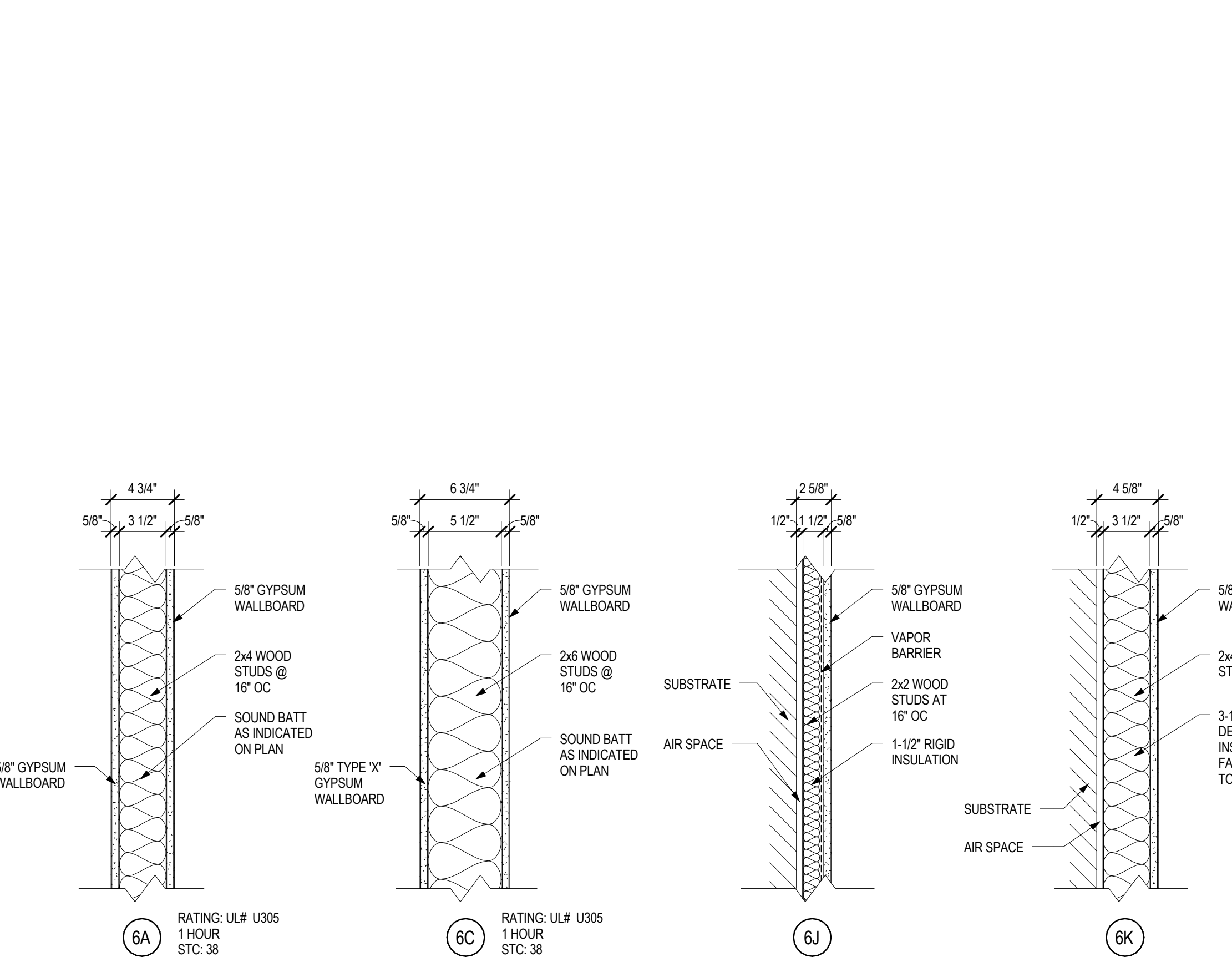
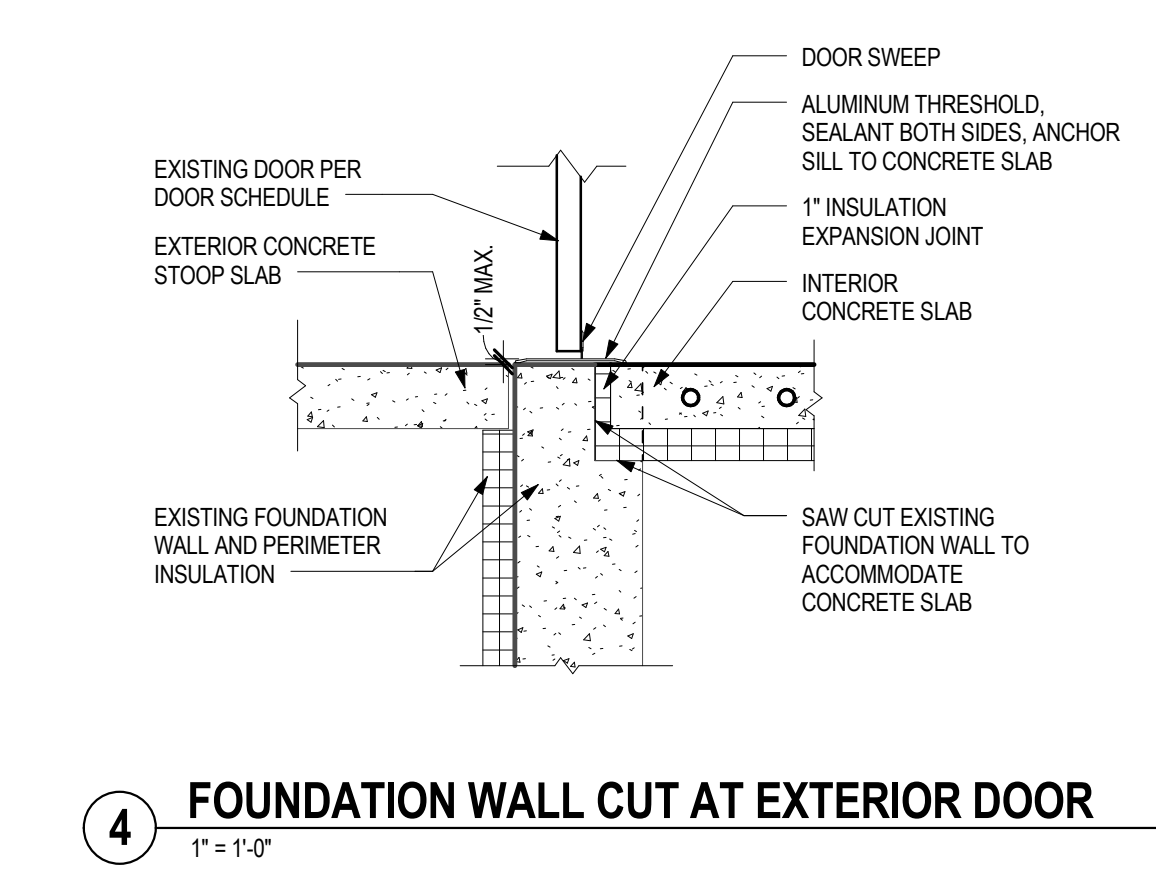
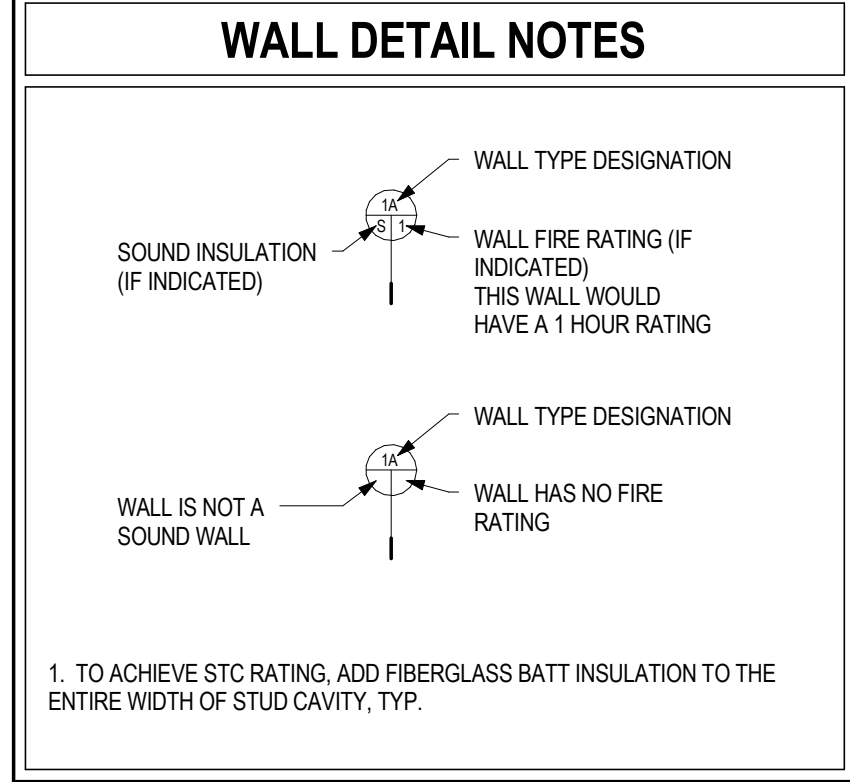
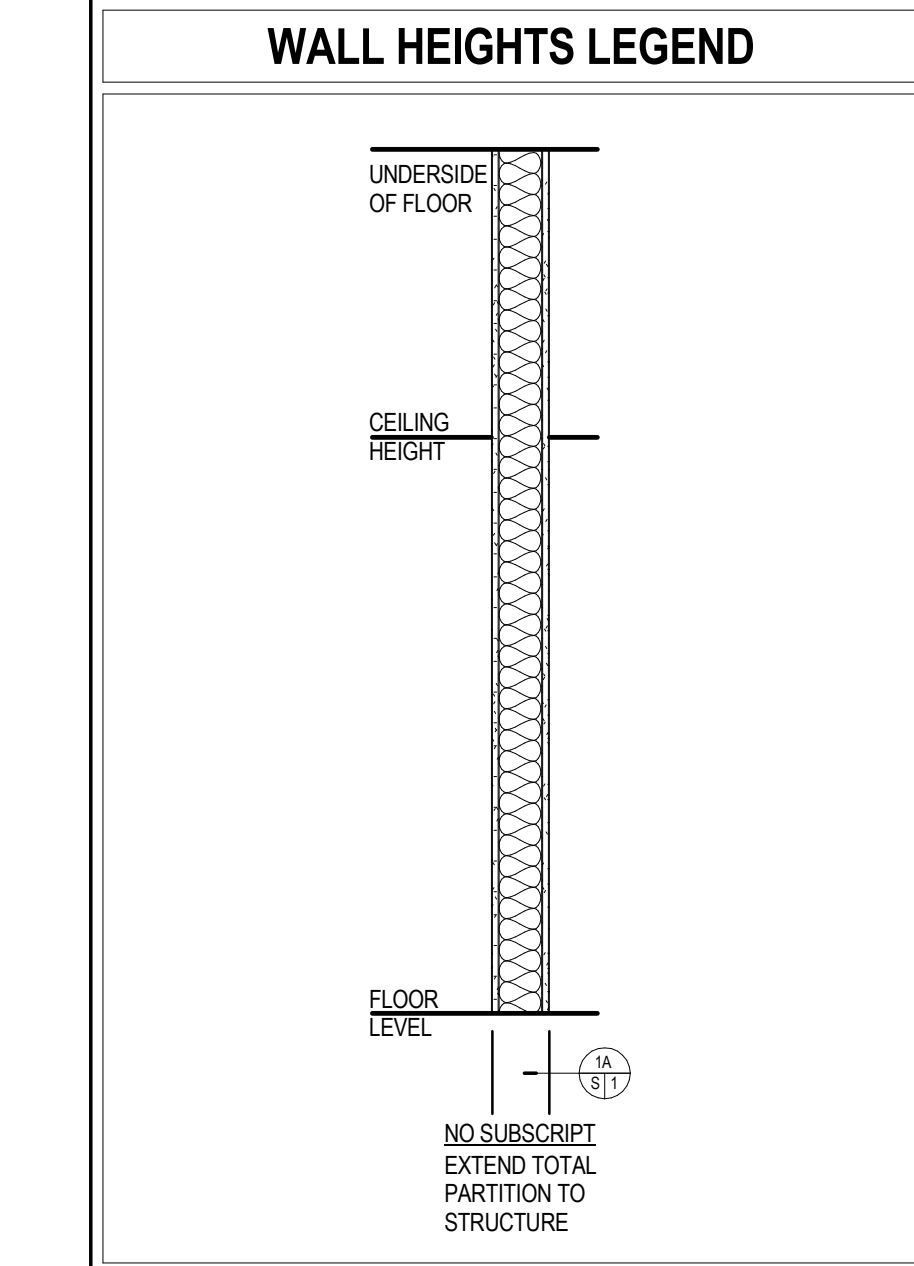
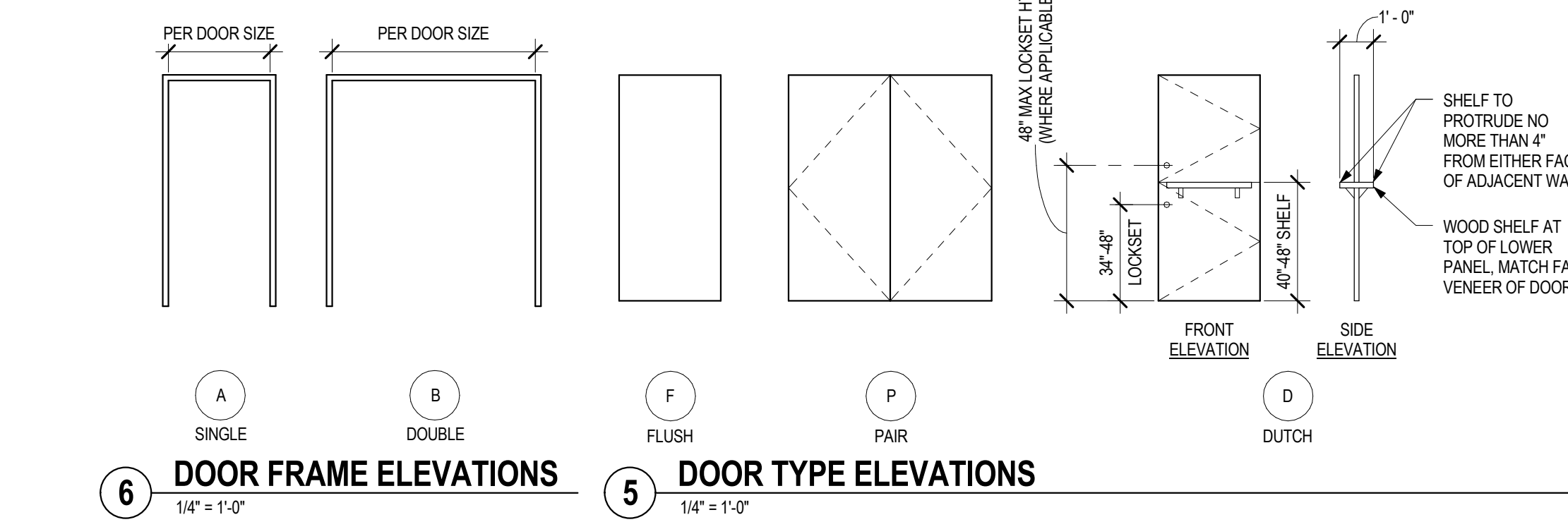
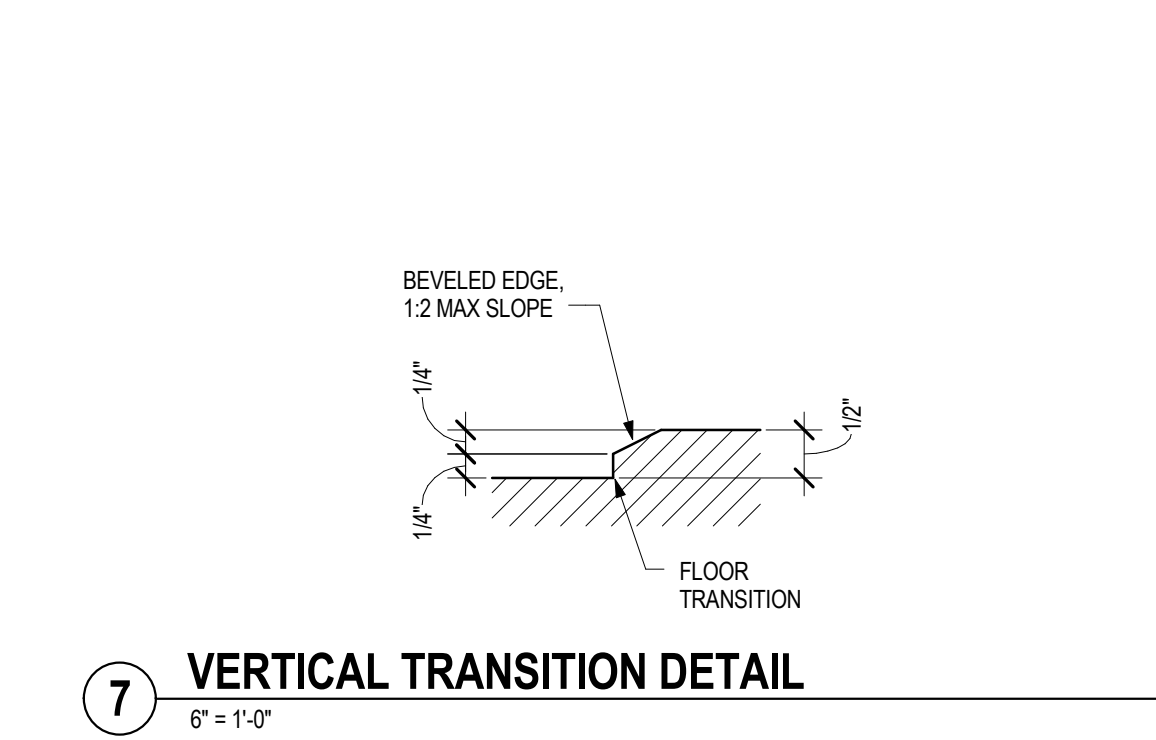
DOOR SCHEDULE																	
DOOR NO.	ROOM NAME	TYPE	DOOR					FRAME					GLAZE	FIRE RATING	HARDWARE	COMMENTS	
			W	H	T	ELEV	MATERIAL	UNDER CUT	ELEV	MATERIAL	HEAD	JAMB					SILL
GROUND FLOOR																	
101	WOMEN	Single	3' - 0"	6' - 8"	1 3/4"	F	HM		A	HM	2/A6.0	2/A6.0			1		
102	MEN	Single	3' - 0"	6' - 8"	1 3/4"	F	HM		A	HM	2/A6.0	2/A6.0			1		
103	MECHANICAL	Single	3' - 0"	6' - 8"	1 3/4"	F	HM		A	HM	2/A6.0	2/A6.0			2		
104	OFFICE	Single-Dutch	3' - 8"	6' - 8"	1 3/4"	D	WD		A	WD	2/A6.0	2/A6.0			3		12" SHELF AT TOP OF LOWER DOOR
106	CLOSET	Double	6' - 0"	6' - 8"	1 3/4"	P	WD		B	WD	2/A6.0	2/A6.0			4		
107	CORRIDOR	Single	3' - 8"	6' - 8"	1 3/4"	F	WD		A	WD	2/A6.0	2/A6.0			5		
108	FIRE SPRINKLER	Double	8' - 0"	8' - 0"	1 3/4"	F	HM		B	HM	2/A6.0	2/A6.0		45 MIN	10		
E100	CORRIDOR	Single	3' - 0"	6' - 8"	EXIST	--	EXISTING								9		HARDWARE TO BE ADA-APPROVED
E101	GATHERING SPACE	Single	3' - 0"	6' - 8"	EXIST	--	EXISTING								6		HARDWARE TO BE ADA-APPROVED
E102	CORRIDOR	Single	3' - 0"	6' - 8"	EXIST	--	EXISTING								9		HARDWARE TO BE ADA-APPROVED
E103	GATHERING SPACE	Double	6' - 0"	6' - 8"	EXIST	--	EXISTING								7		HARDWARE TO BE ADA-APPROVED
LOWER ATTIC																	
E200		Single	3' - 0"	6' - 8"	EXIST	--	EXISTING								8		HARDWARE TO BE ADA-APPROVED

HARDWARE SCHEDULE									
SET #	LOCK SETS				CLOSER	MISC.	COMMENTS (SEE BELOW)		
	DEADBOLT	STOREROOM LOCK	OFFICE LOCK	DUTCH DOOR SURFACE BOLT					
1	X				X		1,4,8,13		
2		X			X		8		
3			X	X			3,7		
4		X					2,5,7		
5		X					8		
6					X	X	9,11		
7					X	X	2,6,9,11,12		
8	X	X			X		11		
9					X	X	9,10,11		
10	X	X			X	X	2,6,8,14		

- ### DOOR SCHEDULE GENERAL NOTES
- WOOD DOORS TO BE PRE-FINISHED
 - HOLLOW METAL FRAME HEADS TO BE 2", U.N.O.
 - ALL SWING DOORS TO RECEIVE 1-1/2" PAIR HINGES, U.N.O.
 - PROVIDE LEVER HANDLE LOCK/LATCH SETS AT ALL DOORS, U.N.O.
 - ALL EXTERIOR DOORS TO RECEIVE WEATHER STRIP AND LOW PROFILE THRESHOLD
 - ALL NEW DOORS TO HAVE ADA APPROVED HARDWARE, OWNER APPROVED.
 - ALL PUBLIC ACCESS DOORS ALONG THE ACCESSIBLE ROUTE TO HAVE 32" MINIMUM CLEAR OPENING AND ADA HARDWARE.
 - REPLACE EXISTING DOOR KNOBS WITH ADA-APPROVED LEVERS, INTERIOR AND EXTERIOR
 - UPGRADE HARDWARE, SILLS, AND FRAMES TO MEET EGRESS REQUIREMENTS AT EXISTING DOORS
 - VERIFY LOCATIONS OF OVERHEAD OBSTRUCTIONS AT DOORS. OBSTRUCTIONS SHALL NOT RESTRICT OPERATION OF DOOR. COORDINATE WITH ARCHITECT.

- ### DOOR HARDWARE COMMENTS
- 1 SET PUSH/PULLS
 - INACTIVE LEVER ON INACTIVE LEAF
 - 4 HINGES
 - KICK PLATE (CORRIDOR SIDE ONLY), VERIFY SIZE AND MATERIAL WITH OWNER
 - INTEGRAL FLUSH BOLT, TOP ONLY, INACTIVE LEAF
 - AUTOMATIC FLUSH BOLT
 - 2 HINGE PIN STOPS
 - WALL BUMPER
 - LOW-PROFILE EXTERIOR THRESHOLD
 - ELECTRONIC STRIKE (LOW VOLTAGE WIRING AND SOFTWARE BY OWNER, SEE ELECTRICAL DRAWINGS)
 - WEATHER STRIPPING AND SWEEP
 - ASTRAGAL AND COORDINATOR
 - PRECUT OPENING FOR 20"x20" FLANGED ALUMINUM DOOR GRILLE, INSTALLED BY HVAC CONTRACTOR
 - COORDINATOR

- ### DOOR SCHEDULE LEGEND
- WD = WOOD
HM = HOLLOW METAL



- ### WALL TYPE GENERAL NOTES
- CONTINUE ALL PARTITION FRAMING AND GYPSUM BOARD TO UNDERSIDE OF RATED ROOF ASSEMBLY OR FLOOR DECK ABOVE, UNLESS INDICATED OTHERWISE.
 - SOUND WALLS (INDICATED BY "STC" - SOUND TRANSFER COEFFICIENT); CAULK ALL UNFINISHED JOINTS BETWEEN GYPSUM BOARD PANELS AND BETWEEN GYPSUM BOARD PANELS AND FLOOR AND SIDE WALL MATERIALS WITH ONE BEAD OF SEALANT PER LAYER OF GYPSUM BOARD. ACOUSTICALLY SEAL ALL PENETRATIONS INCLUDING ELECTRICAL, MECHANICAL AND PIPING. LIMIT NECESSARY WALL PENETRATIONS TO ONE PER STUD CAVITY.
 - PENETRATIONS IN SOUND WALLS AND SMOKE AND FIRE RATED WALLS AND CONNECTIONS AT WALLS TO OTHER WORK SHALL MAINTAIN STC AND/OR FIRE RATINGS. SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED DETAILS, AND SHALL COMPLY WITH APPLICABLE TESTING AGENCY REQUIREMENTS.
 - WHERE WALLS AND/OR FURRING MEET, MAINTAIN A FLUSH SURFACE ON THE SIDE WHERE WALL SURFACE IS STRAIGHT OR CONTINUOUS, UNLESS INDICATED OTHERWISE.
 - FIRE RATINGS SHOWN ARE THE RATINGS AVAILABLE PER NOTED TESTING AGENCY AND/OR IBC REQUIREMENTS. REFER TO FLOOR PLANS AND WALL TYPE SUBSCRIPTS FOR LOCATIONS OF FIRE RATED WALLS.
 - PROVIDE WOOD BLOCKING IN PARTITION TYPES AS REQUIRED BY SPECIFICATIONS AND ACCESSORIES INDICATED ON DRAWINGS.

- ### FRAME WALL TYPE GENERAL NOTES
- PROVIDE FIRE RATED GYPSUM BOARD AT FIRE RATED PARTITIONS AS REQUIRED BY TESTED ASSEMBLY.
 - INSTALLATION OF GYPSUM BOARD, BACKER BOARD AND BASE BOARD SHALL CONFORM TO REQUIREMENTS FOR FIRE RATINGS AND ACOUSTICAL RATINGS.
 - STUD FRAMING TO BE 16" OC UNLESS NOTED OTHERWISE.
 - PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT WALLS OF TOILET ROOMS.

DIMENSION
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**DANE COUNTY
SCHUMACHER BARN
REMODEL / SITE
IMPROVEMENTS**

5682 State Hwy 19
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DATE OF ISSUE: 04/25/2017

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1	PROJECT REBID	11/17/2017
2	ADDENDUM 1	12/15/2017

PROJECT # 14099

**DOOR AND WALL
TYPES AND
SCHEDULES**

A6.0

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

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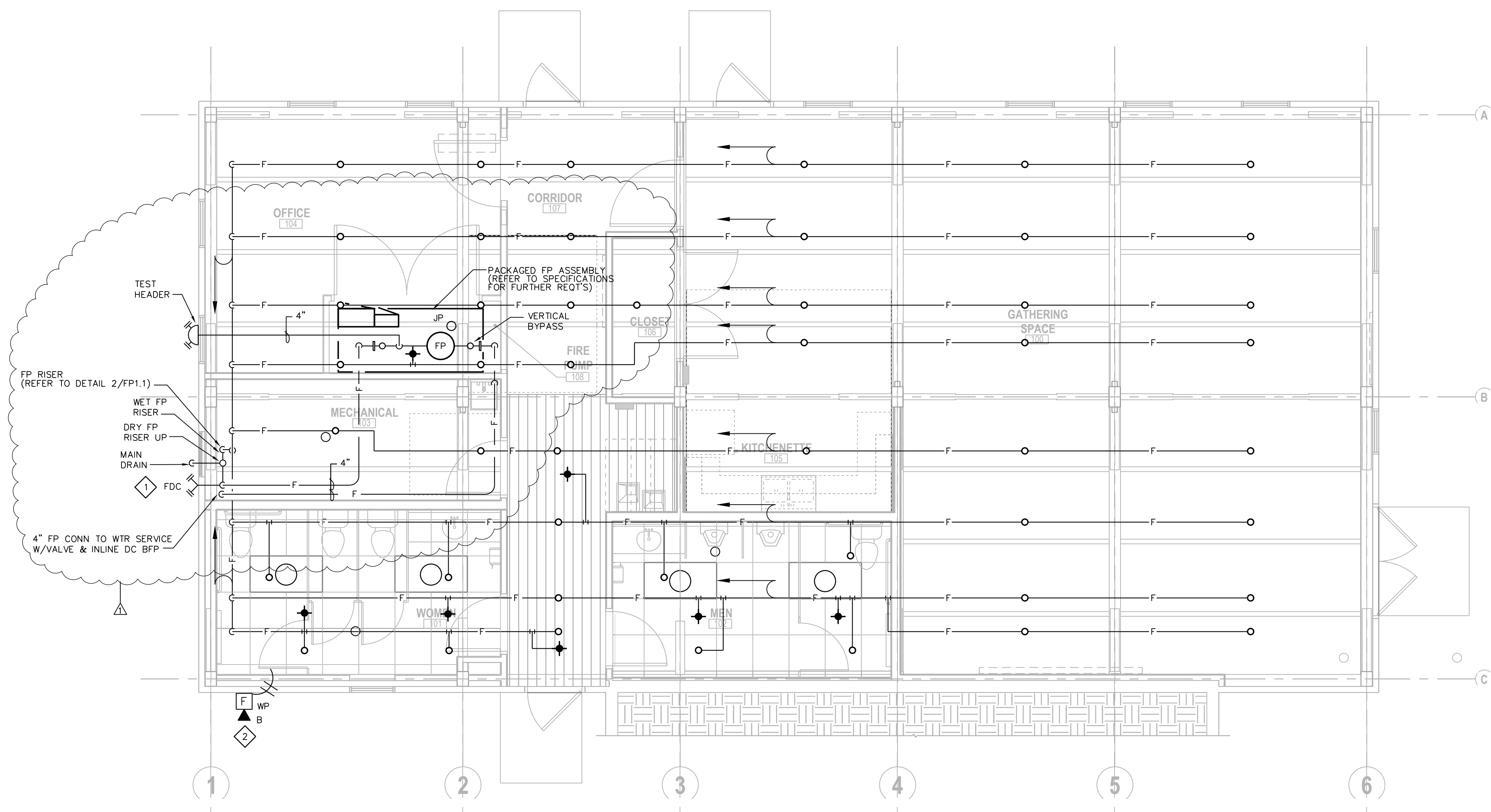
FIRE PROTECTION NOTES:

1. THESE DRAWINGS ARE PROVIDED FOR DESIGN INTENT ONLY, IN CONJUNCTION WITH THE PERFORMANCE SPECIFICATIONS.
2. LOCATE ALL HEADS IN ACOUSTIC TILE CEILINGS CENTERED IN TILES.
3. FIRE PROTECTION CONTRACTOR SHALL DESIGN AND PROVIDE A COMPLETE HYDRAULICALLY CALCULATED COMBINATION WET SPRINKLER SYSTEM. COORDINATE DESIGN WITH OTHER TRADES AND GENERAL CONTRACTOR.
4. THE SPRINKLER DESIGN SHALL MEET REQUIREMENTS OF NFPA 13 AND LOCAL FIRE MARSHAL/INSPECTOR FOR APPROVAL.
5. DESIGN BASIS GENERAL SPACE: LIGHT HAZARD VERIFY FINAL DESIGN CONDITIONS WITH LOCAL FIRE MARSHAL PRIOR TO SUBMITTING BID.
6. SPRINKLER HEADS: QUICK RESPONSE TYPE.
7. PROVIDE SUPERVISED VALVES & FLOW SWITCHES FOR EACH RISER (WITH AUXILIARY CONTACTS FOR FIRE ALARM SUPERVISION).
8. PROVIDE FORWARD FLOW TEST CONNECTION FOR DOUBLE CHECK VALVE BACKFLOW PREVENTER.
9. PROVIDE INSPECTOR'S TEST CONNECTION FOR TEST AND DRAIN OF WET SPRINKLER SYSTEM.
10. PROVIDE LABELED AUXILIARY DRAINS AT ALL TRAPPED PIPING AND LOW POINTS.
11. PROVIDE SPARE HEAD CABINET AND SPRINKLER WRENCH AT FP RISER.
12. PROVIDE BALL DRIP VALVE AT FIRE DEPARTMENT CONNECTION PIPING.
13. ARRANGE WIRING OF FIRE PROTECTION ALARM BELL WITH ELECTRICAL CONTRACTOR.

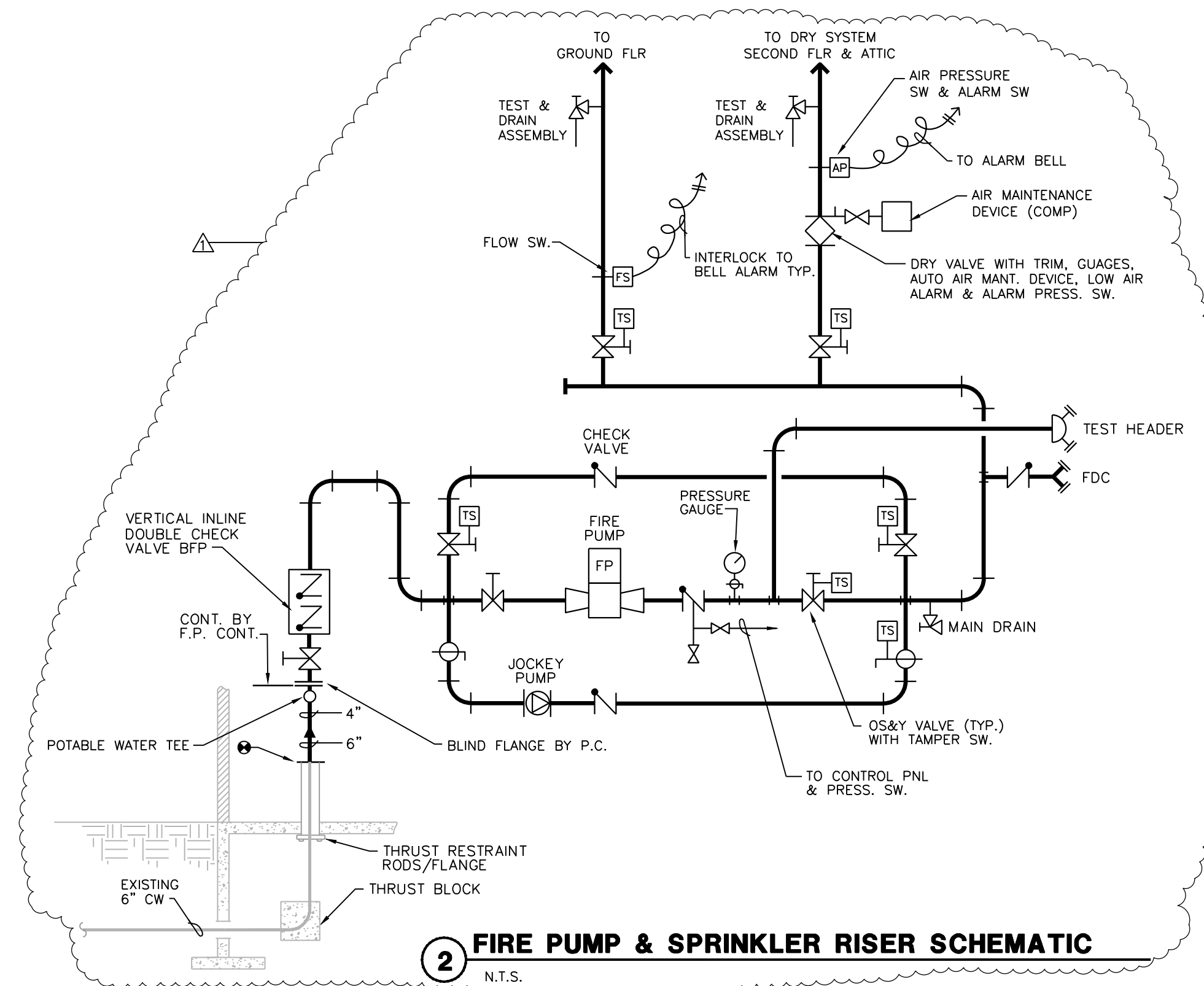
FIRE PROTECTION PLAN NOTES:

- 1 FIRE DEPARTMENT CONNECTION (FDC) FOR FIRE PROTECTION SYSTEM.
- 2 FIRE PROTECTION AUDIO/VISUAL ALARM DEVICE PROVIDED BY F.P.C. WIRED BY E.C.

FIRE PROTECTION SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION
○	UPRIGHT SPRINKLER
⊕	CEILING SEMI-RECESSED SPRINKLER
⊙	CEILING RECESSED CONCEALED SPRINKLER
⊔	SIDEWALL SPRINKLER
⊔ _D	SIDEWALL SPRINKLER - DRY HEAD
— F —	WET SUPPLY PIPING
— D —	DRY SUPPLY PIPING
WP	FP SPRINKLER ALARM STROBE/HORN - WEATHERPROOF
FDC ⊕	FDC FIRE DEPT CONNECTION



1 GROUND FLOOR PLAN - FIRE PROTECTION
1/4" = 1'-0" NORTH



2 FIRE PUMP & SPRINKLER RISER SCHEMATIC
N.T.S.

DATE OF ISSUE: 4-25-2017

REVISIONS:
ADDENDUM 1 12/08/2017

PROJECT # 14099

**GROUND
FLOOR PLAN -
FIRE PROTECTION**

FP1.1

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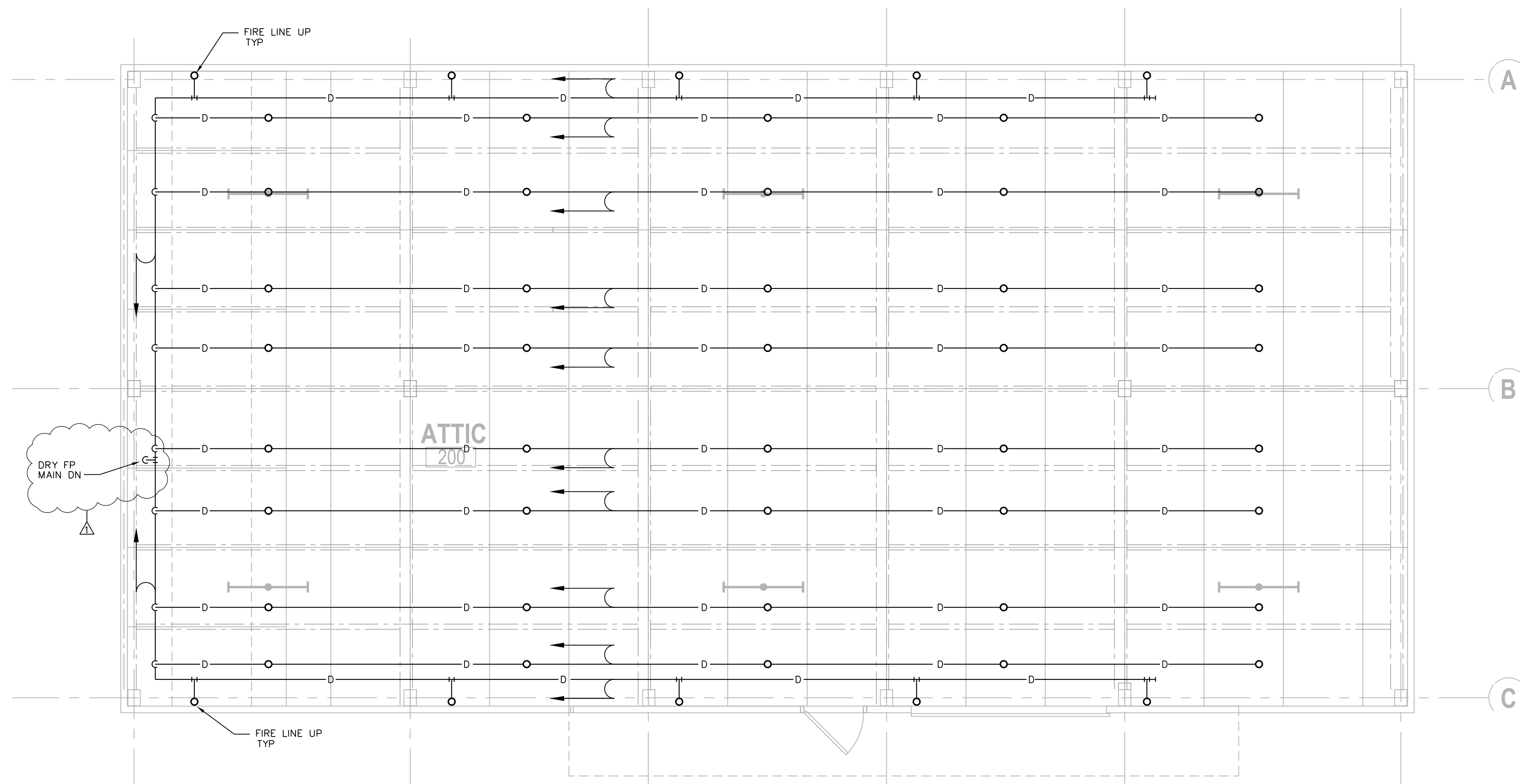
DATE OF ISSUE: 4-25-2017

REVISIONS:
ADDENDUM 1 12/08/2017

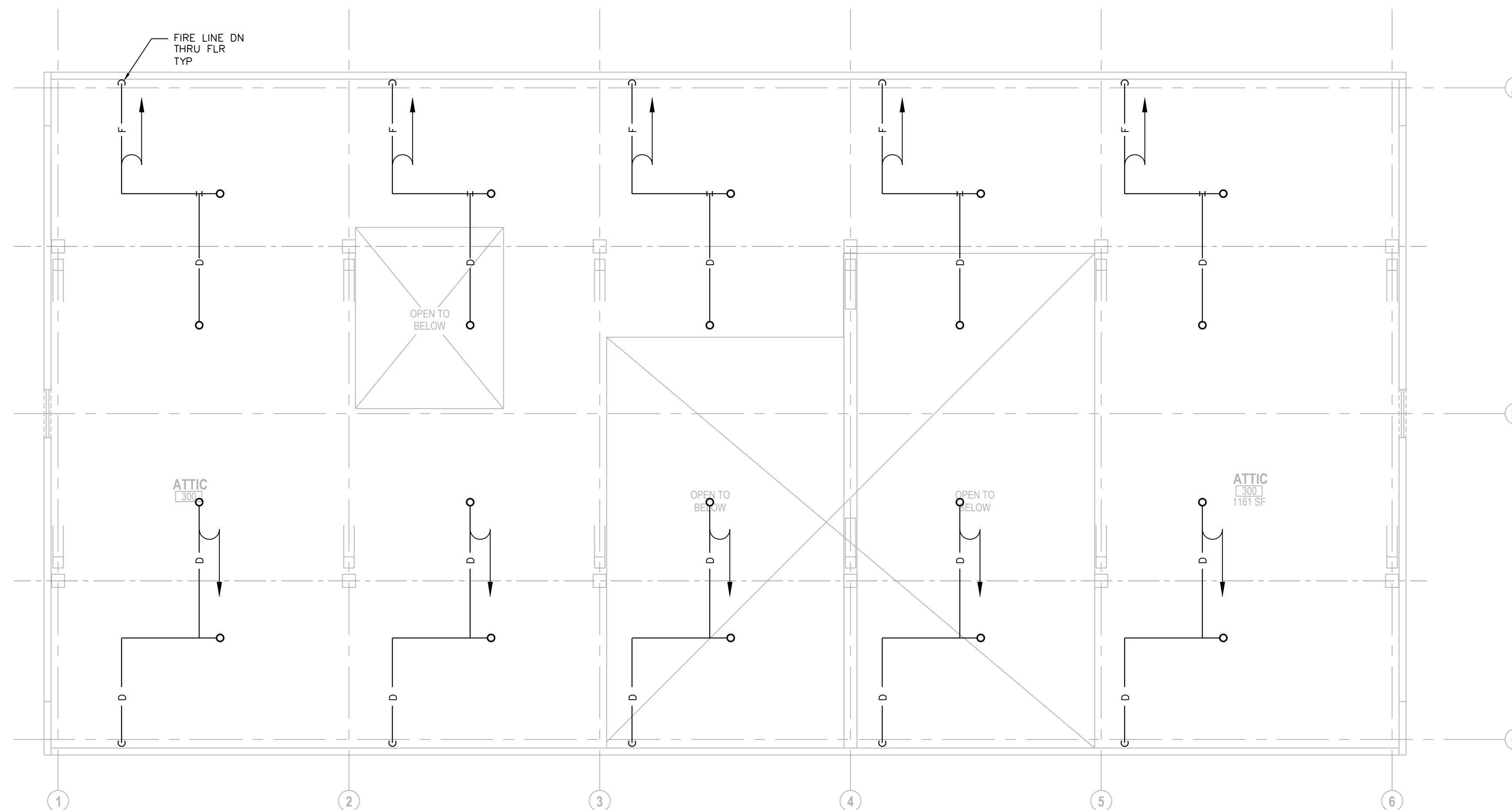
PROJECT # 14099

**ATTIC FLOOR PLANS -
FIRE PROTECTION**

FP1.2



1 LOWER ATTIC PLAN - FIRE PROTECTION
1/4" = 1'-0" NORTH



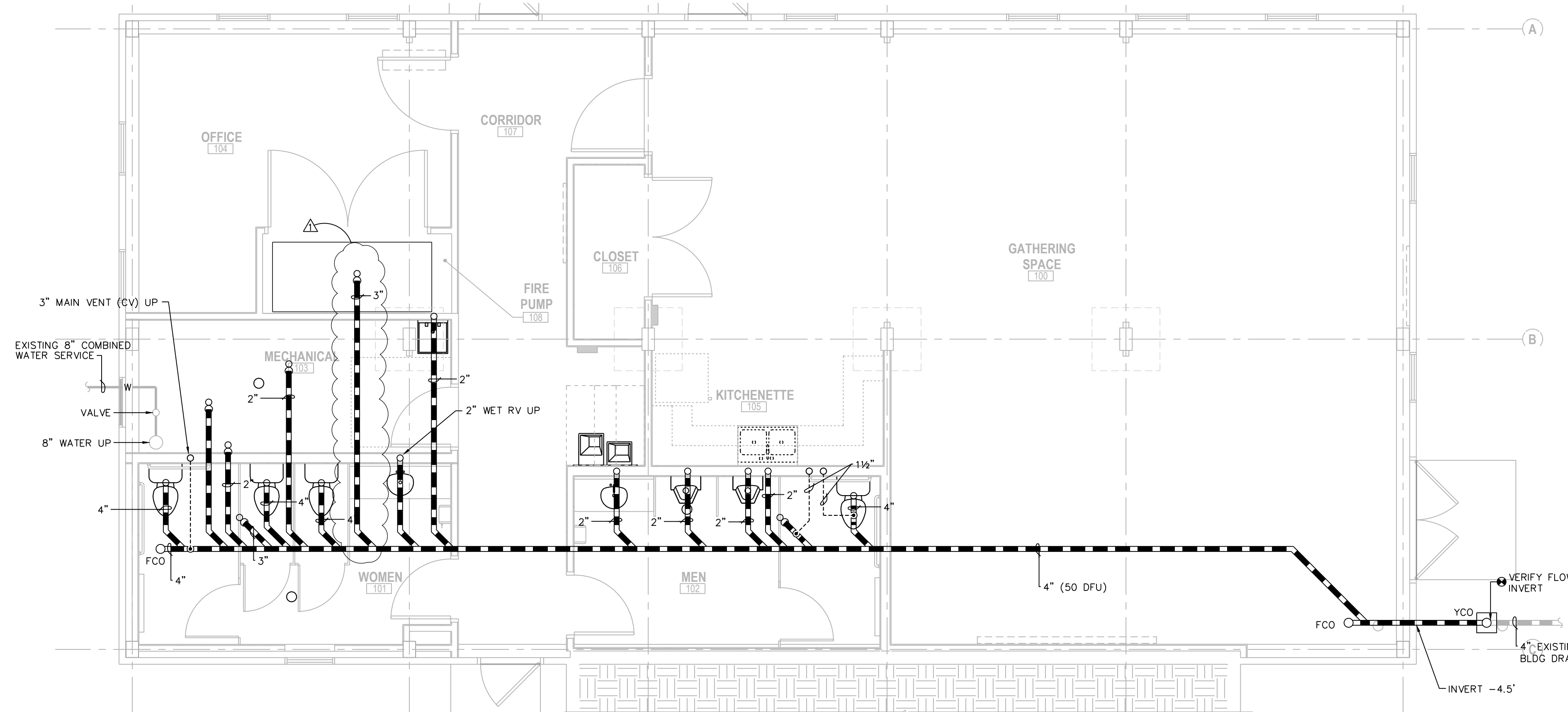
1 UPPER ATTIC PLAN - FIRE PROTECTION
1/4" = 1'-0" NORTH

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

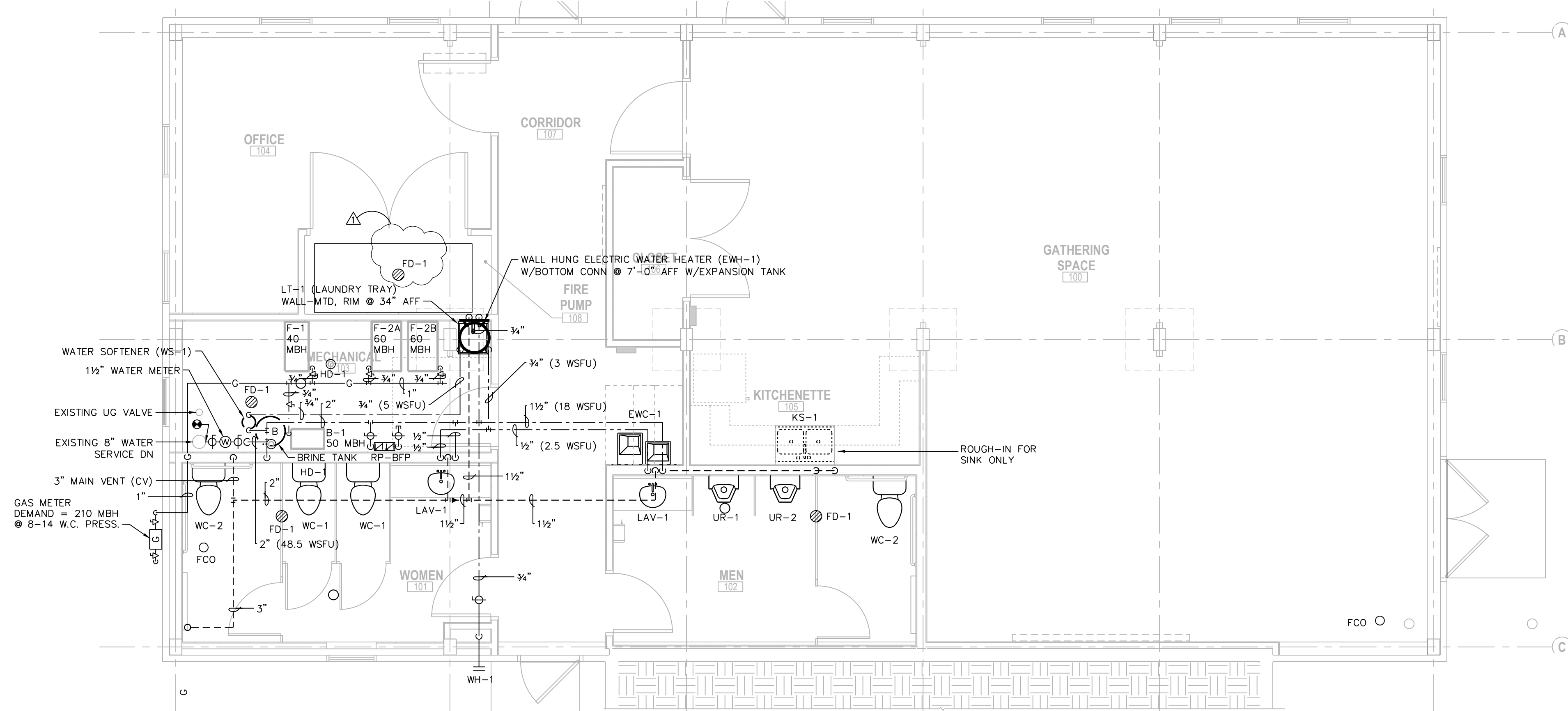
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PLUMBING GENERAL NOTES:

1. PLUMBING CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS.
2. COORDINATE PIPING ROUTING WITH OTHER TRADES TO MAINTAIN SCHEDULED CEILING HEIGHTS.
3. COORDINATE FLOOR DRAINS & FLOOR MTD. FIXTURE LOCATIONS & MOUNTING HEIGHTS WITH THE GENERAL CONTRACTOR & THE CONCRETE FLOOR POUR.
4. REFER TO WATER, WASTE & VENT RISERS FOR PIPE SIZES AND LOCATIONS.



1 FLOOR PLAN - UNDERGROUND PLUMBING
1/4" = 1'-0" NORTH



2 FLOOR PLAN - PLUMBING
1/4" = 1'-0" NORTH

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▲ ADDENDUM 1	12/08/2017

PROJECT # 14099

**FLOOR PLANS -
PLUMBING**

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

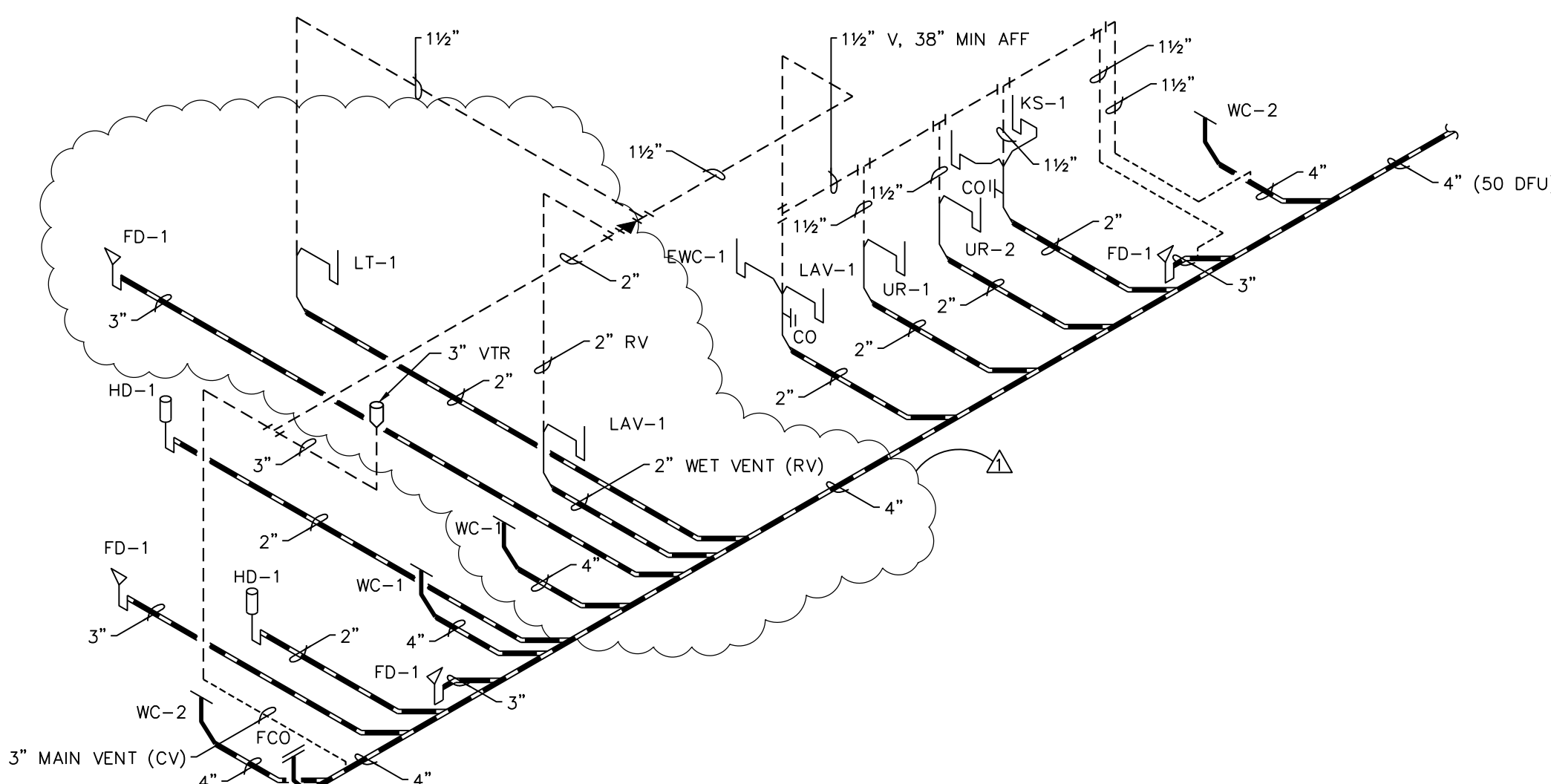
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PLUMBING FIXTURE SCHEDULE

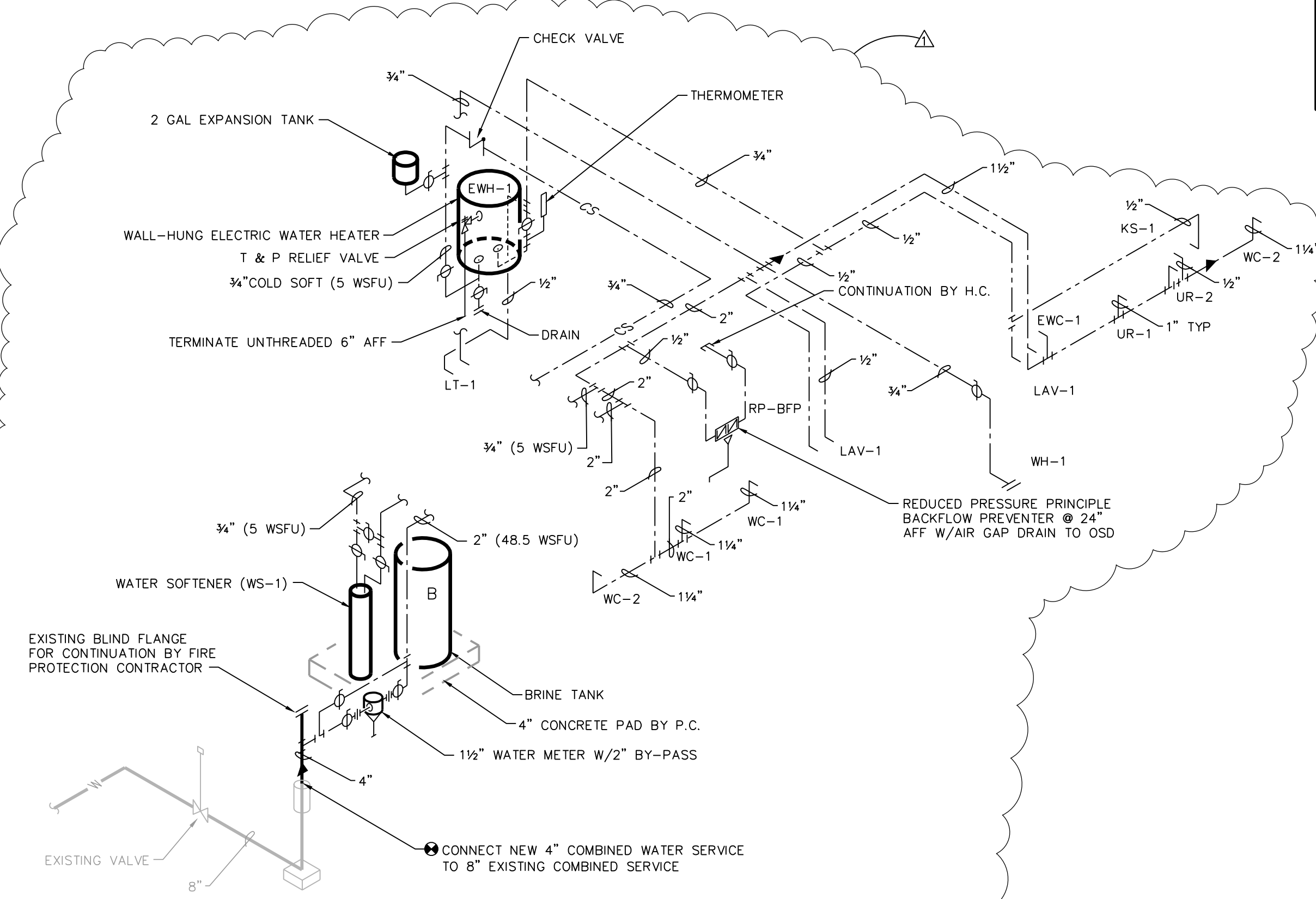
P#	FIXTURE	WASTE	VENT	CW.	HW.	DESCRIPTION
WC-1	WATER CLOSET	4"	1-1/2"	1"	--	VITREOUS CHINA, WHITE, FLOOR-MTD. ELONGATED BOWL, 1-1/2" TOP SPUD, RIM @ 16-1/2" AFF FIXTURE EQUAL TO KOHLER HIGHCREST K-4302, SLOAN OPTIMA 8111 BATTERY-POWERED, SENSOR-OPERATED FLUSH VALVE (1.6 GPF) & BEMIS 1955-SSC OPEN FRONT SEAT.
WC-2	WATER CLOSET ADA	4"	1-1/2"	1"	--	SAME AS WC-1. ADA COMPLIANT.
UR-1	URINAL	2"	1-1/2"	3/4"	--	VITREOUS CHINA, WHITE, WALL-HUNG, TOP SPUD, RIM MTD. 24" AFF. KOHLER BARDON MODEL K-4904-ET WITH SLOAN 8186-1.0 BATTERY-POWERED, SENSOR-OPERATED FLUSH VALVE (1.0 GPF), K-9183 S.S. BEEHIVE STRAINER. PROVIDE VERTICAL ADJUSTABLE WALL CARRIER.
UR-2	URINAL ADA	2"	1-1/2"	3/4"	--	SAME AS UR-1 EXCEPT RIM MTD @ 17" ADA COMPLIANT.
LAV-1	LAVATORY ADA	1-1/4"	1-1/2"	1/2"	1/2"	INTEGRAL BOWL COUNTERTOP, (2-HOLE 4" O.C.) W/SLOAN EBF-650-BDT BATTERY-POWERED, SENSOR-OPERATED (0.5 GPM) FAUCET, W/BELOW DECK MIXING VALVE, PROWRAP 2000 INSULATION GUARDS & KOHLER 8998 P-TRAP WITH CLEANOUT. ADA COMPLIANT.
KS-1	KITCHEN SINK	1-1/2"	1-1/2"	1/2"	1/2"	KITCHEN SINK FURNISHED AND INSTALLED BY OTHERS.
EWC-1	ELECTRIC WATER COOLER ADA	1-1/2"	1-1/2"	1/2"	1/2"	DUAL-LEVEL BARRIER FREE ELECTRIC WATER COOLER W/BOTTLE FILLING STATION, EQUAL TO ELKAY LZSTLGBWSLC. 8-GPH 115V/1φ/60, 4.2 FLA. ADA COMPLIANT.
LT-1	LAUNDRY TRAY	2"	1-1/2"	1/2"	1/2"	WALL-MOUNTED MOLDED STONE EQUAL TO MUSTEE UTILATUB MODEL #18W WITH CHICAGO 897 FAUCET WITH HOSE CONN. VB (WATTS BA-ASSE 1011).
WH-1	EXTERIOR WALL HYDRANT	--	--	3/4"	--	WOODFORD MODEL 65 FREEZELESS WALL HYDRANT WITH HOSE CONN. VACUUM BREAKER FITTING & KEY OPERATED VALVE (ASSE 1011).
EW-1	ELECTRIC WATER HEATER	--	--	3/4"	3/4"	WALL-HUNG ELECTRIC WATER HEATER 30 GALLON CAPACITY, 21 GPH @ 90° F RISE, BRADFORD WHITE LD-WH30L3-1, OR APPROVED EQUAL, 4500 WATT, 240V 1-φ-PHASE, T&P RELIEF VALVE, R20 INSULATION, + 2 GAL EXPANSION TANK.
WS-1	WATER SOFTENER	OPEN SITE DRAIN	--	3/4"	--	HELLENBRAND MODEL PROMATE 6.0 OR APPROVED EQUAL. CAPACITY = 24,000 GRAIN, 0.75 CF RESIN, 9.8 GPM @ 10 PSIG MAX WPD, SOFTENER SIZE: 8"Ø x44"H BRINE TANK: 18"Ø x 40" H (300 LB. SALT CAP.), 3/4" VALVE/MANIFOLD, METERED DEMAND-CONTROLLED REGENERATION, 1.3 GPM BACKWASH RATE.
FD-1	FLOOR DRAIN	3"	1 1/2"	--	--	POLISHED BRONZE ADJ. ROUNDTOP EQUAL TO SMITH MODEL 2005Y-A-PB. (NO HUB), 2005L-A-PB (CAULKED OUTLET) & PROSET TG3H TRAP GUARD.
FCO	FLOOR CLEANOUTS	SEE FLOOR PLAN	--	--	--	PROVIDE SMITH 4025C ROUND NICKEL BRONZE TOP.
HD-1	HUB DRAIN	SEE FLOOR PLAN	1 1/2"	--	--	STUB UP WASTE HUB RIM OUTLET 4" AFF WITH HUB OPENING TWICE THE SIZE OF THE PIPE, OR AS NOTED ON PLANS.
RP-BFP	REDUCED PRESSURE BACKFLOW PREVENTER	--	--	1"	--	REDUCED PRESSURE BACKFLOW PREVENTER WITH AIR CAP DRAIN (ASSE 1013). WATTS 009M20T-S.

PLUMBING SYMBOL SCHEDULE

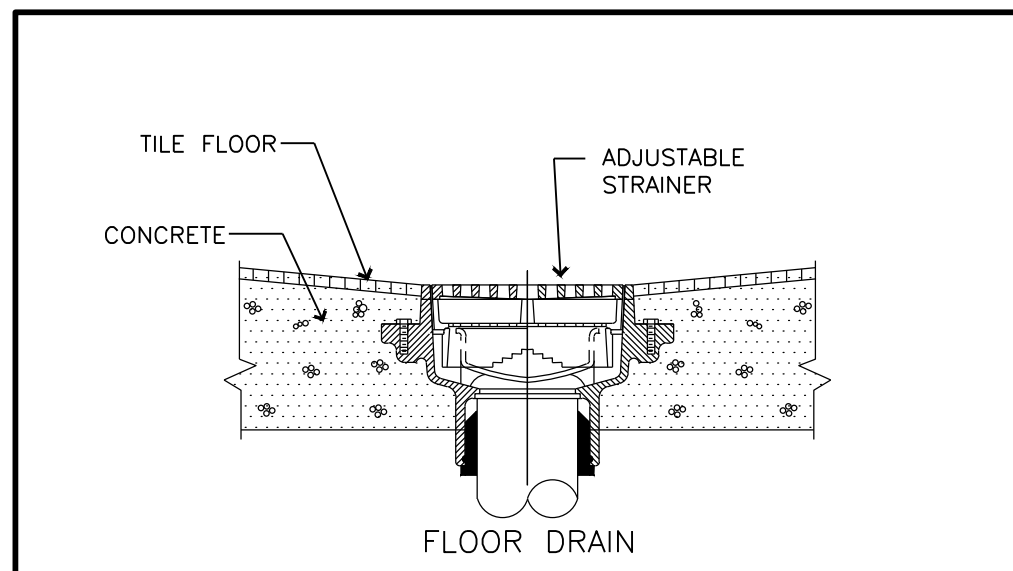
SYMBOL	DESCRIPTION
---	WASTE BELOW GROUND
---	WASTE ABOVE GROUND
W	WATER SERVICE
---	COLD WATER
---	HOT WATER
---	VENT
---	UNDERGROUND VENT
G	GAS LINE
---	PIPE UP
---	PIPE DOWN
CO	CLEAN OUT
---	BALL VALVE
---	CHECK VALVE
---	UNION
---	GAS VALVE
YCO	YARD CLEAN OUT
FCO	FLOOR CLEAN OUT
WCO	WALL CLEAN OUT
CV	CIRCUIT VENT
WH	WALL HYDRANT
VTR	VENT THROUGH ROOF
FD	FLOOR DRAIN
HD	HUB DRAIN
RV	RELIEF VENT
UG	UNDERGROUND
UV	UNDERGROUND VENT
WHA	WATER HAMMER ARRESTOR
WV	WET VENT
WVR	WASTE & VENT RISER



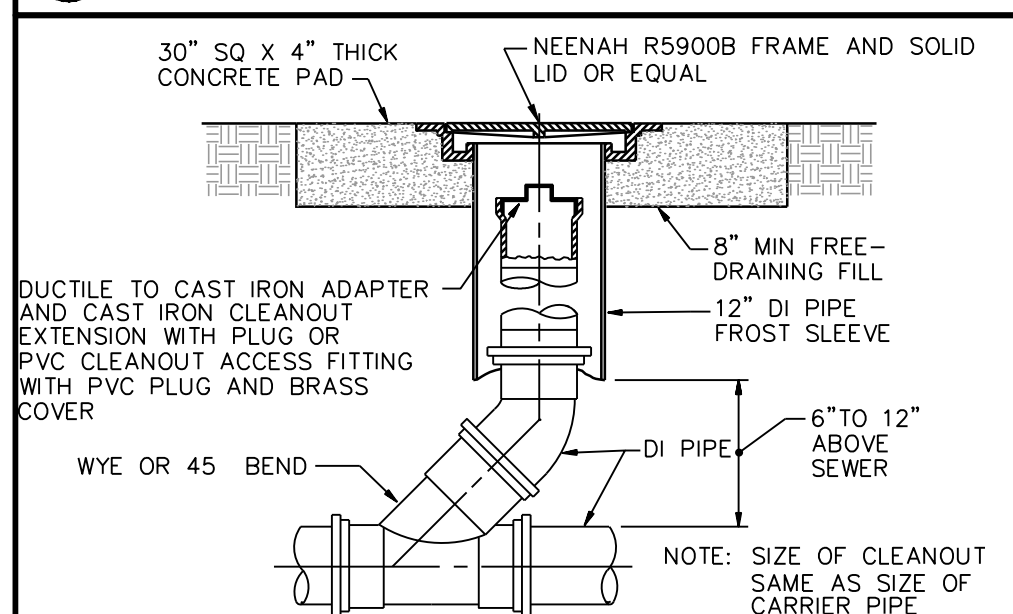
1 WASTE & VENT RISER
SCALE: NONE



2 WATER PIPING RISER
SCALE: NONE



3 FLOOR DRAIN DETAIL
N.T.S.



4 YARD CLEANOUT DETAIL
N.T.S.

WATER SERVICE SIZING:

- 1) 47 DEMAND OF BUILDING IN G.P.M.
- 2) 32 PSI LOW PRESSURE AT MAIN IN STREET (ESTIMATED)
- 3) 6 FT DIFFERENCE IN ELEVATION, MAIN TO METER.
- 4) 1 1/2 IN SIZE OF WATER METER.
- 5) 120 FT DEVELOPED LENGTH FROM MAIN TO METER.

AVAILABLE PRESSURE AFTER THE WATER METER:

- 1) 0.0 PSI PRESSURE LOSS DUE TO FRICTION LOSS IN 8 INCH WATER SERVICE.
- 2) 2.6 PSI PRESSURE LOSS DUE TO ELEVATION, MAIN TO METER.
- 3) 5.0 PSI PRESSURE LOSS DUE TO METER.
- 4) 24.4 PSI AVAILABLE PRESSURE AFTER THE WATER METER.

HOT WATER DISTRIBUTION SIZING:

PERMISSIBLE UNIFORM PRESSURE LOSS FOR FRICTION (A):
(P.S.I./100' OF PIPE)

$$\text{WHERE: } A = \frac{B - (C + D + E)}{F} \times 100$$

A. 9.7 PERMISSIBLE PRESSURE LOSS FOR FRICTION. (PSI/100' OF PIPE).
B. 24.4 PSI AVAILABLE PRESSURE AFTER WATER METER
C. 8 PSI PRESSURE NEEDED AT CONTROLLING FIXTURE.
D. 1.3 PSI DIFFERENCE IN ELEVATION BETWEEN WATER METER AND CONTROLLING FIXTURE IN FEET 3 x .434 PSI/FT.
E. 15 PSI PRESSURE LOSS DUE TO WATER HEATER, FUTURE WATER TREATMENT DEVICES AND BACKFLOW PREVENTERS.
F. 60 FT DEVELOPED LENGTH FROM WATER METER TO CONTROLLING FIXTURE IN FEET 40 x 1.5.

COLD WATER DISTRIBUTION SIZING:

PERMISSIBLE UNIFORM PRESSURE LOSS FOR FRICTION (A):
(P.S.I./100' OF PIPE)

$$\text{WHERE: } A = \frac{B - (C + D + E)}{F} \times 100$$

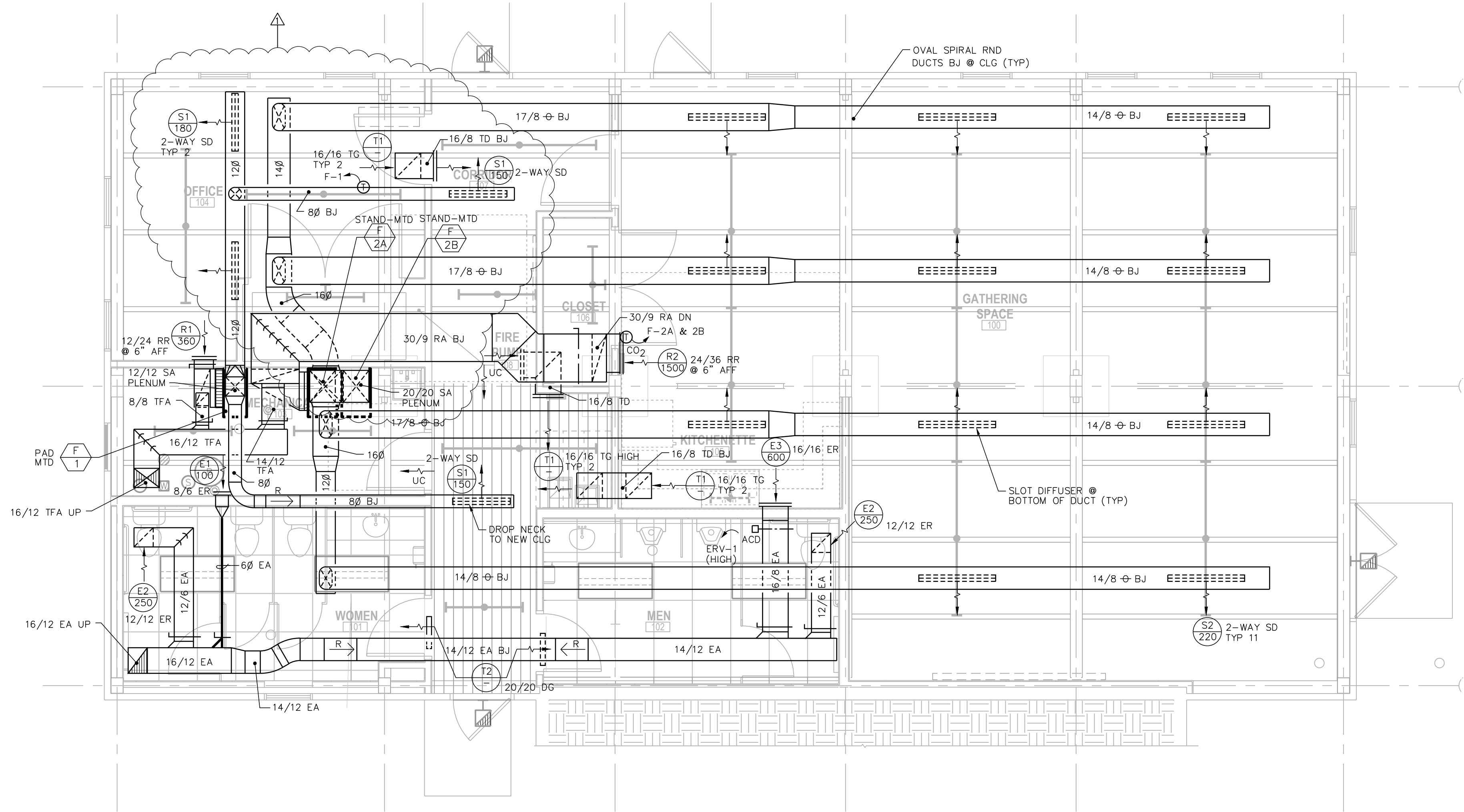
A. 14.7 PERMISSIBLE PRESSURE LOSS FOR FRICTION. (PSI/100' OF PIPE).
B. 24.4 PSI AVAILABLE PRESSURE AFTER WATER METER
C. 15 PSI PRESSURE NEEDED AT CONTROLLING FIXTURE.
D. 1.3 PSI DIFFERENCE IN ELEVATION BETWEEN WATER METER AND CONTROLLING FIXTURE IN FEET 3 x .434 PSI/FT.
E. 0 PSI PRESSURE LOSS DUE TO WATER HEATER, WATER TREATMENT DEVICES AND BACKFLOW PREVENTERS.
F. 60 FT DEVELOPED LENGTH FROM WATER METER TO CONTROLLING FIXTURE IN FEET 40 x 1.5.

DATE OF ISSUE: 4-25-2017

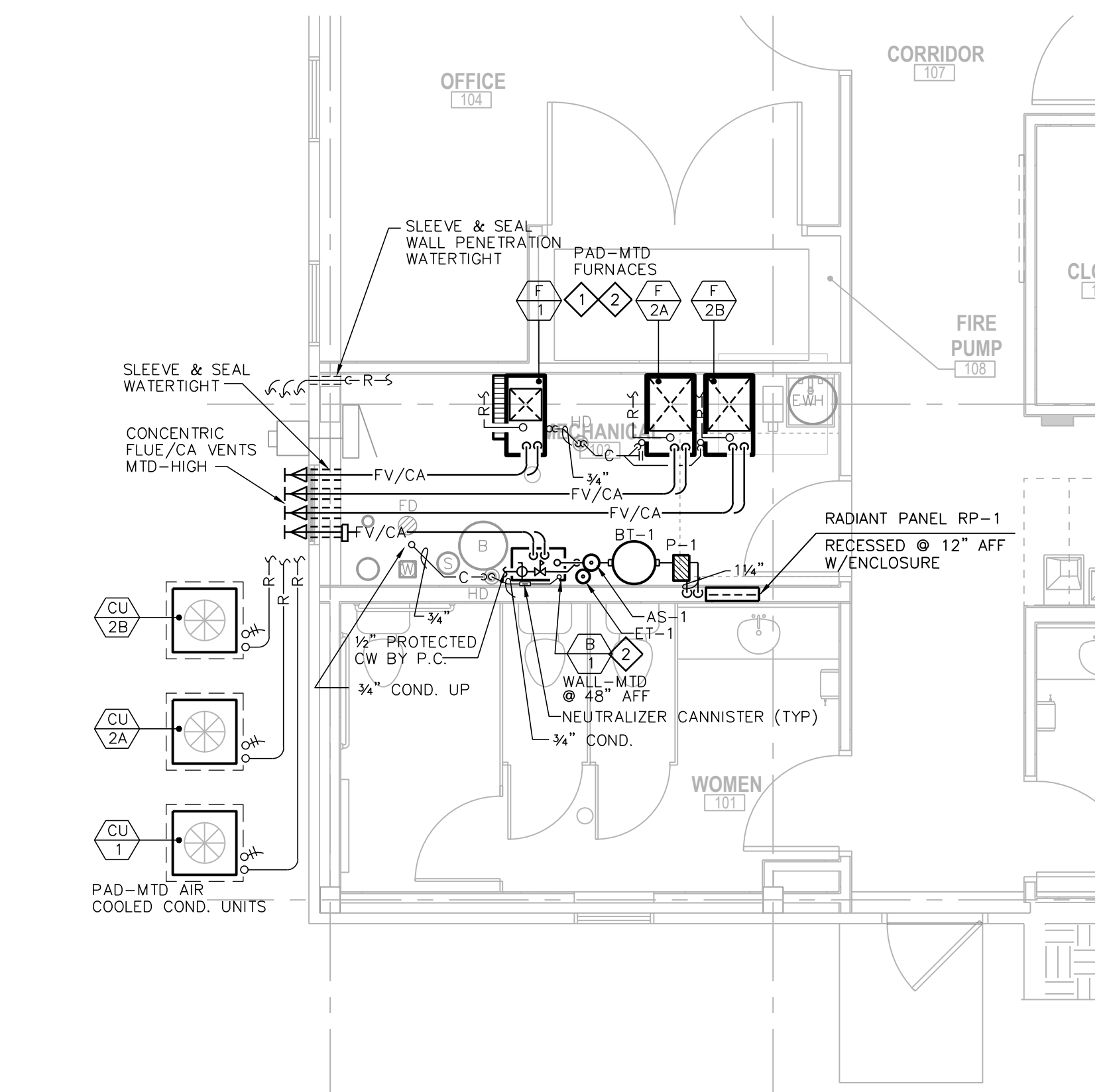
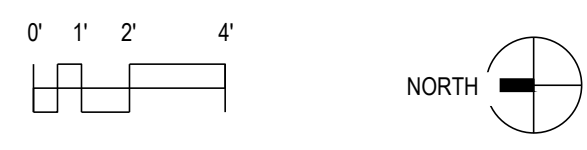
REVISIONS:
ADDENDUM 1 12/08/2017

PROJECT # 14099

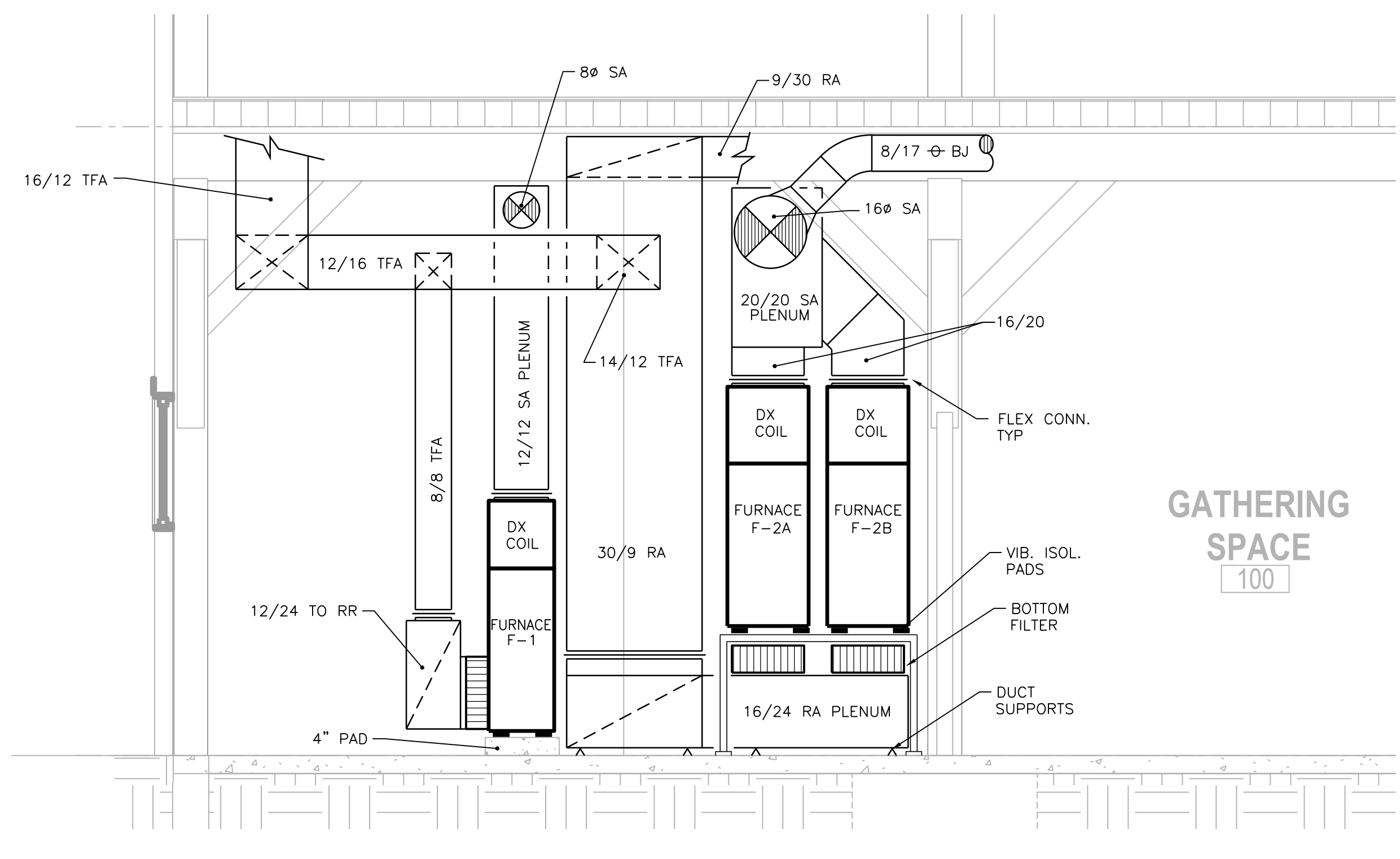
**PLUMBING RISERS,
SCHEDULES
& DETAILS**



1 GROUND FLOOR PLAN - HVAC DUCTWORK
1/4" = 1'-0"



2 PARTIAL FLOOR PLAN - HVAC PIPING
1/4" = 1'-0"



3 FURNACE F-1 & F-2A/2B ELEVATIONS
1/2" = 1'-0"

HVAC GENERAL NOTES:

1. HVAC CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF HVAC WORK WITH OTHER TRADES.
2. COORDINATE PROVISIONS FOR OPENINGS IN NEW CONSTRUCTION WITH THE GENERAL CONTRACTOR FOR APPROVAL PRIOR TO STARTING WORK.
3. HVAC CONTRACTOR IS RESPONSIBLE FOR CUTTING AND PATCHING EXISTING WALLS, FLOORS & CEILING FOR NEW HVAC WORK, WHERE REQUIRED.
4. COORDINATE FINAL CEILING REGISTER AND GRILE LOCATIONS WITH OTHER TRADES.
5. CONCEAL ALL CONTROL WIRING IN FINISHED AREAS. EXPOSED CONTROL WIRING IN EMT CONDUIT.
6. COORDINATE PIPING AND DUCTWORK ROUTING WITH OTHER TRADES TO MAINTAIN SCHEDULED CEILING HEIGHTS.
7. PROVIDE PROPER SERVICE CLEARANCES AND ACCESS SPACE FOR ALL NEW EQUIPMENT.

HVAC PLAN NOTES:

1. EXTEND FURNACE/DX COIL CONDENSATE PIPE TO OSD BY PLUMBING TRADE. INSTALL NEUTRALIZER CANISTERS PER MANUFACTURER'S RECOMMENDATIONS.
2. EXTEND COMBUSTION AIR/FLUE PIPING TO WALL TERMINATION WITH CONCENTRIC VENT.

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

5682 State Hwy 19
Westport, WI 53597

DATE OF ISSUE: 4-25-2017

REVISIONS:	
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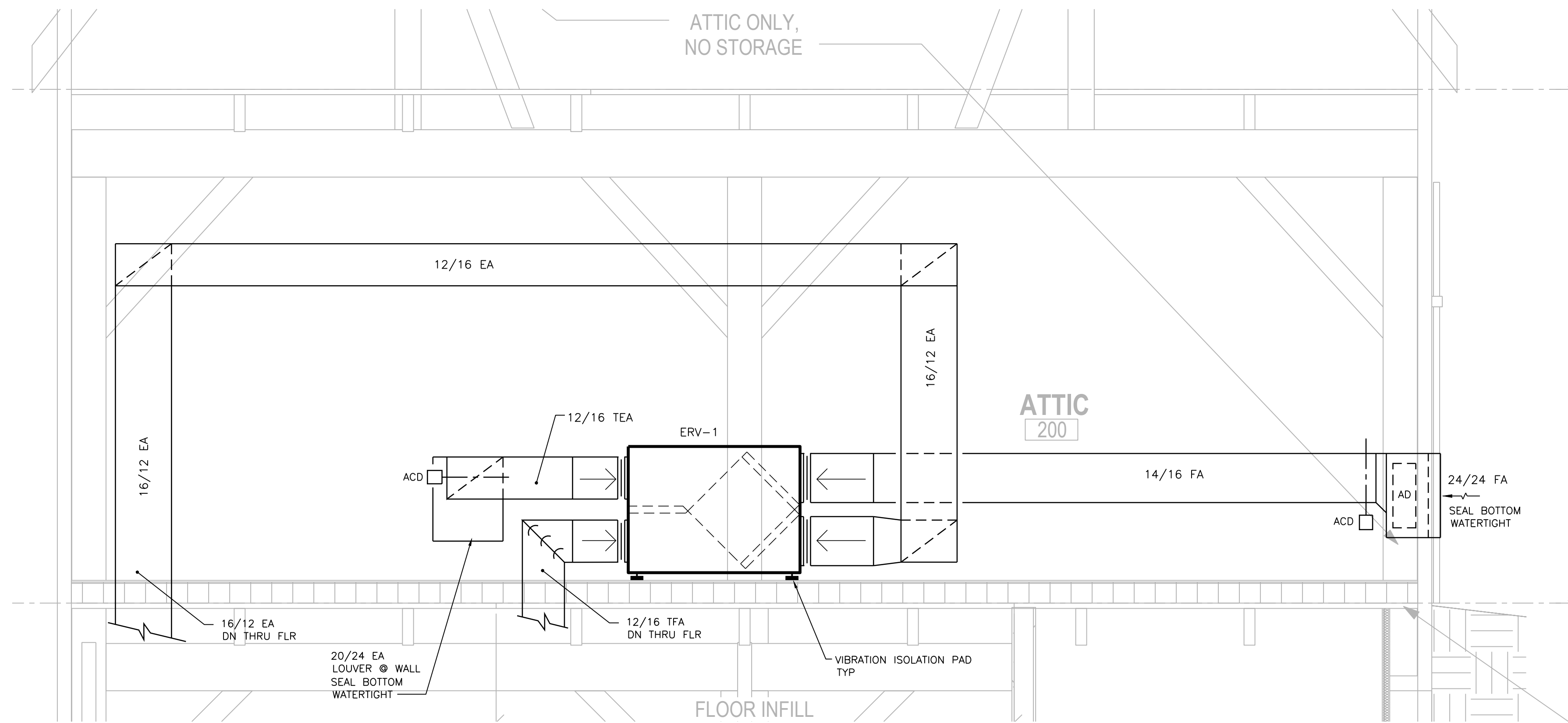
PROJECT # 14099

**GROUND
FLOOR PLANS -
HVAC**

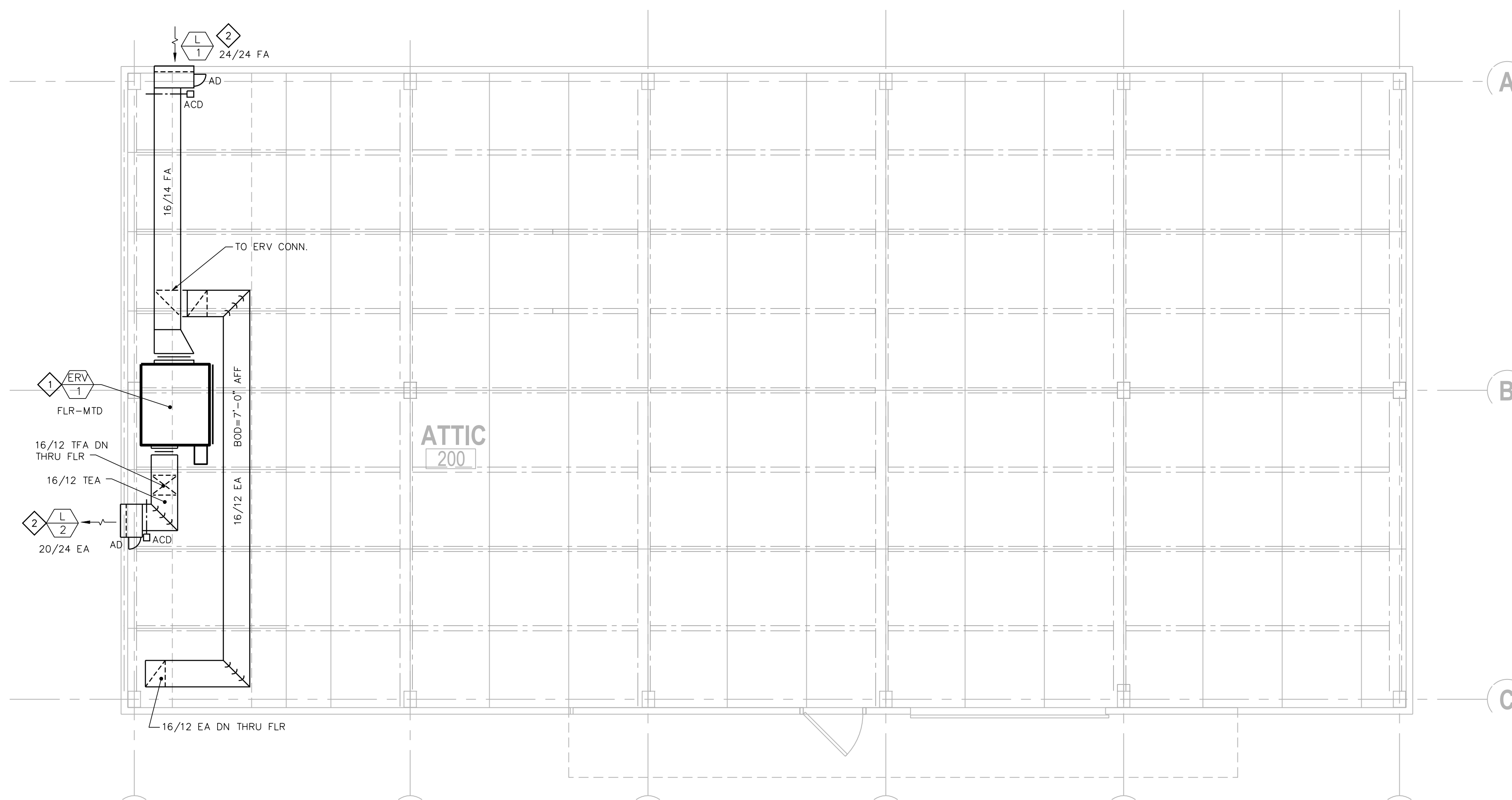
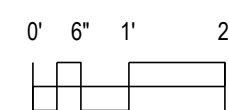
H1.1

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

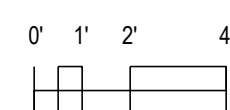
5682 State Hwy 19
Westport, WI 53597



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



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



HVAC GENERAL NOTES:

1. HVAC CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF HVAC WORK WITH OTHER TRADES.
2. COORDINATE PROVISIONS FOR OPENINGS IN NEW CONSTRUCTION WITH THE GENERAL CONTRACTOR FOR APPROVAL PRIOR TO STARTING WORK.
3. HVAC CONTRACTOR IS RESPONSIBLE FOR CUTTING AND PATCHING EXISTING WALLS, FLOORS & CEILING FOR NEW HVAC WORK, WHERE REQUIRED.
4. COORDINATE FINAL CEILING REGISTER AND GRILE LOCATIONS WITH OTHER TRADES.
5. CONCEAL ALL CONTROL WIRING IN FINISHED AREAS. EXPOSED CONTROL WIRING IN EMT CONDUIT.
6. COORDINATE PIPING AND DUCTWORK ROUTING WITH OTHER TRADES TO MAINTAIN SCHEDULED CEILING HEIGHTS.
7. PROVIDE PROPER SERVICE CLEARANCES AND ACCESS SPACE FOR ALL NEW EQUIPMENT.

HVAC ATTIC PLAN NOTES:

1. MOUNT ERV-1 ON VIBRATION ISOLATION PADS.
2. CUT AND PATCH EXISTING WALLS TO INSTALL NEW LOUVERS.

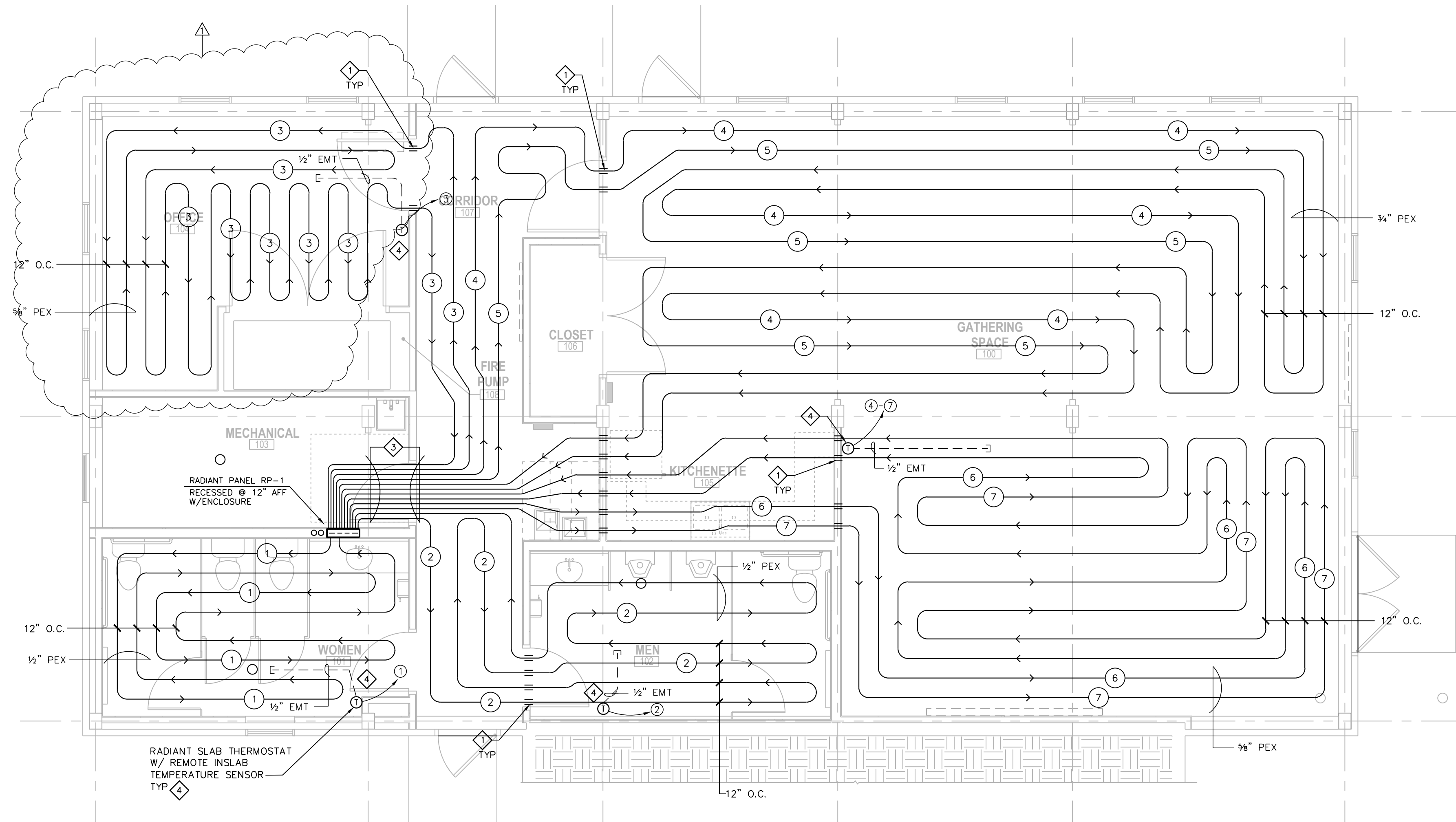
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 Δ ADDENDUM 1 12/08/2017

PROJECT # 14099

**ATTIC FLOOR PLANS -
HVAC**

H1.2



1 FIRST FLOOR PLAN - RADIANT FLOOR PIPING
 1/4" = 1'-0" NORTH

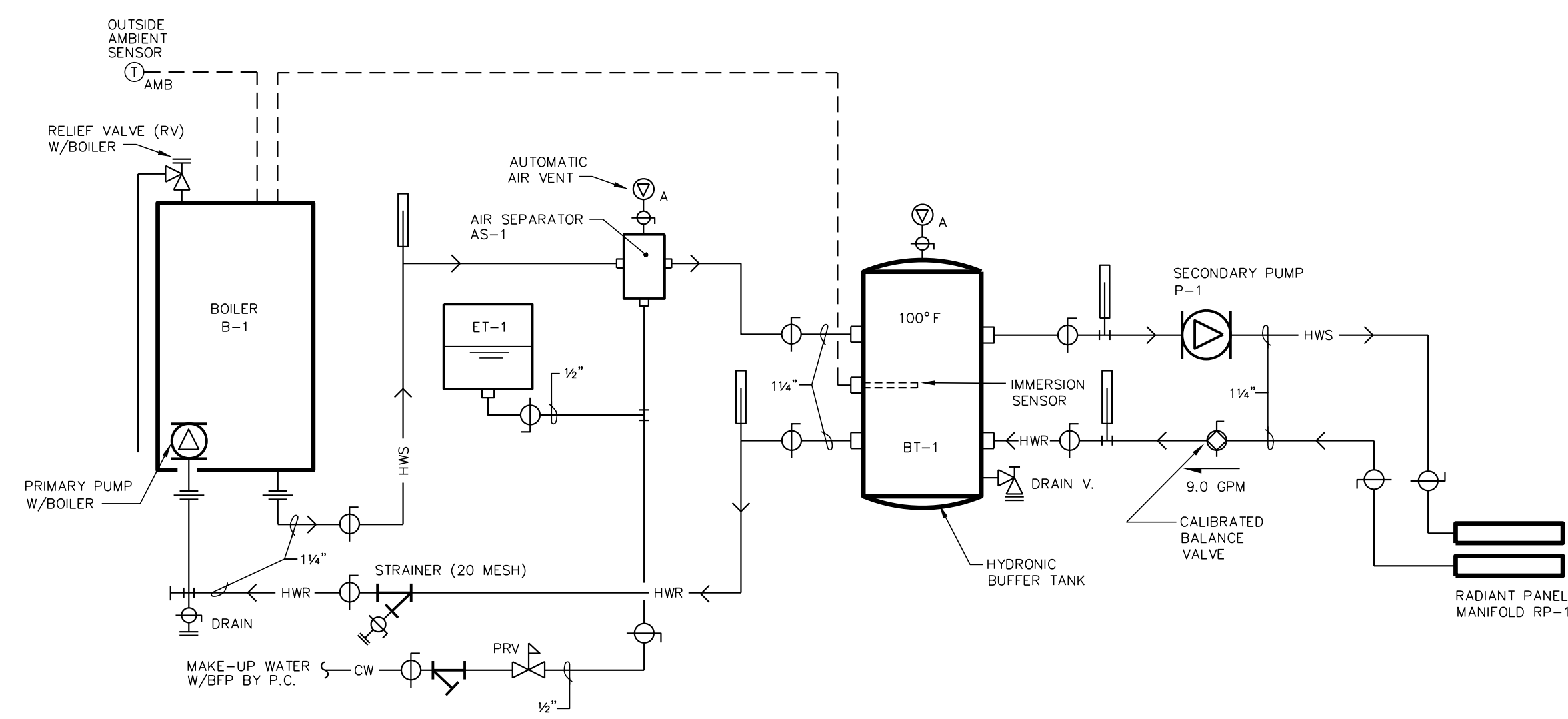
HVAC GENERAL NOTES:

- HVAC CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF HVAC WORK WITH OTHER TRADES.
- COORDINATE PROVISIONS FOR OPENINGS IN NEW CONSTRUCTION WITH THE GENERAL CONTRACTOR FOR APPROVAL PRIOR TO STARTING WORK.
- CONCEAL ALL CONTROL WIRING IN FINISHED AREAS. EXPOSED CONTROL WIRING IN EMT CONDUIT.
- COORDINATE PIPING ROUTING WITH OTHER TRADES TO MAINTAIN SCHEDULED CEILING HEIGHTS.
- PROVIDE PROPER SERVICE CLEARANCES AND ACCESS SPACE FOR ALL NEW EQUIPMENT.
- PROVIDE ACCESS PANELS AT INACCESSIBLE CEILINGS FOR EQUIPMENT, WHERE REQUIRED.
- COORDINATE RADIANT FLOOR PIPE ROUTING LOCATIONS WITH GENERAL CONTRACTOR AND OTHER TRADES.

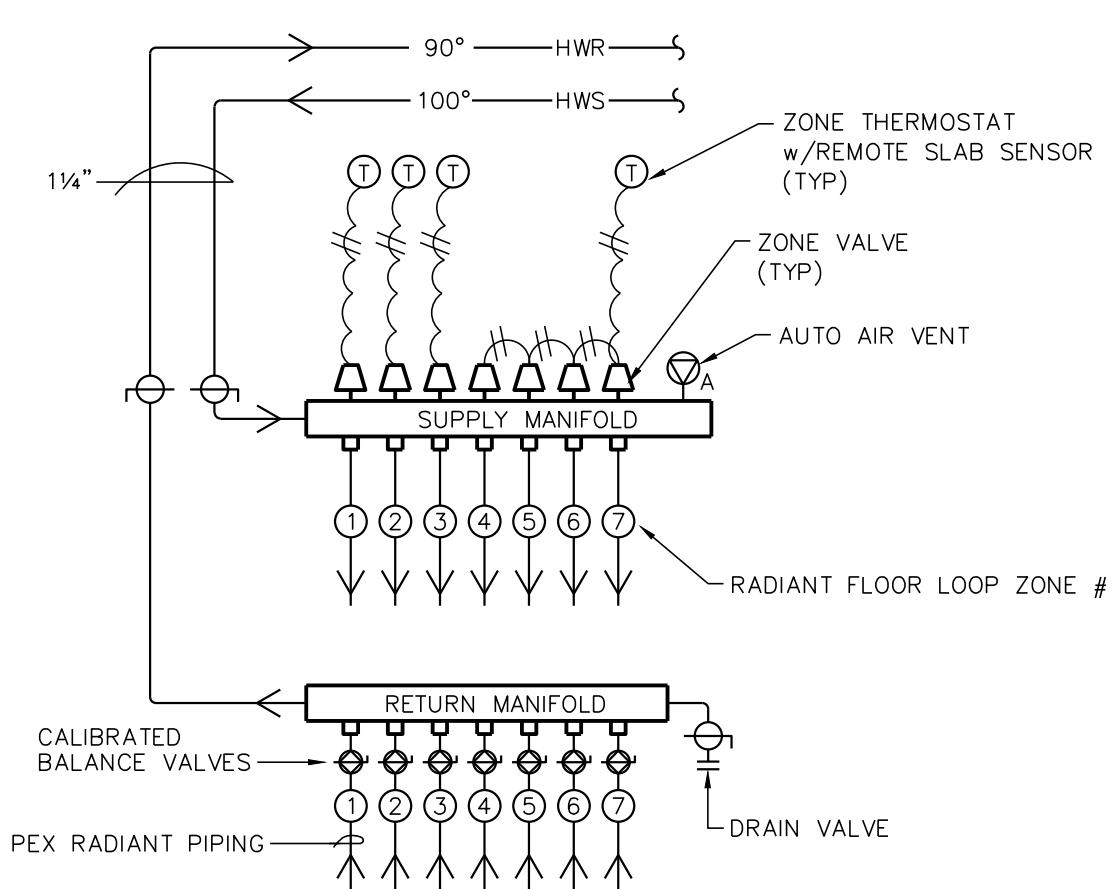
HVAC PLAN NOTES:

- ROUTE RADIANT FLOOR PEX PIPING THROUGH PROTECTIVE METAL SLEEVE (SCH 40 PIPE) UNDER INTERIOR WALLS. ROUTE ALL OTHER PEX PIPING THROUGH DOORWAYS.
- RADIANT FLOOR PIPING AT TYPICALLY 12" O.C. FOR PERIMETER 4 LOOPS. INTERIOR PIPING SPACING AS SHOWN ON PLAN.
- INSULATE SUPPLY RADIANT PIPING WITH 3/4" CLOSED CELL INSULATION BELOW MECH 103 AND CORRIDOR 108 FOR PIPING DESIGNATED.
- EXTEND REMOTE TEMPERATURE SENSOR INTO SLAB INSIDE 1/2" EMT ELECTRICAL CONDUIT WITH END PLUGGED.

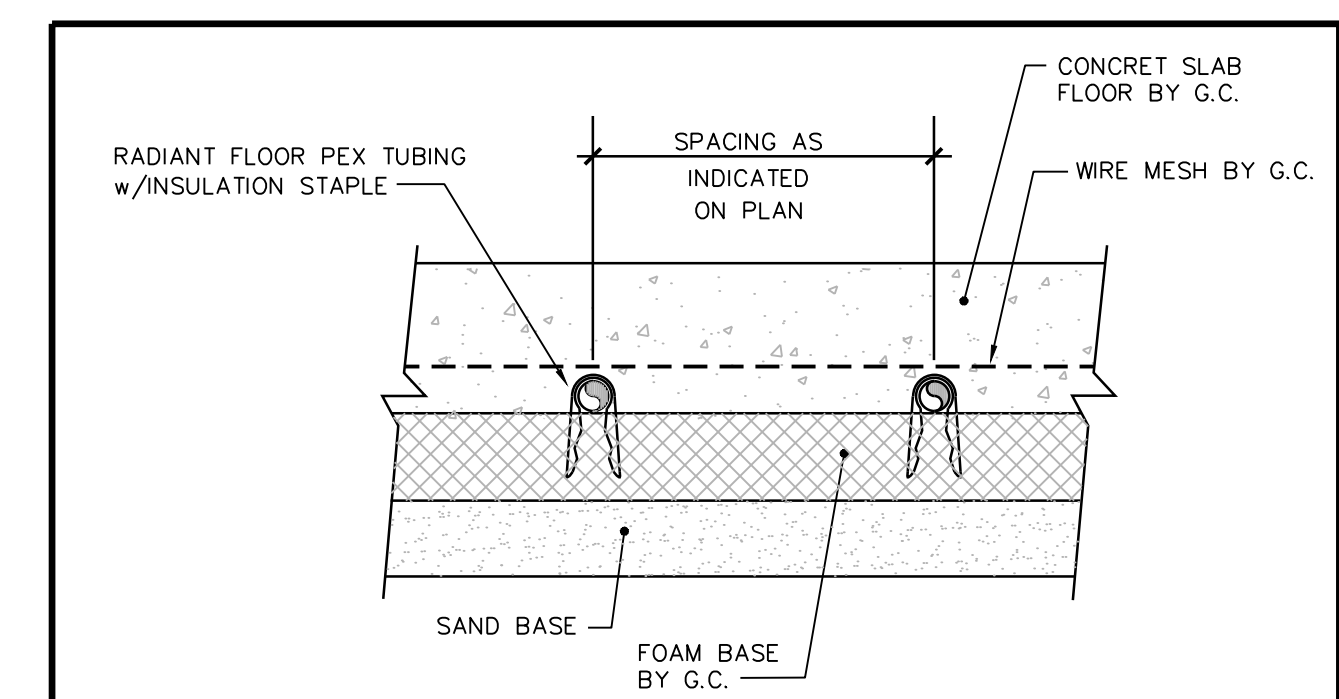
NOTE: RADIANT FLOOR HEATING SYSTEM IS AN 'ADD ALTERNATE BID'.



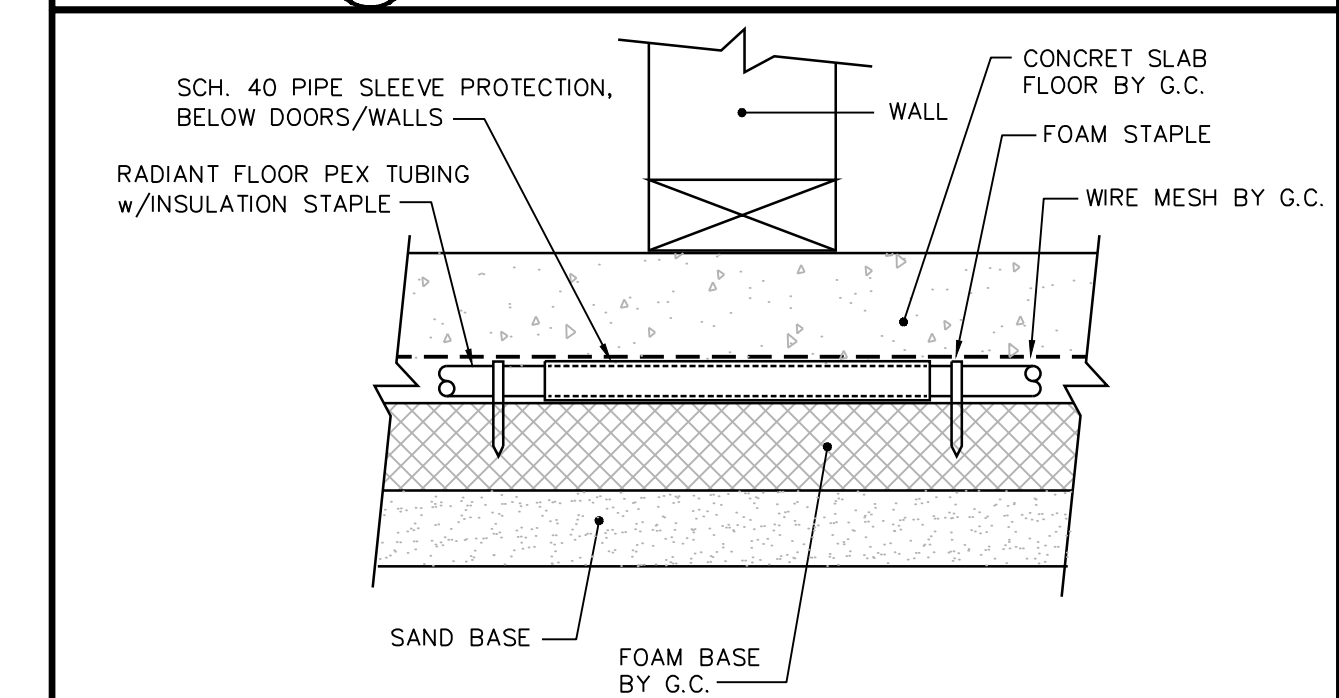
BOILER/HYDRONIC PIPING SCHEMATIC
 N.T.S.



RADIANT MANIFOLD RP-1 PIPING DETAIL
 N.T.S.



4 TYPICAL RADIANT SLAB SECTION
 N.T.S.



5 TYPICAL RADIANT TUBE PROTECTION SLEEVE
 N.T.S.

**SCHUMACHER BARN
 REMODEL/SITE
 IMPROVEMENTS**

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PROJECT # 14099

**GROUND
 FLOOR PLAN -
 RADIANT HEAT**

H1.3

PUMP SCHEDULE

TAG	P-1
MANUFACTURER	GRUNDFOS
MODEL NO.	ALPHA 15-55-SF
TYPE	INLINE
LOCATION	MECH. 103
SERVICE	HW BOILER SECONDARY PUMP
GPM	9
TDH (FT)	10
BHP (WATTS)	(45)
EFFICIENCY (%)	N.A.
SUCTION I.D.	1-1/4"
OUTLET I.D.	1-1/4"
MOTOR HORSEPOWER	1/15
VOLTAGE/PHASE	115/1
FLA	0.65

REMARKS: RADIANT FLOOR PUMP

① VARIABLE-SPEED (ECM MOTOR) PUMP, SET @ CONSTANT PRESSURE II.

CONDENSING UNITS SCHEDULE

GENERAL TAG	CU-1	CU-2A & 2B
MANUFACTURER	CARRIER	CARRIER
MODEL NO.	24ABB3-18	24ABB3-36
REF. TYPE	R-410A (PURON)	R-410A (PURON)
COOLING CAP. MBH	17.5	34.0
AMBIENT TEMP.(F)	91	91
SEER (EER)	13.0 (11.0)	13.0 (11.0)
COND. DISCHARGE	VERTICAL	VERTICAL
COND. COIL AREA SF	8.4	13.13
COND. FAN CFM	1792	2954
REF. LINE SIZE: RS RL	3/4" 3/8"	7/8" 3/8"
ELECTRICAL: VOLTAGE/PHASE	230/1	230/1
FAN F.L.A.	0.5	1.4
COMP. F.L.A.	9.0	15.3
MIN. CKT AMPS	11.8	21.5
MOCP AMPS	20	30

REMARKS: ① ② ③ ④ ⑤ SCROLL COMPRESSOR w/F-1 ① ② ③ ④ ⑤ SCROLL COMPRESSOR w/F-2A & 2B (2 REQ'D)

① CRANKCASE HEATER.
 ② COMPRESSOR START-ASSIST CAPACITOR AND RELAY.
 ③ THERMOSTATIC EXPANSION VALVE (TXV) @ EVAPORATOR COIL.
 ④ LOW-AMBIENT OPERATION WITH CONDENSER FAN SPEED CONTROL (MOTOR MASTER).
 ⑤ BALL BEARING FAN MOTOR.

ENERGY RECOVERY VENTILATOR SCHEDULE

GENERAL TAG	ERV-1
MANUFACTURER	RENEWAIRE
MODEL NO.	HEX2XINH
ARRANGEMENT	INDOOR HORIZONTAL WALL-MTD
TYPE	ENTHALPIC STATIC PLATE
FROST CONTROL	N.R.
EXHAUST AIR: CFM	1200
EXT. SP "w.g.	0.75
FAN HP (BHP)	1-1/2 (0.60)
RPM	1190
DRIVE	DIRECT
FRESH AIR: CFM	1200
EXT. SP "w.g.	0.75
FAN HP (BHP)	1-1/2 (0.6)
RPM	1190
DRIVE	DIRECT
COOLING MODE: FRESH AIR EAT db/wb F	91/74
FRESH AIR LAT db/wb F	79.2/68.3
EXHAUST AIR EAT db/wb F	75/64
TOTAL (SENSIBLE) EFFECTIVENESS	61% (74%)
HEATING MODE: FRESH AIR EAT db F	-15
FRESH AIR LAT db F	47.9
EXHAUST AIR EAT db/wb F	70/51.5
SENSIBLE EFFECTIVENESS	74%
FILTERS: TYPE	2" T.A. 30% EFF. (MERV 8)
QTY/SIZES	(4) 20"x20"x2"
ELECTRICAL: VOLTAGE/PHASE	230/1
FLA	9.6 + 9.6
MCA	20.6
MOCP UNIT	25
REMARKS:	W/F-1&F-2A, 2B UNIT WT= 442 lbs ① ② ③

① FLOOR MOUNT UNIT WITH FLEXIBLE DUCT CONNECTORS & VIBRATION ISOLATION PADS.
 ② INTERLOCK HX WITH ASSOCIATED FURNACE UNIT OCCUPIED MODE.
 ③ VFD MOTORS CONTROLLED BY 0-10 VDC SPEED CONTROL SIGNAL. BALANCE UNIT FOR 50% + 100% AIR FLOW.

FURNACE UNIT SCHEDULE

GENERAL TAG	F-1	F-2A & 2B
MANUFACTURER	CARRIER	CARRIER
MODEL NO.	59T5A 040E14-10	59T5A 060E17-14
TYPE	VERTICAL SEALED COMB.	VERTICAL SEALED COMB.
ARRANGEMENT	UPFLOW SIDE RETURN	BOTTOM RETURN
EAN: CFM	600	1200
ESP ("WG)	0.80	0.80
SPEED	ECM-4/YELLOW	ECM-5/GRAY
MIN. FA CFM (%)	240 (40%)	480 (40%)
EXT. SP "w.g.	0.75	0.75
FAN HP (BHP)	1-1/2 (0.60)	1-1/2 (0.60)
RPM	1190	1190
DRIVE	DIRECT	DIRECT
FRESH AIR: CFM	1200	1200
EXT. SP "w.g.	0.75	0.75
FAN HP (BHP)	1-1/2 (0.6)	1-1/2 (0.6)
RPM	1190	1190
DRIVE	DIRECT	DIRECT
COOLING CAP. (MBH)	17.5	34.0
SENSIBLE CAP. (MBH)	14.1	27.5
EAT DB/WB (deg F)	78/64.5	78/64.5
LAT DB/WB (deg F)	57.7/57.5	56.9/55.9
BOONET INPUT (MBH) HIGH/LOW	40/26	60/39
OUTPUT (MBH) HIGH/LOW	38.6/25.1	57.8/37.6
EAT DB (deg F)	61.2	61.2
LAT DB (deg F) HIGH/LOW	120.5/99.8	105.6/90.1
AFUE%	96.5%	96.3%
FILTER SECTION: TYPE	PLEATED (MERV 13)	PLEATED (MERV 13)
QUANTITY/AREA SF	1/23.1	1/28.6
SIZE: DIMENSIONS: WxHxD NOM	16 25"x16"x4 1/2"	20 25"x20"x4 1/2"
FILTER FRAME	EXTERNAL	EXTERNAL
ELECTRICAL: HORSEPOWER	1/2	3/4
VOLTAGE/PHASE	115/1	115/1
FAN FLA	6.8	9.9
UNIT FLA	7.5	10.7
MIN. CKT. AMP.	10.3	14.3
MOCP	15	15
REMARKS:	① ② ③ ④ 1 1/2-TON UNIT	① ② ③ ④ ⑤ 3-TON UNITS (2 REQ'D)

① FILTER UNIT SHALL BE EQUAL TO CARRIER MODEL EXPXUNV03 SERIES.
 ② CONCENTRIC FLUE/COMBUSTION AIR WALL VENTS.
 ③ FRESH AIR TEMPERED BY ERV.
 ④ MOUNT FURNACE ON VIBRATION ISOLATION PADS.
 ⑤ TWIN UNIT CONTROL.

HVAC SYMBOL SCHEDULE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—HWS—	HOT WATER SUPPLY PIPING	⊙	DIFFUSER/REGISTER/GRILLE TYPE
—HWR—	HOT WATER RETURN PIPING	⊙	EXHAUST CFM
—C—	CONDENSATE PIPING	⊙	EQUIPMENT SYMBOL NO.
—R—	REFRIGERANT PIPING	⊙	THERMOSTAT
—CA—	COMBUSTION AIR	⊙	THERMOSTAT/CARBON DIOXIDE SENSOR
—FV—	FURNACE VENTS	⊙	SQUARE/RECTANGULAR SUPPLY DIFFUSER, GRILLE OR REGISTER-HORIZONTAL MOUNT
○	PIPE UP	⊙	SQUARE/RECTANGULAR RETURN/EXHAUST REGISTER OR GRILLE-HORIZONTAL MOUNT
○	PIPE DOWN	⊙	SUPPLY REGISTER OR GRILLE VERT. MOUNT
○	BALL VALVE	⊙	RETURN/EXHAUST REGISTER OR GRILLE VERT. MOUNT
○	PRESSURE RELIEF VALVE	⊙	VERTICAL SUPPLY DUCT UP
○	DRAIN VALVE	⊙	VERTICAL RETURN/EXHAUST DUCT UP
○	SWING OR LIFT CHECK VALVE	⊙	VERTICAL SUPPLY DUCT DOWN
○	PRESSURE REDUCING VALVE	⊙	VERTICAL RETURN/EXHAUST DUCT DOWN
○	CALIBRATED BALANCING VALVE	⊙	VOLUME DAMPER
○	INLINE STRAINER	⊙	T & P TEST WELL
○	UNION	⊙	A-AUTOMATIC AIR VENT M-MANUAL AIR VENT
○	FLANGE	⊙	REDUCER, CONCENTRIC
○	END CAP OR BLIND FLANGE	⊙	PRESSURE GAUGE
○	THERMOMETER	⊙	FLEXIBLE CONNECTION
○	PRESSURE GAUGE	⊙	FIRE DAMPER W/ACCESS PANEL
○	FLEXIBLE CONNECTION	⊙	AUTOMATIC CONTROL DAMPER
○	T & P TEST WELL	⊙	FLEXIBLE CONNECTION
○	A-AUTOMATIC AIR VENT M-MANUAL AIR VENT	⊙	ROUND/FLEXIBLE DUCT
○	REDUCER, CONCENTRIC	⊙	ROUND RIGID DUCT
○	IMMERSION WELL	⊙	SQUARE ELBOW W/TURNING VANES
○	AUTOMATIC CONTROL DAMPER	⊙	RADIUS ELBOW R/D = 1.5
○	ABOVE FINISHED FLOOR	⊙	RADIUS TAKEOFF R/D = 1.5 "x"=TAKE-OFF WIDTH
○	BOTTOM OF DUCT	⊙	DUCT RISE(R) OR DROP(D)
○	DOOR GRILLE	⊙	TEMPERATURE CONTROL PANEL
○	EXHAUST AIR	⊙	EQUIPMENT SYMBOLS
○	FRESH AIR	⊙	B BOILER
○	MOTORIZED BACKDRAFT DAMPER	⊙	CU CONDENSING UNIT
○	OPEN END DUCT	⊙	ERV ENERGY RECOVERY VENTILATOR
○	RETURN AIR	⊙	F FURNACE
○	SUPPLY AIR	⊙	L LOUVER
○	TEMPERATURE CONTROL PANEL	⊙	P PUMP
○	TRANSFER DUCT	⊙	RP RADIANT PANEL
○	TEMPERED EXHAUST AIR	⊙	
○	TEMPERED FRESH AIR	⊙	
○	TRANSFER GRILLE	⊙	
○	UNDERCUT DOOR	⊙	
○	VOLUME DAMPER	⊙	
○	ROUND DUCT DIAMETER	⊙	
○	OVAL DUCT DIMENSIONS	⊙	

RP-1 RADIANT FLOOR SCHEDULE

LOOP #	1	2	3	4	5	6	7
SERVICE	WOMEN 101	MEN 102 CORR. 108	OFFICE 104 CORR. 107	GATHERING SPACE 100	GATHERING SPACE 100	GATHERING SPACE 100	GATHERING SPACE 100
UPWARD LOAD(BTUH/FT ²)	20	20	20	20	20	20	20
TOTAL LOAD(BTUH/FT ²)	24	24	24	24	24	24	24
TOTAL LOAD(BTU/HR)	3700	4300	5800	8400	8400	6100	6100
FLR COVERING R-VALUE	0	0	0	0	0	0	0
PNL SURFACE TEMP(F)	85	85	85	85	85	85	85
AREA (FT)	155	180	240	350	350	255	255
TUBE SIZE (IN)	1/2"	1/2"	5/8"	3/4"	3/4"	5/8"	5/8"
ROOM LOOP LENGTH(FT)	120	140	190	260	245	200	195
LEADER LENGTH (FT)	5	15	30	30	30	30	30
TOTAL LOOP LENGTH(FT)	125	155	220	290	275	230	225
EWV (F)	90	90	90	90	90	90	90
FLOW (GPM)	0.7	0.9	1.2	1.7	1.7	1.2	1.2
LOOP WPD (FT)	2.5	4.9	4.9	5.4	5.2	4.9	4.8

MANIFOLD TOTALS:
 SUPPLY WATER TEMP (F) = 100
 RETURN WATER TEMP (F) = 90
 ROOM SPACE TEMP (F) = 70
 MANIFOLD FLOW (GPM) = 8.6
 MANIFOLD HEATING CAP (MBH) = 42.8
 MANIFOLD SIZE = 1 1/4"

LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	METAL	LOUVER DEPTH x W x HT	FREE AREA S.F.	SERVICE	REMARKS
L-1	VENT PRODUCTS	2730-31-34	STAT.	EXT. ALUM.	4" x 24" x 24"	1.76	FRESH AIR	① ② FLANGED FRAME W/SUB-FRAME
L-2	VENT PRODUCTS	2730-31-34	STAT.	EXT. ALUM.	4" x 24" x 24"	1.76	EXHAUST AIR	① ② FLANGED FRAME W/SUB-FRAME

① BIRD SCREEN - ALUM.
 ② ALUM SUB-FRAME (BUCK FRAME).
 ③ POWDER COAT BAKED ENAMEL FINISH; FINAL COLOR SELECTION BY ARCHITECT.

HOT WATER SPECIALTIES SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL NO.	CAPACITY	REMARKS
EXPANSION TANK - ET	HW	B&G	HFT-30	2.5 ACCEPT. VOL (GAL.)	DIAPHRAM EXP TANK (4.4 GAL.) CHARGE TO 12 PSIG
PRESSURE REDUCING VALVE (PRV)	HW	B&G	B38	1/2" NPT	12 PSIG SETTING; BRASS BODY
AIR SEPARATOR - AS	HW	SPIROTHERM	V-JR-125-TM	1 1/4"	w/AUTO AIR VENT
HYDRONIC BUFFER TANK - BT	HW	BOILER BUDDY	BB-18	18 GAL	QUAD CONNECTIONS 1 1/4" x 46" W/DRAIN AUTO AIR VENT & THERMOWELL
CALIBRATED BALANCE VALVES	HW	B&G	CB SERIES	SEE PLAN FOR SIZES	

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

TAG	MFR	MODEL	SIZE: NECK (WxH) FACE (L)	MOUNTING	SERVICE	CFM	REMARKS
S1	CARNES	RDBM	3 1/2"x36"	RND DUCT	SUPPLY	150-180	① 3 FT ALUM 2-WAY 2-SLOT (3/4") SD
S2	CARNES	CHCB	3 1/2"x48"	OVAL DUCT	SUPPLY	220	① 4 FT ALUM 2-WAY 2-SLOT (3/4") SD
R1	KEES	GHD40	12"x24"	WALL	RETURN	360	① ② LOUVERED HD RR
R2	KEES	GHD40	24"x36"	WALL	RETURN	1500	① ② LOUVERED HD RR
T1	CARNES	RALMH	16"x16"	SURFACE	TRANSFER	-	③ LOUVERED ALUM TG
T2	CARNES	RFJAD	20"x20"	DOOR	TRANSFER	-	⑤ FLANGED ALUM DG
E1	CARNES	RNJMH	8"x6"	CEILING	EXHAUST	100	① ② LOUVERED ALUM. ER
E2	CARNES	RNJMH	12"x12"	CEILING	EXHAUST	250	① ② LOUVERED ALUM. ER
E3	CARNES	RNJMH	16"x16"	CEILING	EXHAUST	600	① ② LOUVERED ALUM. ER

CD = CEILING DIFFUSER SG = SUPPLY GRILLE
 RG = RETURN GRILLE SR = SUPPLY REGISTER
 RR = RETURN REGISTER ER = EXHAUST REGISTER
 SD = SLOT DIFFUSER HD = HEAVY DUTY

REMARKS:
 ① WHITE FINISH.
 ② OPPOSED BLADE DAMPER.
 ③ ALUM. BAR GRILLE.
 ④ CONCEALED MOUNTING HARDWARE.
 ⑤ POWDER COAT ENAMEL PAINT FINISH COLOR-SELECTED BY ARCHITECT.

HOT WATER BOILER SCHEDULE

TAG	MANUFACTURER	MODEL NO.	TYPE	FUEL	INPUT MBH	OUTPUT MBH	EFF %	FLUE VENT SIZE	COMB AIR SIZE	WATER CONN.	COND. DRAIN CONN.	GAS CONN.	ELECTRICAL: TOW SERVICE	FLA	MOCP	REMARKS
B-1	IBC	HC 13-50	SEALED-COMBUSTION MODULATING	N. GAS	13.5-51	12.4-45.4	95	2"	2"	1"	3/4"	1/2"	115V/1Ø	2.3	15	① ② ③ ④ ⑤ ⑥ ⑦

① 30 PSIG PRESSURE RELIEF VALVE & HIGH-LIMIT AQUASTAT SUPPLIED WITH UNIT.
 ② BOILER PROVIDED WITH CONDENSATE TRAP & VENT CONNECTION KIT.
 ③ PROVIDE CONCENTRIC WALL VENT TERMINATIONS.
 ④ CPVC VENT PIPING; PVC COMBUSTION AIR PIPING.
 ⑤ WIRE OUTDOOR AMBIENT AND INDOOR SENSOR TO BOILER CONTROLLER.
 ⑥ WIRE HYDRONIC BUFFER TANK IMMERSION SENSOR TO BOILER CONTROLLER.
 ⑦ INTERNAL PRIMARY PUMP W/BOILER: UPS 15-58 RATED @ 9 GPM & 11 FT TDH.



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 Project No. H1430

SCHUMACHER BARN REMODEL/SITE IMPROVEMENTS

5682 State Hwy 19
 Westport, WI 53597

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PROJECT # 14099

HVAC SCHEDULES

H2.0

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

5682 State Hwy 19
Westport, WI 53597

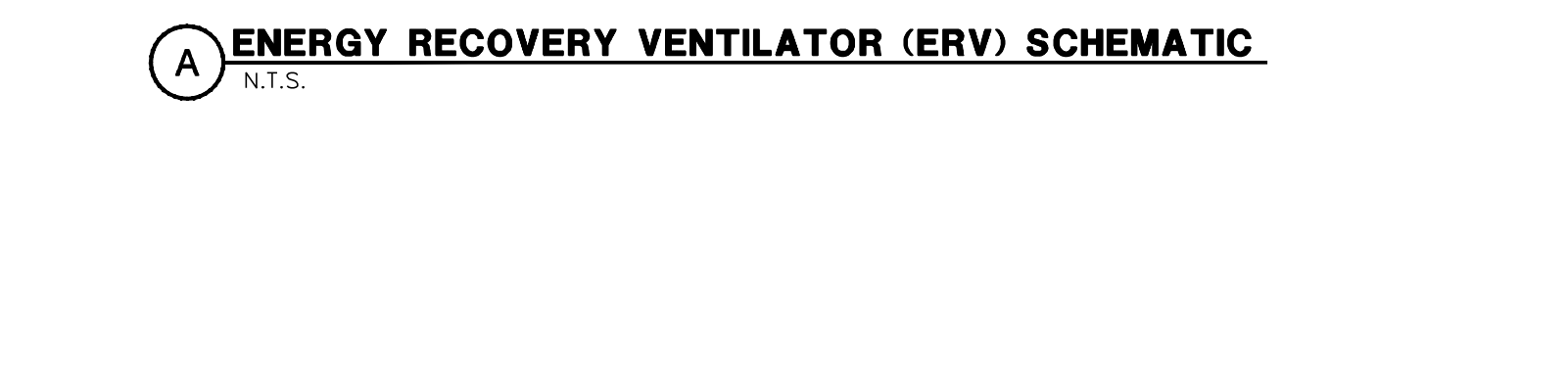
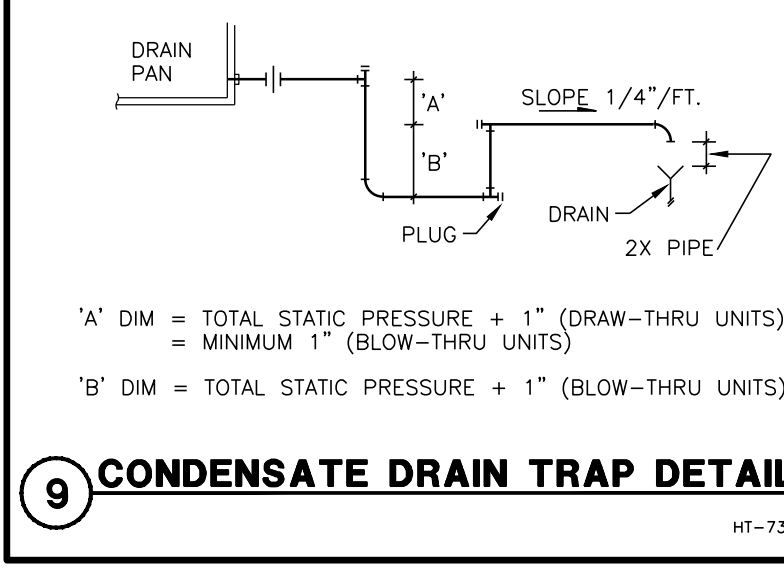
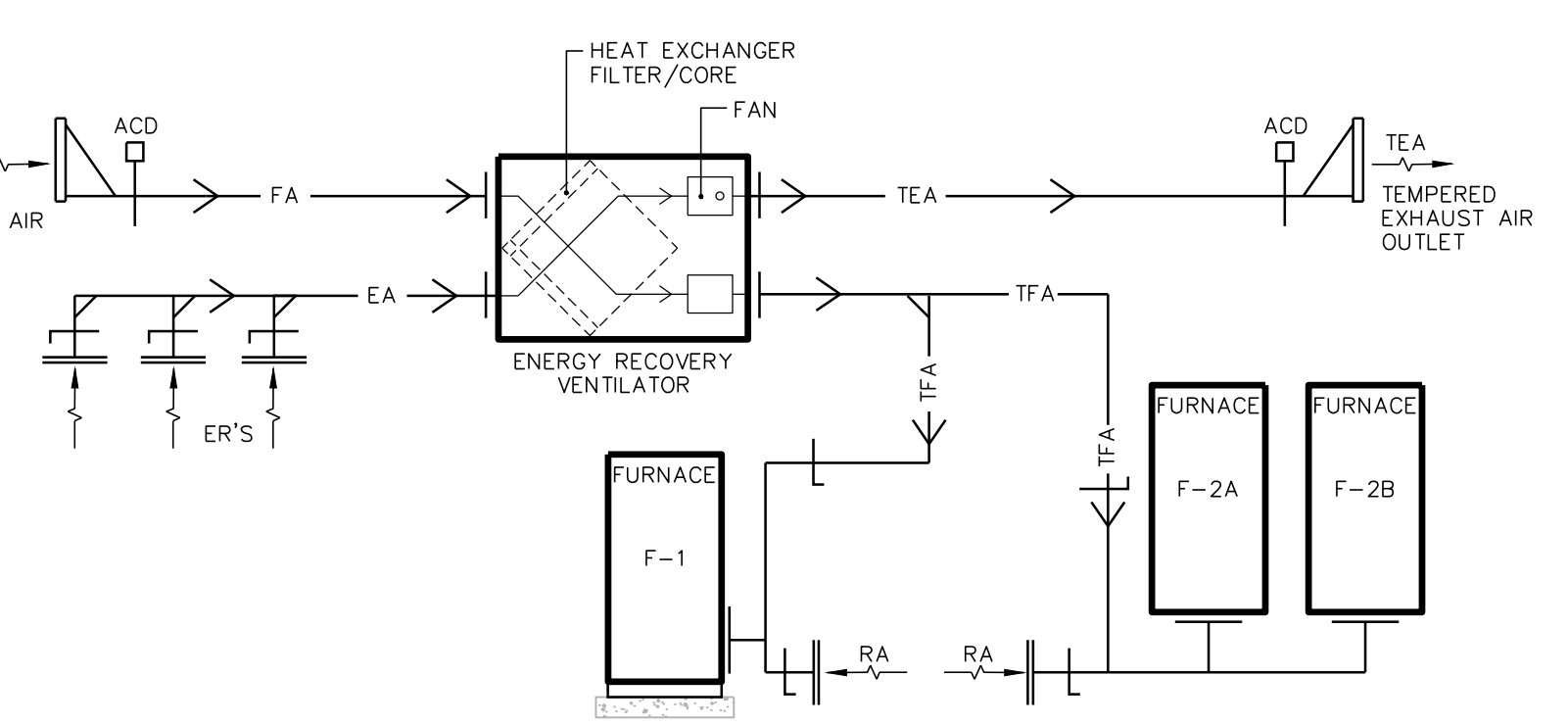
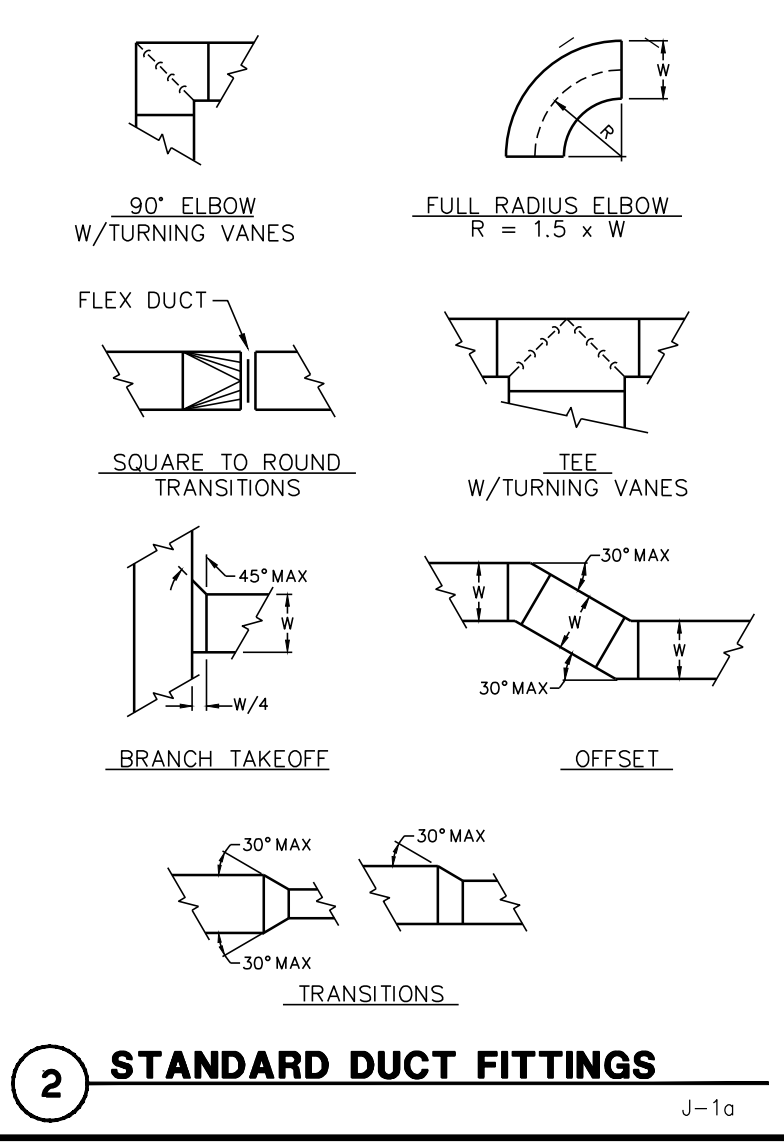
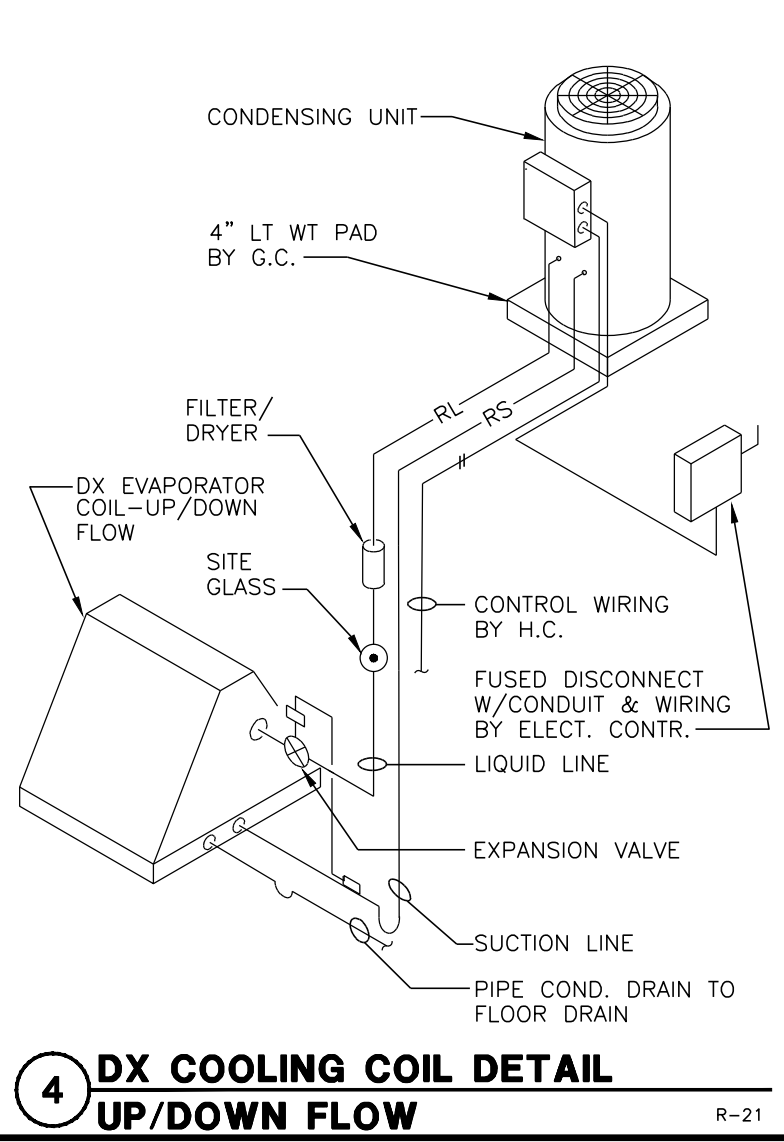
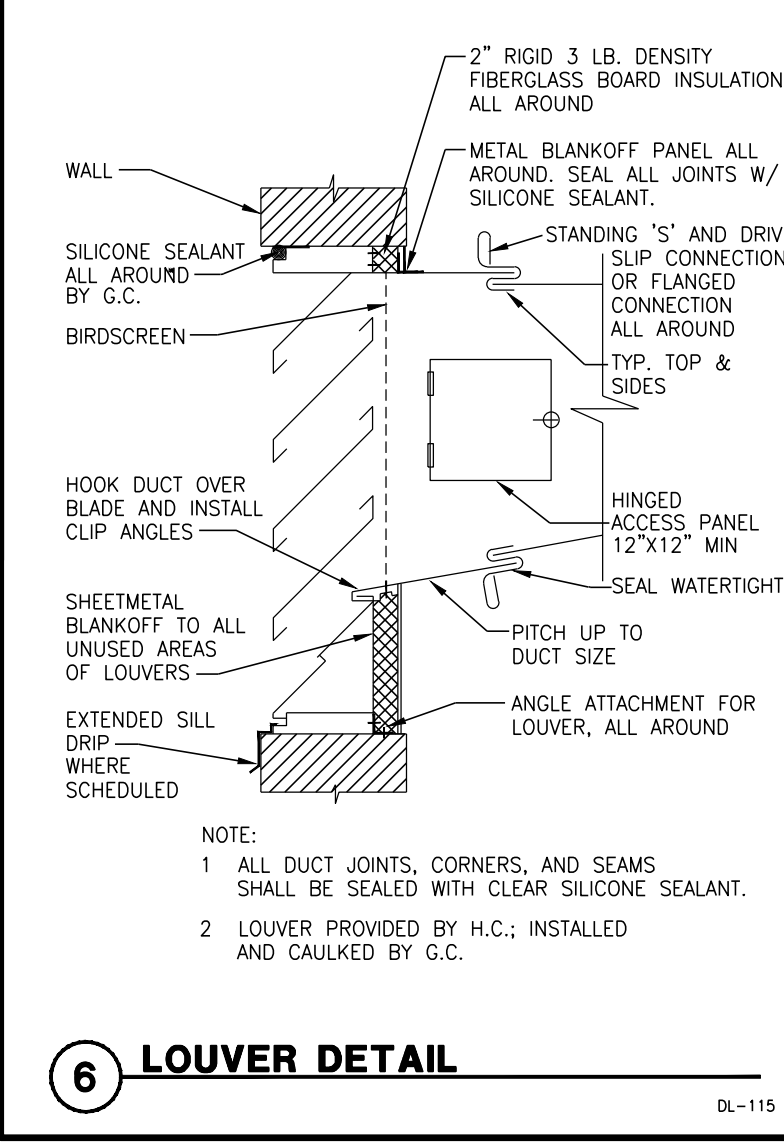
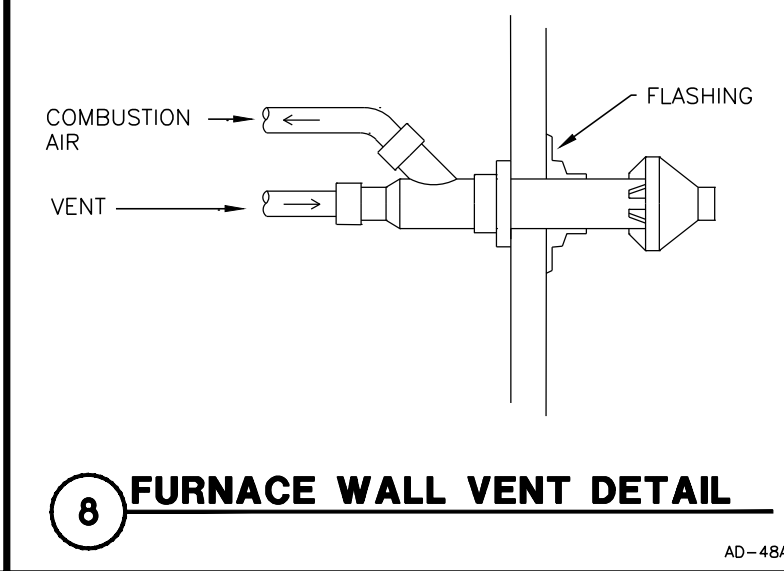
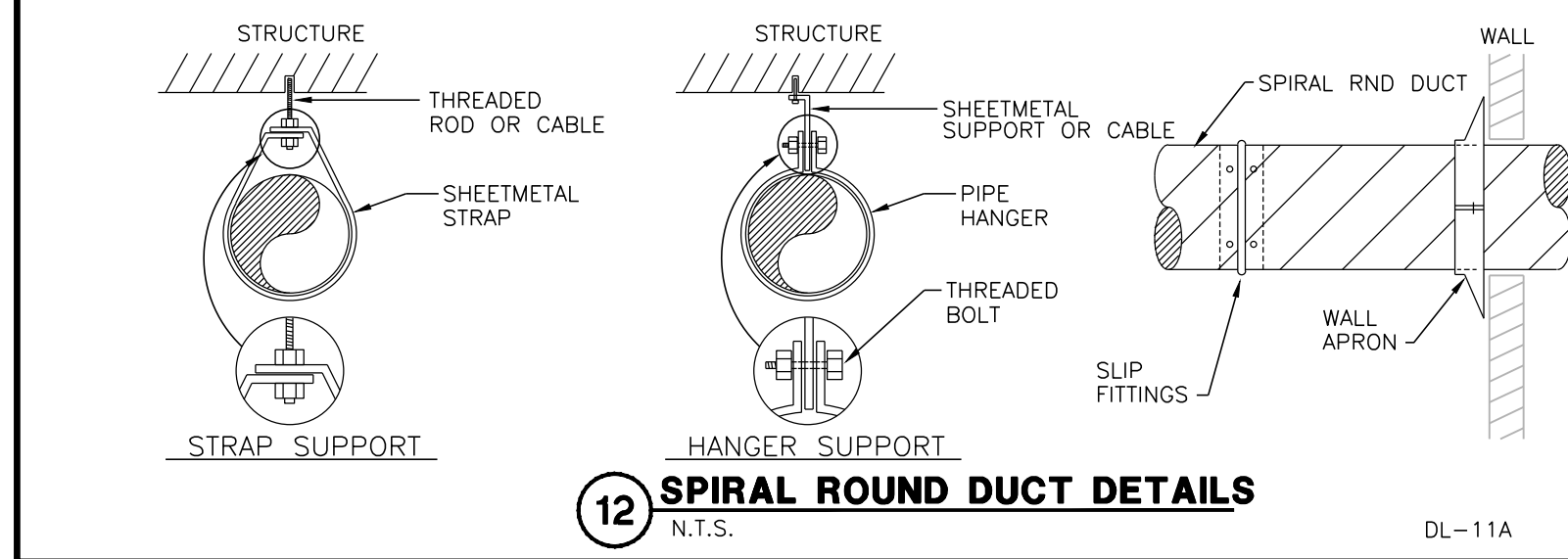
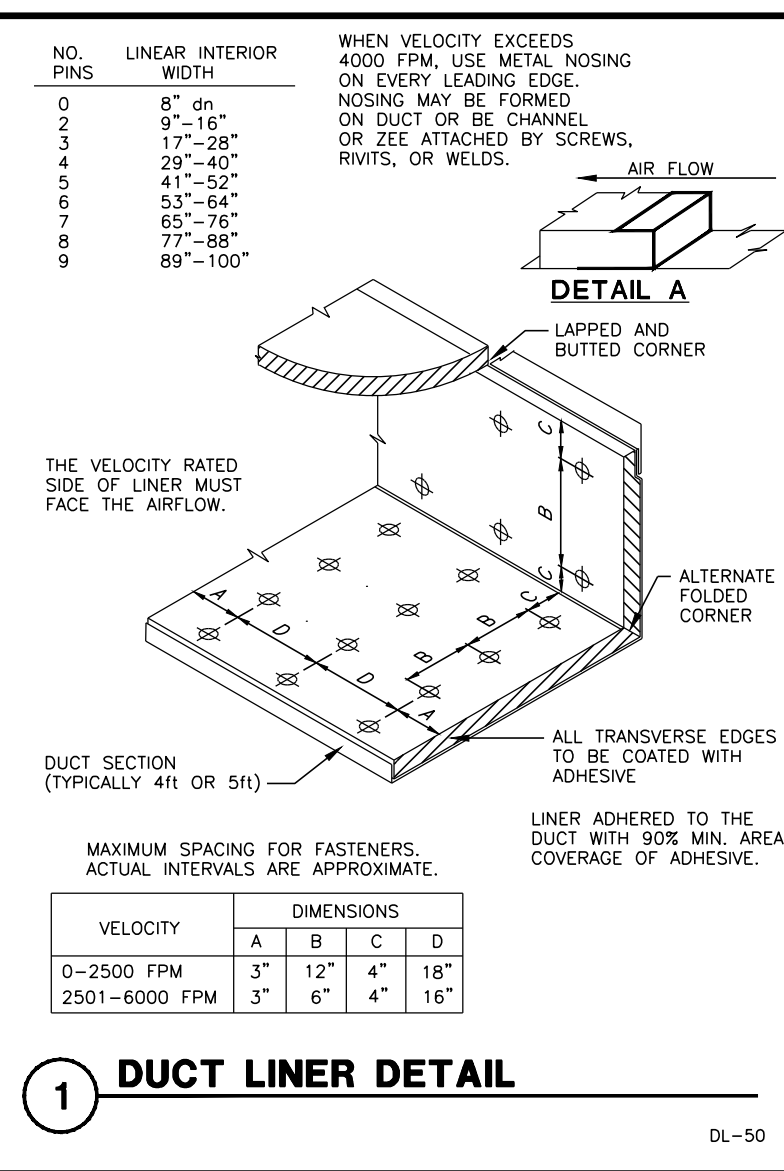
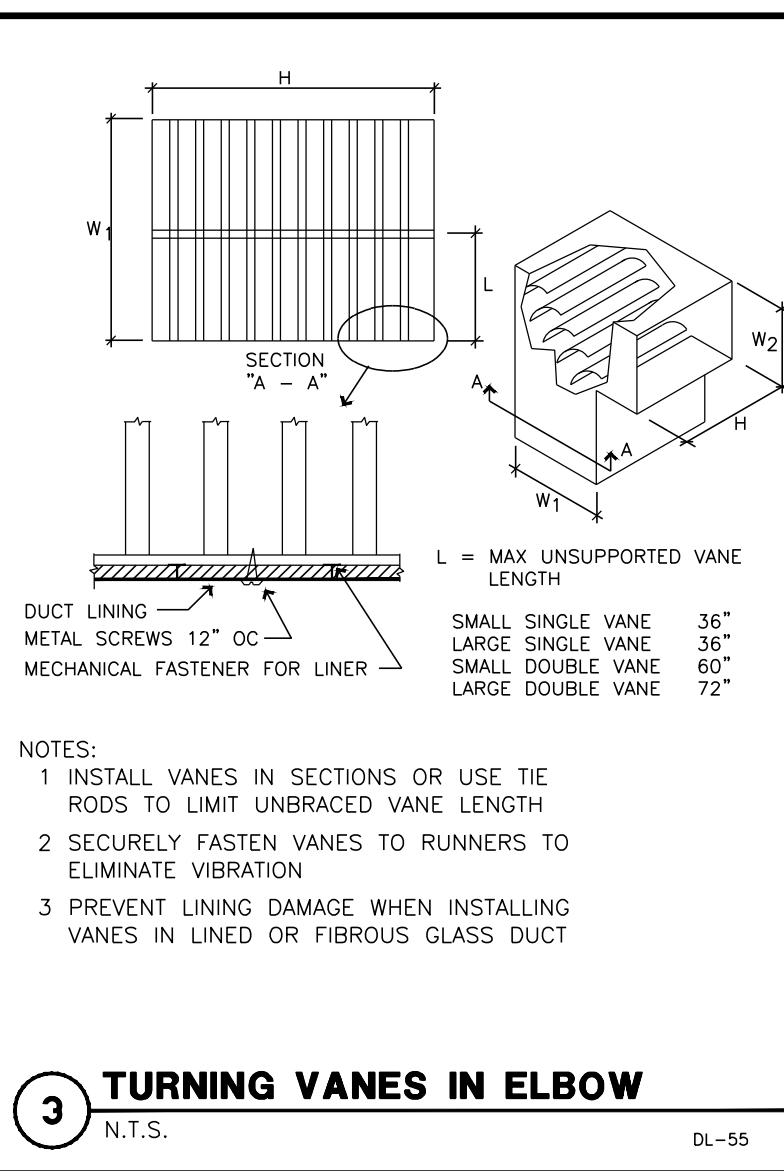
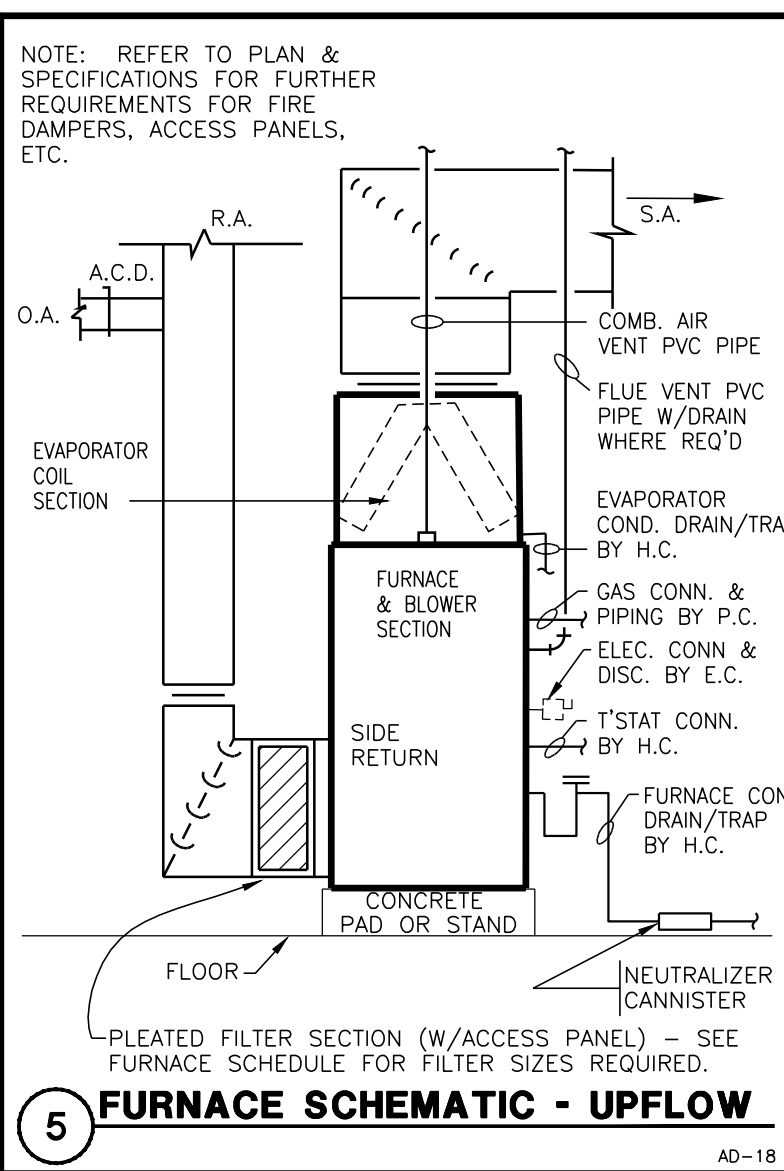
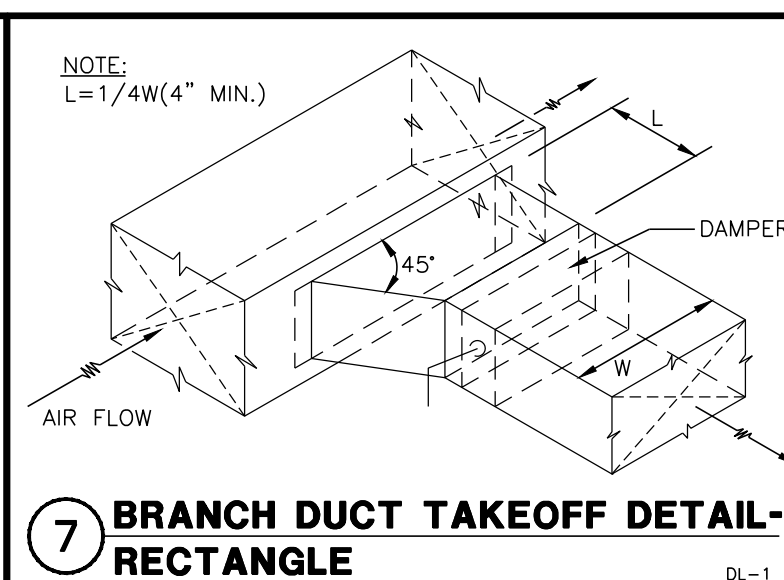
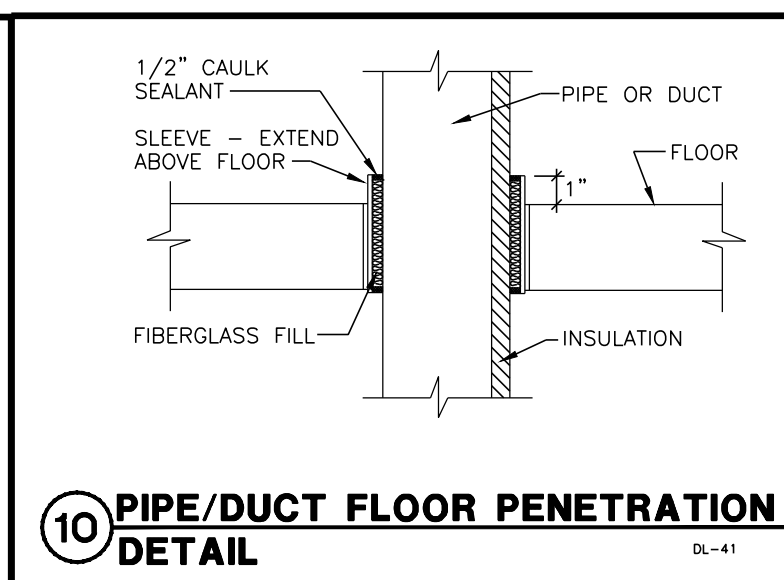
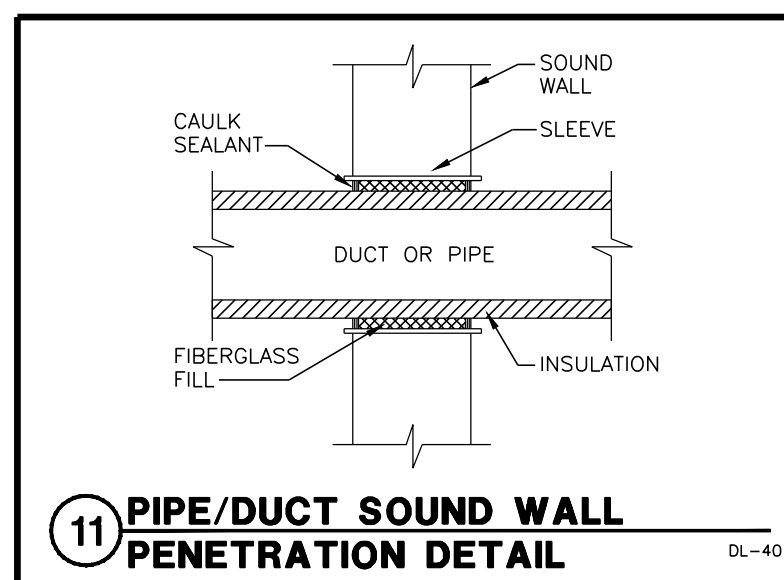
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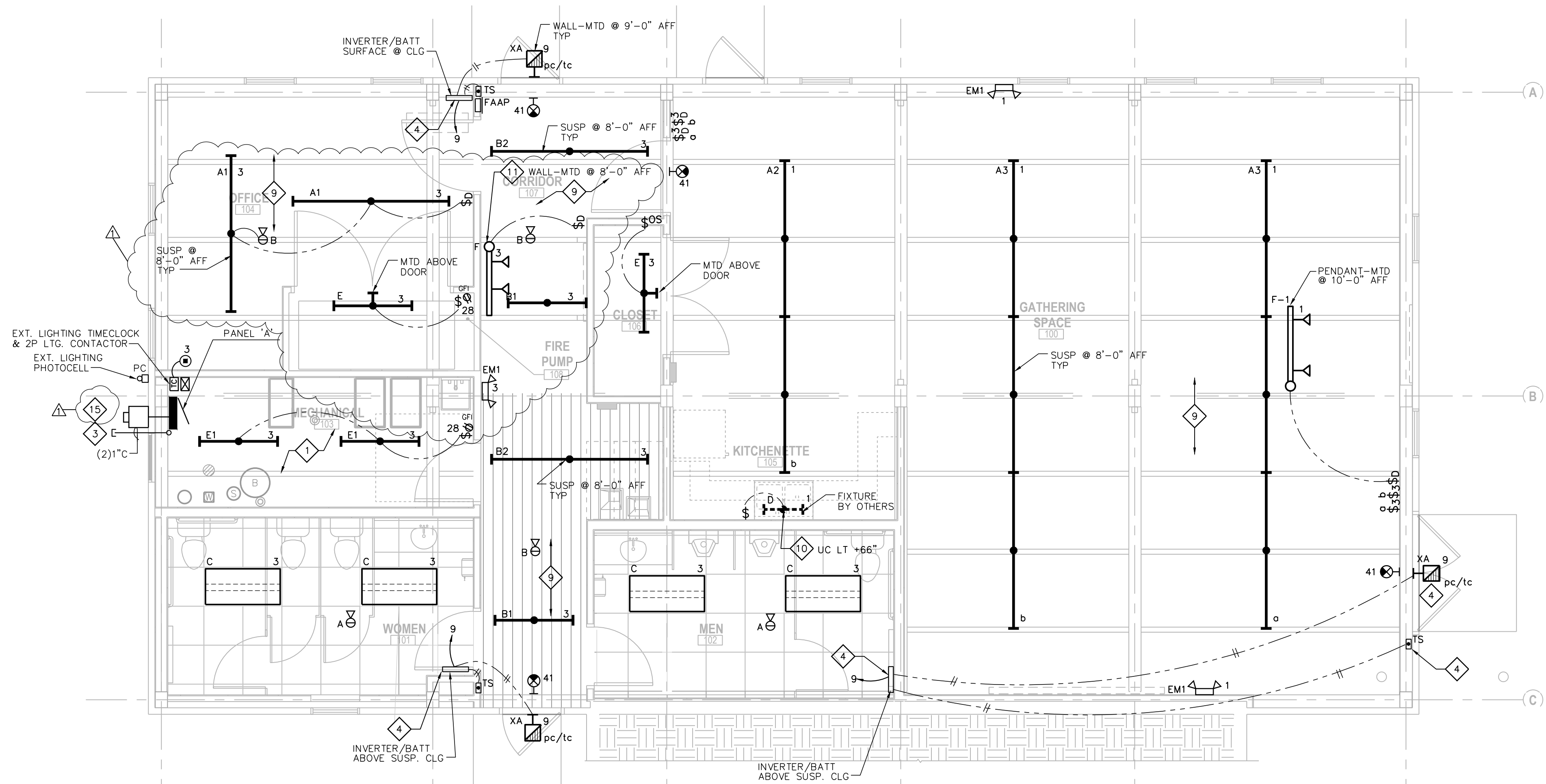
REVISIONS:
 Δ ADDENDUM 1 12/08/2017

PROJECT # 14099

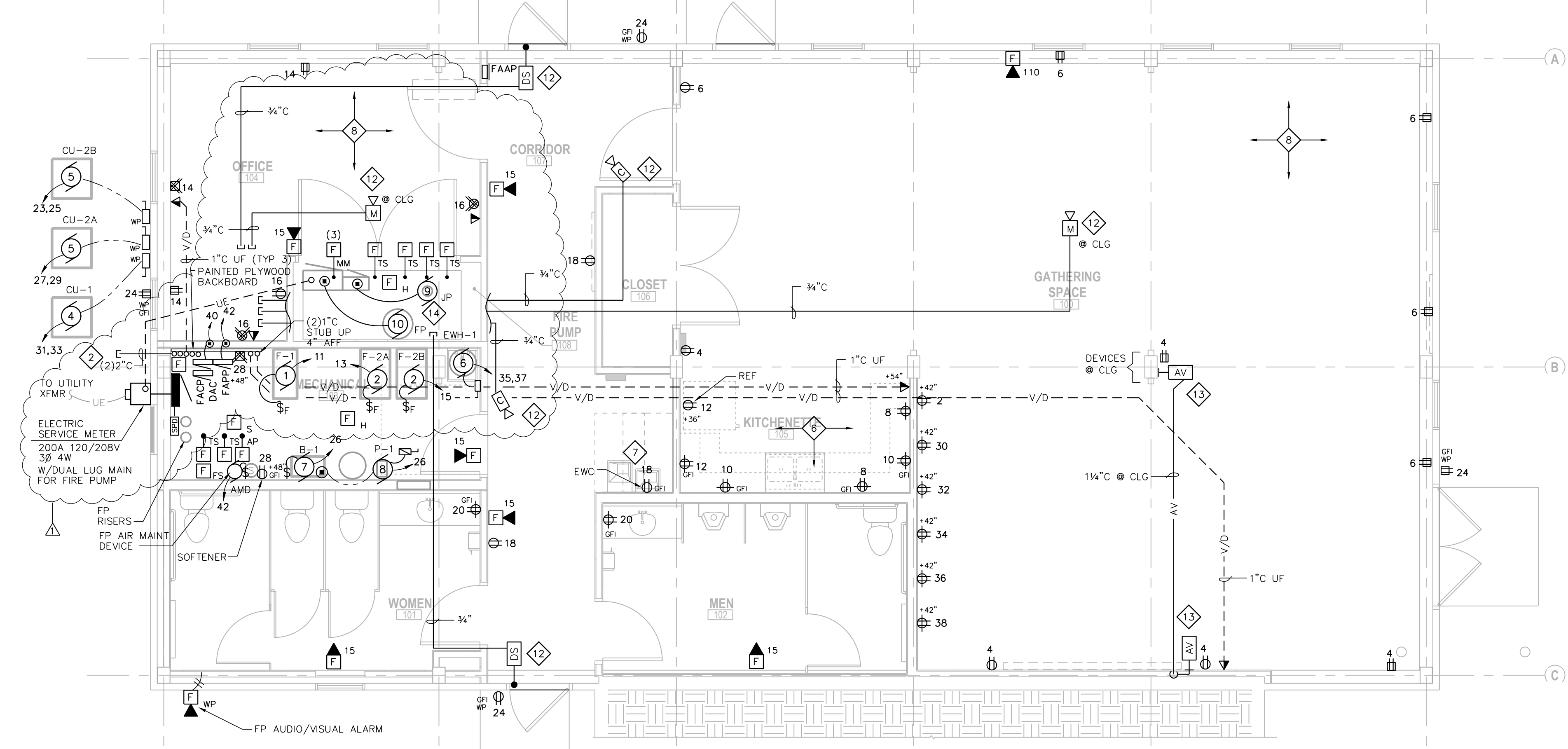
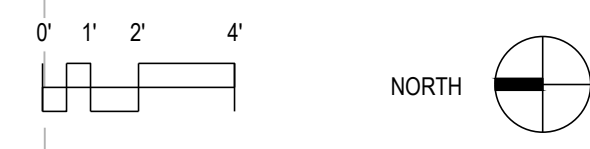
**HVAC
DETAILS**

H3.0

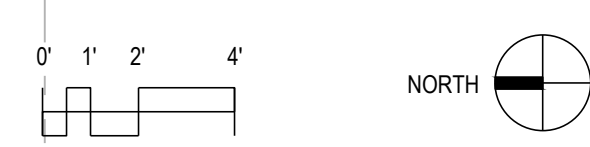




1 FLOOR PLAN - ELECTRICAL LIGHTING
1/4" = 1'-0"



2 FLOOR PLAN - ELECTRICAL POWER/LV
1/4" = 1'-0"



ELECTRICAL GENERAL NOTES:

1. COORDINATE LIGHTING & DEVICE LAYOUT WITH GENERAL CONTRACTOR.
2. COORDINATE ELECTRICAL RACEWAYS ROUTING WITH GENERAL CONTRACTOR AND OTHER TRADES FOR PROPER EQUIPMENT ACCESS.
3. ALL RACEWAYS ARE TO BE CONCEALED IN FINISHED AREAS. MECHANICAL, UTILITY AND UNFINISHED EXISTING AREAS MAY USE SURFACE CONDUIT SYSTEMS.
4. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONSTRUCTION CONDITIONS.
5. ALL LIGHTS CIRCUITED TO PANEL 'A' UNLESS INDICATED OTHERWISE.

ELECTRICAL PLAN NOTES:

- 1 COORDINATE LIGHT FIXTURE MOUNTING LOCATION AND SUSPENSION HEIGHT WITH DUCTWORK, PIPING & OTHER TRADES.
- 2 STUB OUT 2"(PVC) RACEWAY 24" BELOW GRADE AND CAPPED FOR FUTURE COMMUNICATIONS CABLING.
- 3 STUB OUT 1"(PVC) RACEWAY 24" BELOW GRADE AND CAP FOR FUTURE EXTERIOR LIGHTS.
- 4 INVERTER/BATTERY (25 VA) FOR EXTERIOR LIGHTING EMERGENCY EGRESS LIGHTING WITH REMOTE TEST SWITCH EQUAL TO DUAL LITE UFO-LED-25, + SPRTS. PROVIDE UNSWITCHED LEG TO INVERTER FOR POWER MONITORING.
- 5 COORDINATE FINAL PLACEMENT OF FLOOR DEVICES WITH OWNER PRIOR TO INSTALLING.
- 6 COORDINATE DEVICE PLACEMENT AT CASEWORK. CASEWORK BY OTHERS.
- 7 COORDINATE FINAL RECEPTACLE LOCATION FOR ELECTRIC WATER COOLER ROUGH-IN WITH PLUMBING CONTRACTOR.
- 8 ROUTE LIGHTING CONDUCTORS THROUGH EXPOSED EMT CONDUIT SURFACE-MTD AT EXISTING WALLS.
- 9 SUPPORT PENDANT FIXTURES FROM CABLE MTD CANOPY/BOX FLUSH WITH EXISTING CEILING. ROUTE CONDUIT/RACEWAY SYSTEM IN SECOND LEVEL INSULATED FLOOR.
- 10 UNDERCOUNTER LIGHT WITH CASEWORK INSTALLATION BY OTHERS. PROVIDE SWITCH AND ROUGH-IN FOR LIGHT FIXTURE.
- 11 WALL-MTD TRACK FIXTURE @ 8'-0" AFF.
- 12 PROVIDE JCT BOX (4"x4"x2") AND RACEWAY SYSTEM FOR FUTURE SECURITY CAMERAS, MOTION DETECTORS & ELECTRIC DOOR STRIKES BY OTHERS.
- 13 PROVIDE JCT BOX (4"x4"x2") AND RACEWAY SYSTEM FOR AUDIO/VISUAL CABLING BY OTHERS.
- 14 COORDINATE FIRE PUMP WIRING REQUIREMENTS WITH FIRE PROTECTION CONTRACTOR.
- 15 DISCONNECT AND REMOVE EXISTING 200 AMP 1-PHASE SERVICE AND PANEL. COORDINATE WORK WITH ELECTRIC UTILITY.

DIMMER TYPES:

- A 0-10 VDC LED DRIVERS: SYNERGY ISD-BC-120/277-WH (A1, A2 & A3 FIXTURES)
- B LV 120 VAC LED: SYNERGY ISD-400-ELV-120/277-WH (F & F1 FIXTURES)

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

5682 State Hwy 19
Westport, WI 53597

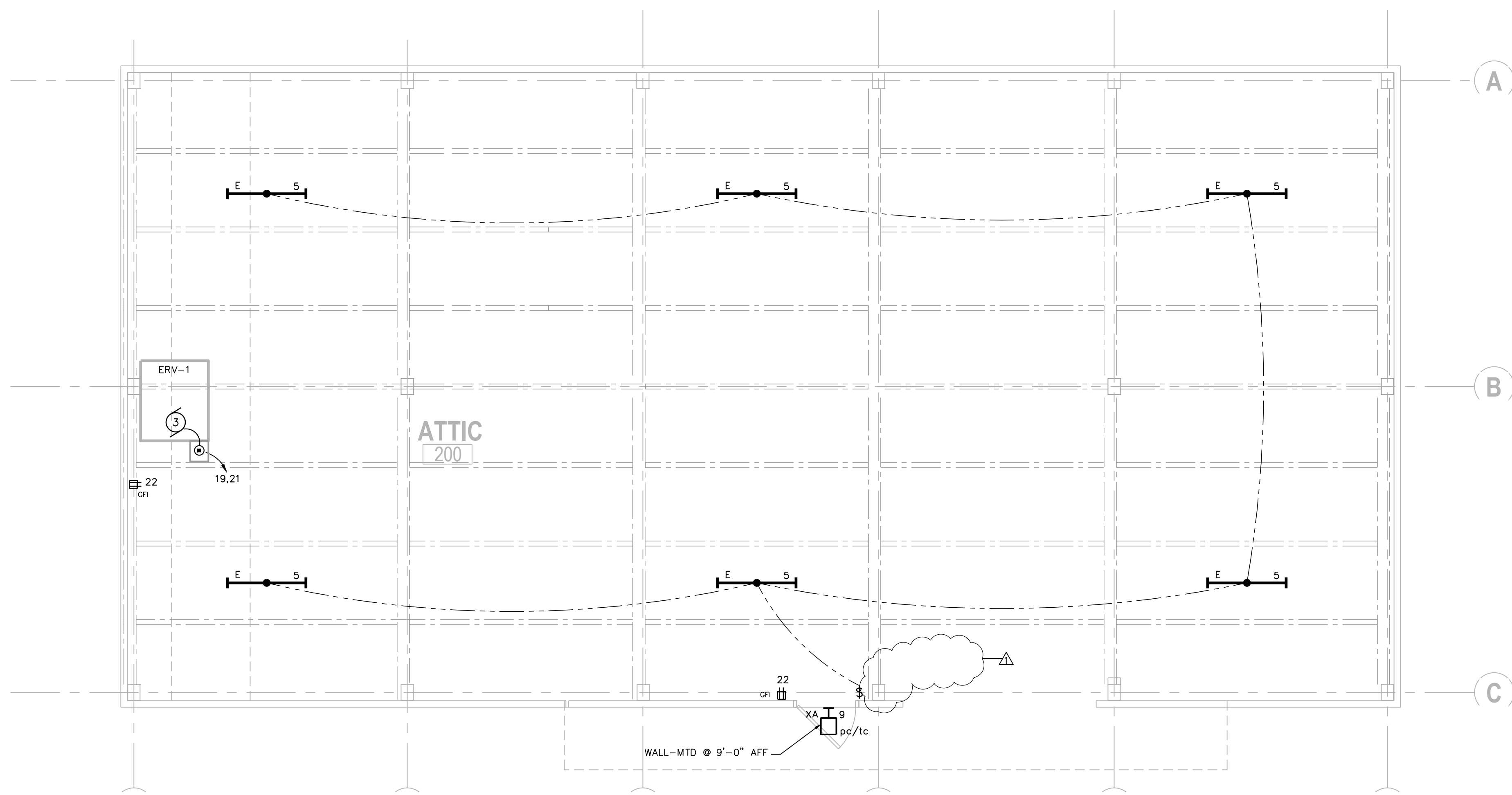
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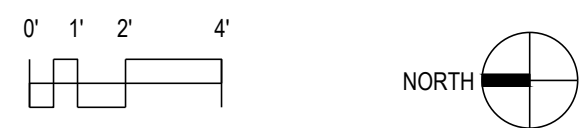
PROJECT # 14099

**GROUND
FLOOR PLANS -
ELECTRICAL**

E1.1



1 LOWER ATTIC PLAN - ELECTRICAL
1/4" = 1'-0"



ELECTRICAL GENERAL NOTES:

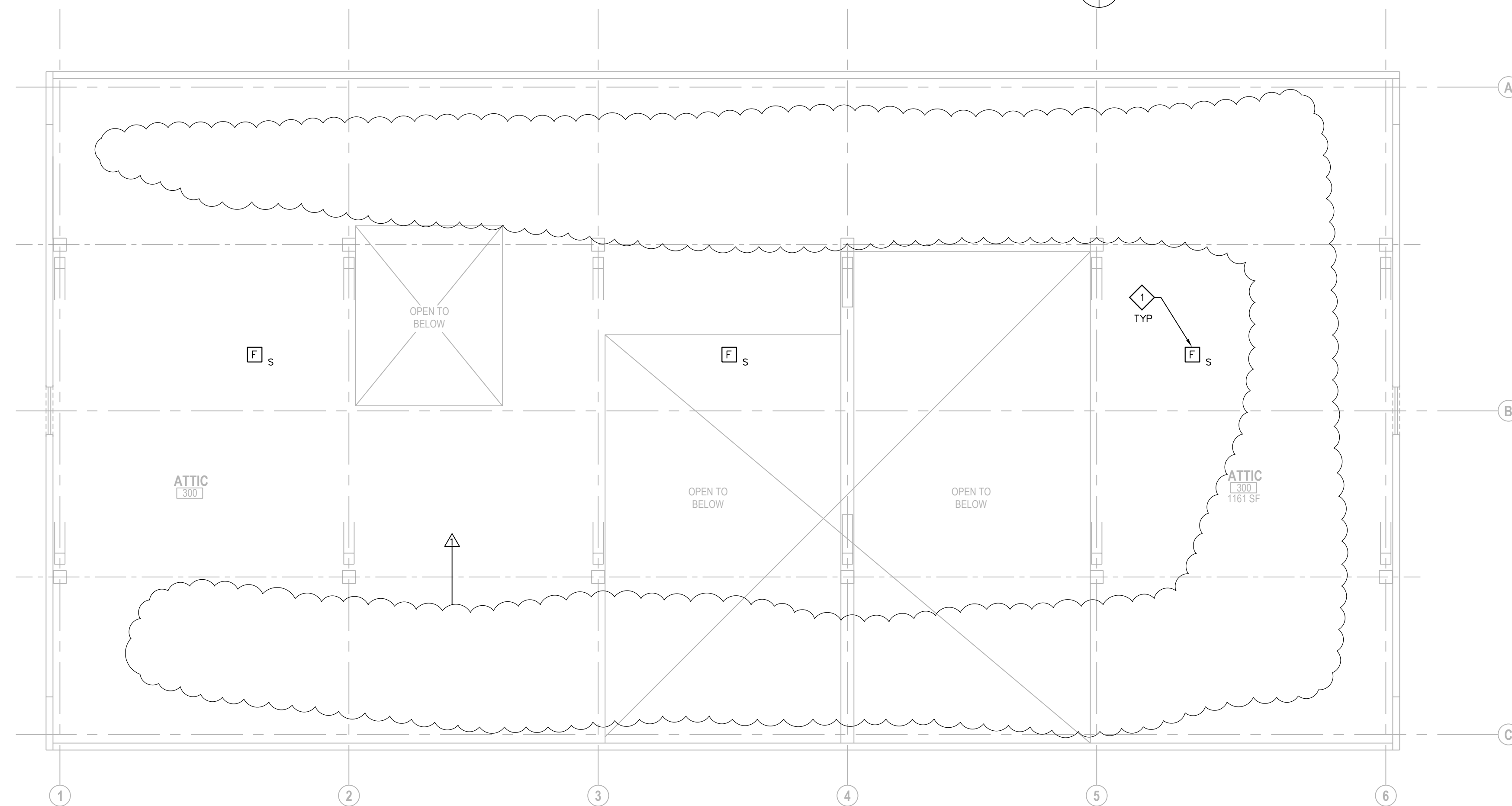
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3. ALL RACEWAYS ARE TO BE CONCEALED IN FINISHED AREAS. MECHANICAL, UTILITY AND UNFINISHED EXISTING AREAS MAY USE SURFACE CONDUIT SYSTEMS.
4. EXISTING ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL CONSTRUCTION CONDITIONS.
5. ALL LIGHTS CIRCUITED TO PANEL 'A' UNLESS INDICATED OTHERWISE.

ELECTRICAL PLAN NOTES:

- ◇ EXTEND FIRE ALARM SYSTEM DEVICES TO GROUND FLOOR FIRE ALARM SYSTEM.

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

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1 UPPER ATTIC PLAN - ELECTRICAL
1/4" = 1'-0"



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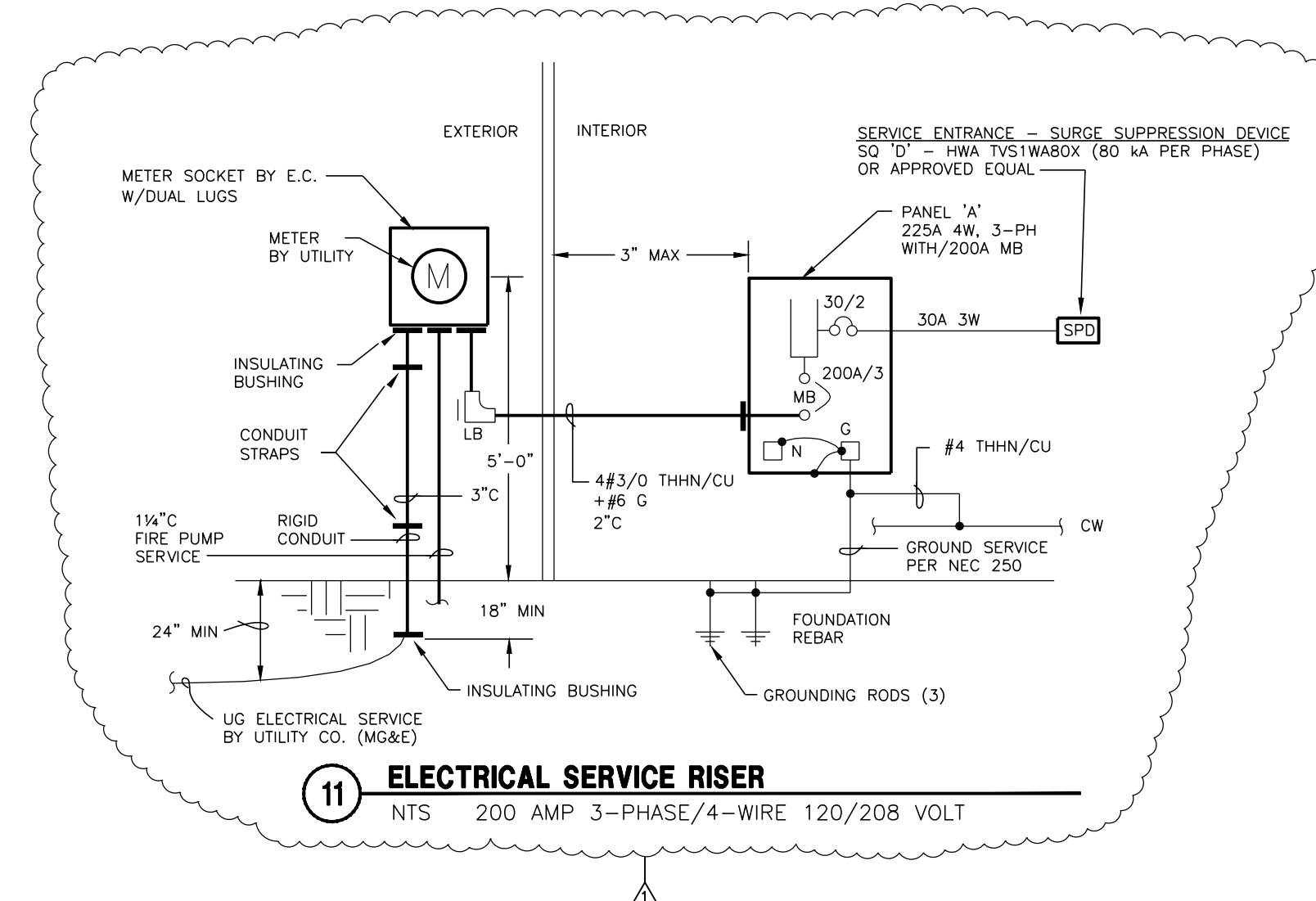
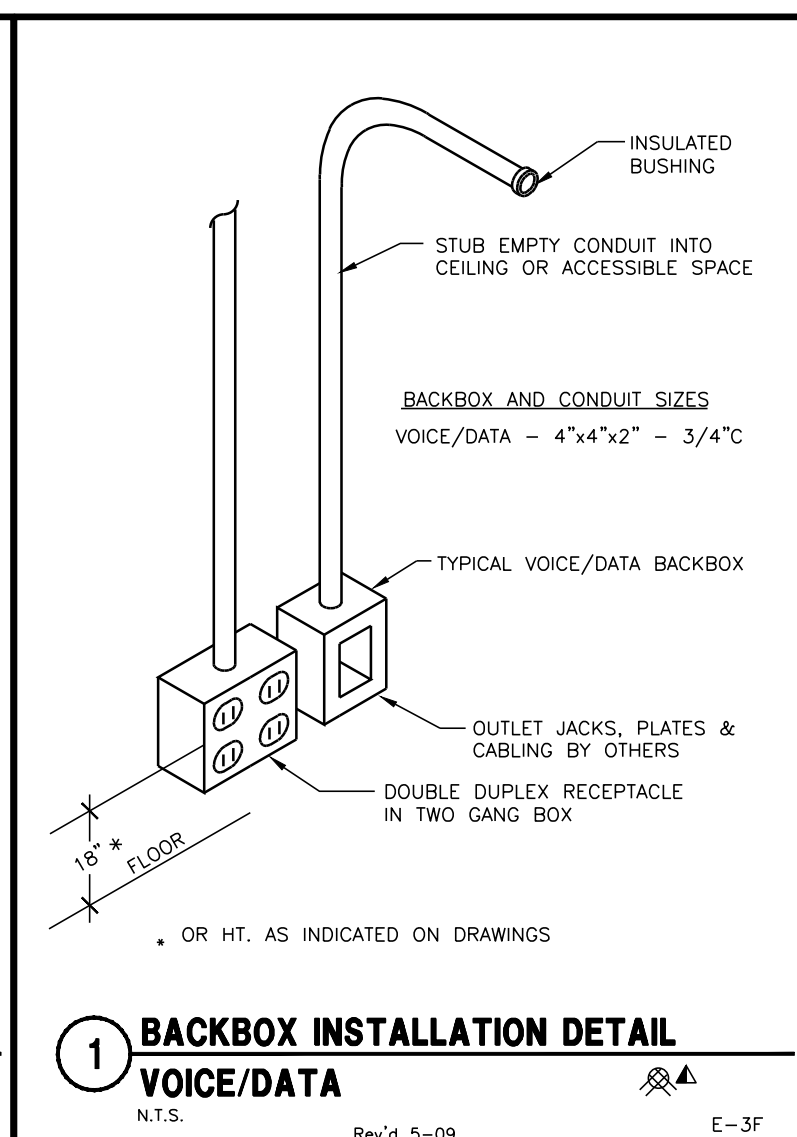
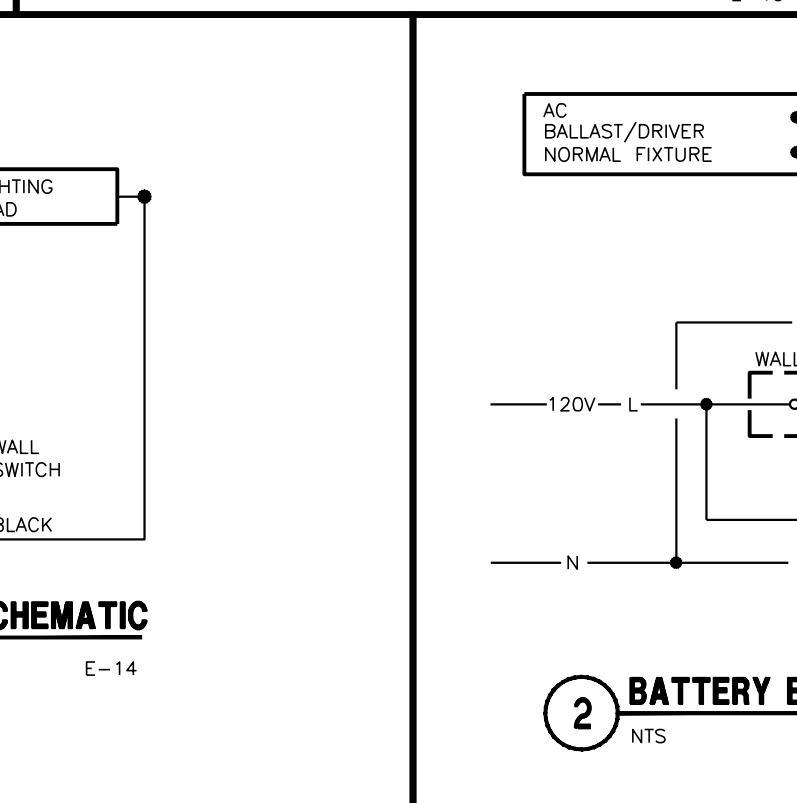
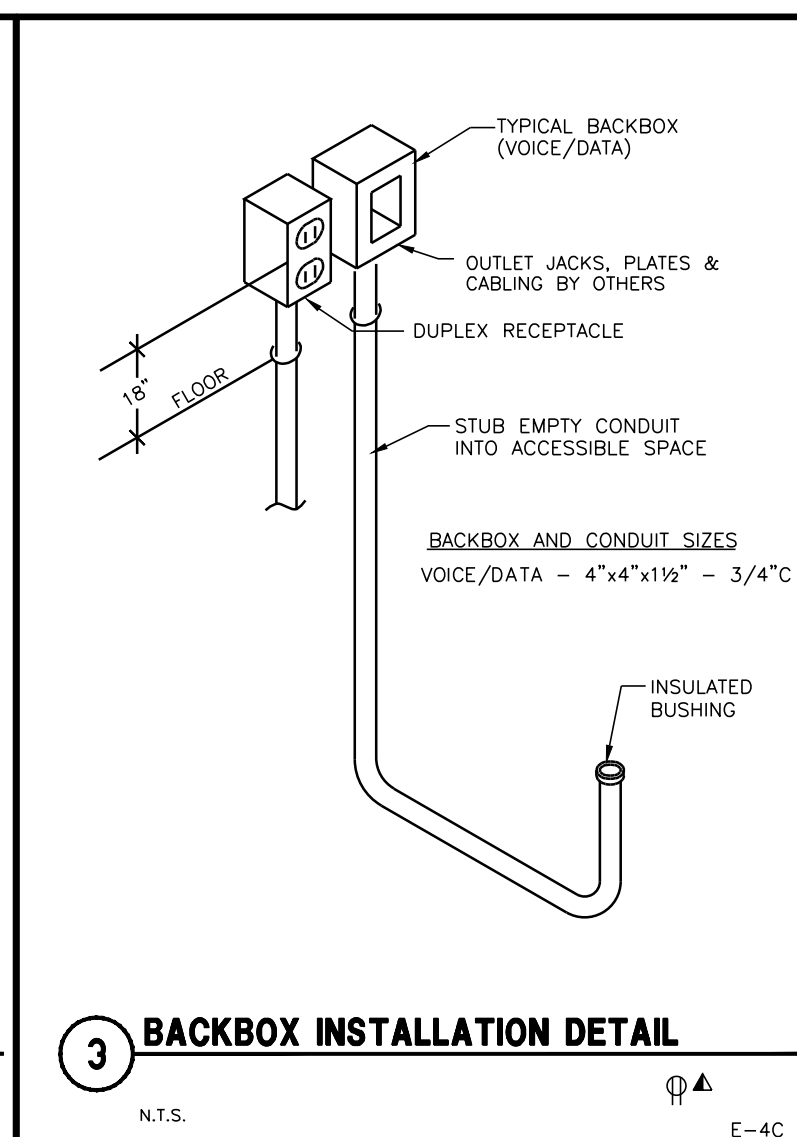
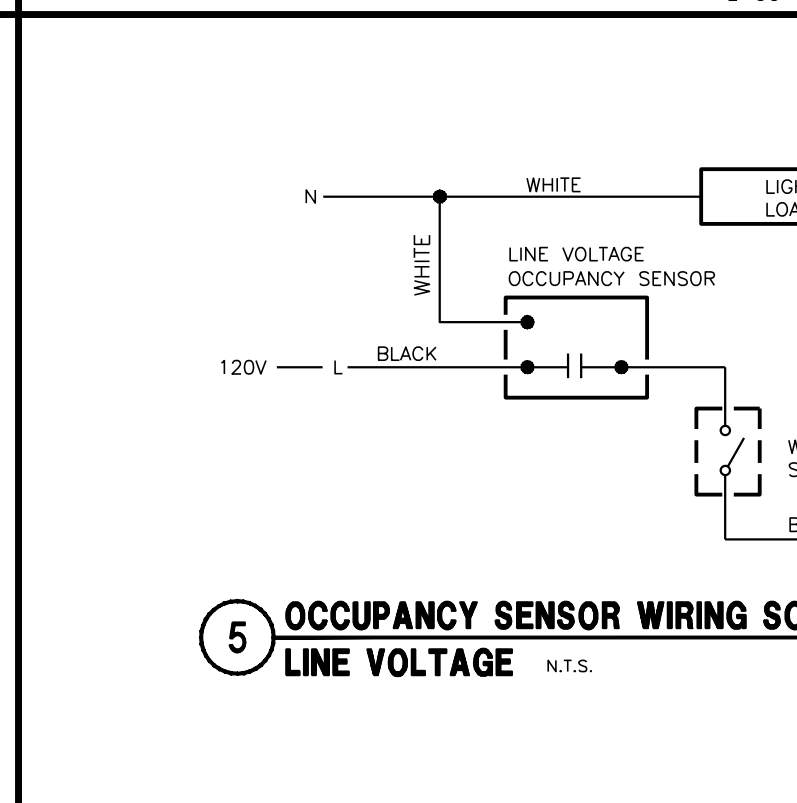
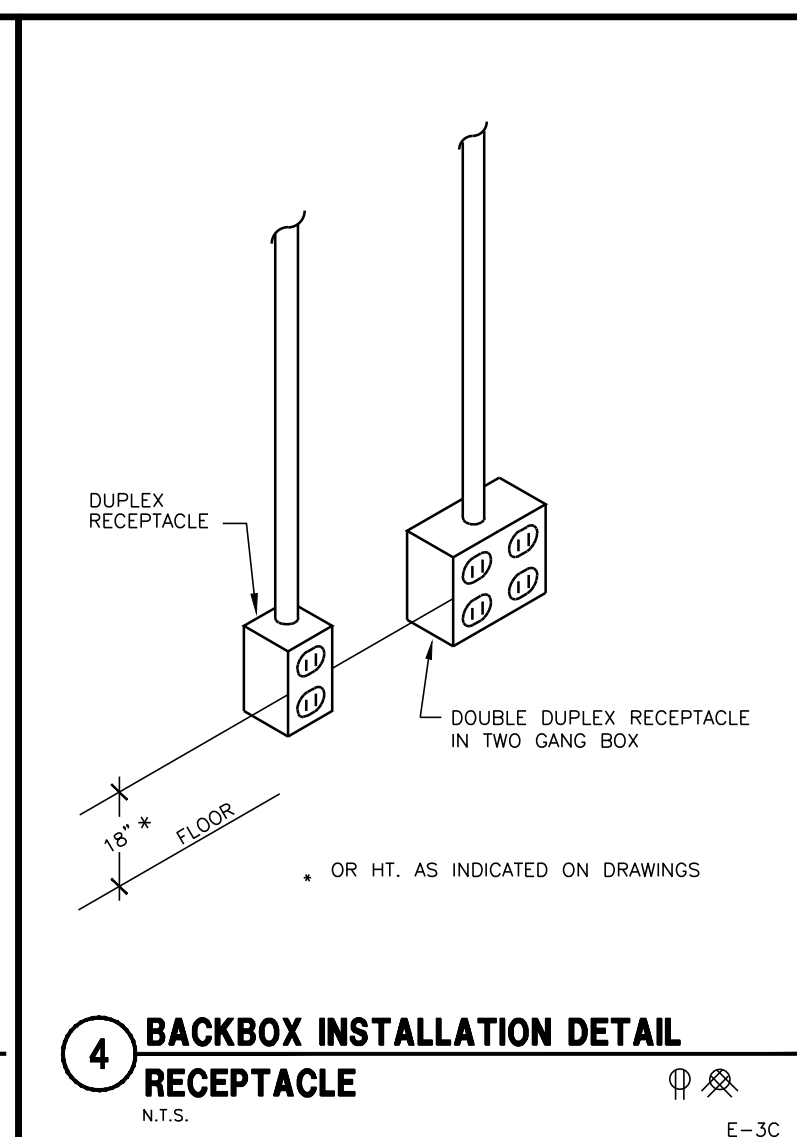
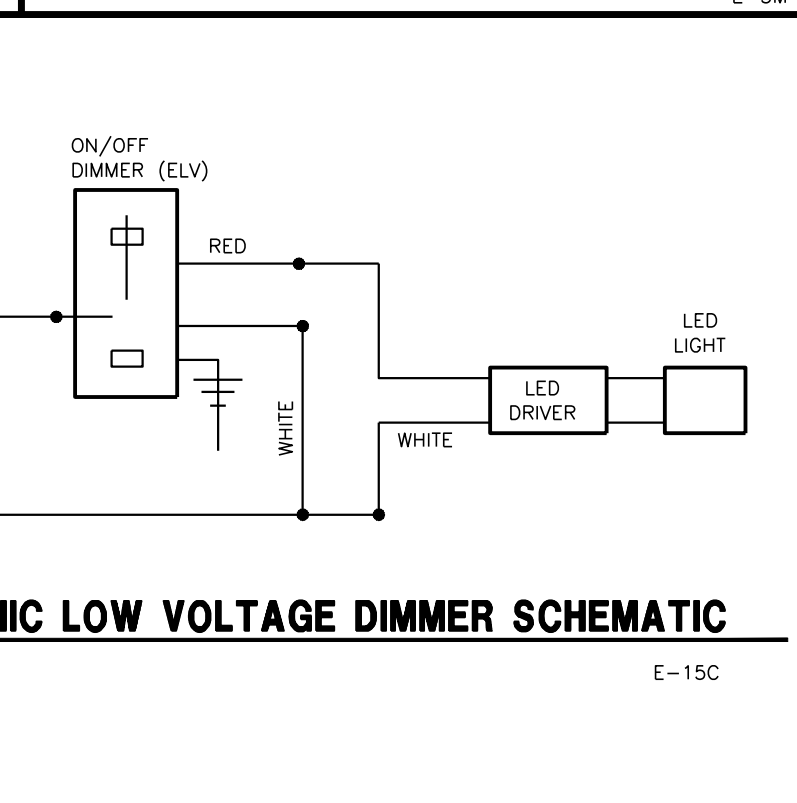
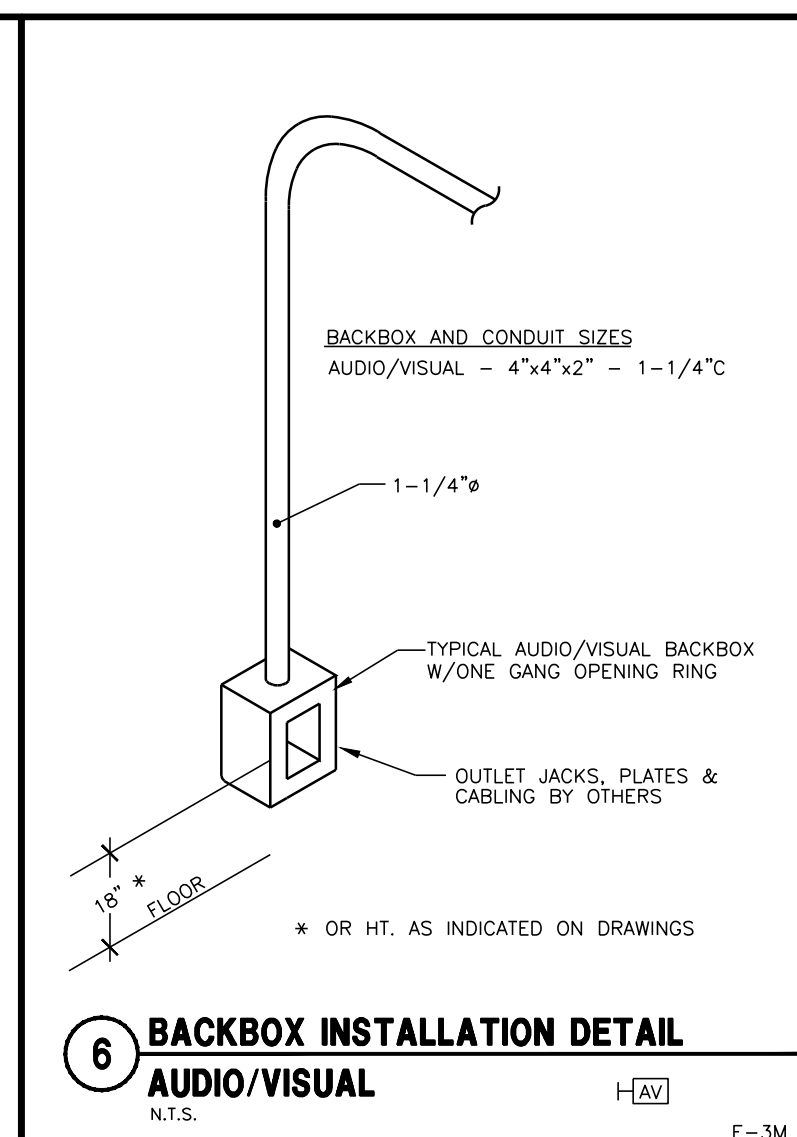
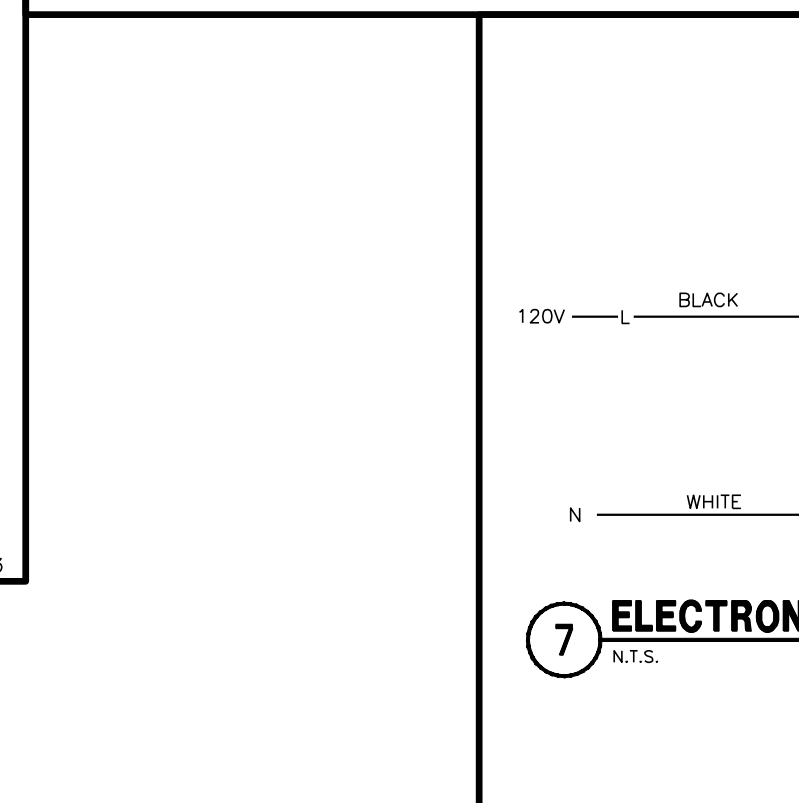
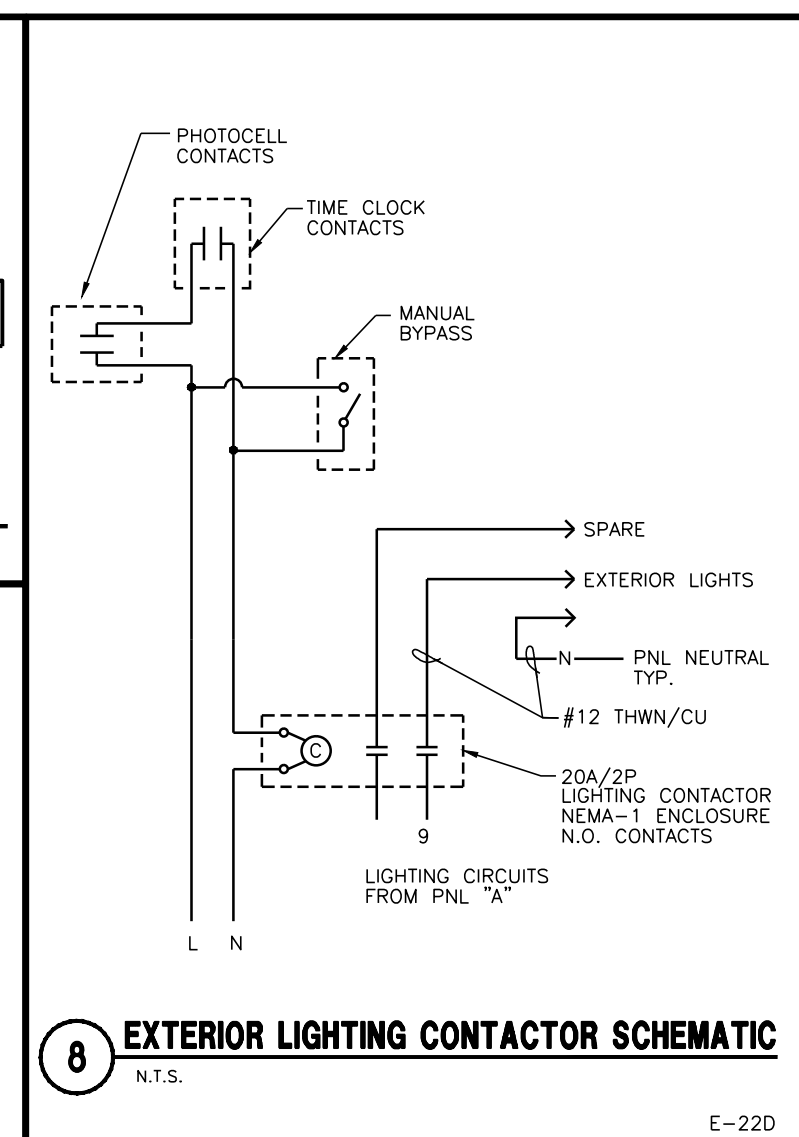
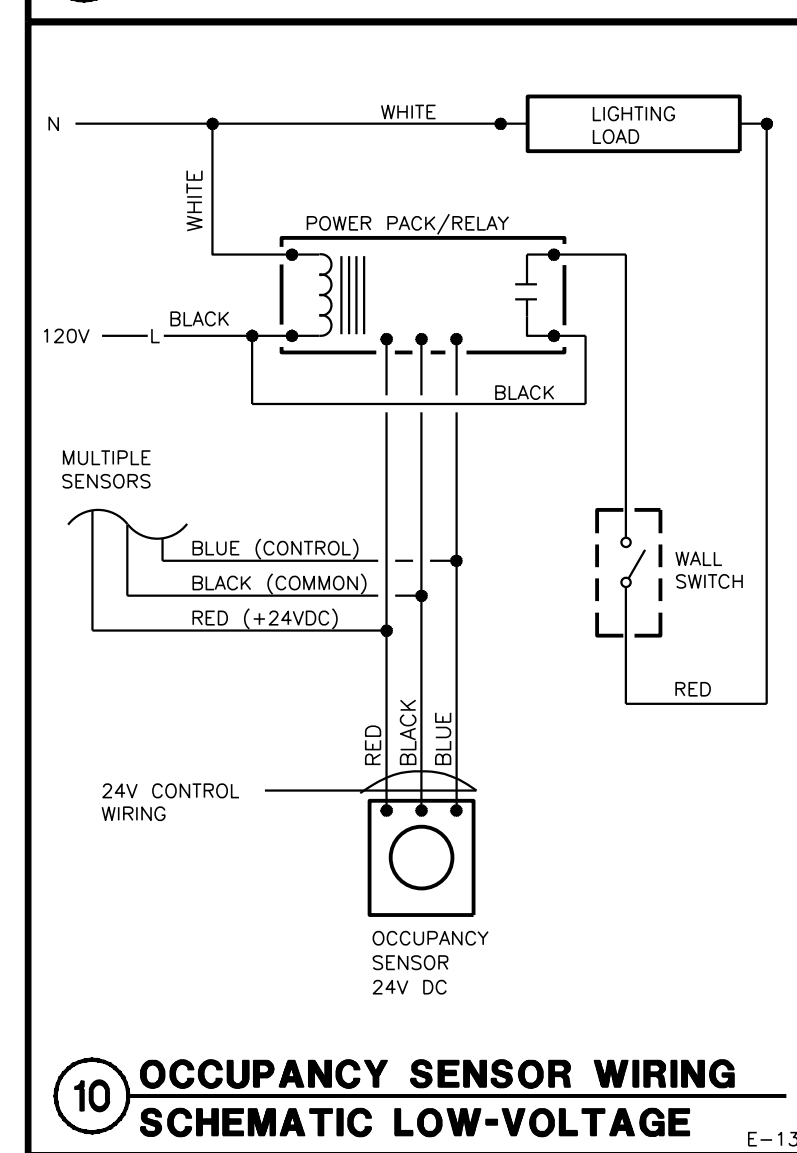
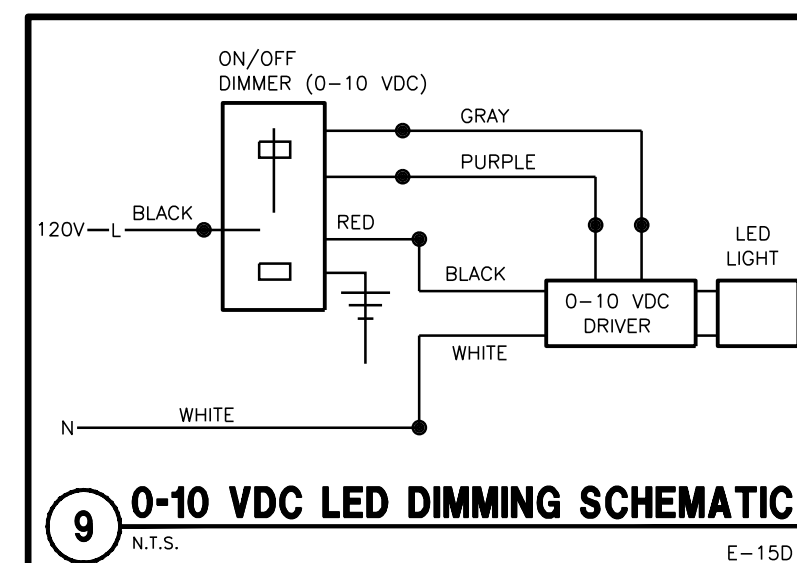
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PROJECT # 14099

**ATTIC FLOOR PLANS -
ELECTRICAL**

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

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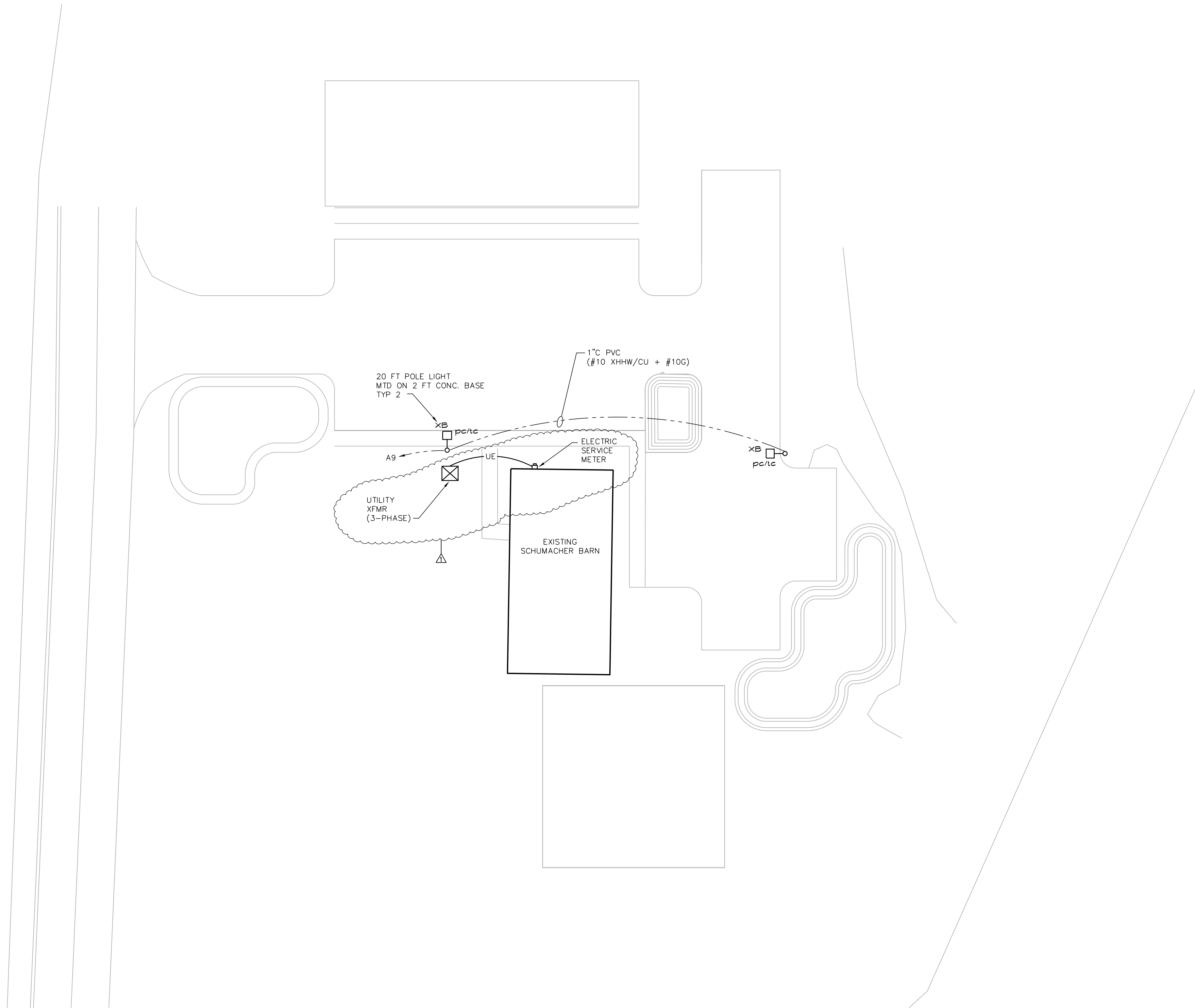
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**ELECTRICAL
DETAILS**

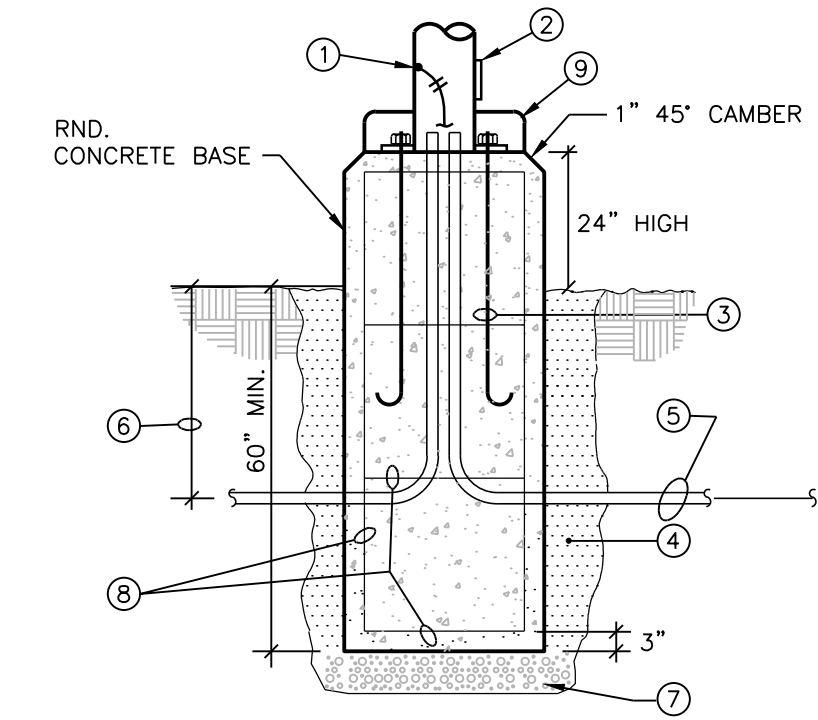
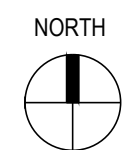
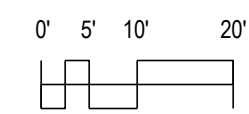
E3.0

**SCHUMACHER BARN
REMODEL/SITE
IMPROVEMENTS**

5682 State Hwy 19
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1 SITE ELECTRICAL PLAN
1" = 20'-0"



1. GROUND POLE w/GROUND CONDUCTOR & LUG.
2. HAND HOLD WP COVER
3. ANCHOR BOLTS PER MFR'S REQUIREMENTS
4. COMPACTED GRANULAR FILL
5. 1" PVC BETWEEN FIXTURES
6. BURY CONDUIT OR RIGID CONDUIT - MIN 30" BELOW GRADE.
7. 6" COMPACTED GRAVEL BASE
8. 4 #3 VERTICAL w/ HORIZ. TIES EQUALLY SPACED
9. POLE BASE COVER

2 LIGHT POLE FOUNDATION DETAIL
N.T.S.

DATE OF ISSUE: 4-25-2017

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▲ ADDENDUM 1	12/08/2017

PROJECT # 14099

**SITE
ELECTRICAL
PLAN**

SE1.0



Schumacher Farm County Park
Schumacher Farm County Park Site Improvements

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JOHN NORLING	FRIEDE & ASSOCIATES	
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ROBERT ARNTZ	ROBERT V. ARNTZ, ARCHITECT	849-7292 rjarn@tda.telnet
Luke Gilbertson	Best Defense Fire Protection	608-223-1110
BOB FELBINGER	SOUND ELEK SOUND ELECTRICAL INC @ GWINN	608-837-9131 COM
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Jeff Spruill	Bauer's Raether Builders	608-222-8941
STEVE INGALLS	EDT	608-845-3006
Alex DeSmatt	DANE CO PARKS	608-800-7262
Jim Ableidinger	Friends of Schumacher P.	608-576-7111
Vince Laufenberg	McKee Associates	608-870-4900
STEVE ARTHURS	T2 CONTRACTING	608-387-1241