

**Bid Package 1 | Addendum No. 1**  
**for**  
**Construction of**  
**St. Croix County Health Center Additions and Renovation**  
Project No. 146038

Date: June 17, 2015

Bids for Bid Package 1 due: Tuesday, June 23, 2015 at 2:00 p.m. (CST)

Prebid Meeting Agenda and attendance sheets are attached for reference.

NOTE: This Addendum may apply to any or all contracts and/or subcontracts.

**ATTACHMENTS**

The following document(s) hereby become a part of this Addendum, the Bidding Documents, and the Contract Documents for the Project.

**SHEET G001, rev. #1**  
**SHEET C100, rev. #1**  
**SHEET C400, rev. #1**  
**SHEET C500, rev. #1**  
**SHEET L100, rev. #1**  
**SHEET L102, rev. #1**

**SHEET S101, rev. #1**  
**SHEET S102, rev. #1**  
**SHEET S103, rev. #1**  
**SHEET S201, rev. #1**  
**SHEET S401, rev. #1**  
**SHEET S402, rev. #1**

**DRAWINGS**

**SHEET G001** (reissued)

Revision of certifications.

**SHEET C100** (reissued)

Added removal of existing sanitary line west to St. Croix Industries building and maintenance shop.

Clarification of lowering and abandonment of existing waterline south around RCF.

**SHEET C400** (reissued)

Additional sanitary sewer replacement to St. Croix Industries building.

Sanitary service sewer slope adjustments.

Sanitary manhole elevation adjustments.

Inclusion of polystyrene insulation.

Location of existing waterline south of RCF as necessary to accommodate proposed grading.

Hydrant lead connection now routed northwest to existing waterline (shown as proposed per request).

**SHEET C500** (reissued)

Hydrant detail revised to City of New Richmond detail per DPW comment.

**SHEET L100** (reissued)

**SHEET L104** (reissued)

**SHEET S101** (reissued)

Revise wall and column footings and dimensions as shown on revised sheet S101.

Revise Alternate # 1 pool area as shown on revised sheet S101.

**SHEET S102** (reissued)

Revise wall and footings near grid AA as shown on revised sheet S102.

**SHEET S103** (reissued)

Revise wall and column footings as shown on revised sheet S103.

**SHEET S201** (reissued)

Add Alternate # 1 pool Floor Framing Plan as shown on revised sheet S201.

Revise dimensions along grid B4 of Penthouse Floor Framing Plan as shown on revised sheet S201.

**SHEET S401** (reissued)

Revise Detail 3/S401 as shown on revised sheet S401.

**SHEET S402** (reissued)

Revise Section 14/S402 as shown on revised sheet S402.

Added new sections 16 through 19/S402 as shown on attached sheet S402.

**PROJECT MANUAL**

**SECTION 00 01 05 – CERTIFICATION PAGE**

Replace this section with attached updated Certification Page with Wisconsin License Numbers. Original stamps and signatures will be sent to the State.

**SECTION 00 41 00 – BID FORM (rev #1)**

Additions for clarification.

**SECTION 32 12 16 – ASPHALT PAVING**

PART 3, Paragraph 3.8, Item A, I removed “verified with Owner’s Project Representative” and just left “verified with Owner.”

Under Item B, I removed “approved by Owner’s Contractor Representation” and just left “approved by Owner.”

**SECTION 33 10 00 – WATER UTILITIES**

PART 3, Paragraph 3.1, Item B, I added “verified by Contractor in coordination with the Owner.”

**SECTION 33 30 00 – SANITARY SEWERAGE UTILITIES**

PART 3, Paragraph 3.1, Item B, I added “can be verified by Contractor in coordination with the Owner.”

**APPROVED EQUALS**

The following manufacturers have applied for “or equal” approval and their quotation(s) may be used by contractors when bidding the Project. It is the duty of the contractor to ascertain that the equipment, workmanship, and products offered do indeed meet the specifications in all respects since this approval does not waive any part of the specification, but indicates that the Bidder has shown he understands the specification and is able to provide equipment, workmanship, and products to fulfill those requirements and can adapt to building dimensions.

Section No.	Item	Manufacturer
--	--	--

End



*Adding Value to Everything We Do*

Market & Johnson, Inc. 2350 Galloway Street PO Box 630 Eau Claire WI 54702-0630 Ph. 715.834.1213 Fax. 715.834.2331

## PRE-BID MEETING AGENDA

**PROJECT:** St. Croix County Health Center – Additions and Renovation: Bid Package #1  
New Richmond, WI

**LOCATION:** St. Croix County Health Center, 1445 N. 4<sup>th</sup> Street, New Richmond, WI 54017

**DATE:** Wednesday, June 10<sup>th</sup>

**TIME:** 10:00am

### I. Introductions (Sign-In Sheet)

- A. Market & Johnson, Inc. is the Construction Manager
  - i. Project Manager – Randy LaFaive
  - ii. Project Superintendent – Jason Walters
  - iii. Administrative Assistant – Julie Schmidt
  - iv. Administrative Assistant – Audrey Stowell
- B. Architect
  - Horty Elving & Associates, Inc.
  - (612) 341-6227
  - Andrew Altstatt - Architect
- C. Civil Engineer
  - JSD Professional Services, Inc.
  - (608) 848-5060
  - Justin Frahm - Engineer
- D. Owner
  - St. Croix County
  - (715) 381-4925
  - Monica Lucht – Facilities Coordinator

### II. Construction Documents

- A. Plans & Specifications dated June 2, 2015, prepared by Horty Elving & Associates, Inc.
- B. Addendum #1 dated June 16, 2015 (as needed)**
- C. It is the responsibility of the contractor to find / review the addenda
- D. Bid Form
  - a. Bid Bond is NOT required
  - b. Indicate the specific “Work Category” on the bid form (reference 00 23 00 for Work Categories)
  - c. Include sales tax – will request value of sales tax for informational use only
  - d. Bids are acceptable via fax, email or by hand
- E. Walk Thru
  - a. Not required, but available by request
- F. Work Category
  - a. Review scopes / inclusions

### III. Schedule

- A. Construction Schedule is in Section 01 32 16
  - a. Phase 1: Skilled Nursing Building
  - b. Phase 2: CBRF Remodel

# PRE-BID MEETING AGENDA

## IV. Bid Information

- A. Bid Package #1 Due Date: Tuesday, June 23, 2015 @ 2pm
  - a. Public Opening
  - b. All bids to be qualified and reviewed with owner committee prior to official award

## V. Pre-Job Overview

- A. Weekly Meetings Mandatory when on site
- B. Pre-Installation Meetings as Necessary
- C. Safety Program
- D. Recycling Program
- E. Site Access & Parking
- F. Record Drawings
- G. Pre-bid questions
  - a. Directed to
    - Randy LaFaive, rlafaive@market-johnson.com, (612) 919-4782
  - b. Must be submitted by June 15<sup>th</sup> by 3pm.

## Notes:

1. The temporary road shown on C200 will be constructed by others and likely removed from the documents.
2. The project team will review for any discrepancies related to the current St. Croix County work.
3. Sandy and Jim asked about an observation area. M&J will review location.
4. Existing light poles are anticipated to be removed by the current excavator and therefore will be removed on the Addendum.
5. M&J will be providing jobsite signage within the next couple of weeks.
6. Current site fencing is provided by existing contract and will be removed prior to construction. M&J will address in Bid Package #2.



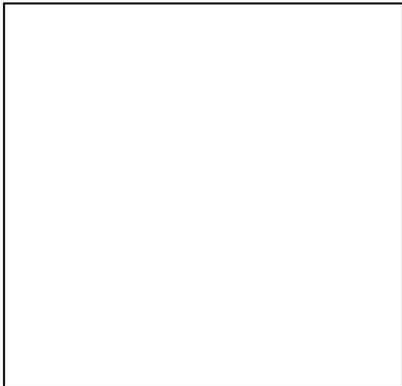
SECTION 00 01 05 - CERTIFICATIONS PAGE

1.1 PROJECT INFORMATION

- A. Project Identification: St. Croix County Health Center, Additions and Renovation, Bid Package #1.
- B. Project Location:  
  
St. Croix County Health Center  
1445 N 4th Street  
New Richmond WI 54017

1.2 DESIGN PROFESSIONALS OF RECORD

A. Architect:



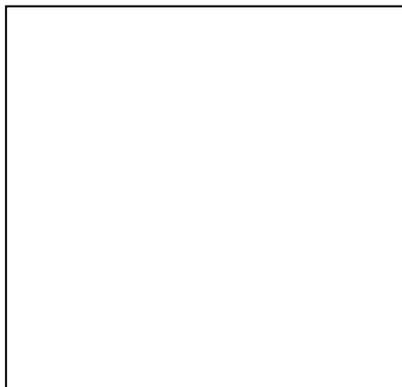
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Architect under the laws of the State of Wisconsin.

Rick Moore, License No. 8698

\_\_\_\_\_  
Signature

Date Issued: 6/2/15

B. Structural Engineer:



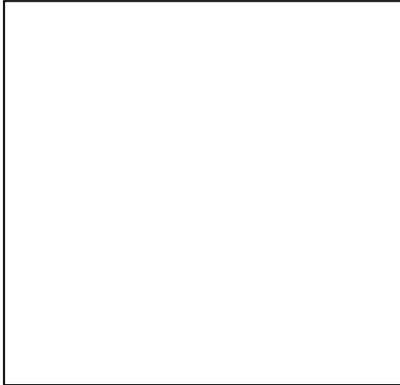
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Wisconsin.

Craig L. Blahut, Registration No. 29379

\_\_\_\_\_  
Signature

Date Issued: 6/2/15

C. Civil Engineer:



I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Wisconsin.

William H. Dunlop, P.E., Registration No. 37807-6

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Signature

Date Issued: 6/2/15

1.3 DISCLAIMER

- A. These specifications are the copyrighted work product of Architect and reuse, modification or reproduction of these documents without the express written consent of Architect is prohibited. The architectural or related services performed or furnished by the Architect for this Project are provided subject to the care and skill ordinarily exercised by members of the architectural profession practicing under similar circumstances at the same time and in the same locality. Architect makes no warranties, express or implied, in connection with its services.

END OF SECTION 00 01 05

**SECTION 00 41 00  
BID FORM**

PROJECT: Bid Package #1  
St. Croix County Health Center - Additions and Renovation  
New Richmond, WI

BID DEADLINE: Tuesday, June 23, 2015, @ 2:00 p.m. local time

BID TO: St. Croix County Facilities Department  
Attn: Monica Lucht  
1101 Carmichael Road – Suite G315  
Hudson, WI 54016

Or

Fax: (715) 377-5818

Or

Email: [bids@co.saint-croix.wi.us](mailto:bids@co.saint-croix.wi.us)

Company Name \_\_\_\_\_

Business Address \_\_\_\_\_  
Street Address City State Zip

Mailing Address \_\_\_\_\_  
P.O. Box City State Zip

Phone Number ( ) \_\_\_\_\_ Fax: Number ( ) \_\_\_\_\_

Contact for Project \_\_\_\_\_ Email Address: \_\_\_\_\_

Authorized Signature \_\_\_\_\_ Title \_\_\_\_\_  
(circle applicable items) Union Non-Union MBE WBE SBE

**SEAL IF BID BY A CORPORATION**

In strict compliance with the Bidding and Contract Documents entitled St. Croix County Health Center - Additions and Renovation and dated June 2, 2015, as prepared by Harty Elving & Associates, Inc, the undersigned have become thoroughly familiar with the terms and conditions of the proposed Contract Documents, local conditions affecting the Work, fully inspected the particulars of the site, and propose the following bid:

A separate Bid Form should be used for each Work Category or for each combination of Work Categories being bid.

***For informational use only provide a labor and material breakdown with each respective Work Category Bid. This information is necessary to assess the sales tax portion and to assist in evaluating the bids.***

Company Name: \_\_\_\_\_ Work Category No(s). \_\_\_\_\_

**WORK CATEGORY NUMBER** \_\_\_\_\_

**BASE BID: All Work as defined in Work Category Number(s) noted above.**

**Total Base Bid:** \$ \_\_\_\_\_.

Approximate value of Material Sales Tax \$ \_\_\_\_\_.  
(not used for evaluation of bids – informational use only)

**ALTERNATE BID #1 – Therapy Pool Addition:**

**Total Base Bid:** \$ \_\_\_\_\_.

Approximate value of Material Sales Tax \$ \_\_\_\_\_.  
(not used for evaluation of bids – informational use only)

*“Install Only” means receive delivery on board, unload, uncrate and install, including all labor, miscellaneous materials, insurance, taxes, and equipment necessary for material supplied by others. This also includes removal of debris generated by materials supplied by others.*

*“Furnish Only” means deliver, tax and freight includes (FOB job site), materials to the Owner’s facility for installation by others. Delivery shall be made during standard working hours and notification of delivery shall be given to Market & Johnson 72 hours in advance.*

We acknowledge receipt of Addenda \_\_\_\_\_ through \_\_\_\_\_ inclusive.

**Performance Bond and Labor and Material Payment Bond**

The Bidder  can /  cannot provide Performance and Payment Bond in favor of St. Croix County and Market & Johnson, **if requested**, in the sum of 100% of the Contract Amount. The premium for any bonds will be paid by the Contractor, separate from the amounts quoted above.

The name of the proposed surety is \_\_\_\_\_.

To provide Performance and Payment Bonds

Base Bid	Add	\$ _____
Alternate #1	Add / Deduct	\$ _____

## SECTION 32 12 16 - ASPHALT PAVING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Hot-mix asphalt patching.
  - 2. Hot-mix-asphalt paving.
  - 3. Pavement marking.
- B. Related Requirements: The following Sections contain requirements that relate to this Section:
  - 1. Section 31 20 00 – Earth Moving.
  - 2. Section 32 11 23 – Aggregate Base Course.
  - 3. Section 32 16 00 - Curbs And Sidewalks.

#### 1.3 STANDARD SPECIFICATIONS

- A. Where reference is made to the “Standard Specifications”, it shall be construed to mean the pertinent section of the Wisconsin Department of Transportation (WisDOT) Standard Specifications for Road and Structure Construction, current edition, and all supplemental and interim supplemental specifications, as they may pertain, except the method of measurement and basis of payment shall not apply.
- B. All construction of public facilities and/or work within public lands or rights of way shall conform to the requirements and conditions of the City of New Richmond Construction Standards.
- C. St. Croix County work in the right of way permit.

#### 1.4 DEFINITIONS

- A. Hot-Mix Asphalt Paving Terminology: Refer to ASTM D 8 for definitions of terms.

#### 1.5 SUBMITTALS

- A. Job-Mix Designs for each job mix proposed for the work.
- B. Material Certificates, signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

1.6 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt paving according to materials, workmanship, and other applicable requirements of standard specifications of WisDOT.

1.7 QUALITY ASSURANCE

- A. Asphalt-Paving Publication: Comply with AI MS-22, "Construction of Hot Mix Asphalt Pavements," unless more stringent requirements are indicated.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pavement-marking materials to Project site in original packages with seals unbroken and bearing Manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement-marking materials in a clean, dry, protected location within temperature range required by Manufacturer. Protect stored materials from direct sunlight.

1.9 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp or if the following conditions are not met:
  - 1. Prime and Tack Coats: Minimum surface temperature of 60 deg F.
  - 2. Asphalt Base Course: Minimum surface temperature of 36 deg F and rising at time of placement.
  - 3. Asphalt Surface Course: Minimum surface temperature of 36 deg F and rising at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 40 deg F for oil-based materials, 50 deg F for water-based materials, and not exceeding 95 deg F. Paint color shall be specified by the owner and located as indicated on the drawings.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All materials and methods for on-site pavement shall conform to WisDOT Standard Specifications. Where conflicts between this specification and the WisDOT Standard Specifications exist, requirements of the WisDOT shall govern.
- B. All materials and methods for public roadways shall conform to City of New Richmond Construction Standards.

2.2 MATERIALS AND MIXES (ON-SITE PAVING)

- A. Provide asphaltic pavement per WisDOT Standard Specifications Section 460.2 and 460.3 but excluding limitations in Section 460.3.2 restricting layer thickness by aggregate size.
- B. Pavement thickness: Per Drawings
- C. Compaction requirements:
  - 1. Bituminous concrete: Refer to Section 460-3.
  - 2. Base course: Refer to Section 301.3.4.2, Standard Compaction.
- D. Mixture Type: E-0.3, Section 460, Table 460-2 of the WisDOT Standard Specifications.
- E. Bituminous Material: Per WisDOT Standard Specifications, of suitable grade and consistency for application.
- F. Tack Coat: Per WisDOT Standard Specifications, of suitable grade and consistency for application.
- G. Water: Potable.

### 2.3 AUXILIARY MATERIALS

- A. Pavement-Marking Paint: Latex, waterborne emulsion, lead and chromate free, ready mixed, complying with FS TT-P-1952, with drying time of less than 45 minutes.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll sub-base using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.
- C. Proceed with paving only after unsatisfactory conditions have been corrected.

### 3.2 PATCHING

- A. Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Re-compact existing unbound-aggregate base course to form new subgrade.
- B. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot-mix asphalt paving at a rate of 0.05 to 0.15 gal./sq. yd.
  - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

- C. Patching: Partially fill excavated pavements with hot-mix asphalt base mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

### 3.3 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
  - 1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.
- B. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
  - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

### 3.4 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
  - 1. Place hot-mix asphalt binder course in number of lifts and thicknesses indicated.
  - 2. Spread mix at minimum temperature of 250 deg F.
  - 3. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
  - 4. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless in-fill edge strips of a lesser width are required.
  - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt binder course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

### 3.5 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.
  - 1. Clean contact surfaces and apply tack coat to joints.
  - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
  - 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
  - 4. Construct transverse joints as described in AI MS-22, "Construction of Hot Mix Asphalt Pavements."

5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
6. Compact asphalt at joints to a density within 2 percent of specified course density.

### 3.6 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers.
  1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
  1. Average Density: 96 percent of reference laboratory density according to AASHTO T 245, but not less than 94 percent nor greater than 100 percent.
  2. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

### 3.7 INSTALLATION TOLERANCE

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:
  1. Binder Course: Plus or minus 1/4 inch.
  2. Surface Course: Plus 1/4 inch, no minus.
- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:

1. Binder Course: 1/4 inch.
2. Surface Course: 1/8 inch.
3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

### 3.8 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Owner.
- B. Allow paving to age for 30 days before starting pavement marking unless otherwise approved by Owner.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at Manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.

### 3.9 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and to prepare test reports.
  1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.
- B. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- E. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

### 3.10 DISPOSAL

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.
  1. Do not allow excavated materials to accumulate on-site.

END OF SECTION 32 12 16

SECTION 33 10 00 - WATER UTILITIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Installation of water service, accessories and fittings to replace existing service removed as part of the construction methods on the site.
2. Excavation, installation, bedding cover, and backfill of water service facilities.
3. Protecting existing utilities in and around the site of the work.
4. Testing and sterilizing the new service.
5. Coordination of the work to allow inspection by City personnel.
6. Adjustment of valve boxes and manholes prior to pavement operations.

B. Related Requirements: The following Sections contain requirements that relate to this Section:

1. Section 31 20 00 - Earth Moving.
2. Section 31 23 16.13 – Trenching.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM) latest edition:

- |        |   |
|--------|---|
| B 88   | Seamless Copper Water Tube  |
| D 1557 | Test for Moisture-Density Relations of Soils Using 10-lb (4.5 Kg) Rammer and 18-inch (457 mm) Drop (Modified Proctor) |
| D 2487 | Classification of Soils for Engineering Purposes  |
| D 2922 | Tests for Density of Soil and Soil- Aggregate in Place by Nuclear Methods (Shallow Depth)                             |
| D 3017 | Test for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)                      |

B. American Water Works Association (AWWA) latest edition:

- |      |  |
|------|--|
| C500 | Gate Valves, 3 through 48 in NPS, for Water and Sewage Systems |
| M41  | Manual of Water Supply Practices                               |

C. Standard Specifications for Sewer and Water Construction in Wisconsin, hereinafter referred to as the Standard Specifications.

1.4 SUBMITTALS

- A. Submit shop drawings for all products specified.

PART 2 - PRODUCTS

2.1 EXTERIOR WATER MAIN

- A. Ductile iron pipe, mechanical or push-on joint, thickness Class 52, AWWA C151 with standard thickness cement mortar lining, AWWA C104. Minimum rated working pressure of 350 PSI.
- B. Ductile iron or gray iron mechanical joint fittings, Class 250, AWWA C110; ductile iron mechanical joint compact fittings, Class 350, AWWA C153; rubber gasket joints with non-toxic gasket lubricant, AWWA C111.
- C. All pipe, valves and fittings shall be furnished with Cable Bond conductor or Electrobrand conductivity strips. Lead tipped gaskets or bronze wedges will not be allowed.

2.2 VALVES FOR EXTERIOR WATER MAIN

- A. Valves for water service shall have ends suited or adapters shall be provided for proper installation in the lines. Valves shall meet City of New Richmond standards or in the absence of such standards the following requirements:

1. 12 inches and smaller:

- a. Resilient Wedge Gate Valves
- b. Meets the requirements of AWWA C509- latest revision
- c. Supplied with mechanical joints
- d. Supplied with conductive mechanical joint (no lead) gaskets
- e. Open to the left
- f. Non-rising stem
- g. O-ring packing
- h. 2-inch square operating nut
- i. Acceptable models include:

<b>Brand</b>	<b>Model</b>
Kennedy	K4571 or equal
Mueller	A2360 or equal
Clow	F6100 or equal
AFC	Series 500 or equal – <i>OR</i> – Series 2500 or equal

- B. Valve boxes shall be Bingham and Taylor cast-iron, size “DD”, 50-inches to 70-inches, three piece screw type, No. 6 round base, 4. 5-1/4-inch shaft, and with stay-put covers marked “WATER.”.

2.3 FIRE HYDRANTS

- A. Hydrant requirements:
- B. Hydrants are required to have “breakaway” capability

C. Acceptable models include:

1. AFC Waterous Pacer WB-67
2. Mueller Super Centurion A42

D. Nozzle requirements:

1. Side nozzles: Two at 2½-inch diameter.
2. Pumper nozzle: One at 4½-inch diameter.
3. National Standard threads.
4. Chains attaching the caps to the hydrant.
5. Embossed with the word OPEN and an arrow showing that the hydrant opens left.
6. Valve opening: 5¼-inch with National Standard operating nut shape.
7. Painted red with blue nozzle caps – Waterous color M4152 (Houston Blue), or equal.
8. 360-degree top rotation.
9. “Dry top” operating threads to be sealed when open.
10. 6-inch mechanical joint bottom connection with conductive mechanical joint (no lead) gasket and necessary accessories.

E. Upper valve plate requirements:

1. Brass with a brass-to-brass foot valve.

F. Drain valve facing requirements:

1. Furnish hydrant with plastic drain valve facing (otherwise, drain tube/drain valve assembly).

G. Operating Nut requirements:

1. One-Piece operating nut.

H. Reflective locating device:

1. “Hydra-Finder” manufactured by RoDon Corp.

I. Extensions per manufacturer’s recommendation.

2.4 COPPER SERVICE LATERALS

- A. Type K, soft copper tubing meeting the requirements of ASTM B88. Copper water main 1½ inches in diameter and larger shall be provided in straight lengths, not roll stock.

2.5 BRASS WATER SERVICE FITTINGS

A. Service Saddles:

1. Double strap, bronze service saddles meeting the requirements of AWWA C800. Service saddles shall be provided with nitrile O-ring gasket and AWWA Taper outlet.
2. Service saddles shall be properly sized to accommodate both the main and service lines.
3. Mueller BR 2B Series, or approved equal.

B. Corporation Stops:

1. Corporation stops shall be brass, ball style. Inlets shall be AWWA Taper; outlet connection shall be compression having a positive indicator to avoid over-tightening.
2. Corporation stops shall be Mueller B-25008, or approved equal.

C. Curb Stops:

1. Curb stops shall be brass, with compression connections having a positive indicator to avoid over-tightening. Curb stops shall be provided with a quarter turn check.
2. Corporation stops shall be Mueller B-25209, or approved equal.

D. Unions:

1. Unions shall be 3-piece brass, with compression connections having a positive indicator to avoid over-tightening.
2. Unions shall be Mueller H-15403, or approved equal.

E. U-Branch, Wyes, Etc.:

1. U-branch, wye and other fittings shall be brass, with compression connections having a positive indicator to avoid over-tightening. Fittings shall be produced specifically for water supply applications.
2. Mueller or approved equal.

2.6 BOARD INSULATION

- A. Rigid, closed-cell, extruded polystyrene insulation. Insulation shall be suitable for buried installation.
- B. Individual boards shall have minimum dimensions of 8'x4'x2".

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide new fire/water mains from existing main within the site complete with all necessary valves, valve boxes and hardware. Extend into building and provide tee for domestic water and the fire protection system.
- B. No work shall begin before location, size and depth of existing main is verified by Contractor in coordination with the Owner.

3.2 TRENCHING AND BACKFILLING

- A. See Section 31 23 16.13 - Trenching..
- B. Contractor shall file written "Notification of Excavation" with all utility companies at least three (3) days prior to excavating.
- C. Connection to Main: Make required connections to existing on site water main.

- D. Bedding shall be crushed limestone, crushed gravel or sand in accordance with Section 4.3.0 of the Standard Specifications for Sewer & Water Construction in Wisconsin, latest edition. Pea gravel is not acceptable.

### 3.3 PIPE LAYING

- A. The entire water service shall be installed per recommendations by the manufacturer and as set forth in the Standard Specifications for Sewer & Water Construction in Wisconsin, latest edition. Lay to line and grade so horizontal and vertical deflections are not more than 50 percent of maximum deflection as recommended by manufacturer. Where greater deflections are necessary, use proper fittings.
- B. Bedding and cover up to 12 inches above pipe barrel.
- C. Inspect all pipe and fittings before lowering into trench. Pipe should be lowered into the trench with ropes or by machinery. Do not drop pipe or fittings into trench.
- D. Piping shall have a uniform bearing trench bottom. Pipe shall have laying condition Type 2 per ANSI A21.50.
- E. Do not allow trench water or dirt to enter pipe or joint space during laying, insert watertight plug in open end of piping when pipe laying is not in progress.

### 3.4 FITTINGS AND BRANCH CONNECTIONS

- A. Install proper fittings at all changes in direction, dead ends and interconnections of lines.
- B. Provide thrust blocks at each change of direction exceeding 15 degrees and each fitting.
- C. In lieu of thrust blocks, anchors and tie rods can be provided. Tie rods shall be 3/4-inch diameter steel rod. Clamps shall be 3/8 inch thick by 2 inches wide steel. Each clamp shall be secured with four 5/8 inch diameter bolts. All tie rods, clamps, and bolts shall be asphalt coated.

### 3.5 PIPE JOINTS

- A. Push-on joints and mechanical joints shall be installed as recommended by manufacturer and DIPRA.

### 3.6 BONDING

- A. At non-welded joints in ferrous water lines, except where insulated joints are required, provide a jumper bond copper wire spot welded to each side of the joint. "Cadweld" welding is required. After welding, coat welded areas with a heavy coat of coal-tar enamel and wrap.

### 3.7 SETTING VALVES

- A. Before setting each valve make sure the interior is clean and insure full opening and closing by operating valve. Set valves and stops with stem plug. Provide a cast iron stop cock holder and a brick laid flat or other similar foot piece under each curb box. Valve and service boxes shall be plumb, centered over valves, and tops level with finished grade. Tamp trench backfill thoroughly for a distance of 3 feet on each side of the boxes.

3.8 CUTTING/PATCHING PAVED SURFACES

- A. Saw cut all blacktop or concrete paved surfaces.
- B. Patch all sidewalks, curbs, grass, concrete, and blacktop areas to original condition. Any costs involved are to be included under this contract.

3.9 FIELD QUALITY CONTROL

- A. Combined fire protection/domestic water service shall be tested for a period of two hours at a minimum hydrostatic pressure of 200 PSI according to NFPA 24.

3.10 DISINFECTION

- A. Water service shall be disinfected prior to use. The method to be followed shall be as follows:
  - 1. The pipe system shall be flushed with clean potable water until no dirty water appears at the points of outlet.
  - 2. The system or part thereof shall be filled with a water chlorine solution containing at least 50 parts per million of chlorine and the system or part thereof shall be valved off and allowed to stand for 24 hours or the system or part thereof shall be filled with a water chlorine solution containing at least 200 parts per million of chlorine and allowed to stand for three (30) hours.
  - 3. Following the allowed standing time, the system shall be flushed with clean potable water until no chlorine remains in the water coming from the system and the Contractor shall obtain samples and pay for testing by a DNR approved laboratory.
  - 4. The procedures shall be repeated if it is shown by a bacteriological examination that contamination still exists in the system at no cost to the Owner.

END OF SECTION 33 10 00

SECTION 33 30 00 - SANITARY SEWERAGE UTILITIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This section provides information common to two or more technical site work specification sections or items that are of a general nature, and not included in other sections. This section applies to ALL site work, as applicable. Included are the following topics:
- B. Section Includes:
  - 1. Provide a complete sanitary building sewer including connection to existing sewer lateral at street and all necessary fittings and hardware.
- C. Work under this section shall begin 5 feet from the building structure and extend to include all site utility work and connection to the existing lateral.
- D. Related Requirements: The following Sections contain requirements that relate to this Section:
  - 1. Section 31 20 00 - Earth Moving.
  - 2. Section 31 23 16.13 - Trenching.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM), Latest Edition.

D1784-03	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
D2564-04	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
D2680-01	Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping
D3034-04a	Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
D3212-96a (2003) e1	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
D3350-05	Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
F477-02e1	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

F679-03

Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter  
Plastic Gravity Sewer Pipe and Fittings

- B. Standard Specifications for Sewer & Water Construction in Wisconsin, Latest Edition
- C. City of New Richmond Standard Specifications for Public Works Construction, Latest Edition.

1.4 SUBMITTALS

- A. Provide manufacturer product information for all products specified.
  - 1. Submit shop drawings for all products specified.
  - 2. Provide copies of record drawings.

PART 2 - PRODUCTS

2.1 SANITARY SEWER

- A. Polyvinyl Chloride (PVC) pipe shall be of the bell and spigot type and meet the requirements of ASTM D 3034, Type PSM SDR-35 unless otherwise specified in the Drawings. The pipe manufacturer shall be one who currently has an approval for PVC pipe by the Wisconsin Department of Natural Resources.
- B. Tracer wire shall be installed on all non-metallic exterior building sewers.

2.2 YARD CLEANOUT

- A. Provide yard cleanouts per SPS 382.35(5) at required intervals and as indicated on drawings. Access cover shall have concrete collar sloping away from the cleanout opening.

2.3 MANHOLES

- A. General:
  - 1. Provide precast concrete manholes. Concrete block or cast-in-place manholes may only be used after receiving written approval by the Owner's Construction Representative and the Engineer for customized manhole sizes and shapes.
  - 2. Submit manufacturer's preproduction (shop) drawings for approval prior to the start of manufacturing.
  - 3. Contractor shall carefully locate all pipe locations, sizes, orientation and elevation prior to ordering new manholes. For sewer relays, verify if each pipe encountered is active. In- active pipe shall not be connected to the new sewer.
- B. Precast Manhole Sections:
  - 1. Precast concrete manhole sections, including bottom and top shall meet the requirements of ASTM C478.
  - 2. Unless otherwise noted, provide four 4-foot diameter manholes. If field conditions require a larger structure, contact the Owner's Construction Representative or Engineer.
  - 3. For 4-foot diameter manholes, provide eccentric cone top sections with a minimum clear opening of 24 inches. Flat top slabs may be used on manholes greater than 4 feet in diameter.

4. Manhole wall thickness shall be minimum of 5 inches for 4-foot diameter manholes, 6 inches for 5-foot diameter manholes and 7 inches for 6-foot and 7-foot diameter manholes.
5. Manhole bottom section shall be pre-cast with integral base having a minimum thickness of 8 inches unless otherwise noted.

C. Joints:

1. Provide manhole riser and barrel sections, cones, and flat tops, with standard pipe section tongue and groove joints.
2. Seal joints watertight with prefabricated rubber or plastic gaskets or formed in place butyl rubber seal.
3. Joint sealers: Kent Seal, ConSeal, or approved equal.

D. Connections:

1. Openings for connections shall be cast-in-place or cored and appropriately sized for the type and size of pipe being connected.
2. Provide flexible, watertight, pipe-to-manhole connections (or "boots") for sanitary sewers; Kor-N-Seal, Interpace, A-Lok, or an approved equal.

E. Manhole Steps:

1. Provide steps at 16-inch O.C. and project approximately 6 inches from wall.
2. Unless otherwise indicated on the drawings, locate manhole steps over the downstream pipe opening.
3. Manhole steps shall be steel reinforced polypropylene with 1/2-inch diameter deformed reinforcing bar. Steps shall be permanently secured in the manhole wall. Manhole steps shall be American Step Company, M.A. Industries or approved equal.

F. Bench and Flowline:

1. Provide either pre-cast or cast-in-place bench and flowline.
2. Unless otherwise indicated on the drawings, bench height shall be 3/4 the diameter of the downstream pipe. Slope bench towards flowlines at a minimum 1/2 inch per foot. Provide light broom finish on bench.
3. Flowlines shall be formed with gradual, uniform sweeps directed towards the downstream pipe. Provide smooth, troweled finish for flowlines.
4. When cast-in-place benches and flowline are used, lay the sewer pipe through the manhole.

G. Adjusting Rings:

1. All final grade adjustment of manhole covers and frame assemblies shall be completed utilizing injection molded high density polyethylene (HDPE) adjustment rings as manufactured by LADTECH, Inc. or an approved equal.
2. The adjustment rings shall be manufactured from polyethylene plastic as identified in ASTM Specification D-4976 (Standard Specification for Polyethylene Plastic Molding and Extrusion Materials).
3. Material properties shall be tested and qualified for usage per the ASTM Test Methods referenced in the above ASTM standard.
4. Installation shall be per manufacturer's recommendations only.
5. The annular space between the rings and cone basin, the rings, and the rings and cover frame shall be sealed utilizing an approved butyl sealant. Butyl material shall be E-Z Stick, or equal.
6. All adjustment for matching road grade shall be made utilizing a molded and indexed slope ring.

## 2.4 CASTINGS

- A. All manhole castings shall be heavy duty iron conforming to ASTM A48, Class 20 and rated for AASHTO H-20 loading. Provide water-tight, gasketed, self-sealing, non-rocking lids with concealed pickhole.

2.5 MANHOLE CHIMNEY SEAL

- A. When indicated on the drawings, provide an internal frame/cone seal meeting requirements of Sections 8.42.3-8.42.5 of the Standard Specifications for Sewer and Water Construction in Wisconsin.

2.6 PIPE INSULATION

- A. Rigid, closed-cell extruded polystyrene insulation. Insulation shall be suitable for buried insulation.
- B. Individual boards shall have dimensions of 8'x4'x2". Dow Styrofoam, or approved equal.

2.7 LOCATOR TAPE

- A. Detectable metallic locator tape, specifically manufactured for marking utilities. Tape shall be a minimum of 6 inches wide and shall be marked "SEWER".

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide new sanitary sewer from existing sanitary sewer lateral complete with all necessary fittings and hardware.
- B. No work shall commence before sewer can be verified by Contractor in coordination with the Owner, including exact location, depth, and inverts of the existing. Coordinate start invert elevation at building foundation wall for the interior work. The work shall include costs for new connections at the existing manhole. Verify the location of all roads, driveways and other service or physical properties that are relevant to new construction.
- C. Install exterior piping below predicted frost level and not less than 5 feet bury depth to top of pipe wherever possible. Where piping is located above predicted frost level, provide frost protection in accordance with SPS 382.30(11) (c).
- D. Contractor shall file written "Notification of Excavation" with all utility companies at least three days prior to excavating.

3.2 CUTTING/PATCHING PAVED SURFACES

- A. Saw cut all blacktop or concrete paved surfaces.
- B. Patch all sidewalks, curbs, grass, concrete and blacktop areas to original condition. Any costs involved are to be included under this contract.

3.3 INSPECTION

- A. Inspect site and drawings to determine scope of underground utility work. Notify A/E of any conflict in routing, elevations, etc. prior to commencing work of this section.

3.4 INSTALLATION

- A. Trenching and Backfilling: See Section 31 23 16.13 - Trenching.

3.5 BEDDING OF SEWER PIPES

- A. The bedding or foundation for sewer pipes shall be constructed to prevent settlement of the pipes and to avert excessive pressure on the pipes in order to avoid rupture, leakage or deformation of the pipes.
- B. The width of the bedding shall be equal to the width of the trench. The depth of the bedding shall extend from an elevation at least 6 inches below the bottom of the pipe to an elevation at least 12 inches above the top of the pipe. All bedding shall be mechanically compacted.
- C. Bedding material shall be granular fill. See Section 31 20 00.

3.6 LAYING PIPE

- A. Pipe, fittings and accessories shall be of the size, class, type and design and shall be laid at the locations and to the required lines and grade as indicated on the drawings. Wherever the work "PIPE" appears it shall be understood to include pipe, fittings and accessories. The proper installations of structures and fittings whose locations are indicated on the drawings shall be accomplished by the use of random lengths of pipe. Field cuts of all types of pipe shall be made with an approved mechanical pipe cutter or with a power saw in order to make a straight true cut without chipping and cracking the pipe.
- B. The laying of pipes in finished trenches shall commence at the lowest point and shall proceed towards the upper end and the pipe shall be laid so that the spigot or tongue ends point in the direction of flow.
- C. Jointing surfaces shall be carefully cleaned before pipes are lowered into trenches. Pipes shall be lowered so as to avoid unnecessary handling in the trench. Each section shall have a firm bearing throughout its length and shall be true to the line and grade required.
- D. The method of shoving or pulling the pipes together shall be such that there will be no injury to the pipes and the joints will be properly adjusted and will not be excessively large. Pipes shall be fitted and matched so that when set firmly to line and grade they will form a sewer with a smooth and uniform invert.
- E. Pipe shall not be laid to within 10 feet of the excavation in progress. Pipe shall not be laid in water, in frozen trench conditions or when weather is unsuitable for the proper performance of the work.
- F. No length of pipe shall be laid until the previously laid length of pipe has been sufficiently backfilled to hold it securely in place during the jointing operation. If, in making a joint, any previously laid pipe is disturbed such pipe shall be removed and re-laid. Adequate backfill shall be placed on the pipe to prevent floating. Any pipe, which has been floated, shall be removed and re-laid at the expense of the Contractor.
- G. Provide suitable lifting and handling devices designed to distribute the weight of the pipe over the length of the pipe and prevent high stresses over small areas.

- H. All water must be kept out of the bell hole of the pipe until the joint is completed and water shall not be allowed to rise in or about the pipe until the trench is filled at least 1 foot above the top of the pipe.
- I. Before leaving the work for the night, during a storm or for any reason, care must be taken that the unfinished end of the sewer is securely closed with a tightly fitting plug. Any earth or other materials that may find entrance into the sewer shall be removed by this Contractor at no additional cost to the Owner.

### 3.7 JOINTS

- A. Jointing materials shall conform to the requirements specified in "PRODUCTS" of these specifications for the type of pipe being installed.
- B. Joints shall not be made until the pipe is in the trench and set to true line and grade. Lengths of pipe that are joined together outside of the trench shall be removed from the project immediately.
- C. Prior to making joints, the jointing surfaces shall be inspected for chips, cracks or other defects in the joints and jointing materials. Jointing surfaces shall be carefully cleaned and lubricated with a vegetable lubricant or a lubricating adhesive. Lubricant shall be applied to both the bell and spigot surfaces of the joint. Lubricant shall be that recommended by the gasket manufacturer for the particular type of gasket being installed.
- D. Care shall be taken when shoving or pulling the pipes together in order not to damage the pipe or the joints and jointing materials. Pipes shall be in proper alignment and to the proper grade prior to applying the pressure necessary to make the joint.

### 3.8 MANHOLES

- A. Contractor shall determine the proper location, size, elevation, and orientation of all pipes entering new manholes before ordering. Do not connect abandoned pipes to new manholes. Manholes having improper location and/or orientation of the pipe connections will be rejected. Field repairs or adjustments of connection points are not permitted.
- B. Limit the excavation for manholes so as to provide only the necessary amount of space to sufficiently prepare the subgrade, set the base, set the manhole or structure, and lay pipe. Provide a minimum of 1 foot of clearance between structure and trench wall for adequate backfilling and compaction.
- C. Where excavation occurs below the bottom elevation of the structure's base, bring the excavation to the required elevation by the use of compacted crushed stone bedding. A minimum of 8 inches of compacted Crushed Stone Bedding shall be placed below manhole base.
- D. Set manhole base in accordance with elevation and location as indicated on the plans. Install base plumb and level. Install subsequent pre-cast manhole sections in accordance with shop drawing layout. Provide watertight gaskets between each manhole section.
- E. Pour inverts with smooth surface draining to downstream pipe. Where two or more lines meet at an angle, provide curved channel. Slope manhole bench at 2 inches/foot towards flow channel.
- F. Manholes shall be provided with between 4 and 8 inches of adjusting rings, with the top adjusting ring being 2 inches thick. Provide butyl sealant material between rings. Once rings are in place, tuck point the exterior joint and provide the entire exterior surface of the adjusting ring riser with a coating of mortar.

- G. When indicated on the drawings, the manhole frame shall be set with a Type I frame/chimney joint as specified in the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition. The frame and adjusting rings shall be sealed with an internal rubber sleeve as detailed in File 12A of the Standard Specifications.
- H. Drop manholes shall be constructed in accordance with File No. 19 of the Standard Specifications.

### 3.9 CASTING INSTALLATION

- A. Install casting type as indicated on the plans or in the specifications. Provide butyl sealant material between last adjusting ring and casting base. Adjust casting elevation and slope to match adjacent proposed grades.

### 3.10 PIPE INSULATION

- A. Provide insulation when indicated on the drawings, or where depth of cover is less than 6 feet. Unless otherwise noted, install 2-inch thick polystyrene board insulation. Install insulation on compacted initial cover material, 6 inches above the top of the pipe. Stagger joints where more than one layer of insulation is required. Provide insulation with a minimum of 1 foot of initial cover material. Place cover and backfill material in manner that does not damage insulation; replace any damaged insulation.

### 3.11 LOCATOR TAPE

- A. Provide locator tape when indicated on the Drawings. Install locator tape approximately 2 feet above the top of the pipe.

### 3.12 MISCELLANEOUS CONSTRUCTION

- A. Make all necessary openings into existing structures including construction or reconstruction of existing inverts as required to serve new connections. Openings made in structures shall be patched with mortar around the pipe installed so that the connection is watertight and permanent. When a new sanitary sewer is connected to an existing structure, such line shall be plugged and remain plugged until final completion and acceptance of the new sewer line. The plug shall be subject to the approval of the A/E. The cost of making openings and connections as described above shall be included by the Contractor.

### 3.13 TESTS

- A. Deflection Testing:
  - 1. Test all PVC sewer pipe in the presence of the Owner's Construction Representative by a "go-no-go" deflection test mandrel furnished by the Contractor. Do not perform deflection testing any sooner than 30 days following the installation of the PVC pipe. Pull the mandrel by hand, or hand operated winch so as to avoid any damages to the pipe that may be caused by mechanized pulling equipment.
  - 2. Size the to test the pipeline for a maximum allowable internal deflection of the pipe (in any direction) of not to exceed five (5) percent of the original internal diameter for the pipelines tested, regardless of how long after installation the testing takes place.
  - 3. Deflection testing may be done concurrently with any necessary televising of the sewers. When done concurrently with sewer televising, the mandrel may be pulled by mechanized equipment,

provided the mandrel is visible in the television picture during the testing and the operation of the mandrel can be quickly halted before damage to the pipe occurs.

4. Where poor trench soils conditions require the pipe excavation to be undercut and/or over excavated, the Construction Representative reserves the right to require an additional deflection test prior to the expiration of the Contractor's one year performance guarantee.
5. Remove and replace all pipe that fails to pass the five (5) percent vertical deflection testing until the pipe passes the deflection test.

B. Leakage Testing:

1. All new sanitary sewer lines shall be leakage tested in accordance with Chapter 3.7.0 of Standard Specifications for Sewer and Water Construction.

C. Replace defective work or material or repair as necessary and repeat the inspection and test. Repair shall be done with new materials and at the contractor's expense.

D. Upon completion of the work, submit all records and certifications approving testing requirements to the Owner's Construction Representative.

END OF SECTION 33 30 00





St. Croix County  
BID PACKAGE 1  
Health Center Additions & Renovation  
New Richmond, WI

Sheet Revision Schedule

Rev. #	Date	Revision	Description
▲	03-06-15		DD SUBMITTAL
▲	04-06-15		CITY OF NEW RICHMOND SUBMITTAL
▲	04-30-15		50% CD REVIEW SET
▲	05-21-15		CD REVIEW SET
▲	06-17-15		BID ADDENDUM 1

**JSD Professional Services, Inc.**  
Engineers • Surveyors • Planners

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

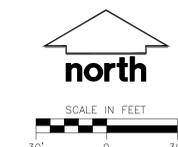
MADISON REGIONAL OFFICE  
161 HORIZON DRIVE, SUITE 101  
VERONA, WISCONSIN 53593  
608.849.5000 PHONE | 608.848.2255 FAX

**LEGEND**

---	PROPERTY LINE
- - - -	RIGHT-OF-WAY
---	EDGE OF PAVEMENT
---	ANY SERVICE REPLACEMENTS DUE TO GRADING, UTILITY CROSSINGS OR ANY OTHER WORK WITH APPLICABLE UTILITY COMPANY.
○ ○ ○ ○ ○ ○	RETAINING WALL
▨	ASPHALT PAVEMENT
▨	CONCRETE PAVEMENT
▨	POLYSTYRENE INSULATION
▨	18" STANDARD CURB AND GUTTER
▨	18" REJECT CURB AND GUTTER
---	ST
---	SAN
---	WATER MAIN
---	ELECTRIC SERVICE (BY OTHERS)

**UTILITY NOTES**

- REFER TO THE EXISTING CONDITIONS SURVEY, PROVIDED BY OTHERS, FOR EXISTING CONDITIONS, NOTES AND LEGEND. JSD DOES NOT TAKE RESPONSIBILITY FOR ANY INFORMATION LOCATED ON THE SURVEY PROVIDED BY OTHERS. ALL INFORMATION SHALL BE FIELD LOCATED AND VERIFIED PRIOR TO CONSTRUCTION.
- ELECTRIC, FIBER OPTIC, AND TELEPHONE ARE SHOWN FOR GRAPHIC PURPOSES ONLY. DESIGN FOR THESE SERVICES ARE BY OTHERS. CONTRACTOR TO COORDINATE AND PROVIDE NEW SERVICE INSTALLATION AND ANY SERVICE REPLACEMENTS DUE TO GRADING, UTILITY CROSSINGS OR ANY OTHER WORK WITH APPLICABLE UTILITY COMPANY.
- ALL WORK WITHIN THE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE LATEST CITY OF NEW RICHMOND REQUIREMENTS FOR PUBLIC WORKS IMPROVEMENTS.
- DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
- IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REVISION MAY OCCUR.
- LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
- ALL CONSTRUCTION SIGNING TO BE IN ACCORDANCE WITH THE CITY OF NEW RICHMOND AND WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES, AND THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN WISCONSIN.
- PROVIDE DE-WATERING ACTIVITIES AND PERMITS AS NECESSARY PER WORK REQUIREMENTS AND MONITOR TECHNICAL STANDARD 1061.
- ALL PRIVATE WATER MAIN AND WATER SERVICES SHALL BE INSTALLED WITH A 8" MINIMUM BURY.
- THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED.
- THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING PLANS DESIGNED TO MEET ORDINANCES AND REQUIREMENTS OF THE MUNICIPALITY AND WISDOT, WSPS, AND WWR.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
  - EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
  - OBTAINING ALL NECESSARY PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
  - VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
  - NOTIFYING ALL UTILITIES PRIOR TO THE INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
  - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
- THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
- ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
- CONTRACTOR SHALL NOTIFY THE CITY OF NEW RICHMOND PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES. CONTRACTOR SHALL NOTIFY NEW RICHMOND UTILITIES DEPARTMENT 48 HOURS PRIOR TO CONNECTING TO PUBLIC WATER MAINS.
- ALL PRIVATE STORM BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30-2.
- ALL PRIVATE SANITARY BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30-3.
- ALL PRIVATE PIPE AND TUBING FOR WATER SERVICE SHALL CONFORM TO SPS 384.30-4.
- WATER SERVICE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO FIELD VERIFY LOCATION AND SIZE. REPORT DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION. CONSTRUCTION TO BE IN ACCORDANCE WITH THE NEW RICHMOND WATER & LIGHT DEPARTMENT STANDARDS FOR WATER MAIN CONSTRUCTION.
- NEW RICHMOND UTILITIES WILL REQUIRE INSPECTION OF WATER SERVICE INSTALLATION AND TESTING WITH COSTS TO BE PAID BY NEW RICHMOND COMMUNITY HOSPITAL.
- ANY PUBLIC WATER VALVES OUTSIDE OF THE PROJECT LIMITS SHALL BE OPERATED BY NEW RICHMOND UTILITIES PERSONNEL ONLY.
- NEW WATER MAIN INSTALLED AS PART OF THIS PROJECT SHALL PASS A WATER MAIN PRESSURE TEST FOR A MINIMUM OF 2 HOURS AT 150 PSI. NO LEAKAGE WILL BE ALLOWED.
- TWO SAFE BACTERIA SAMPLES WILL BE REQUIRED TO BE COLLECTED BY THE CONTRACTOR 24 HOURS APART. RESULTS BE SENT TO THE NEW RICHMOND WATER & LIGHT DEPARTMENT PRIOR TO PLACE THE NEW WATER MAIN INTO SERVICE FOR THE HOSPITAL.
- ALL PRIVATE PIPE SHALL BE INSTALLED PER SPS 382.40-8 INCLUDING AT LEAST 8" OF HORIZONTAL DISTANCE BETWEEN WATER PIPING AND SANITARY SEWER FROM CENTER OF PIPE TO CENTER OF PIPE AND 6" OF SEPARATION BETWEEN STORM SEWER AND WATER PIPING.
- THE CONTRACTOR SHALL ALLOW TO WORKING DAYS FOR THE CONSTRUCTION OF GAS MAINS WHEN SCHEDULING THE WORK AND SHALL NOT RESTRICT ACCESS TO THE GAS MAIN CONTRACTOR OR OTHER UTILITY CONTRACTORS.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. STREETS SHALL BE WATERED TO CONTROL DUST WHEN ORDERED BY THE ENGINEER.
- THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO BE IN CONFORMANCE WITH THE CITY EROSION CONTROL AND STORMWATER ORDINANCE, AND DNR ADMINISTRATIVE RULE NR 216 AT ALL TIMES.
- CONTRACTOR SHALL COORDINATE UTILITY RELOCATIONS WITH THE RESPECTIVE UTILITIES.
- PVC DRAIN BASIN SHALL BE NYLOPLAST OF THE SIZE SHOWN AN APPROVED EQUAL GRATES SHALL BE STANDARD GRATES IN LANDSCAPED AREAS.
- 2" POLYSTYRENE INSULATION SHALL BE PROVIDED AT ALL STORM SEWER CROSSINGS.
- ALL WATER LINES SHALL BE BURIED 8 FOOT MINIMUM OR INSULATED WITH POLYSTYRENE INSULATION AT 1" PER FOOT TO ACHIEVE 8 FOOT COVER.



**PROPOSED STORM SEWER STRUCTURES SCHEDULE**

LABEL	INVERT ELEV. (FT)	RIM ELEV. (FT)	DEPTH (FT)	STRUCTURE DESCRIPTION	GRATE
INL-1	1039.09	1041.17	2.08	2' x 3' PRECAST BOX	R-3067, COMBINATION INLET FRAME, TYPE C GRATE
INL-2	1038.98	1041.13	2.15	2' x 3' PRECAST BOX	R-3067, COMBINATION INLET FRAME, TYPE C GRATE
OS-BP2	1036.73	1040.73	4.00	36" DIA CONC INLET	36" DIA. INLET, TYPE C GRATE
OS-BP3	1023.93	1028.00	4.07	36" DIA CONC INLET	36" DIA. INLET, TYPE C GRATE
OS-BP5	1023.29	1028.40	3.12	36" DIA CONC INLET	36" DIA. INLET, TYPE C GRATE
OS-BP4	1034.39	1037.50	3.12	36" DIA CONC INLET	36" DIA. INLET, TYPE C GRATE
OS-BP1	1037.42	1039.97	2.56	36" DIA CONC INLET	36" DIA. INLET, TYPE C GRATE
INL-3	1039.58	1044.88	5.30	2824G NYLOPLAST BASIN	STANDARD GRATE
INL-4	1038.34	1040.30	1.96	2824G NYLOPLAST BASIN	STANDARD GRATE
INL-5	1034.93	1038.86	3.93	2824G NYLOPLAST BASIN	STANDARD GRATE
INL-6	1040.47	1045.17	4.70	2812AG NYLOPLAST BASIN	STANDARD GRATE
INL-7	1040.18	1042.50	2.32	2824G NYLOPLAST BASIN	STANDARD GRATE

**PROPOSED STORM SEWER PIPE SCHEDULE**

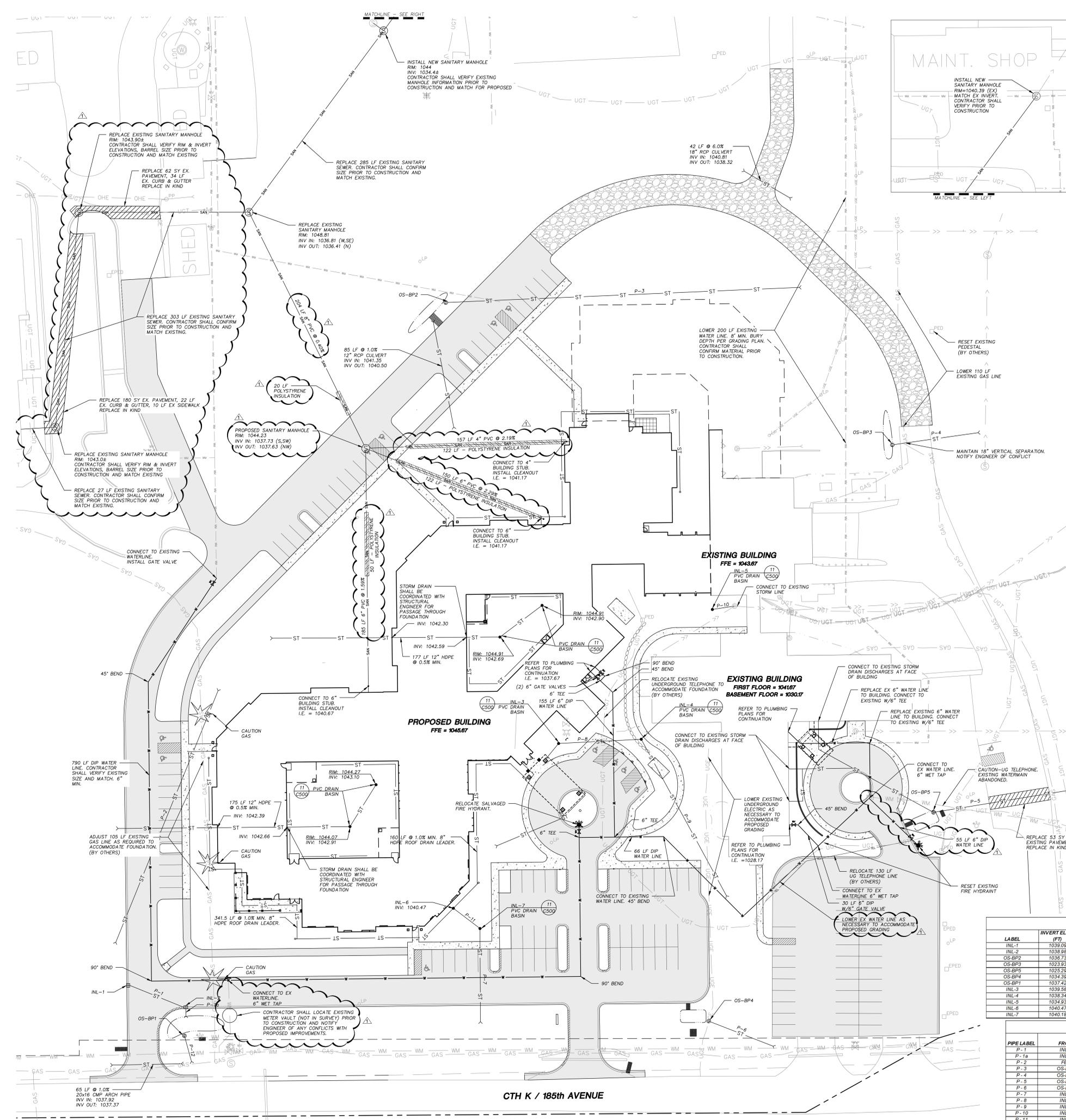
PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEVATION (FT)	DISCHARGE ELEVATION (FT)	SLOPE (%)	PIPE SIZE & TYPE
P-1	INL-1	INL-2	47	1039.09	1038.98	0.22%	12" RCP
P-1B	INL-2	FES	8	1038.98	1038.97	0.01%	12" RCP
P-2	FES	FES	213	1040.53	1038.40	1.00%	12" RCP
P-3	OS-BP2	FES	266	1036.73	1034.07	1.00%	12" RCP
P-4	OS-BP3	FES	68	1023.93	1023.25	1.00%	12" RCP
P-5	OS-BP5	FES	110	1023.29	1020.50	4.35%	12" HDPE
P-6	OS-BP4	FES	21	1034.39	1034.28	0.50%	12" HDPE
P-7	INL-3	FES	42	1040.18	1039.76	1.00%	12" HDPE
P-8	INL-4	FES	65	1038.34	1037.00	4.00%	12" HDPE
P-9	INL-4	FES	140	1037.44	1037.04	0.29%	12" HDPE
P-10	INL-5	EX PIPE	22	1034.93	1034.50	2.00%	12" HDPE
P-11	INL-6	INL-7	29	1040.47	1040.18	1.00%	10" HDPE
P-12	OS-BP1	FES	21.00	1037.42	1037.31	0.50%	12" HDPE

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UTILITY PLAN

Scale: 1" = 30'  
Date: 03/06/15  
Project Number: 146038



CTH K / 185th AVENUE



St. Croix County  
**BID PACKAGE 1**  
Health Center Additions & Renovation  
New Richmond, WI

Sheet Revision Schedule

Rev. #	Date	Revision	Description
03-06-15		DD Submittal	
04-06-15		City of New Richmond Submittal	
05-21-15		CD Review Set	
06-16-15		Bid Addendum #1	

**JSD Professional Services, Inc.**  
Engineers • Surveyors • Planners

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

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**LEGEND**

- PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF PAVEMENT
- RETAINING WALL
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 18" STANDARD CURB & GUTTER
- 18" RELECT CURB & GUTTER
- PROPOSED 1' FOOT CONTOUR
- PROPOSED 5' FOOT CONTOUR
- WATER UTILITY
- STORM UTILITY
- SANITARY UTILITY
- ELECTRICAL UTILITY
- COLORLED CONCRETE FOR COURTYARD AREA - SEATING/PASSIVE SPACE
- COLORLED CONCRETE FOR COURTYARD AREA - RAISED PLANTER AREAS
- POLYETHYLENE EDGING
- RAIN GARDEN PLUG MIX
- LIMESTONE BOULDER

- GENERAL NOTES**
- REFER TO THE EXISTING CONDITIONS SURVEY, PROVIDED BY OTHERS, FOR EXISTING CONDITIONS NOTES AND LEGEND. JSD DOES NOT TAKE RESPONSIBILITY FOR ANY BENCHMARKS LOCATED ON THE SURVEY PROVIDED BY OTHERS.
  - ALL WORK IN THE ROW AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF NEW RICHMOND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AND PERFORMED BY A CITY LICENSED CONTRACTOR.
  - JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
  - DRAWING FOR REVIEW - NOT FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE TITLE BLOCK.
  - THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND TOPSOILING WITH GENERAL CONTRACTOR.
  - REFER TO SHEET L200 FOR ADDITIONAL DETAILS, NOTES AND SPECIFICATION INFORMATION INCLUDING MATERIALS, GUARANTEE, AND EXECUTION RELATED TO LANDSCAPE PLAN.

**LANDSCAPE PLANT LIST**

SYM	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
<b>TALL DECIDUOUS TREES</b>					
GB	3	Autumn Gold Ginkgo	GINKGO biloba 'Autumn Gold'	2 1/2" Cal.	B&B
GB2	2	Autumn Gold Ginkgo	GINKGO biloba 'Autumn Gold'	3 1/2" Cal.	B&B
KC*	3	Kentucky Coffeetree	GYNOCLEADIS dioica	3 1/2" Cal.	B&B
IH*	1	Imperial Honeylocust	GLEDITSIA inermis 'Imperial'	3 1/2" Cal.	B&B
IH2*	2	Imperial Honeylocust	GLEDITSIA inermis 'Imperial'	2 1/2" Cal.	B&B
A*	1	Morgan Freeman Maple	ACER x freemanii 'Morgan'	1 1/2" Cal.	B&B
SG*	2	Sierra Glen Maple	ACER x freemanii 'Sienna' (PP11322)	2 1/2" Cal.	B&B
PP*	3	Prairie Pride Common Hackberry	CELTIS occidentalis 'Prairie Pride'	2 1/2" Cal.	B&B
OG	7	October Glory Red Maple	ACER rubrum 'October Glory'	2 1/2" Cal.	B&B
<b>TALL EVERGREEN TREES</b>					
WP	3	White Pine	PINUS strobus	3-4' Ht.	B&B
BHS	14	Black Hills Spruce	PICEA glauca var. densata	3-4' Ht.	B&B
NS	10	Norway Spruce	PICEA abies	3-4' Ht.	B&B
<b>MEDIUM DECIDUOUS TREES</b>					
CSP	14	Cleveland Select Pear	PYRUS Calleryana 'Cleveland Select'	1 1/2" Cal.	B&B
TCH	9	Thornless Cockspur Hawthorn	CRATAEGUS crus-galli var. inermis	1 1/2" Cal.	B&B
AMF	13	Amur Maple 'Flame' (Multistem)	ACER ginnala 'Flame'	1 1/2" Cal.	B&B
<b>MEDIUM EVERGREEN TREES</b>					
AJ	6	Ames Juniper	JUNIPERUS chinensis 'Ames'	3' Ht.	B&B
HA	15	Holmstrup Arborvitae	THUJA occidentalis 'Holmstrup'	3' Ht.	B&B
SA	7	Siberian Arborvitae	THUJA occidentalis 'Wareana'	3' Ht.	B&B
<b>ORNAMENTAL TREES</b>					
ABS*	2	Autumn Brilliance Serviceberry	AMELANCHIER x grandiflora 'Autumn Brilliance'	1 1/2" Cal.	B&B
CS*	13	Canada Serviceberry	AMELANCHIER canadensis 'Shadobush'	1 1/2" Cal.	B&B
<b>TALL DECIDUOUS SHRUBS</b>					
AP	3	Pink Delight Butterfly Bush	BUDDLEJA davidii 'Pink Delight'	18 - 24" Min. Ht.	# 3 Cont.
RD	8	Redosier Dogwood	CORNUS sericea	18 - 24" Min. Ht.	# 3 Cont.
<b>MEDIUM DECIDUOUS SHRUBS</b>					
SWN	21	Summer Wine Ninebark	PHYSOCARPUS opulifolius 'Seward' Summer Wine	18 - 24" Min. Ht.	# 3 Cont.
BRC	14	Brilliant Red Chokeberry	ARONIA arbutifolia 'Brilliantissima'	18 - 24" Min. Ht.	# 3 Cont.
<b>MEDIUM AND LOW EVERGREEN SHRUBS</b>					
MA	62	Mini Arcade Juniper	JUNIPERUS sabina 'Mini Arcade'	15-18" Min. Ht.	# 3 Cont.
TY	84	Taunton Yew	TAXUS x media 'Tauntonii'	15-18" Min. Ht.	# 3 Cont.
<b>LOW DECIDUOUS SHRUBS</b>					
HS	13	Snowhill Hydrangea	HYDRANGEA arborescens 'Grand'	12-24" Min. Ht.	#2 Cont.
PR*	73	Pygmy Ruby Barberry	BERBERIS thunbergii 'Pyguzam'	12-24" Min. Ht.	#2 Cont.
LPS	132	Japanese White Spirea	SPIREA alba 'Japanese White Spirea'	12-24" Min. Ht.	#2 Cont.
GFS	6	Goldflame Spirea	SPIREA japonica 'Goldflame'	12-24" Min. Ht.	#2 Cont.
<b>PERENNIALS</b>					
LD*	96	Lemon Drop Sedum	SEDUM spurium 'Lemon Drop'	3" Pot	# 1 Cont.
RS	10	Russian Sage	PEROVSKIA atriplicifolia	10 - 12" Ht.	# 1 Cont.
LGS	263	Little Goldstar Black-Eyed Susan	RUDEBECKIA fulgida var. 'sulfurilla' Little Goldstar	10 - 12" Ht.	# 1 Cont.
HRD	85	Happy Returns Daylily	HEMEROCALLIS 'Happy Returns'	10 - 12" Ht.	# 1 Cont.
HG	31	Barbara Mitchell Daylily	HEMEROCALLIS 'Barbara Mitchell'	10 - 12" Ht.	# 1 Cont.
HRS	46	Hosta Royal Standard	HOSTA 'Royal Standard'	10 - 12" Ht.	# 1 Cont.
HRS	32	Hosta Regal Splendor	HOSTA 'Regal Splendor'	10 - 12" Ht.	# 1 Cont.
CA*	63	Chinese Astilbe	ASTILBE chinensis 'Pumila'	10 - 12" Ht.	# 1 Cont.
AVR*	71	Visions in Red Astilbe	ASTILBE x chinensis 'Visions in Red'	10 - 12" Ht.	# 1 Cont.
BOC	48	Blackout Coral Bells	HEUCHERA 'Blackout'	10 - 12" Ht.	# 1 Cont.
KG	128	Gayfeather Blazing Star	LIATRIS spicata 'Kobold'	10 - 12" Ht.	# 1 Cont.
<b>ORNAMENTAL GRASSES</b>					
CA	54	Karl Foerster Feather Reed Grass	CALAMAGROSTIS x scutiflora 'Karl Foerster'	8 - 18" Ht.	# 1 Cont.
PA	26	Dwarf Hameln Fountain Grass	PENSETUM alpestralis 'Hameln'	8 - 18" Ht.	# 1 Cont.
SSG*	13	Northwind Switch Grass	PANICUM virgatum 'Northwind'	8 - 18" Ht.	# 1 Cont.
BOG*	55	Blue Oat Grass	HELICTRICHUM sempervirens	8 - 18" Ht.	# 1 Cont.
LB*	52	The Blues Little Bluestem	SCHIZACHYRIUM scoparium 'The Blues'	8 - 18" Ht.	# 1 Cont.
PR	167	Prairie Dropseed	SPOROBOLOUS heterolepis	8 - 18" Ht.	# 1 Cont.

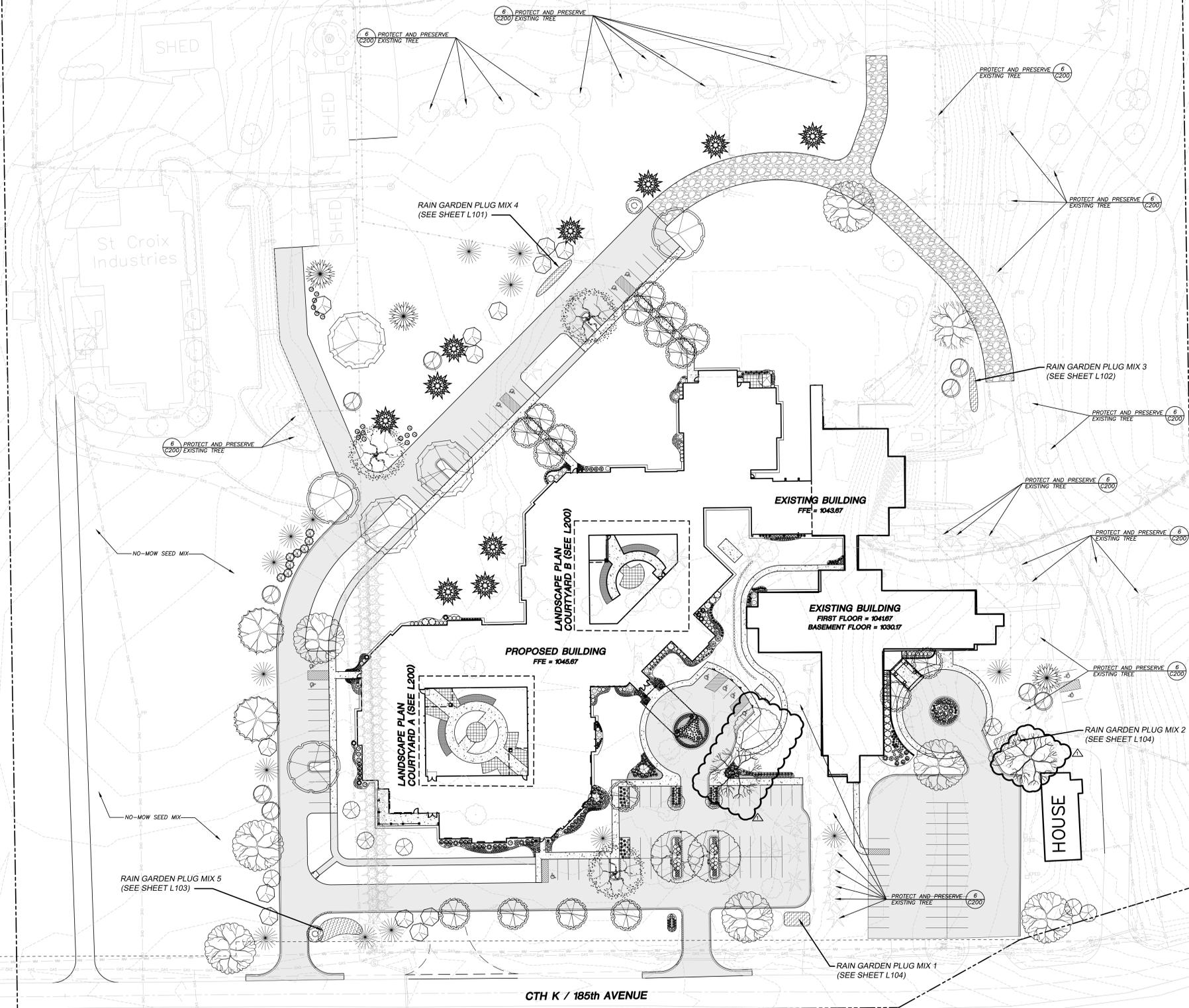
\* Denotes Xeriscape Plants  
**Note to Bidders:** Norway Spruce trees shown on this plan will be provided and planted by the owner.

**FRONT YARD PLANT REQUIREMENTS**  
Approximate Building Square Footage = 80,000 ft<sup>2</sup>

Shade Trees Required = 16  
Proposed Shade Trees = 34

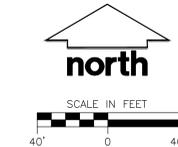
3 1/2" Caliper Shade Trees Required = 3  
Proposed 3 1/2" Caliper Shade Trees = 3

Evergreen Shrubs Required = 80  
Proposed Evergreen Shrubs = 136



**LEGEND (PROPOSED)**

<b>TALL DECIDUOUS TREES</b>	<b>TALL EVERGREEN TREES</b>	<b>MEDIUM EVERGREEN TREES</b>	<b>MEDIUM DECIDUOUS SHRUBS</b>	<b>PERENNIALS</b>	<b>ORNAMENTAL GRASSES</b>
2 1/2" Caliper Autumn Gold Ginkgo	White Pine	Ames Juniper	Summer Wine Ninebark	Lemon Drop Sedum	Karl Foerster Feather Reed Grass
3 1/2" Caliper Autumn Gold Ginkgo	Black Hills Spruce	Holmstrup Arborvitae	Brilliant Red Chokeberry	Russian Sage	Dwarf Hameln Fountain Grass
Kentucky Coffeetree	Norway Spruce	Siberian Arborvitae		Little Goldstar Black-Eyed Susan	Northwind Switch Grass
2 1/2" Caliper Imperial Honey Locust				Happy Returns Daylily	Blue Oat Grass
3 1/2" Caliper Imperial Honey Locust				Barbara Mitchell Daylily	The Blues Little Bluestem
				Hosta Royal Standard	Prairie Dropseed
				Hosta Regal Splendor	
				Chinese Astilbe	
				Visions in Red Astilbe	
				Blackout Coral Bells	
				Gayfeather Blazing Star	



PRELIMINARY  
NOT FOR CONSTRUCTION

LANDSCAPE PLAN OVERVIEW

Scale	Date	Project Number
1" = 20'	5/21/15	146038

**L100**



SITE DATUM: 100'-0" = 1045.67'

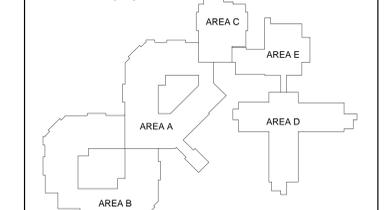
**St. Croix County  
 BID PACKAGE 1  
 Health Center Additions & Renovation  
 New Richmond, WI**

**Sheet Revision Schedule**

Rev. #	Date	Revision	Description
1	6/17/15	a1	MISC. REVISIONS

- FOUNDATION PLAN NOTES:**
- SEE 1/S103 FOR LAYOUT FROM EXISTING BUILDING.
  - VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
  - SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF ALL WALL OPENINGS.
  - FINISHED FLOOR ELEVATION (FFE) = SEE PLAN. VERIFY ALL DEPRESSED SLABS W/ ARCH. DRAWINGS AND MECH./ELEC. CONTRACTORS.
  - ALL INTERIOR AND EXTERIOR CONTINUOUS WALL FOOTINGS SHALL BE 2'-0" W x 1'-0" D W/ 2-#5 CONT. BOT. UNO.
  - TOP OF EXTERIOR FOOTING ELEVATION (TFE) = 96'-6" UNO.
  - S---S ON PLAN DENOTES STEPPED FOOTING. SEE DETAIL 1/S401.
  - SEE SECTION 2/S41 FOR DROPPED FOOTING AT ALL UNDERGROUND MECHANICAL LINES ENTERING BUILDING.
  - SEE DETAILS 4/S401, 5/S401 AND 6/S401 FOR TYPICAL FOUNDATION WALL JOINTS AND CORNER REINFORCING.
  - \*PX\* ON PLAN DENOTES WOOD POST SIZE. SEE WOOD POST SCHEDULE ON THIS SHEET.
  - \*CX\* ON PLAN DENOTES STEEL COLUMN SIZE. SEE STEEL COLUMN SCHEDULE ON THIS SHEET.
  - \*FX\* ON PLAN DENOTES FOOTING SIZE. SEE FOOTING SCHEDULE ON THIS SHEET.
  - \*J\* ON PLAN DENOTES MASONRY JAMB. SEE JAMB REINFORCING SCHEDULE ON THIS SHEET.
  - CONCRETE BLOCK WALL VERTICAL REINFORCING SHALL BE #5 @ 32" O.C. UNO ON PLAN OR IN SECTIONS AND DETAILS.
  - EXTERIOR DIMENSIONS ARE TO THE OUTSIDE FACE OF THE FOUNDATION WALL AND THE OUTSIDE FACE OF THE EXTERIOR WALL SHEATHING.
  - EXTEND ALL INTERIOR FOOTINGS MINIMUM 1'-0" BEYOND END OF WALLS UNO.

- FOUNDATION KEYNOTES:**
- PLACE INTERIOR FOOTINGS OVER TESTED/INSPECTED COMPACTED FILL OR STEP INTERIOR FOOTINGS DOWN TO EXTERIOR FOOTING PER 1/S401.
  - RECESS SLAB FOR IN-FLOOR SCALE. SEE ARCH. FOR SIZE AND LOCATION. TOP OF SLAB ELEVATION (TSE) = 99'-8.38". VERIFY W/ SCALE SUPPLIER.
  - CONCRETE BLOCK WALL VERTICAL REINFORCING SHALL BE #5 @ 24" O.C.
  - CAST-IN-PLACE CONCRETE PAD FOOTING W/ #4 @ 12" O.C. EW TOP & BOT. TFE=94'-6". VERIFY SIZE AND LOCATION W/ POOL SUPPLIER. FINISH TOP OF FOOTING PER POOL SUPPLIER REQUIREMENTS.
  - 4" CONCRETE SLAB ON GRADE W/ FIBERMESH REINF. TOP OF SLAB ELEVATION (TSE) = 92'-0".



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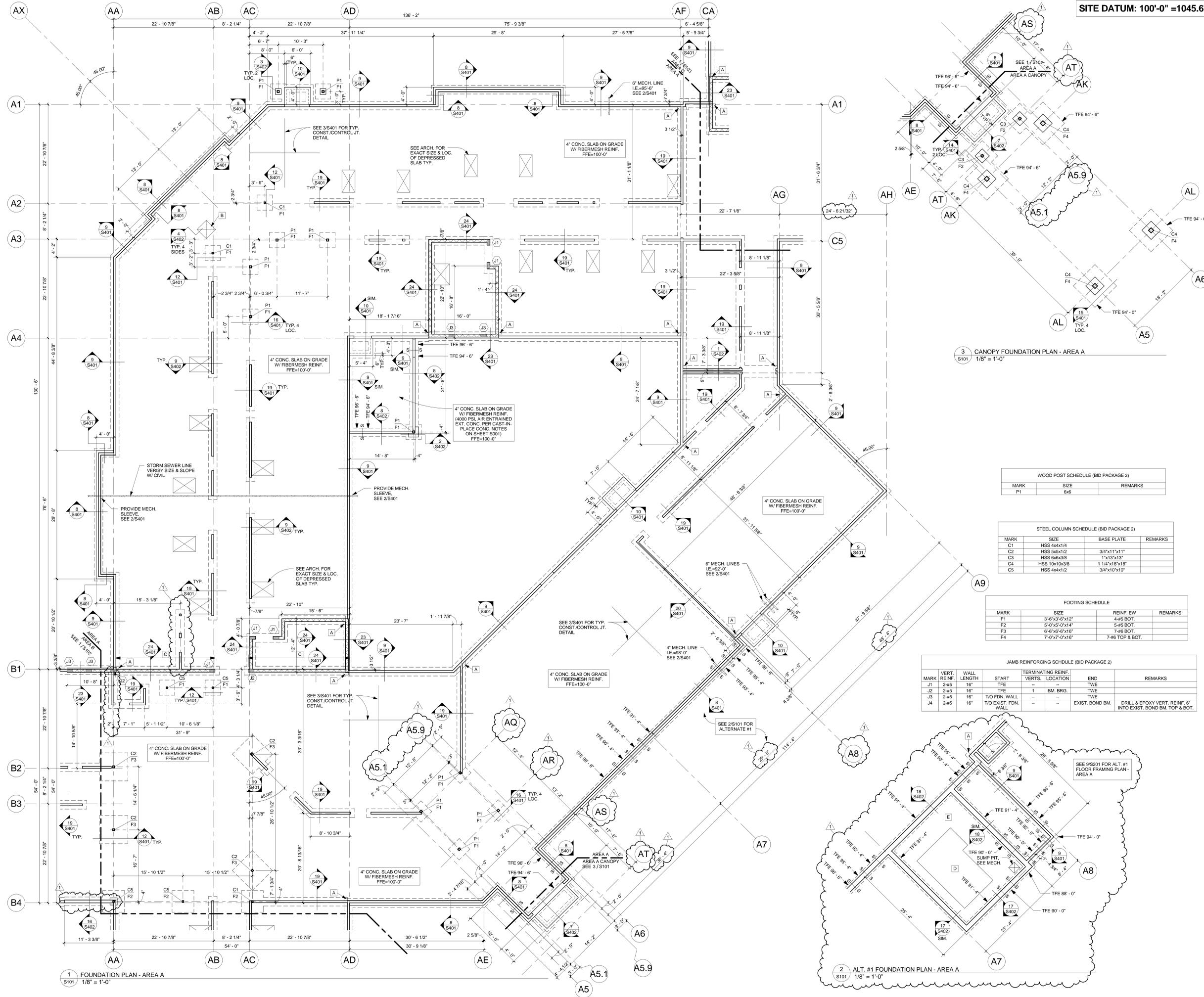


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**FOUNDATION PLAN - AREA A**

Scale	Date	Project Number
As indicated	6/02/15	146038

**S101**



**WOOD POST SCHEDULE (BID PACKAGE 2)**

MARK	SIZE	REMARKS
P1	6x6	

**STEEL COLUMN SCHEDULE (BID PACKAGE 2)**

MARK	SIZE	BASE PLATE	REMARKS
C1	HSS 4x4x1/4	3/4"x11"x11"	
C2	HSS 5x5x1/2	1"x13"x13"	
C3	HSS 6x6x3/8	1 1/4"x15"x15"	
C4	HSS 10x10x3/8	1 1/4"x15"x15"	
C5	HSS 4x4x1/2	3/4"x10"x10"	

**FOOTING SCHEDULE**

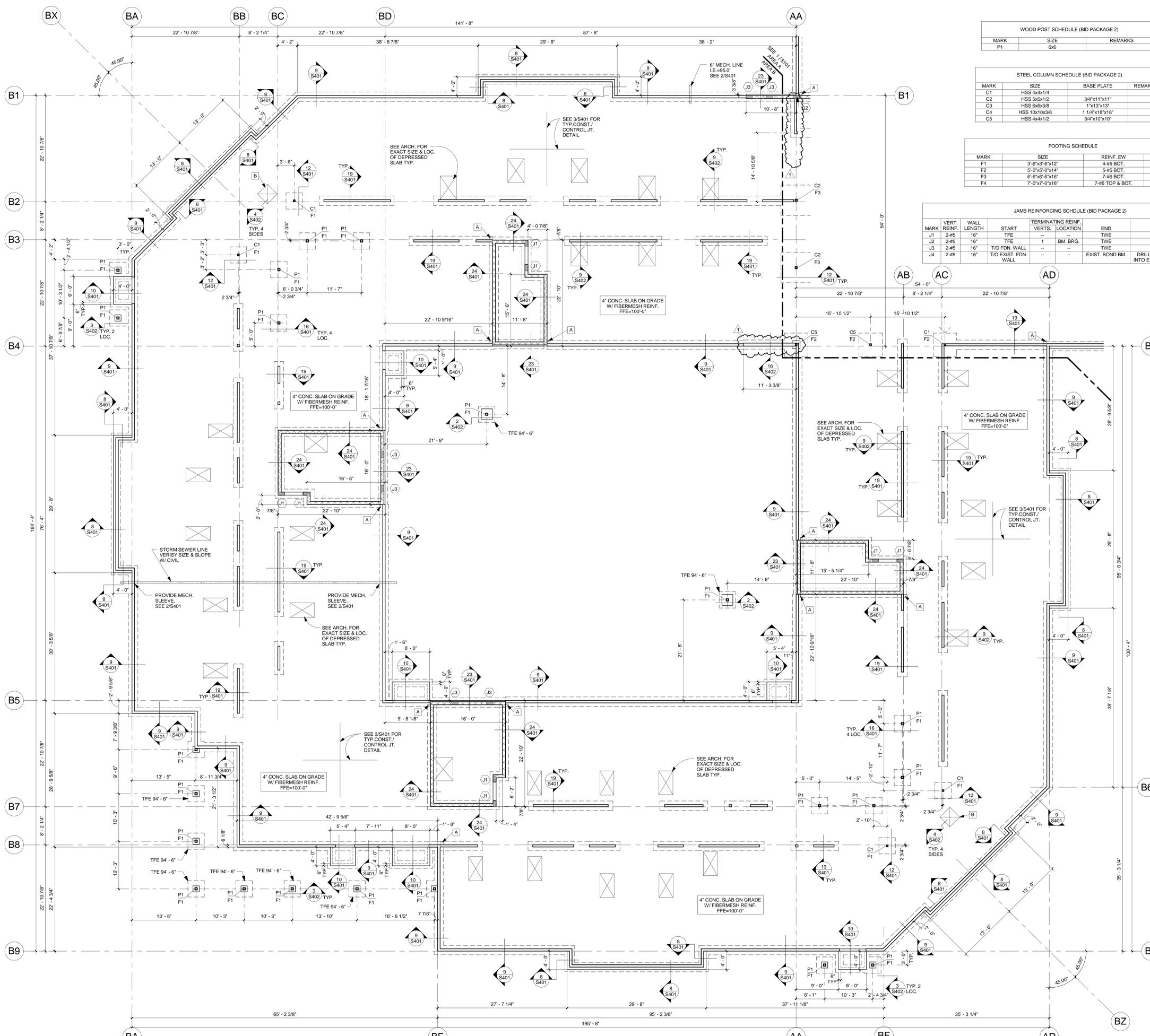
MARK	SIZE	REINF. EW	REMARKS
F1	3'-6"x3'-6"x12"	4-#5 BOT.	
F2	5'-0"x5'-0"x14"	5-#5 BOT.	
F3	6'-6"x6'-6"x16"	7-#6 BOT.	
F4	7'-0"x7'-0"x16"	7-#6 TOP & BOT.	

**JAMB REINFORCING SCHEDULE (BID PACKAGE 2)**

MARK	VERT. REINF.	WALL LENGTH	START	TERMINATING REINF. VERTS. LOCATION	END	REMARKS
J1	2-#5	16"	TFE	--	TWE	
J2	2-#5	16"	TWE	1	BM. BRG.	
J3	2-#5	16"	T/O FDN. WALL	--	TWE	
J4	2-#5	16"	T/O EXIST. FDN. WALL	--	EXIST. BOND BM.	DRILL & EPOXY VERT. REINF. 6" INTO EXIST. BOND BM. TOP & BOT.

1 FOUNDATION PLAN - AREA A  
 S101 1/8" = 1'-0"

2 ALT. #1 FOUNDATION PLAN - AREA A  
 S101 1/8" = 1'-0"



SITE DATUM: 100'-0" = 1045.67'

MARK	SIZE	REMARKS
P1	6x6	

MARK	SIZE	BASE PLATE	REMARKS
C1	HSS 4x4x1/4	4-#5 BOT.	
C2	HSS 5x5x1/2	3/4"x11"x11"	
C3	HSS 6x6x3/8	1"x13"x13"	
C4	HSS 10x10x3/8	1 1/4"x15"x15"	
C5	HSS 4x4x1/2	3/4"x10"x10"	

MARK	SIZE	REINF. EW	REMARKS
F1	3'-6"x3'-6"x12"	4-#5 BOT.	
F2	5'-0"x5'-0"x14"	5-#5 BOT.	
F3	6'-6"x6'-6"x16"	7-#6 BOT.	
F4	7'-0"x7'-0"x16"	7-#6 TOP & BOT.	

MARK	VERT. REINF.	WALL LENGTH	START	TERMINATING REINF. VERTS. LOCATION	END	REMARKS
J1	2-#5	16"	TFE	1	BM. BRG.	TWE
J2	2-#5	16"	TFE	1	BM. BRG.	TWE
J3	2-#5	16"	T/O FDN. WALL			TWE
J4	2-#5	16"	T/O EXIST. FDN. WALL		EXIST. BOND BM.	DRILL & EPOXY VERT. REINF. 6" INTO EXIST. BOND BM. TOP & BOT.

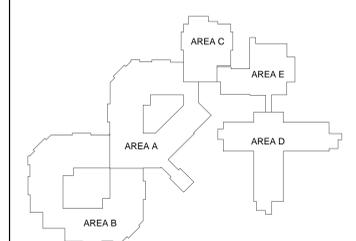
**Horty Elving**  
**Horty Elving & Associates, Inc.**  
 505 East Grant Street, Minneapolis, MN 55404-1490  
 T 612.332.4422 F 612.344.1282 hortyelving.com

**St. Croix County  
 BID PACKAGE 1  
 Health Center Additions & Renovation  
 New Richmond, WI**

Rev. #	Date	Revision	Description
1	6/17/15	a1	MISC. REVISIONS

- FOUNDATION PLAN NOTES:**
- SEE 1/S103 FOR LAYOUT FROM EXISTING BUILDING.
  - VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
  - SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF ALL WALL OPENINGS.
  - FINISHED FLOOR ELEVATION (FFE) = SEE PLAN. VERIFY ALL DEPRESSED SLABS W/ ARCH. DRAWINGS AND MECH./ELEC. CONTRACTORS.
  - ALL INTERIOR AND EXTERIOR CONTINUOUS WALL FOOTINGS SHALL BE 2'-0"W x 1'-0"D W/ 2-#5 CONT. BOT. UNO.
  - TOP OF EXTERIOR FOOTING ELEVATION (TFE) = 96'-6" UNO.
  - S--S ON PLAN DENOTES STEPPED FOOTING. SEE DETAIL 1/S401.
  - SEE SECTION 2/S401 FOR DROPPED FOOTING AT ALL UNDERGROUND MECHANICAL LINES ENTERING BUILDING.
  - SEE DETAILS 4/S401, 5/S401 AND 6/S401 FOR TYPICAL FOUNDATION WALL JOINTS AND CORNER REINFORCING.
  - "PX" ON PLAN DENOTES WOOD POST SIZE. SEE WOOD POST SCHEDULE ON THIS SHEET.
  - "CX" ON PLAN DENOTES STEEL COLUMN SIZE. SEE STEEL COLUMN SCHEDULE ON THIS SHEET.
  - "FX" ON PLAN DENOTES FOOTING SIZE. SEE FOOTING SCHEDULE ON THIS SHEET.
  - "J" ON PLAN DENOTES MASONRY JAMB. SEE JAMB REINFORCING SCHEDULE ON THIS SHEET.
  - CONCRETE BLOCK WALL VERTICAL REINFORCING SHALL BE #5 @ 32" O.C. UNO ON PLAN OR IN SECTIONS AND DETAILS.
  - EXTERIOR DIMENSIONS ARE TO THE OUTSIDE FACE OF THE FOUNDATION WALL AND THE OUTSIDE FACE OF THE EXTERIOR WALL SHEATHING.
  - EXTEND ALL INTERIOR FOOTINGS MINIMUM 1'-0" BEYOND END OF WALLS UNO.

- FOUNDATION KEYNOTES:**
- A PLACE INTERIOR FOOTINGS OVER TESTED/INSPECTED COMPACTED FILL OR STEP INTERIOR FOOTINGS DOWN TO EXTERIOR FOOTING PER 1/S401.
  - B RECESS SLAB FOR IN-FLOOR SCALE. SEE ARCH. FOR SIZE AND LOCATION. TOP OF SLAB ELEVATION (TSE) = 99'-8 3/8". VERIFY W/ SCALE SUPPLIER.



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**FOUNDATION PLAN - AREA B**

Scale	Date	Project Number
As indicated	6/02/15	146038

**S102**

1 FOUNDATION PLAN - AREA B  
 S102 1/8" = 1'-0"

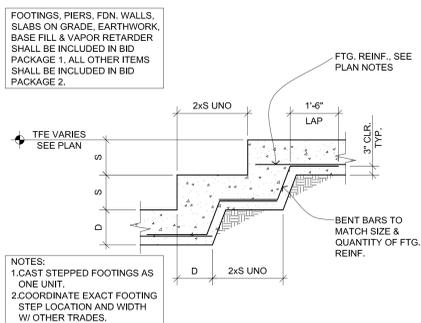




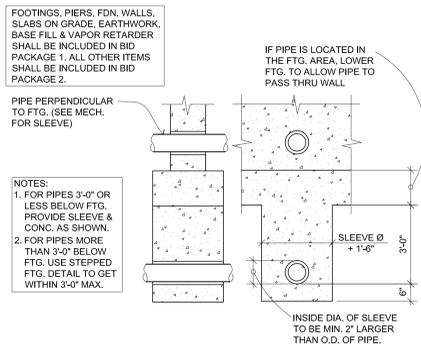
St. Croix County  
**BID PACKAGE 1**  
Health Center Additions & Renovation  
New Richmond, WI

Sheet Revision Schedule

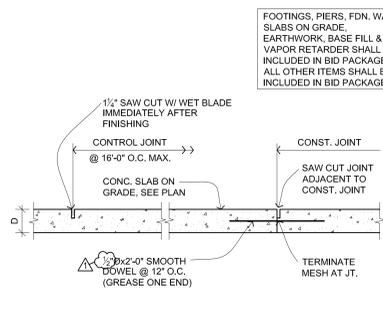
Rev. #	Date	Revision	Description
1	6/17/15	a/1	MISC. REVISIONS



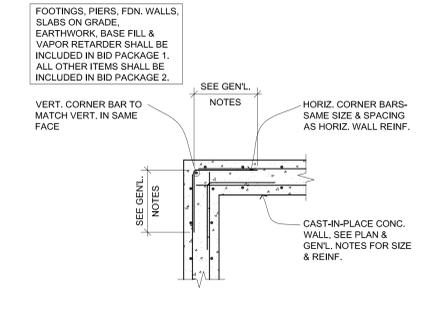
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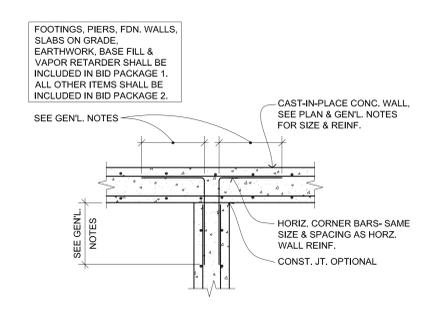
2 DETAIL  
S401 WALL FTG. @ UNDERGROUND LINES NO SCALE



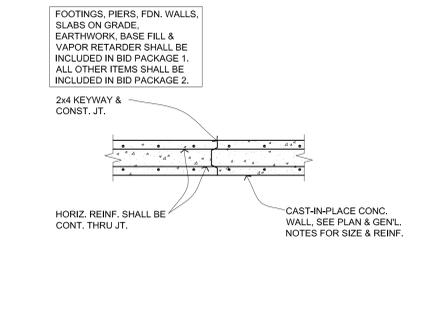
3 DETAIL  
S401 TYPICAL CONTROL/CONSTRUCTION JOINT NO SCALE



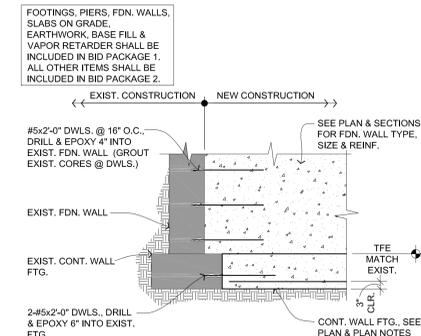
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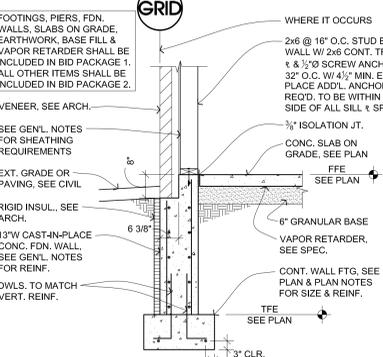
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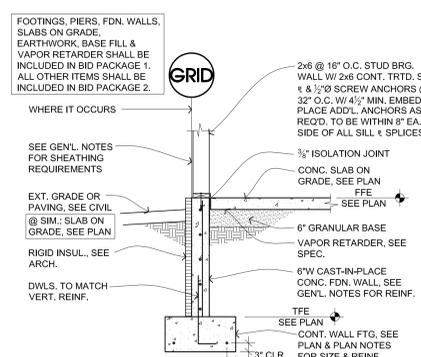
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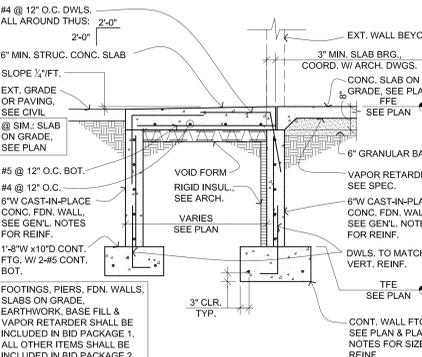
7 SECTION  
S401 WALL FTG. @ EXIST. 1/2"x1'-0"



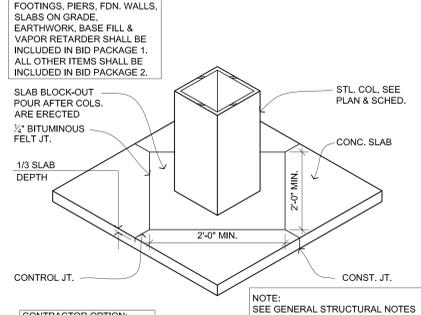
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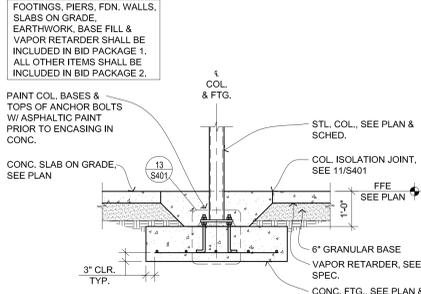
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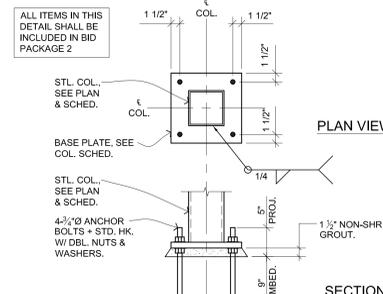
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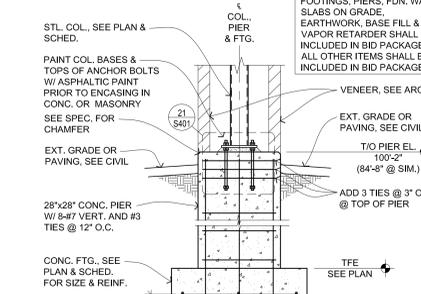
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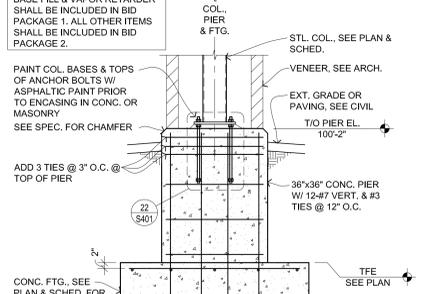
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S401 INT. STL. COL., FTG. & PIER 1/2"x1'-0"



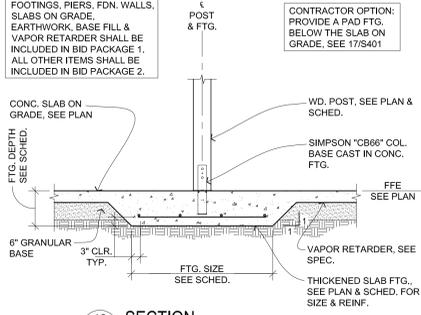
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S401 ANCHOR BOLT SETTING NO SCALE



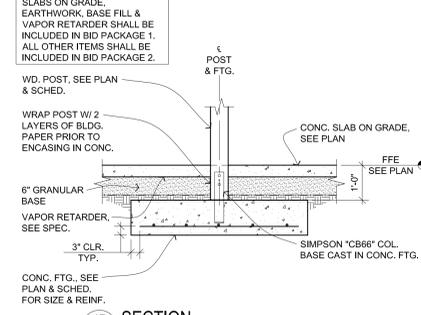
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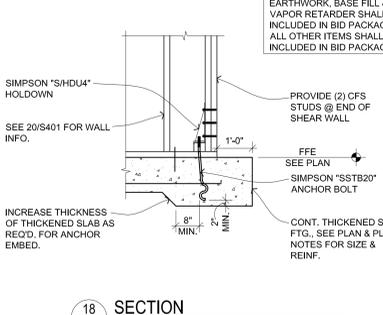
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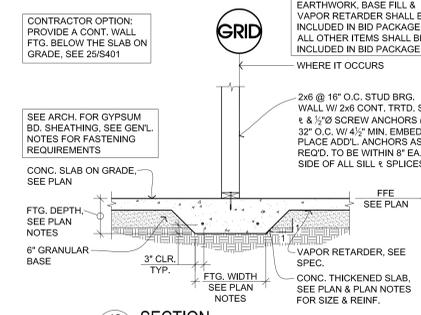
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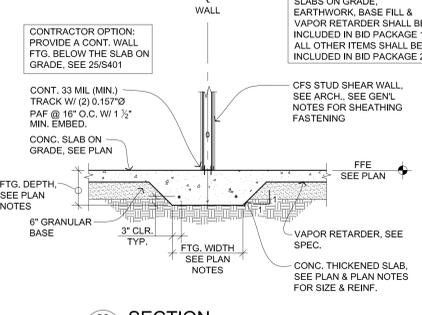
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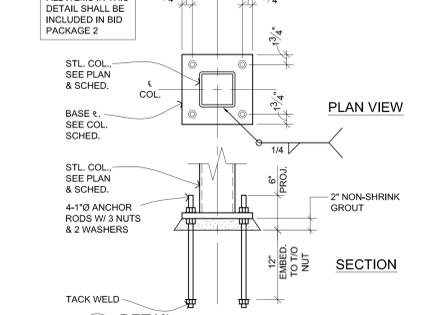
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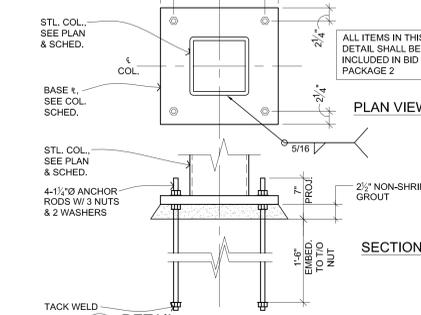
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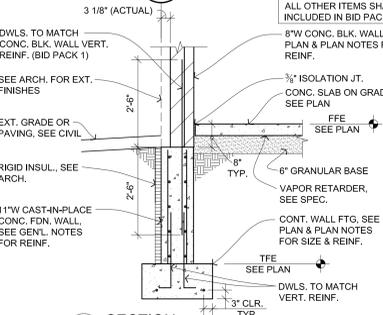
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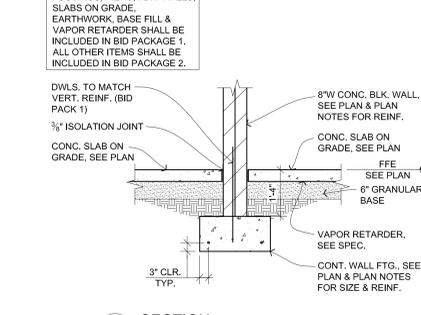
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S401 ANCHOR ROD SETTING 1"x1'-0"



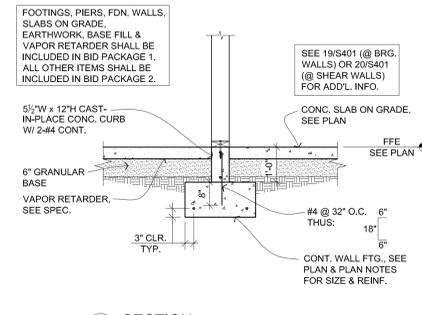
22 DETAIL  
S401 ANCHOR ROD SETTING 1"x1'-0"



23 SECTION  
S401 TYP. FDN. @ CONC. BLK. WALL 1/2"x1'-0"



24 SECTION  
S401 TYP. INT. CONC. BLK. WALL 1/2"x1'-0"



25 SECTION  
S401 ALT. INT. STUD WALL 1/2"x1'-0"

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SECTIONS AND DETAILS

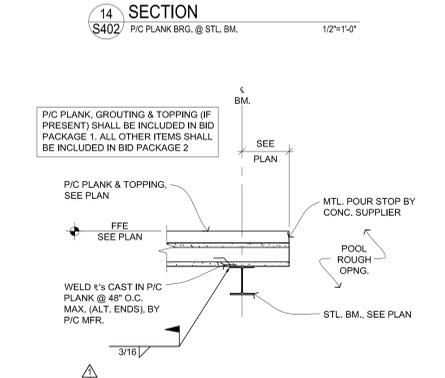
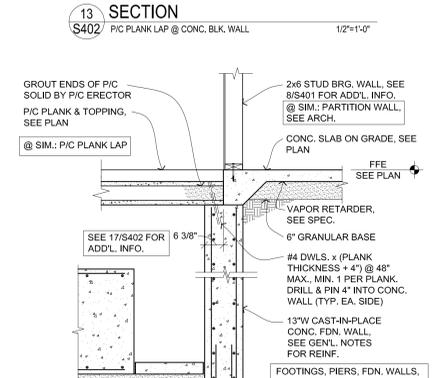
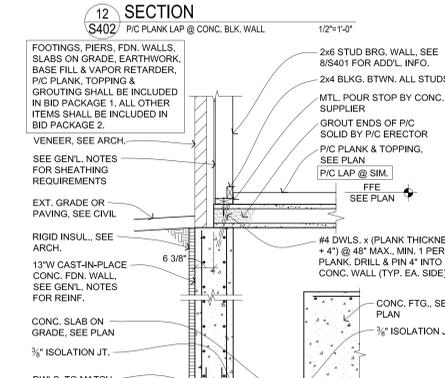
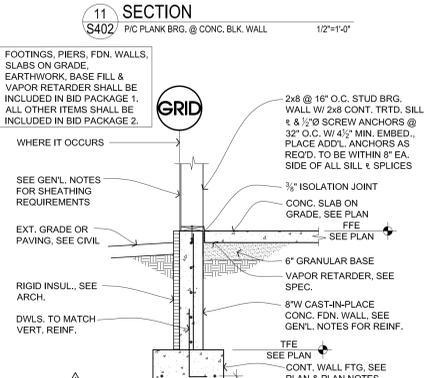
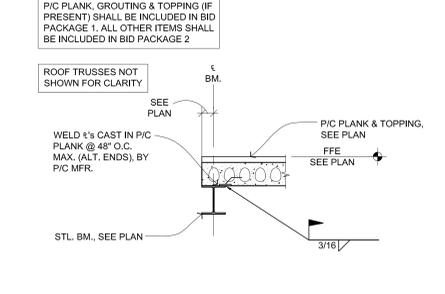
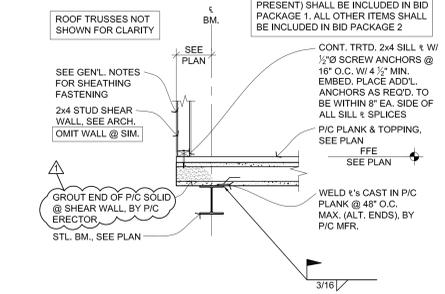
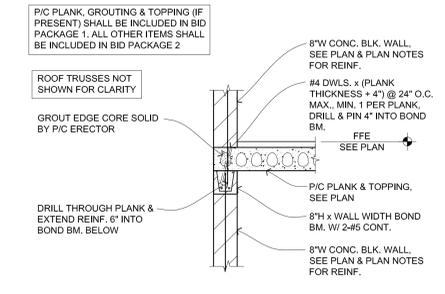
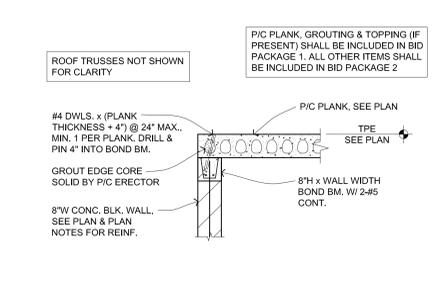
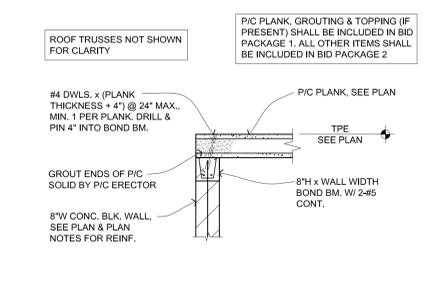
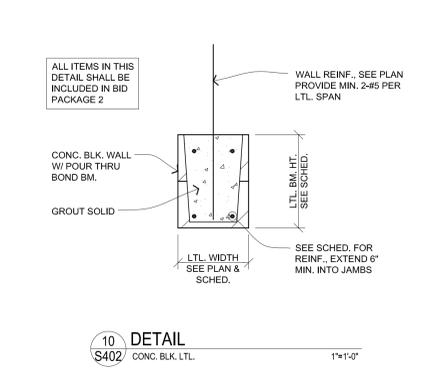
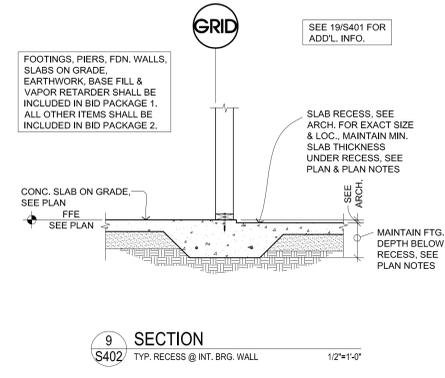
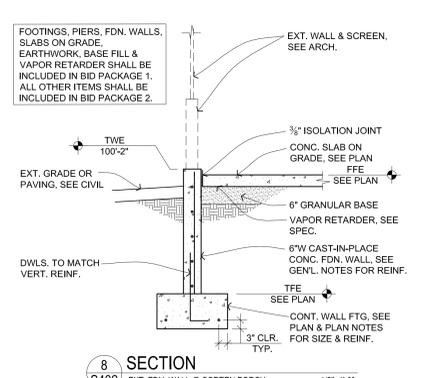
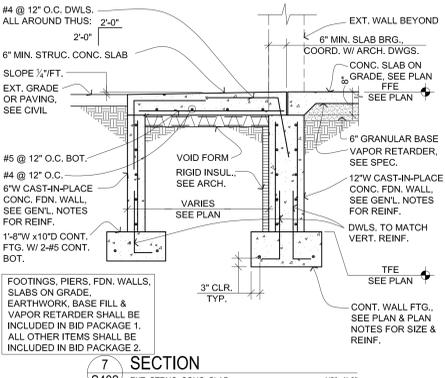
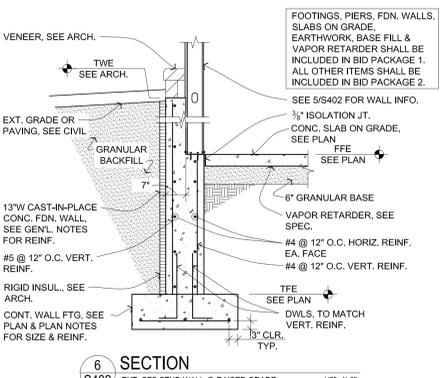
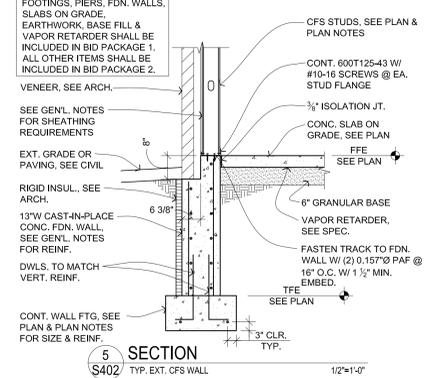
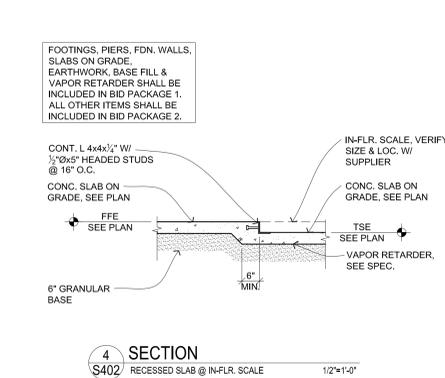
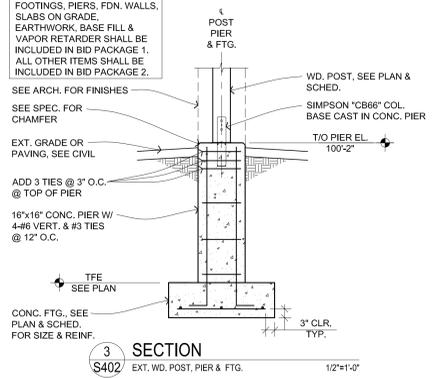
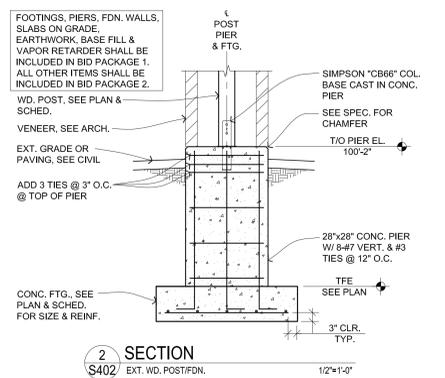
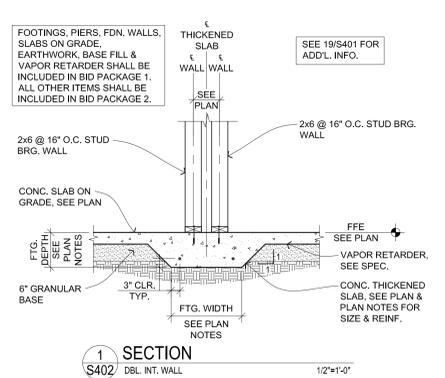
Scale Date 6/02/15 Project Number 146038

S401

**St. Croix County  
BID PACKAGE 1  
Health Center Additions & Renovation  
New Richmond, WI**

**Sheet Revision Schedule**

Rev. #	Date	Revision	Description
1	6/17/15	apl	MISC. REVISIONS



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**SECTIONS AND DETAILS**

Scale	Date	Project Number
	6/02/15	146038

**S402**