STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 2 TO PROJECT NO. 44535

CONSTRUCTION WORK, ELECTRICAL WORK, FIRE PROTECTION WORK
MACCORMICK SECURE CENTER
FIRE PROTECTION SYSTEM IMPROVEMENTS
300 SOUTH ROAD
BROOKTONDALE, NY

January 16, 2014

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

C CONTRACT:

SPECIFICATIONS

1. SECTION 015000 CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

    a. Page 015000-6, DELETE subparagraph 1.13.B.2 in its entirety.

2. SECTION 210519 COLD WATER METERS

    a. DELETE Section 210519 in its entirety.

3. SECTION 213000 FIRE PUMP SYSTEM

    a. DELETE Section 213000 bound in Project Manual dated 6/13/2013.
    b. INSERT the attached Section 213000 FIRE PUMP SYSTEM – ADDENDUM No. 2, dated 1/15/14.

4. SECTION 462170 INTAKE SCREEN

    a. Pages 462170-1 to 462170-4: DELETE the referenced section number "444333" and REPLACE with section number "462170".

    b. Page 462170-3, INSERT the following Subparagraph 2.01.D:

        "D. Basis of Design: Johnson Screens Model T12HC"

DRAWINGS

1. Drawing No. C002:

    a. Delete the Construction Sequencing Notes and replace with the following:
    "1. PRIOR TO COMMENCING ANY CLEARING, GRUBBING, EARTHWORK ACTIVITIES, ETC.AT THE SITE, THE CONTRACTOR SHALL FLAG THE WORK LIMITS AND SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCES, STABILIZED CONSTRUCTION ENTRANCES, STONE CHECK DAMS, ETC.) INDICATED ON THE PROJECT DRAWINGS. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THEIR TRIBUTARY AREAS.

    2. THE CONTRACTOR SHALL COMMENCE SITE CONSTRUCTION ACTIVITIES INCLUDING CLEARING & GRADING OF THE PROPOSED AREA OF DISTURBANCE AS REQUIRED.

    3. CONSTRUCT ALL UTILITIES AS SHOWN ON THE PLANS. COMPLETE CONSTRUCTION OF POND INTAKE SCREEN AND LINE FROM SCREEN TO WETWELL, INCLUDING BANK STABILIZATION, PRIOR TO PLACING FOUNDATION OF FIRE PUMP STATION.

    4. FINALIZE PAVEMENT SUB-GRADE PREPARATION.

    5. INSTALL SUB-BASE MATERIAL AS REQUIRED FOR PAVEMENT.

    6. PRIOR TO FINALIZING CONSTRUCTION, ALL DRAINAGE LINES SHALL BE CLEANED OF ALL SILT AND SEDIMENT.

    7. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY ESTABLISH PERMANENT VEGETATION ON THE AREAS DISTURBED DURING THEIR REMOVAL."

2. Drawings No. C102:

    a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

3. Drawing No. C103:

    a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

4. Drawing No. C104:

a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

5. Drawing No. C301:

   a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

6. Drawing No. C302:

   a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

7. Drawing No. C501:

   a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

8. Drawing No. C502:

   a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

9. Drawing No. C503:

   a. DELETE drawing dated 7/22/13 and REPLACE with attached revised drawing dated 1/15/14.

E CONTRACT

DRAWINGS

1. Drawing No. E102:

   a. Reference Detail 2/E102: DELETE dimension of “18”” for horizontal separation between water pipe and electrical conduit and REPLACE with dimension of “24””.

N CONTRACT

DRAWINGS

1. Drawing No. N001:

   a. FIRE PROTECTION NOTES: Add Note 10 as follows: “PROVIDE SPRINKLER HEADS TO PROTECT ALL SPACES UNDER ALL SOFFIT AREAS WHERE THE SOFFIT WIDTH EXCEEDS 8 INCHES. PROVIDE IN ACCORDANCE WITH NFPA-13.”

2. Drawing No. N101:

    a. Change General Note 3 to read as follows: "ALL SPRINKLER PIPING ON THIS LEVEL SHALL BE SCH. 40 BLACK STEEL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS."

3. Drawing No. N105:

    a. Add the following sentences to Drawing Note 5: "AT EACH OF THE SIDEWALL HEAD LOCATIONS, PROVIDE CUSTOMIZED SECTION OF SECURITY SOFFIT SYSTEM WITH FACE CONTAINING THE SIDEWALL SPRINKLER HEAD CONSTRUCTED AND INSTALLED PERPENDICULAR TO THE CEILING SLOPE. SECURE EACH SECTION OF SECURITY SOFFIT IN THIS AREA TO WALL AND STRUCTURE ABOVE CEILING."

END OF ADDENDUM

James Dirolf, P.E.
Director of Design

SECTION 213000

FIRE PUMP SYSTEM – ADDENDUM NO. 2

REVISED 1/15/14

PART 1 GENERAL

1.01 SUMMARY/SCOPE

A. This specification covers the manufacturing and supplying of 1 packaged fire pump system including a vertical turbine fire pump complete with motor, controller, and accessories as outlined. The contractor shall provide and install the packaged fire pump system, designed in accordance with the requirements of NFPA 20. The fire pump shall be listed by Underwriters Laboratories and/or approved by Factory Mutual for fire pump service at the specified rating. The system manufacturer will assume unit responsibility for the proper operation of the entire packaged system as specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Concrete Pads: Section 033000.

B. Valves: Section 220523.

1.03 REFERENCES

A. National Fire Protection Association Standard 20 - Centrifugal Fire Pumps.

B. Underwriters Laboratories Inc. 448 - Pumps for Fire-Protection Service.

C. NEMA MG-1 - Motors and Generators.

D. NEMA ICS-6 - Enclosures for Industrial Control and Systems.

1.04 SYSTEM DESCRIPTION

A. Fire Pump System: The fire pump system shall consist of a fire pump, fire pump motor, automatic transfer switch and fire pump controller, jockey pump, jockey pump motor, jockey pump controller, associated valves, gauges, and test apparatus to supply water to the standpipe system.

1. The jockey pump maintains a minimum pressure in the standpipe system.
2. The fire pump starts in the event of a drop in pressure below the minimum pressure maintained by the jockey pump.

1.05 SUBMITTALS

A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to this Section.

B. Submittal Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.

C. Shop Drawings:
   1. Outline drawings showing equipment layout, dimensions, clearances, support details, connection requirements, and weights.
   2. Certified performance curve for each pump, shop tested, indicating GPM, bhp, and efficiency, from free delivery to shut off head and with operating point indicated.
   3. Wiring diagrams for electrical power and control wiring.
      a. Deliver 2 copies of approved wiring diagrams to the Electrical Contractor for installation of fire pump automatic transfer switch control wiring for dual control of diesel-alternator unit DA-2.

D. Product Data:
   1. Catalog sheets, specifications, and installation instructions.
      a. Indicate UL listing for the system.
      b. Certify that the products comply with NFPA 20.
      c. Indicate FM approval for the system.
      d. Certify that the products comply with NFPA 20 and Factory Mutual Loss Prevention Sheet 3-7N.
      e. Show that the short circuit withstand rating of the fire pump system is greater than the short circuit ampere capability of the circuit to which it is connected.
      f. Show that the continuous current ratings of the components are in compliance with the referenced codes and standards.
   2. Bill of materials.

E. Quality Control Submittals:
   1. Company Field Advisor Data: Include:
      a. Name, business address and telephone number of Company Field Advisor secured for the required services.
      b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
      c. Services and each product for which authorization is given by the Company, listed specifically for this project.

F. Contract Closeout Submittals:
   1. System acceptance test report.
   2. Certificate: Affidavit, signed by the Company Field Advisor and notarized certifying that the system meets the contract requirements and is operating properly.
   3. Operation and Maintenance Data:
      a. Deliver 2 copies, covering the installed products, to the Director's Representative. Include:

1) Operation and maintenance data for each product.
2) Parts lists.
3) Lubrication charts.
4) Name, address, and telephone number of nearest fully equipped service organization.

1.06 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. The fire pump system shall be listed by Underwriters Laboratories Inc.
   2. The fire pump system shall be approved by the Factory Mutual System.
   3. Unless otherwise specified herein, conform to the requirements and recommendations of NFPA 20 - Centrifugal Fire Pumps.

B. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 24 working hours for the following:
   1. Render advice regarding installation and final adjustment of the system.
   2. Witness final system test and then certify with an affidavit that the system is installed in accordance with the contract documents and is operating properly.
   3. Train facility personnel in operation, and routine maintenance of the system.

1.07 DELIVERY, STORAGE, AND PROTECTION

A. Accept fire pumps and components on site in factory packing. Inspect for damage. Comply with manufacturers rigging and installation instructions.
B. Protect fire pumps and components from physical damage including effects of weather, water, and construction debris.
C. Provide temporary inlet and outlet caps, and maintain in place until installation.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Patterson Pumps

B. Xylem A-C Fire Pumps

C. Peerless Pumps

2.02 ELECTRICAL REQUIREMENTS - GENERAL

A. Short Circuit Withstand Rating: The fire pump system will be connected to a circuit capable of delivering not more than 22,000 RMS symmetrical amperes at 460 volts.

B. Continuous Current Ratings: Not less than required by the referenced codes and standards.

C. Premises Wiring System: 120/208 volt, 3 phase, 4 wire.

2.02 MOTORS

A. Motor (Nameplate) Voltage:
   1. 120/208 V and 277/480 V, Three Phase, 4W Premises Wiring Systems:
      a. Motors Less Than 1/2 HP: NEMA standard motor voltage 115 V, single phase, 60 Hz.
      b. Motors 1/2 HP and Larger:
         1) 208 Volt Circuit: NEMA standard motor voltage 200 V, three phase, 60 Hz. 208 V, 208-230 V, 220 V, or 230 V motors are not acceptable.
         2) 480 Volt Circuit: NEMA standard motor voltage 460 V, three phase, 60 Hz. 440 V motors are not acceptable.
   2. Nominal 240 V and 480 V, 3 phase, 3W Premises Wiring System:
      a. Motors Less Than 1/2 HP: NEMA standard motor voltage 230 V, single phase, 60Hz.
      b. Motors 1/2 HP and Larger:
         1) 240 Volt Circuit: NEMA standard motor voltage 230 V, three phase, 60 Hz.
         2) 480 Volt Circuit: NEMA standard motor voltage 460 V, three phase, 60 Hz. 440 V motors are not acceptable.

B. Horsepower Capacity: Each motor shall not be overloaded by the apparatus it operates under any condition of operation. Where a minimum horsepower capacity is listed, furnish a motor larger than the minimum, if required in any particular case. Pay any additional cost due to necessary increase in feeder sizes, circuit breaker sizes, etc.

C. Service Factor: The “Service Factor” is a multiplier, which, applied to the normal horsepower rating, indicates a permissible loading within the accepted safe limits of temperature rise for the insulation system. Service factor for each motor shall conform to NEMA standards.

D. Temperature Rise and Insulation System Class: Conform to NEMA standards.

E. Motor Housing: Conform to NEMA requirements for a drip-proof machine unless otherwise specified or indicated.

2.03 FIRE PUMP ASSEMBLY

A. Type: Factory assembled unit specifically designed for fire service, and comprised of fire pump and fire pump motor mounted on steel drip rim base, complete with coupling, OSHA approved coupling guard, and directly connected to the motor.

   1. The pump shall be counterclockwise rotation as viewed from the top.
   2. The pump discharge flange shall be rated for 250 lbs.

3. The pump casting shall be smooth, free of scale, lumps, cracks, sand holes, and defects of any nature which may make it unfit for the use for which it is intended.
4. The bolting of pressure-holding castings shall be such that the maximum stress on any bolt will not exceed one-fourth the elastic limit of the material as computed by using the stress area and on the basis of the water pressure equivalent to the shutoff pressure effective over the area out of the center line of the bolts.
5. The pump bearings shall have an L-10 rating of not less than 5,000 hours based on load ratings and fatigue life.
6. The shaft shall be sealed with a stuffing box and packing. The stuffing box glands shall exert uniform pressure on the packing.
7. The pump casing shall be hydrostatically strength-tested to a minimum of 250 PSI, or not less than twice the maximum shut-off pressure.

B. Fire Pump: Vertical turbine, Class 30, cast iron, bronze fitted, vertical turbine pump Patterson Model 12DMC-FP 5-stage unit, or approved equal capable of providing 500 gpm at 150 psi TDH.

C. Fire Pump Motor:
1. Specifically listed for fire pump service, 60 HP, 1770 RPM, 3 phase, 60 cycle, 460 volt.
2. Comply with NEMA standard MG-1 and be marked as complying with NEMA Design B standards.
3. Vertically mounted, open drip-proof, squirrel cage induction motor with a 1.15 service factor, suitable for starting with a wye-delta closed transition controller.

2.04 AUTOMATIC TRANSFER SWITCH AND FIRE PUMP CONTROLLER

A. Automatic Transfer Switch:
1. Listed for Fire Pump Service, dedicated to fire pump.
2. Isolating switch located in automatic transfer switch compartment, ahead of the alternate input terminals of the transfer switch.
   a. Isolating switch supervised to indicate when it is open.
   b. Interlock switch to prevent starting of diesel-alternator when isolating switch is open.
3. Accessories as required to perform the functions specified in SYSTEM DESCRIPTION.
4. Mounted in barriered compartments of fire pump controller.
5. Time Delays:
   a. Non Adjustable: Factory set at 3 seconds to override momentary outages.
   b. Adjustable: Time range of 0-30 minutes for retransfer to normal feeder with feature to run unit for 5 minutes unloaded.
6. Test switch to simulate normal feeder failure (unit start and transfer to emergency feeder).
7. Two identified pilot lights to indicate switch position (power source).
8. Engine start contacts.
9. Spare auxiliary contact on main shaft (closed on normal).

10. Spare auxiliary contact on main shaft (closed on emergency).
11. Accessories as required for dual control (2 transfer switches controlling one diesel-alternator unit).
12. Capable of being padlocked in the OFF position for installation and maintenance safety.

B. Fire Pump Controller:
1. Specifically listed for electric motor driven fire pump service, wye-delta closed transition, reduced voltage, automatic controller with isolating switch, and circuit breaker (disconnecting means), Firetrol Model FTT1350-AN75B, or approved equal.
2. Isolating switch located in fire pump controller compartment ahead of circuit breaker (disconnect means) input terminals.
   a. Each line terminal of isolating switch equipped with surge protective device. Comply with ANSI Standard C62.1 or C62.11.
3. Circuit breaker trip curve adjustment shall be factory set, tested, and sealed for the full load amps of the circuit breaker.
   a. Circuit breaker shall be capable of being field tested to verify actual pick up, locked rotor, and instantaneous trip points after field installation without disturbing incoming line and load conductors.
4. NEMA 2 enclosure housing controller and automatic transfer switch in barriered compartments, floor mounted utilizing floor mounting feet.
5. Visible indicator, connected to line side of controller, indicating:
   a. Power available (operating voltage is available to contactor coil).
   b. Phase reversal.
6. Auxiliary contacts for connection to the integrated fire protective signaling system. Separate contacts for each of the following:
   a. Loss of alarm supervisory power.
   b. Controller has operated into a motor running condition (fire pump running).
   c. Loss of line power on line side of fire pump controller, in any phase.
   d. Phase reversal on line side of fire pump controller.
   e. Automatic transfer switch isolating switch open.
7. Operator interface shall be provided with user keypad:
   a. Interface shall monitor and display motor operating conditions, including all alarms, events, and pressure conditions.
   b. The display shall be a minimum 2-line, 20-character, vacuum fluorescent, dot matrix type designed to allow easy viewing at all angles and in all light conditions.
   c. Shall be rated for NEMA 4X and 12 protection and shall be fully accessible without opening the controller door.
   d. Display and user interface shall utilize multiple levels of password protection for system security. A minimum of 3 password levels shall be provided.

e. Capable of displaying true RMS digital motor voltage and current measurements for all 3 phases. Voltage and current shall be measured by True RMS technology to provide the most accurate measurement for all sine waves, including non-sinusoidal waveforms. Average responding meters will not be accepted.

f. Digital display shall indicate text messages for the status and alarm conditions of (sequential start timer and minimum run timer/off delay timer shall be displayed as numeric values reflecting the value of the remaining time):
   1) Motor On
   2) Minimum Run Time/Off Delay Time
   3) Fail to Start
   4) Under Voltage
   5) Low Suction Pressure
   6) Emergency Start
   7) Drive Not Installed
   8) Disk Error
   9) Disk Near Full
   10) Sequential Start Time
   11) Local Start
   12) Remote Start
   13) System Battery Low
   14) Over Voltage
   15) Over Frequency
   16) Motor Overload
   17) Printer Error
   18) Pressure Error

g. LED visual indicators, visible with the door closed, shall indicate:
   1) Power On
   2) Pump Running
   3) Alarm
   4) Deluge Open
   5) Phase Failure
   6) Interlock On
   7) Emergency Isolating Switch Open
   8) Low System Pressure
   9) Transfer Switch Normal
   10) Transfer Switch Emergency
   11) Phase Reversal

h. Data Logging: the digital display shall monitor the system and log the following data:
   1) Motor Calls/Starts
   2) Last Trip Currents
   3) Last Breaker Trip
   4) Minimum Voltages
   5) Maximum Voltages
   6) Last Phase Failure
   7) Last Phase Reversal

8) Min/Max Pressure
9) Elapsed Motor Run Time
10) Elapsed Power On Time
11) Minimum Run Currents
12) Maximum Run Currents
13) Last Motor Run Time
14) Last Start Currents
15) Mix/Max Frequency

8. The controller shall record all operational and alarm events to system memory. All events shall be time and date stamped and include an index number. The system memory shall have the capability of storing a minimum of 3,000 events and allow the user access to the event log via the user interface.
   a. The controller shall have a built-in USB Host Controller with a USB port capable of accepting a USB Flash Memory Disk.
   b. The controller shall save all operation and alarm events to the flash memory on a daily basis. Each saved event shall be time and date stamped.
   c. The controller shall have the capability to save settings and values to the flash disk via the user interface.
   d. The controller shall feature a RS485 serial communications port for use with 2 or 4 wire Modbus RTU communications.
9. The controller shall be supplied with a solid state pressure transducer with a range of 0-300 psi (plus/minus 1 psi). The solid state pressure switch shall be used both for display of the system pressure and control of the fire pump controller.
   a. Systems using analog pressure devices or mercury switches for operational control will not be accepted.
   b. The START, STOP, and SYSTEM PRESSURE shall be digitally displayed and adjustable through the user interface.
   c. The pressure transducer shall be mounted inside the controller to prevent accidental damage. The pressure transducer shall be directly pipe mounted to a bulkhead pipe coupling without any other supporting members. Field connections shall be made externally at the controller coupling to prevent distortion of the pressure switch element and mechanism.
10. A digitally set On Delay (Sequential Start) timer shall be provided as standard. Upon a call to start, the user interface shall display a message indicating the remaining time value of the On Delay timer.
    a. The controller shall be field programmable for manual stop or automatic stop. If set for automatic stop, the controller shall allow the user to select either a Minimum Run Timer or an Off Delay Timer. Both timers shall be programmable through the user interface.
    b. The controller shall be fully programmable to allow up to 8 custom alarm messages to be displayed on the user interface.
    c. A weekly test timer shall be provided as standard. The controller shall have the ability to program the time, date, and frequency of the weekly test. In addition, the controller shall have the capability to display a preventative maintenance

message for a service inspection. The message text and frequency of occurrence shall be programmable through the user interface.

d. A Lamp Test feature shall be included. The user interface shall also have the ability to display the status of the system inputs and outputs.

11. The controller shall include two fully automatic, 200 amp hour, 4 step battery chargers. The chargers shall feature a qualification stage, in which the batteries are examined by the charger to insure that they are not defective and are capable of accepting a charge.

a. The battery charger shall feature:

1) Selectable AC Power Voltage
2) Selectable Battery Voltage
3) Selectable Battery Type
4) Charge Cycle Reset Push-Button

C. Remote Alarm Panel:

1. Surface mounted NEMA 1 enclosure.
2. Supervised visual and audible alarm indication for each of the following:
   a. Trouble conditions (supervised alarm circuit).
   b. Controller has operated into a motor running condition (fire pump running).
   c. Loss of line power on line side of fire pump controller, in any phase.
   d. Phase reversal on line side of fire pump controller.
   e. Automatic transfer switch isolating switch open.
3. Silencing switch for audible alarm. (Visual indication remains until alarm condition has been restored to normal).
4. Silencing switch for trouble conditions. The silencing switch silences the audible trouble signal only. Upon restoration to normal condition, the panel automatically resets or the audible trouble signal sounds again to indicate the abnormal position of a manual reset switch (ring back feature).
5. Input circuit suitable for operation on 120 V ac.

2.05 JOCKEY PUMP

A. Pump Type: centrifugal close-coupled vertical type, mechanical sealed, cast iron suction and discharge chambers, with stainless steel impeller, shaft, and wet parts, Grundfos 10S15-21, 1.5 hp, or approved equal, capable of providing 10 gpm at 173 psi.

B. Motor: 3450 rpm complete with vertical , squirrel cage induction motor with TEFC enclosure, rated for 3.00 HP, 3 phase, 60 cycle, 460 volt operation.

C. Controller: Full voltage magnetic, designed as jockey pump controller, as produced by Patterson, Firetrol Inc. Model FTA550F-AG003B, or Joslyn Clark Controls Inc., having:

1. NEMA 3R, driptight enclosure.

2. Three position, hand-off (H-O-A) selector switch mounted in controller enclosure.
3. Running period timer.
4. Pressure switch, externally mounted, 0-300 psi, suitable for fresh water.
5. Secondary control power transformer (maximum control voltage 120 volts).
6. Contacts for:
    a. remote indication pump running
    b. remote indication phase failure/reversal
    c. remote indication failed to start
    d. remote indication switch not in auto

2.06 FIRE PUMP SYSTEM PIPING ACCESSORIES

A. Jockey Pump:
1. Casing relief valve.

B. Fire Pump:
1. Automatic air release valve.
2. Casing relief valve.
3. Compound suction gage.
4. Discharge gage.

2.07 HOSE VALVE HEADER/TEST CONNECTION

A. Type:
1. Three-way wall mounted type with 6-inch flanged inlet and 1 rising stem fire pump test valves with 3 inch female N.P.T. inlets and 2 2-1/2 inch male hose thread outlets with caps and chains; wall escutcheon with "PUMP TEST CONN." cast into it; all brass with polished finish.
2. Flush type connections may be used where space will not accommodate a projecting unit.

2.08 FLOW METERING SYSTEM

A. Flow Element and Fittings: Venturi type, steel body with 150 pound weld neck flanges complete with quick disconnect valves, safety shut-off valves, with a metal identification tag chained to each fitting.
1. Include the following stamped data on tag: Pipe size, venturi series, station identification and meter reading at design flow rate. Select each venturi so that the design flow rate has a pressure differential suitable for use with the meter furnished. Maximum pressure loss through metering fittings shall not exceed 10 percent of the created differential pressure.

B. Flow Indicator: Wall mounted, GPM direct reading type with mounting brackets, assembly piping, connectors and valves; designed for a working pressure of 250 psi at 250 degrees F, and with meter scale as recommended by the fire pump manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION

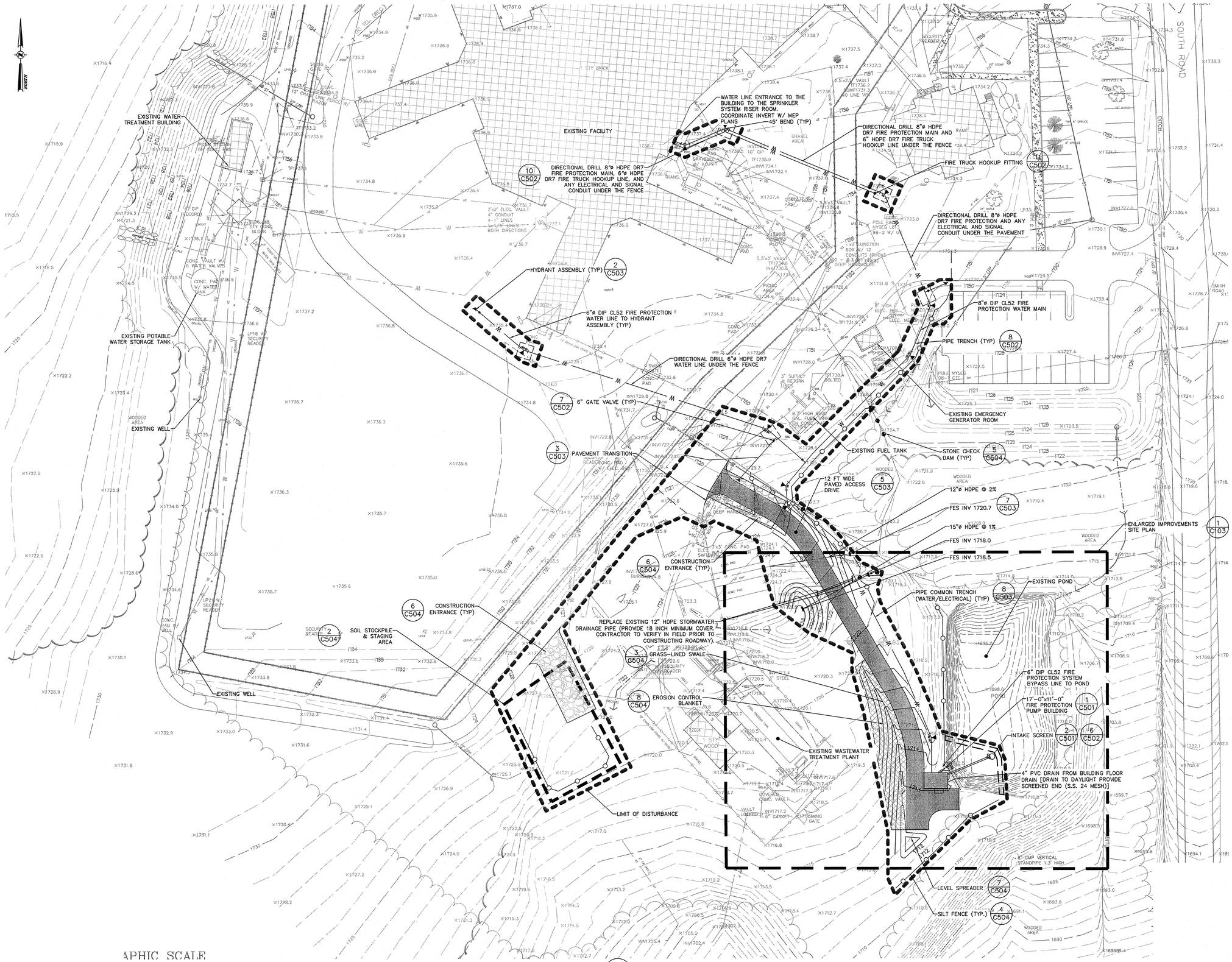
A. Unless otherwise shown as specified, install the Work of this Section in accordance with NFPA 20, and the manufacturer's printed instructions.

3.02 FIELD QUALITY CONTROL

A. Preliminary System Test:
   1. Preparation: Have the Company Field Advisor adjust the completed system and then operate it long enough to assure that it is performing properly.
   2. Run a preliminary test for the purpose of:
      a. Determining whether the system is in a suitable condition to conduct an acceptance test.
      b. Checking and adjusting equipment.
      c. Training facility personnel.

B. System Acceptance Test:
   1. Preparation: Notify the Director's Representative at least 3 working days prior to the test so arrangements can be made to have a Facility Representative witness the test.
   2. Make the following tests:
      a. Perform tests required by NFPA 20.
      b. Test each system function step by step as summarized in 2.04. AUTOMATIC TRANSFER SWITCH AND FIRE PUMP CONTROLLER.
   3. Supply all equipment necessary for system adjustment and testing.
   4. Submit written report of test results signed by Company Field Advisor and the Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly adjacent to the fire pump controller.

END OF SECTION



1 C102 **OVERALL IMPROVEMENTS SITE PLAN**
SCALE: 1"=30'

APHIC SCALE

Jan 15,2014 - 11:17am
X:\3\31200-31299\31232.01 MacCormick Center\Eng\dwg\6_44535_C-102_OVERALL IMPROVEMENTS SITE PLAN (14).dwg

36x24 PLOT SHEET

NYS OFFICE OF GENERAL SERVICES

Serving New York

ANDREW M. CUOMO
Governor

ROANN M. DESTITO
Commissioner

CONSULTANT

CHAZEN ENGINEERING, LAND SURVEYING & LANDSCAPE ARCHITECTURE CO., P.C.

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CHAZEN JOB# 31232.01

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK
RICHARD H. CHAZEN
057811
LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER FIRE PROTECTION SYSTEM IMPROVEMENTS

LOCATION:
MACCORMICK
SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

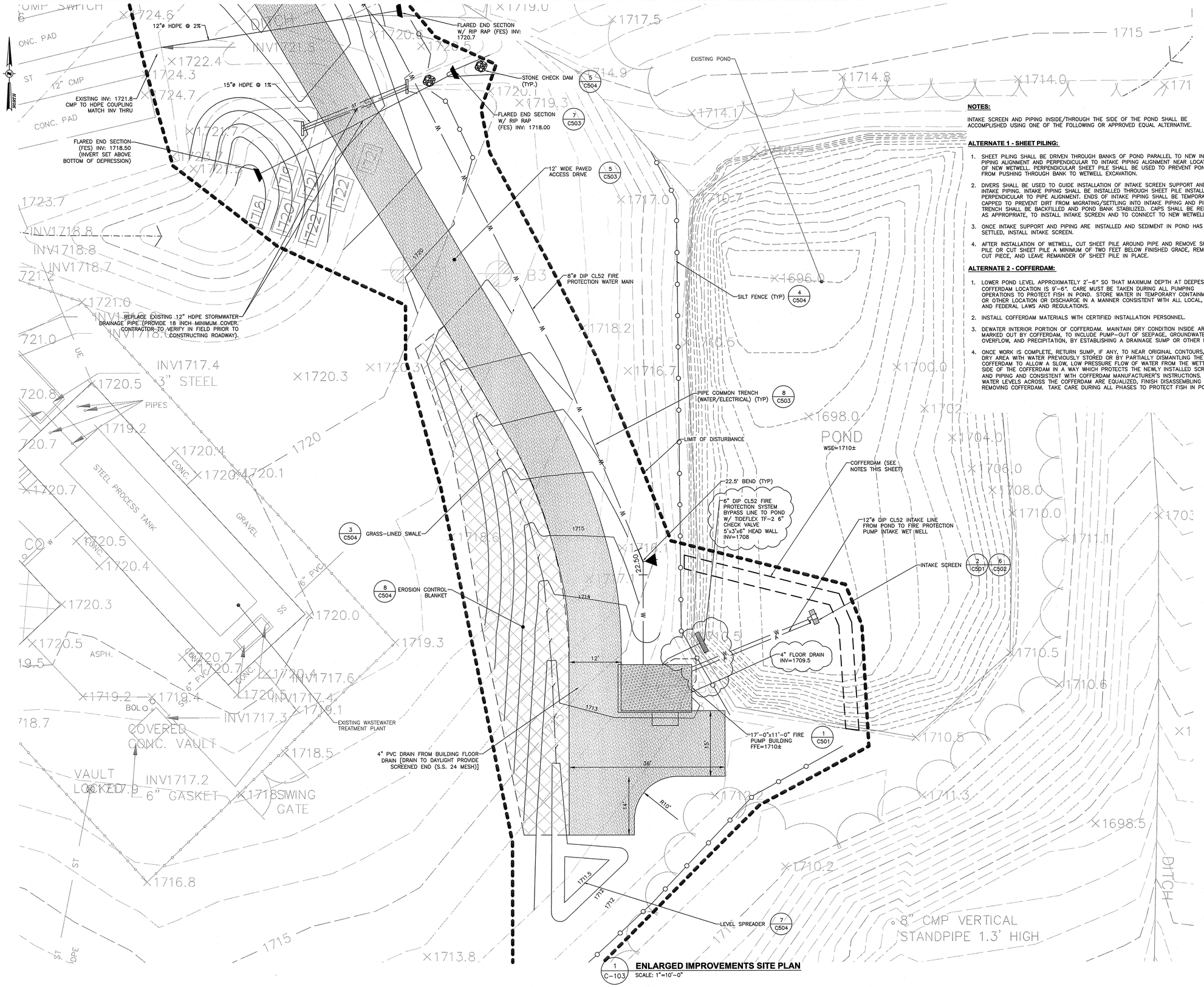
MARK	DATE	DESCRIPTION
	1/15/14	ADDENDUM 1
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	**44535-C**
DESIGNED BY:	DP/SCP
DRAWN BY:	RGL/SCP
FIELD CHECK:	
APPROVED:	EPJ

SHEET TITLE:
OVERALL IMPROVEMENTS SITE PLAN

DRAWING NUMBER:
C102

SHEET 6 OF 14



1 C-103 **ENLARGED IMPROVEMENTS SITE PLAN**
SCALE: 1"=10'-0"

NOTES:

INTAKE SCREEN AND PIPING INSIDE/THROUGH THE SIDE OF THE POND SHALL BE ACCOMPLISHED USING ONE OF THE FOLLOWING OR APPROVED EQUAL ALTERNATIVE.

ALTERNATE 1 - SHEET PILING:

1. SHEET PILING SHALL BE DRIVEN THROUGH BANKS OF POND PARALLEL TO NEW INTAKE PIPING ALIGNMENT AND PERPENDICULAR TO INTAKE PIPING ALIGNMENT NEAR LOCATION OF NEW WETWELL. PERPENDICULAR SHEET PILE SHALL BE USED TO PREVENT POND FROM PUSHING THROUGH BANK TO WETWELL EXCAVATION.
2. DIVERS SHALL BE USED TO GUIDE INSTALLATION OF INTAKE SCREEN SUPPORT AND INTAKE PIPING. INTAKE PIPING SHALL BE INSTALLED THROUGH SHEET PILE INSTALLED PERPENDICULAR TO PIPE ALIGNMENT. ENDS OF INTAKE PIPING SHALL BE TEMPORARILY CAPPED TO PREVENT DIRT FROM MIGRATING/SETTLING INTO INTAKE PIPING AND PIPE TRENCH SHALL BE BACKFILLED AND POND BANK STABILIZED. CAPS SHALL BE REMOVED, AS APPROPRIATE, TO INSTALL INTAKE SCREEN AND TO CONNECT TO NEW WETWELL.
3. ONCE INTAKE SUPPORT AND PIPING ARE INSTALLED AND SEDIMENT IN POND HAS SETTLED, INSTALL INTAKE SCREEN.
4. AFTER INSTALLATION OF WETWELL, CUT SHEET PILE AROUND PIPE AND REMOVE SHEET PILE OR CUT SHEET PILE A MINIMUM OF TWO FEET BELOW FINISHED GRADE, REMOVE CUT PIECE, AND LEAVE REMAINDER OF SHEET PILE IN PLACE.

ALTERNATE 2 - COFFERDAM:

1. LOWER POND LEVEL APPROXIMATELY 2'-6" SO THAT MAXIMUM DEPTH AT DEEPEST COFFERDAM LOCATION IS 9'-6". CARE MUST BE TAKEN DURING ALL PUMPING OPERATIONS TO PROTECT FISH IN POND. STORE WATER IN TEMPORARY CONTAINMENT OR OTHER LOCATION OR DISCHARGE IN A MANNER CONSISTENT WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.
2. INSTALL COFFERDAM MATERIALS WITH CERTIFIED INSTALLATION PERSONNEL.
3. DEWATER INTERIOR PORTION OF COFFERDAM. MAINTAIN DRY CONDITION INSIDE AREA MARKED OUT BY COFFERDAM, TO INCLUDE PUMP-OUT OF SEEPAGE, GROUNDWATER, OVERFLOW, AND PRECIPITATION, BY ESTABLISHING A DRAINAGE SUMP OR OTHER MEANS.
4. ONCE WORK IS COMPLETE, RETURN SUMP, IF ANY, TO NEAR ORIGINAL CONTOURS, REFILL DRY AREA WITH WATER PREVIOUSLY STORED OR BY PARTIALLY DISMANTLING THE COFFERDAM TO ALLOW A SLOW, LOW PRESSURE FLOW OF WATER FROM THE WETTED SIDE OF THE COFFERDAM IN A WAY WHICH PROTECTS THE NEWLY INSTALLED SCREEN AND PIPING AND CONSISTENT WITH COFFERDAM MANUFACTURER'S INSTRUCTIONS. ONCE WATER LEVELS ACROSS THE COFFERDAM ARE EQUALIZED, FINISH DISASSEMBLING AND REMOVING COFFERDAM. TAKE CARE DURING ALL PHASES TO PROTECT FISH IN POND.

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STATE OF NEW YORK · RICHARD H. CHAZEN · LICENSED PROFESSIONAL ENGINEER · 057818

CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER FIRE PROTECTION SYSTEM IMPROVEMENTS

LOCATION:
MACCORMICK SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
	1/15/14	ADDENDUM 1
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	**44535-C**
DESIGNED BY:	DP/SCP
DRAWN BY:	RGL/SCP
FIELD CHECK:	
APPROVED:	EPJ

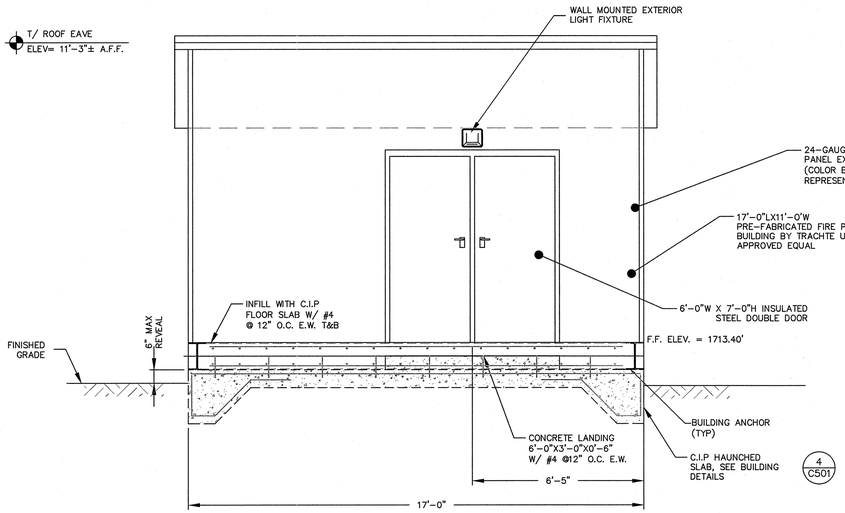
SHEET TITLE:
ENLARGED IMPROVEMENTS SITE PLAN

DRAWING NUMBER:
C103

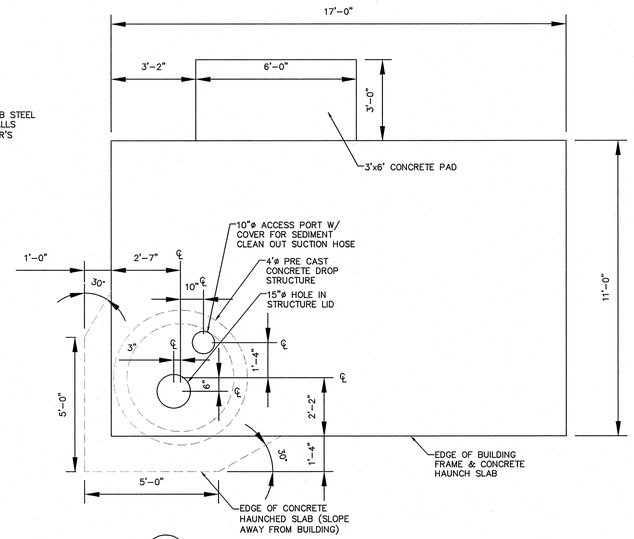
SHEET 7 OF 14

Jan 15,2014 - 11:18am
X:\31200-31299\31232.01 MacCormick Center\Eng\dwg\7_44535_C-103_ENLARGED IMPROVEMENTS SITE PLAN.dwg

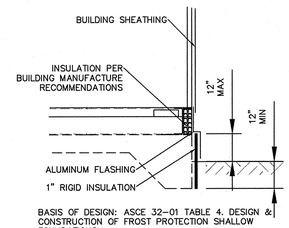
36x24 PLOT SHEET



1 C-104 **SOUTH ELEVATION - PREFABRICATED PUMP HOUSE BUILDING**
SCALE: 3/8" = 1'-0"

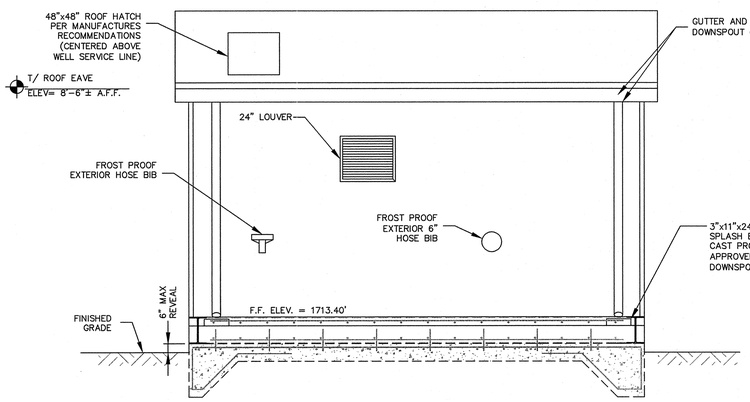


5 C-104 **PLAN - PREFABRICATED PUMP HOUSE BUILDING**
SCALE: 3/8" = 1'-0"

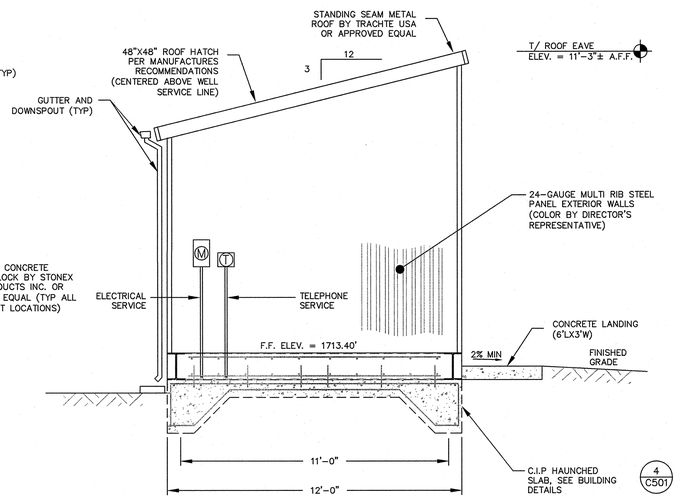


BASIS OF DESIGN: ASCE 32-01 TABLE 4. DESIGN & CONSTRUCTION OF FROST PROTECTION SHALLOW FOUNDATIONS.
ITHICA AIR FREEZING INDEX =1367
LINE USED LESS THAN 1,500 °F-DAYS.
VERTICAL INSULATION VALUE =4.5
HORIZONTAL NOT REQUIRED
MIN FOOTING DEPTH IS 12"

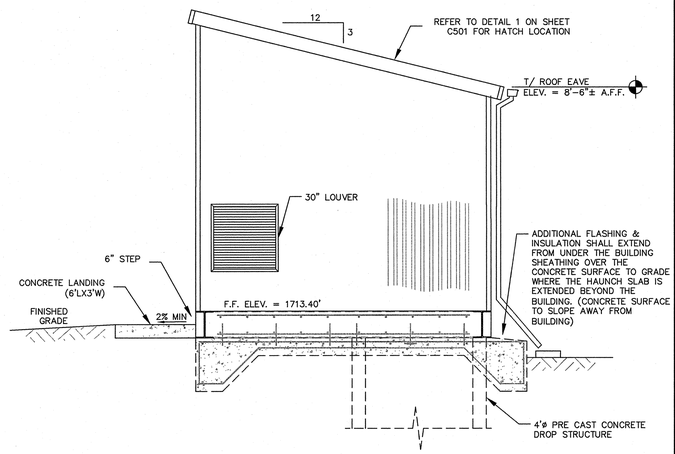
6 C-104 **FOUNDATION INSULATION TYPICAL**
SCALE: NTS



3 C-104 **NORTH ELEVATION - PREFABRICATED PUMP HOUSE BUILDING**
SCALE: 3/8" = 1'-0"



2 C-104 **WEST ELEVATION - PREFABRICATED PUMP HOUSE BUILDING**
SCALE: 3/8" = 1'-0"



4 C-104 **EAST ELEVATION - PREFABRICATED PUMP HOUSE BUILDING**
SCALE: 3/8" = 1'-0"

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CHAZEN JOB# 31232.01

STATE OF NEW YORK · RICHARD H. CHASE · 057901-1 · LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

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MACCORMICK SECURE CENTER
FIRE PROTECTION SYSTEM
IMPROVEMENTS

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	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

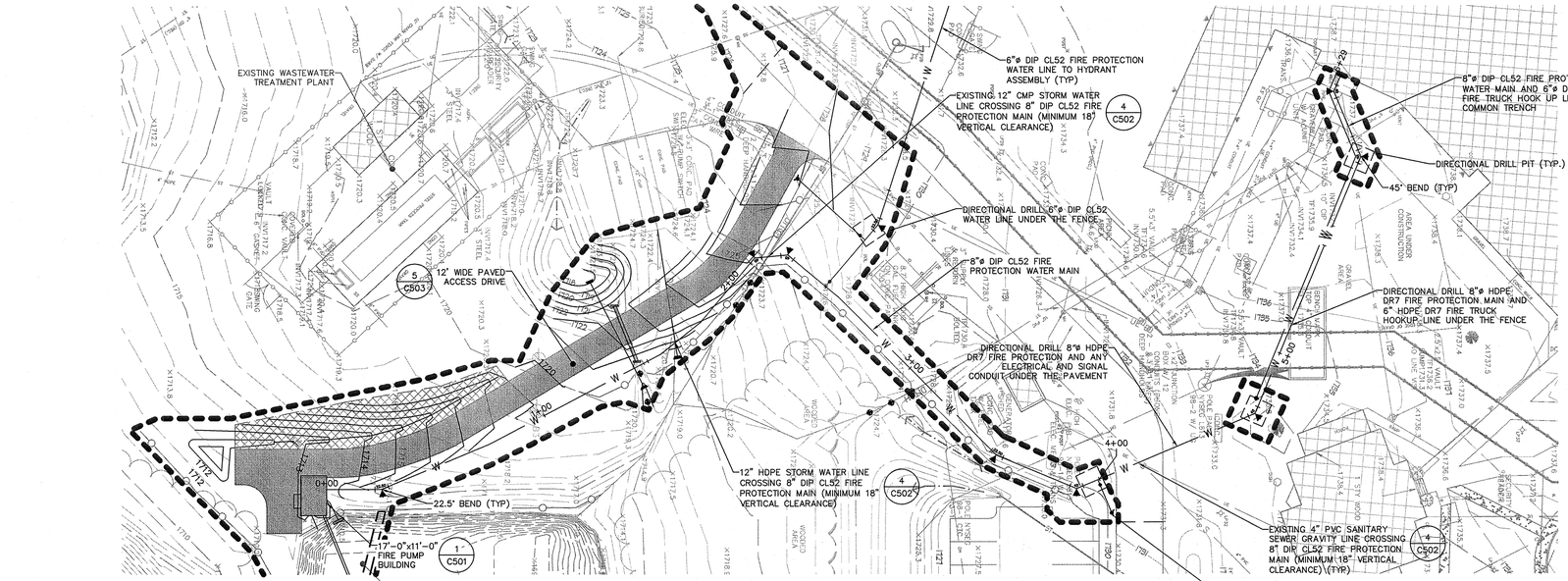
PROJECT NUMBER:	**44535-C**
DESIGNED BY:	DP/SCP
DRAWN BY:	RGL/SCP
FIELD CHECK:	
APPROVED:	EPJ

SHEET TITLE:
FIRE PUMP
BUILDING ELEVATIONS

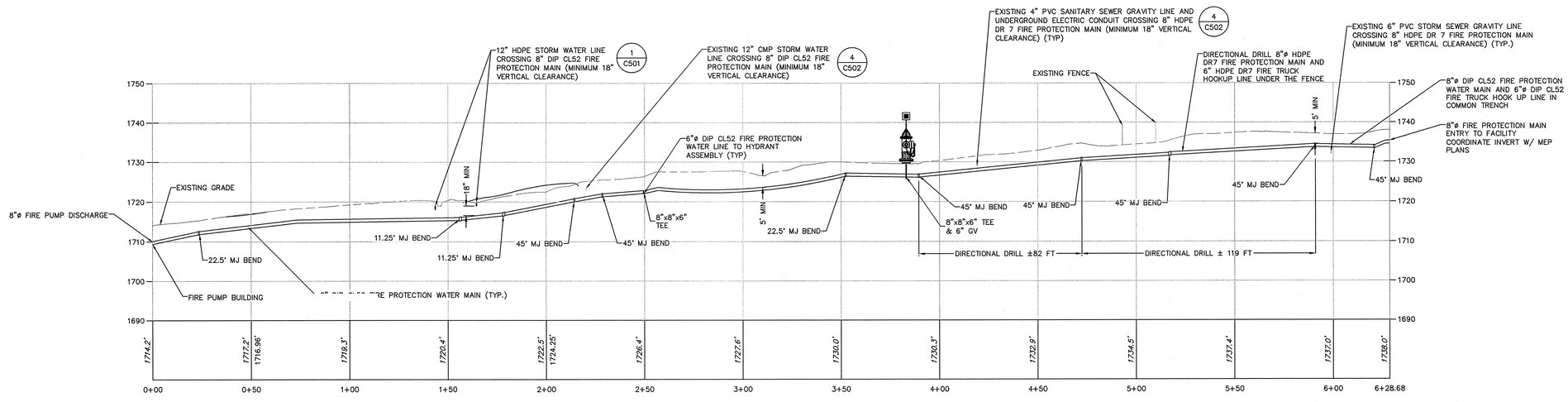
DRAWING NUMBER:
C104

SHEET 8 OF 14

Jan 15,2014 - 11:18am
X:\3\31200-31299\31232.01 MacCormick Center\Eng\dwg\8_44535_C-104_FIRE PUMP BUILDING ELEVATIONS.dwg
36x24 PLOT SHEET



1 C-301 **FIRE PROTECTION WATER MAIN PLAN VIEW**
SCALE: 1"=30'-0"



TRACER WIRE SHALL BE INSTALLED ALONG ALL DIRECTIONALLY DRILLED WATERMAIN AND EXTENDED TO NEAREST HYDRANT OR VALVE. TRACER WIRE SHALL BE STAINLESS STEEL 14 GAUGE (MIN.) WIRE WITH A 45 MIL HDPE JACKET MANUFACTURED BY KRIS-TECH WIRE OR APPROVED EQUAL.

DIP TO HDPE TRANSITION COUPLING SHALL BE USED BETWEEN CONVENTIONAL TRENCHED DIP WATER LINE & DIRECTIONAL DRILLED HDPE WATER LINE.

2 C-301 **FIRE PROTECTION WATER MAIN PROFILE**
SCALE: HORIZONTAL: 1"=30'-0"
SCALE: VERTICAL: 1"=15'-0"

NYS OFFICE OF GENERAL SERVICES
Serving New York
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Governor
ROANN M. DESTITO
Commissioner

CONSULTANT

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CHAZEN JOB# 31232.01

CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER
FIRE PROTECTION SYSTEM IMPROVEMENTS

LOCATION:
MACCORMICK
SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

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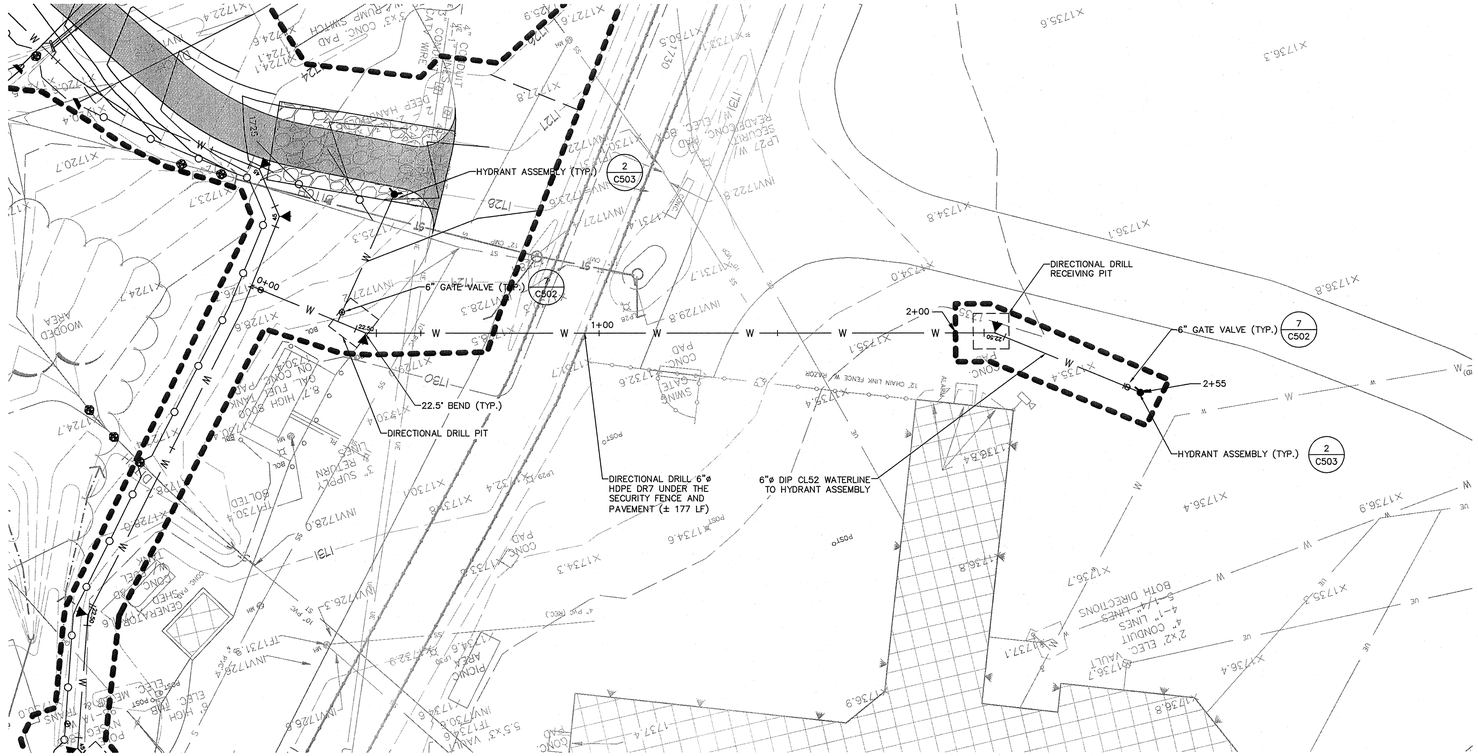
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	**44535-C**
DESIGNED BY:	DP/SCP
DRAWN BY:	RGL/SCP
FIELD CHECK:	
APPROVED:	EPJ

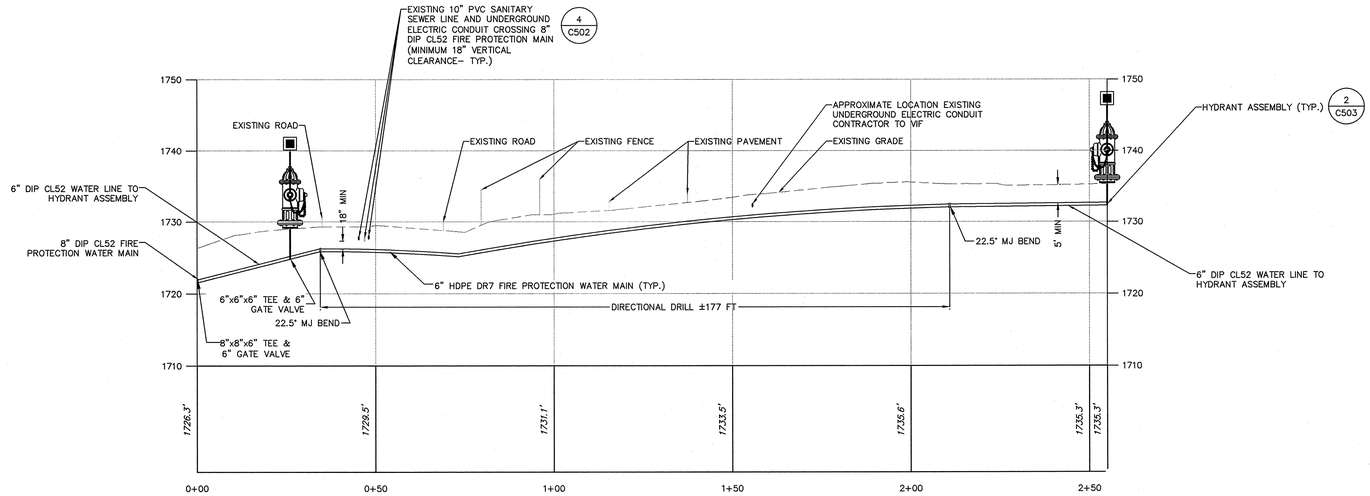
SHEET TITLE:
FIRE PROTECTION WATER MAIN PLAN & PROFILE– 1

DRAWING NUMBER:
C301

SHEET 9 OF 14



1 C-302 **FIRE PROTECTION WATER MAIN PLAN VIEW**
SCALE: 1"=20'-0"



TRACER WIRE SHALL BE INSTALLED ALONG ALL DIRECTIONALLY DRILLED WATERMAIN AND EXTENDED TO NEAREST HYDRANT OR VALVE. TRACER WIRE SHALL BE STAINLESS STEEL 14 GAUGE (MIN.) WIRE WITH A 45 MIL HDPE JACKET MANUFACTURED BY KRIS-TECH WIRE OR APPROVED EQUAL.

DIP TO HDPE TRANSITION COUPLING SHALL BE USED BETWEEN CONVENTIONAL TRENCHED DIP WATER LINE & DIRECTIONAL DRILLED HDPE WATER LINE.

2 C-302 **FIRE PROTECTION WATER MAIN PROFILE**
SCALE: HORIZONTAL: 1"=20'-0"
SCALE: VERTICAL: 1"=10'-0"

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STATE OF NEW YORK · RICHARD H. CHAZEN · 076718-1 · LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER
FIRE PROTECTION SYSTEM
IMPROVEMENTS

LOCATION:
MACCORMICK
SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
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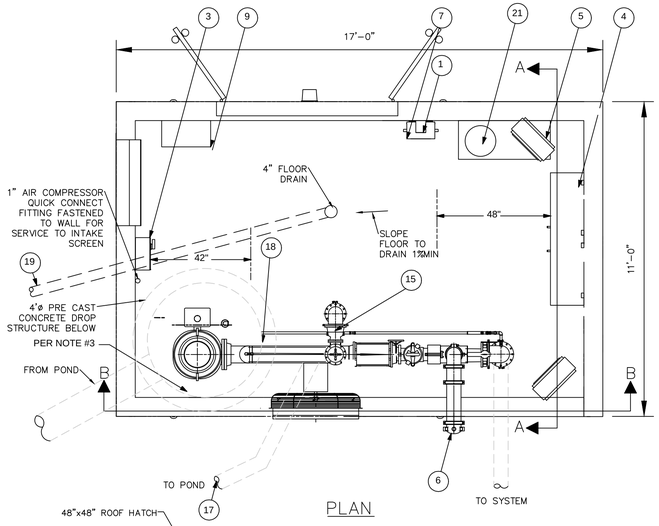
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	**44535-C**
DESIGNED BY:	DP/SCP
DRAWN BY:	RGL/SCP
FIELD CHECK:	
APPROVED:	EPJ

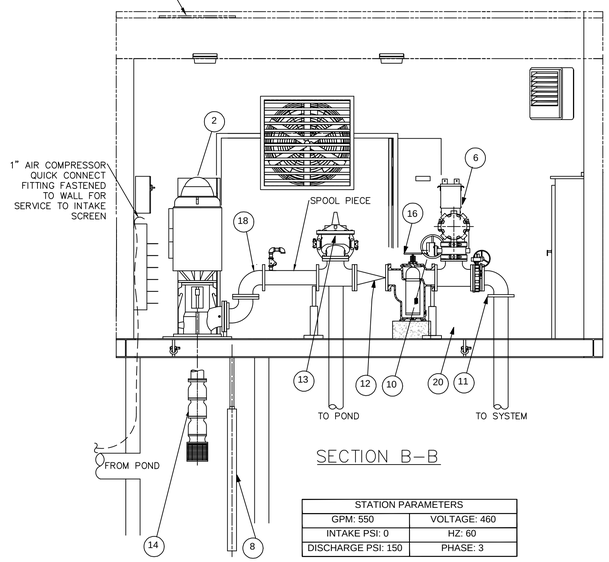
SHEET TITLE:
FIRE PROTECTION WATER MAIN PLAN & PROFILE–2

DRAWING NUMBER:
C302

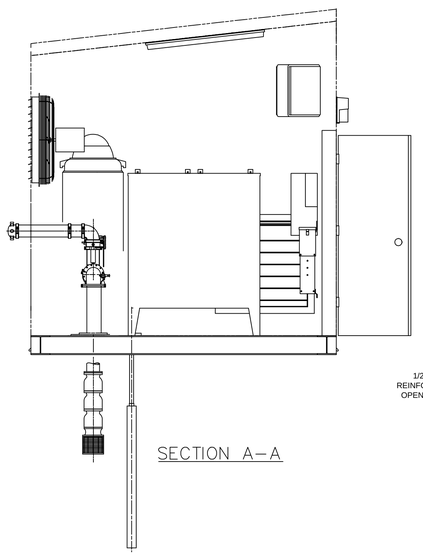
SHEET 10 OF 14



PLAN



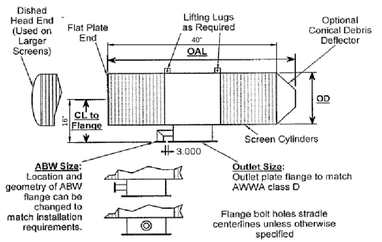
SECTION B–B



SECTION A–A

STATION PARAMETERS	
GPM: 550	VOLTAGE: 460
INTAKE PSI: 0	HZ: 60
DISCHARGE PSI: 150	PHASE: 3

BOM			
SYM	DESCRIPTION	P/N	ITEM QTY
1	DISCONNECT, 30 AMP	GE	1
2	ELECTRICAL,US,MOTOR, 447TPA-01	---	1
3	FPC,MOTOR,ELECTRIC,JOCKEY	100-400-106	1
4	FPC,MOTOR,ELECTRIC,MAIN	---	1
5	HEATER, W/ THERMOSTAT, 7.5KW	---	1
6	FROST-PROOF HOSE BIBB	100-200-362	1
7	POWER,PAK,5-KVA	80-003-010	1
8	PUMP, JOCKEY	---	1
9	LOAD CENTER	GE	1
10	VALVE,BFLY,ANVIL,GEAR,W/TAMPER,UL/ULC,6	20-005-367	1
11	VALVE,BFLY,LUG,NIBCO,LD3510-8,6	23-002-450	1
12	VALVE,CHECK,NIBCO,KW-900-W,6	23-002-240	1
13	VALVE,CLA-VAL,2050B-4KG1,CL150,6	100-200-458	1
14	VERTICAL TURBINE PUMP	---	1
15	WASTE CONE,C.S.,6X10,CL150,CLOSED	100-200-412	1
16	MODEL 72 SIMPLEX STRAINER 6"	---	1
17	6"Ø DIP CL52 DRAIN LINE TO POND	---	1
18	6"Ø DIP CL52 90° ELBOW	---	5
19	4"Ø PVC DRAIN LINE TO SWALE (PROVIDE SS24 MESH)	---	1
20	ADJUSTABLE PIPE SADDLE SUPPORT FIG.B3089 & FIG.B3095 C/W FIG.B3088T BASE STAND BY B-LINE OR APPROVED EQUAL. HOT-DIP GALVANIZED FINISH. (TYP)	---	1
21	INGERSOLL-RAND ELECTRIC 2 STAGE AIR COMPRESSOR	---	1



NOTES:

1. PIPING MUST BE SUPPORTED NEAR ALL INTERFACE CONNECTIONS TO ELIMINATE STRAIN.
2. ALL PIPING SUPPORTS ARE NOT SHOWN FOR CLARITY PURPOSES.
3. ALL POLYMERIC DRAIN LINE PIPING TO THIS LOCATION.
4. MINIMUM CLEARANCE TO ANY OBSTRUCTION REQUIRED BY THE NATIONAL ELECTRIC CODE AS SHOWN.
5. SHIPPING DIMENSIONS: 204L X 136W X 121H (INCHES).
6. ESTIMATED SHIPPING WEIGHT: 9,600 LBS, ESTIMATED OPERATING WEIGHT: 10,900 LBS.
7. CONDUIT AND SMALL PIPING RUNS TO FOLLOW STRUCTURAL MEMBERS, WHERE POSSIBLE, TO AVOID CREATING TRIP HAZARDS.
8. BASE PLATE SETTING PRIOR TO PIPING: GROUTING PROCEDURES AND FINAL ALIGNMENT MUST BE IN ACCORDANCE WITH THE XYLEM A–C FIRE PUMP INSTRUCTION MANUAL.
9. INSTALL CHECK VALVE WITH HINGE PINS IN THE VERTICAL POSITION.
10. PRESSURE SENSING LINE DRAINS TO BE PIPED TO THE SKID DRAIN MANIFOLD.

ITEMS TO SHIP LOOSE:

- F0B7–F020 HOSE HEADER, (8) 2.5" VALVES AND PIPING
- F0B7–F020 METERING AND PRESSURE GAGUES
- F0B7–F020 PUMPS AND MOTOR
- F0B7–F020 HEATERS

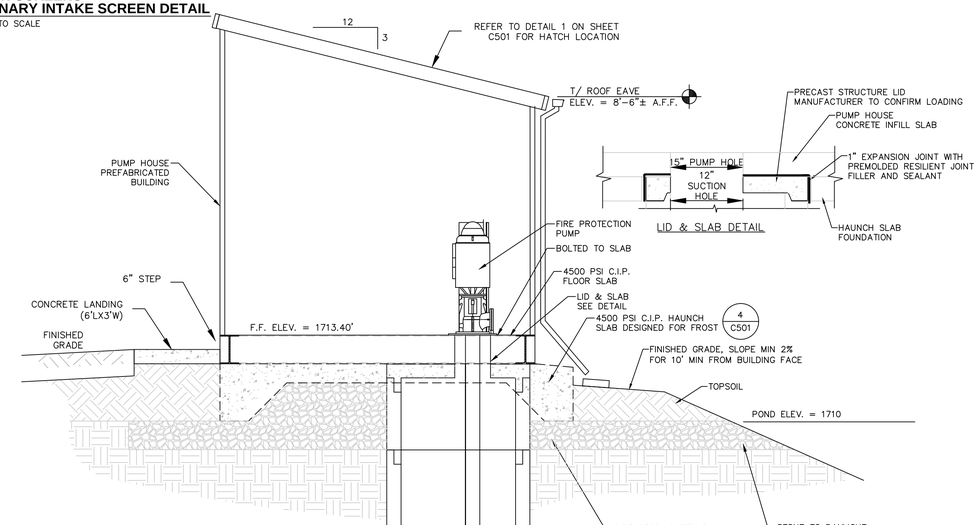
CUSTOMER INTERFACE CONNECTIONS:

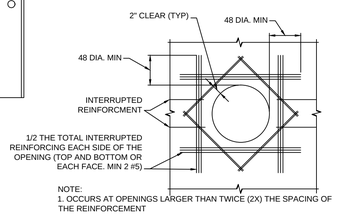
A) DISCHARGE: FLANGED, 6", CLASS 150#
B) LOAD CENTER: 460V/3PH/60HZ

PAINT SPECIFICATIONS:

- F0B7–F020 PAINT PER XYLEM FLOWTRONEX SPEC FPP–002

2 / C–501 **JOHNSON SCREENS PRELIMINARY INTAKE SCREEN DETAIL**
SCALE: NOT TO SCALE

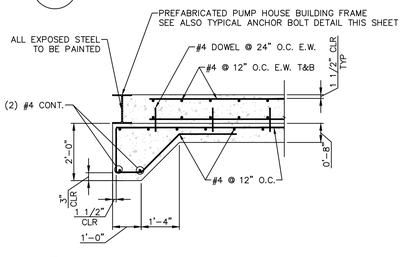




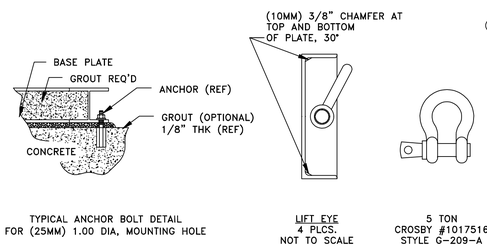
NOTE:
1. OCCURS AT OPENINGS LARGER THAN TWICE (2X) THE SPACING OF THE REINFORCEMENT

2. WHERE OPENINGS ARE IMMEDIATELY ABOVE FOOTING, COORDINATE ADDITIONAL VERTICAL REINFORCING WITH DOWELLS @ FOOTING LOCATIONS.

5 / C–501 **PIPE PENETRATION IN SLAB DETAIL**
SCALE: NOT TO SCALE



4 / C–501 **HAUNCHED SLAB DETAIL**
SCALE: NOT TO SCALE



TYPICAL ANCHOR BOLT DETAIL FOR (25MM) 1.00 DIA, MOUNTING HOLE

LIFT EYE 4 PLCS. NOT TO SCALE

5 TON CROSBY #1017516 STYLE G–209–A

1 / C–501 **FIRE PROTECTION PUMP BUILDING DETAILS**
SCALE: NOT TO SCALE

3 / C–501 **FIRE PROTECTION PUMP INTAKE WETWELL DETAIL**
SCALE: NOT TO SCALE

NYS OFFICE OF GENERAL SERVICES
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STATE OF NEW YORK RICHARD H. CHASIN 090918-1 LICENSED PROFESSIONAL ENGINEER

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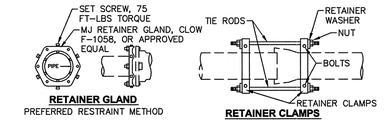
DRAWN BY:	RGL/SCP	
FIELD CHECK:		
APPROVED:	EPJ	

SHEET TITLE:
FIRE PUMP BUILDING DETAILS

DRAWING NUMBER:
C501

SHEET 11 OF 14

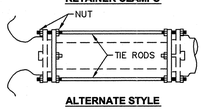


RETAINER GLAND
PREFERRED RESTRAINT METHOD

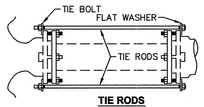
RETAINER CLAMPS

NO. OF TIE RODS REQUIRED

PIPE SIZE INCHES	MIN NO. OF 3/4 "RODS
6	2
8	2

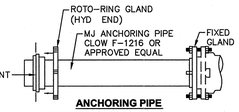


ALTERNATE STYLE



TIE RODS
AS MANUFACTURED BY STAR SUPPLY CORP OR APP EQUAL, HIGH-STRENGTH CORTEN

NOTES:
1. APPLIES TO 5/8" RODS AS WELL.
2. MIN NO. OF 1" RODS.



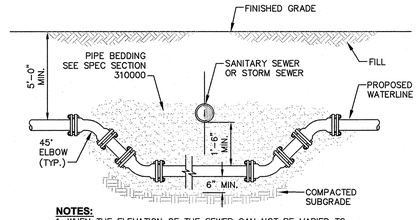
ANCHORING PIPE
PREFERRED FOR HYD INSTALLATION

® 1 / C-502 **THRUST RESTRAINT OPTIONS**
SCALE: NOT TO SCALE

SCHEDULE OF JOINT RESTRAINT DIP (LENGTH OF PIPE EACH SIDE OF FITTING TO BE RESTRAINED IN FEET)													
PIPE SIZE (INCHES)	FITTING TYPE							REDUCER					
	90°	45°	22½°	11¼°	TEE	VALVE	DEAD END	24"	18"	16"	12"	10"	8"	6"
8"	70	29	14	7	55	58	58							24
6"	54	22	11	5	41	44	44							

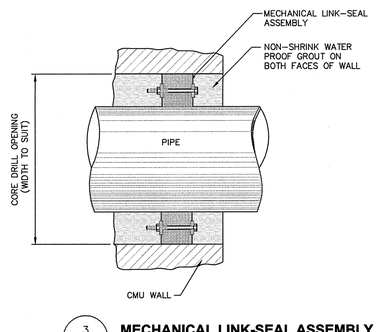
NOTES:
1. THE LENGTH OF PIPE REQUIRING RESTRAINT IS BASED UPON THE FOLLOWING ASSUMPTIONS:
   A. BEDDING TYPE 2 – FLAT BOTTOM TRENCH, BACKFILL LIGHTLY CONSOLIDATED TO CENTER LINE OF PIPE.
   B. SOIL TYPE CLAY 1 – CLAY OF MEDIUM TO LOW PLASTICITY, LL<50, <25% COURSE PARTICLES [CL & CL–ML] :
      CL – INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS. LEAN CLAYS
      ML – INORGANIC SILTS, VERY FINE SAND, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS.
   C. DEPTH TO TOP OF PIPE 5'–0" MINIMUM
   D. MAXIMUM OPERATING PRESSURE OF 150 PSI
   E. FACTOR OF SAFETY OF 1.5
2. FOR END PLUGS, RESTRAIN PIPE LENGTH GIVEN FOR DEAD END FITTING.
3. THE LENGTH OF NEW PIPE TO BE RESTRAINED IS THE LENGTH FOR EACH SIDE OF THE FITTING. EXISTING PIPE SHALL NOT BE RESTRAINED EVEN IF THE REQUIRED RESTRAINED LENGTH INCLUDES LENGTH OF EXISTING PIPE.
4. THE ABOVE INFORMATION WAS PROVIDED USING THE THRUST RESTRAINT PROGRAM ISSUED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) AND IS BASED ON THE ASSUMPTIONS LISTED IN NOTE 1. RESTRAINED LENGTH REQUIREMENTS FOR FIELD CONDITIONS AND PIPE SIZES DIFFERING FROM THOSE LISTED ABOVE SHOULD BE EVALUATED SEPARATELY.

® 2 / C-502 **JOINT RESTRAINT SCHEDULE AND NOTES**
SCALE: NOT TO SCALE

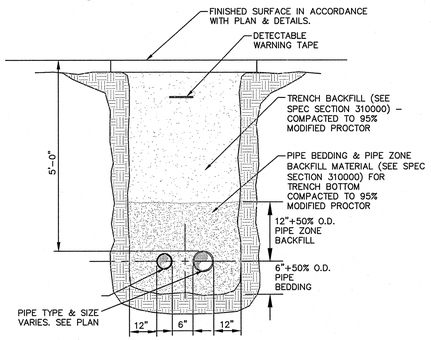


NOTES:
1. WHEN THE ELEVATION OF THE SEWER CAN NOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS REQUIRED SEPARATION.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150psi TO ASSURE WATER TIGHTNESS.

® 4 / C-502 **WATERLINE OFFSET DETAIL**
SCALE: NOT TO SCALE

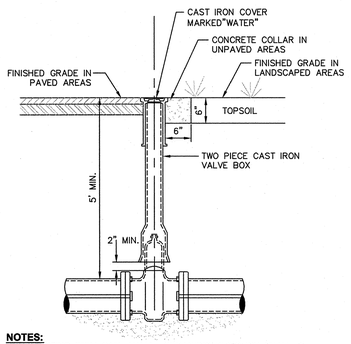


® 3 / C-502 **MECHANICAL LINK-SEAL ASSEMBLY**
SCALE: NOT TO SCALE



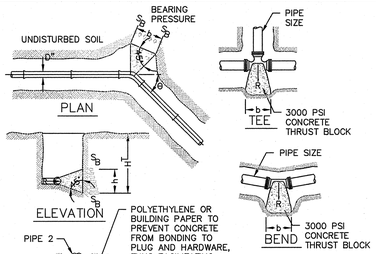
NOTES:
1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN–OF–BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN IN SPEC SECTION 310101.
2. TRENCH BACKFILL SHALL BE A NATURAL RUN–OF–BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN IN SPEC SECTION 310101.
   IN NON–TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND COMPACTED TO 90% MODIFIED PROCTOR.
3. FURNISH AND INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

® 10 / C-502 **PIPE COMMON TRENCH DETAIL (TYPICAL)**
SCALE: NOT TO SCALE



NOTES:
1. NON–RISING STEM GATE VALVE, OPERATING DIRECTION SHALL BE COUNTERCLOCKWISE TO OPEN.
2. MINIMUM DISTANCE TO JOINTS, FITTINGS, OR OTHER WET TAPS OR STOPS SHALL BE 3 FEET.
3. IF VALVE IS TO BE RODDED, PROVIDE VALVE WITH RODDING FLANGES OR EYEBOLTS. TWO (2) 3/4"ø GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 180° SPACING SHALL BE USED FOR RODDING VALVES.
4. GATE VALVE & VALVE BOX SHALL BE AS MANUFACTURED BY (MUELLER, CLOW OR WATROUS) OR APPROVED EQUIVALENT.

® 7 / C-502 **TYPICAL GATE VALVE DETAIL**
SCALE: NOT TO SCALE



BEARING AREA (B) AND THRUST (R) SHALL BE DETERMINED BASED UPON THE SIZE OF PIPE 2.

TEE WITH PLUG

REQUIRED BEARING AREAS –B (SQFT) FOR BEARING BLOCKS*					
PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	22 1/2 ° BEND	11 1/4 ° BEND
6	4.2	5.9	3.2	1.6	0.8
8	7.2	10.1	5.5	2.8	1.4

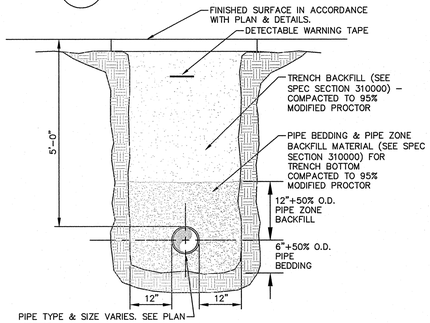
*FACTOR OF SAFETY=1.5 SOIL BEARING OF 3,000 PSF 225 PSI DESIGN PRESSURE
*BEARING AREA (B) = bxh

NOTES:
1. CONCRETE SHALL NOT OVERLAP ANY JOINT.
2. THRUST BLOCKS SHALL BE CONFIGURED IN A MANNER THAT DOES NOT INTERFERE WITH REMOVAL OR INSTALLATION OF ANY JOINTING COMPONENTS.
3. FOR REDUCERS, USE MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS.
4. BEARING SURFACE SHALL, WHERE POSSIBLE, BE PLACED AGAINST UNDISTURBED SOIL WHERE THAT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND UNDISTURBED SOIL MUST BE COMPACTED TO AT LEAST 90% STANDARD PROCTOR DENSITY.
5. BLOCK HEIGHT (h) SHALL BE EQUAL TO OR LESS THAN ONE–HALF THE TOTAL DEPTH TO THE BOTTOM OF THE BLOCK, (HT), BUT NOT LESS THAN THE PIPE DIAMETER (D).
6. BLOCK HEIGHT (h) SHALL BE ESTABLISHED SUCH THAT THE CALCULATED BLOCK WIDTH (b) VARIES BETWEEN ONE AND TWO TIMES THE HEIGHT.
7. VALUES FOR TEES APPLY TO TEES, END PLUGS, CAPS, AND TAPPING SLEEVES.
8. REQUIRED BEARING AREAS ARE DEVELOPED TO RESIST THRUSTS RESULTING FROM 150 PSI WORKING PRESSURE PLUS 50%(75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE. REQUIRED BEARING AREAS ARE BASED UPON AN ALLOWABLE SOIL BEARING CAPACITY OF 3,000 POUNDS PER SQUARE FOOT. IN RESPONSE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS REQUIRED MAY BE MODIFIED BY THE DIRECTOR'S REPRESENTATIVE.

SOIL	BEARING STRENGTH Sa (LB/SQ FT)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

9. IN MUCK, PEAT, OR RECENTLY PLACED FILL, ALL THRUSTS SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS; ALL AS REQUIRED BY THE DIRECTOR'S REPRESENTATIVE.
10. CONCRETE THRUST BLOCK SHALL BE USED ONLY AS ALLOWED BY THE PROJECT PLANS AND/OR SPECIFICATION. (IF RESTRAINED JOINT PIPE IS TO BE USED SEE SCHEDULE OF JOINT RESTRAINED PIPE.)

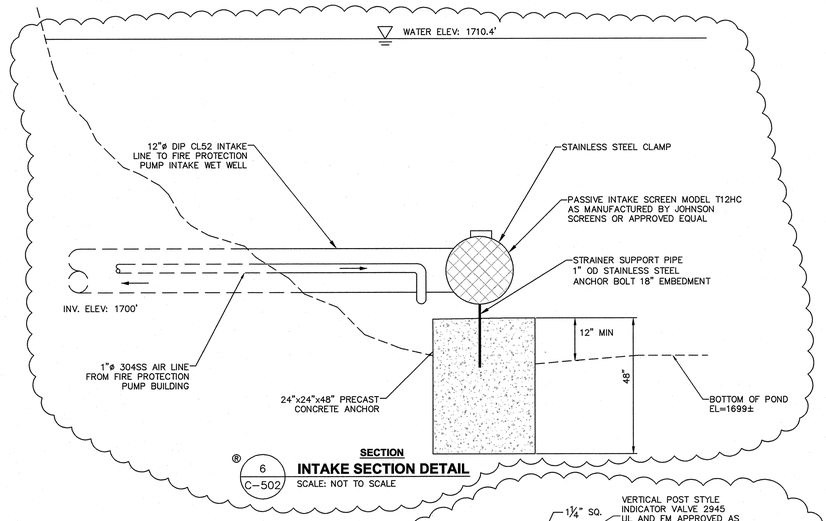
® 5 / C-502 **CONCRETE THRUST BLOCK DETAILS**
SCALE: NOT TO SCALE



PIPE TYPE & SIZE VARIES. SEE PLAN

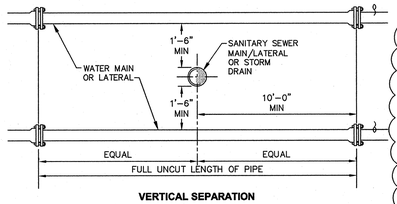
NOTES:
1. PIPE BEDDING & PIPE ZONE BACKFILL SHALL BE A NATURAL RUN–OF–BANK (R.O.B.) SAND OR A MIXTURE OF CRUSHED STONE AND GRAVEL, FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. BEDDING GRADATIONS SHALL BE APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN IN SPEC SECTION 310101.
2. TRENCH BACKFILL SHALL BE A NATURAL RUN–OF–BANK (R.O.B.) OR PROCESSED GRAVEL, OR EXCAVATED MATERIAL FREE OF SOFT, NONDURABLE PARTICLES, ORGANIC MATERIALS AND ELONGATED PARTICLES, AND SHALL BE WELL GRADED FROM FINE TO COARSE PARTICLES. TRENCH BACKFILL GRADATIONS SHALL BE APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN IN SPEC SECTION 310101.
   IN NON–TRAFFIC UNPAVED AREAS TRENCH BACKFILL CAN BE MATERIALS EXCAVATED FROM THE TRENCH AS APPROVED BY THE DIRECTOR'S REPRESENTATIVE AND COMPACTED TO 90% MODIFIED PROCTOR.
3. FURNISH AND INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
4. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

® 8 / C-502 **PIPE TRENCH DETAIL (TYPICAL)**
SCALE: NOT TO SCALE

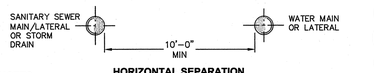


SECTION

® 6 / C-502 **INTAKE SECTION DETAIL**
SCALE: NOT TO SCALE



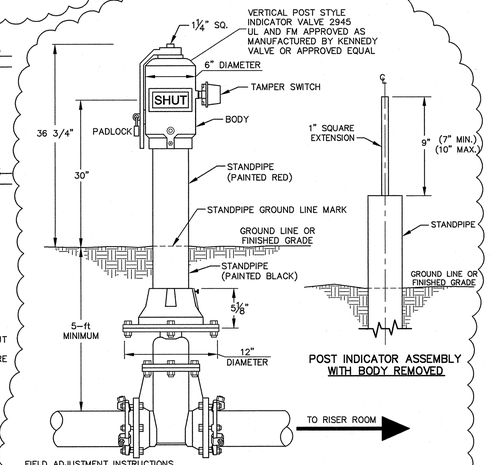
VERTICAL SEPARATION



HORIZONTAL SEPARATION

NOTES:
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE NYS HEALTH DEPARTMENT EXCEPT AS SHOWN ON THE PLANS. OFFSETTING OF WATERLINE SHALL BE REQUIRED WHERE SEPARATION DISTANCES CANNOT BE MAINTAINED.
2. WHEN IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS INDICATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT DUCTILE IRON PIPE OR PVC WATER WORKS GRADE PRESSURE PIPE FOR 10' EACH SIDE OF CROSSING AND SHALL BE PRESSURE TESTED TO 150psi TO ASSURE WATER TIGHTNESS.

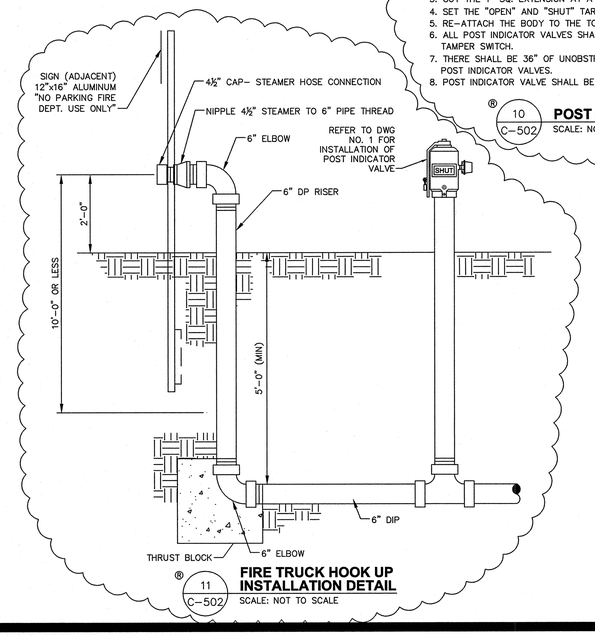
® 9 / C-502 **SANITARY/STORM SEWER AND WATERMAIN SEPARATION DETAIL**
SCALE: NOT TO SCALE



POST INDICATOR ASSEMBLY
WITH BODY REMOVED

FIELD ADJUSTMENT INSTRUCTIONS
1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE–ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN ELECTRONIC UL LISTED TAMPER SWITCH.
7. THERE SHALL BE 36" OF UNOBSTRUCTED CLEARANCE AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.
8. POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 5–ft FROM BUILDING.

® 10 / C-502 **POST INDICATOR VALVE**
SCALE: NOT TO SCALE



® 11 / C-502 **FIRE TRUCK HOOK UP INSTALLATION DETAIL**
SCALE: NOT TO SCALE

NYS OFFICE OF GENERAL SERVICES

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CHAZEN ENGINEERING, LAND SURVEYING
LANDSCAPE ARCHITECTURE CO., P.C.

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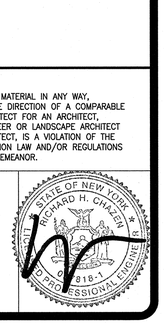


CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER FIRE PROTECTION SYSTEM IMPROVEMENTS

LOCATION:
MACCORMICK SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

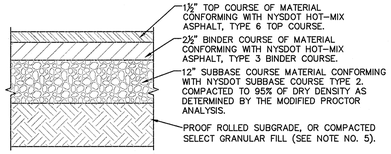
MARK	DATE	DESCRIPTION
	1/15/14	ADDENDUM 1
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	44535-C
DESIGNED BY:	RGL
DRAWN BY:	RGL
FIELD CHECK:	
APPROVED:	EPJ

SHEET TITLE:
FIRE PROTECTION WATER SYSTEM CONSTRUCTION DETAILS

DRAWING NUMBER:
C502

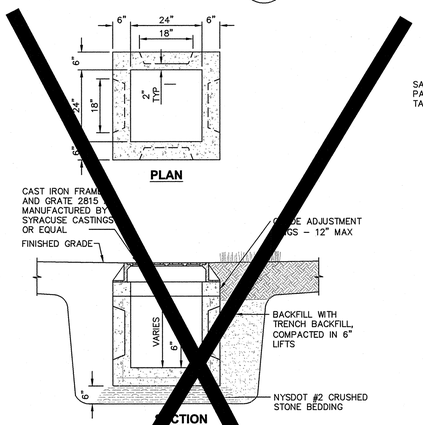
SHEET 12 OF 14



NOTES:

1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, DATED MAY 1, 2008, AND ALL ADDENDA THERETO.
2. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 – SUBBASE COURSE OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS.
3. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400–HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 403–HOT MIX ASPHALT (HMA) PAVEMENTS FOR MUNICIPALITIES.
4. TACK COAT WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407–TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
5. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203–EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.

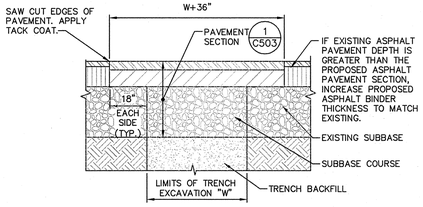
® 1 / C503 **PAVEMENT SECTION DETAIL**
SCALE: NOT TO SCALE



NOTES:

1. YARD INLET GRATE DESIGNS SHALL BE OF CAST CONCRETE. DESIGNED FOR HS20–44 VEHICULAR LOADING + 30% IMPACT AS MANUFACTURED BY FORT MILLER CO. OR EQUAL.
2. FRAME AND COVER SHALL BE DESIGNED FOR HS20–44 VEHICULAR LOADING & 25% IMPACT.
3. CONCRETE YARD INLET BASIN CASTING CLEAR OPENING DIMENSION MUST MATCH FRAME AND GRATE CLEAR OPENING DIMENSION.
4. YARD INLET BASINS HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE TOP OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
5. BACKFILL USING TRENCH BACKFILL, COMPACTED IN 6" LIFTS.
6. SUMPS FOR YARD INLET BASINS SHALL BE 12".
7. MAX STORM SEWER PIPE FOR YARD INLET BASIN IS

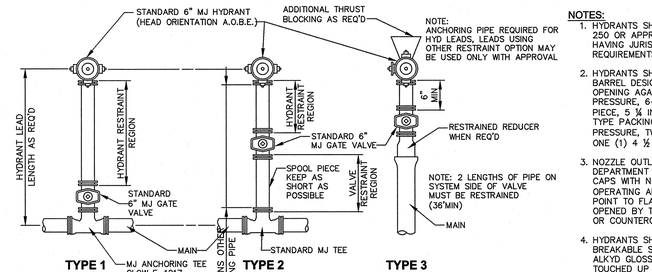
® 4 / C503 **YARD DRAIN DETAIL**
SCALE: NOT TO SCALE



NOTES:

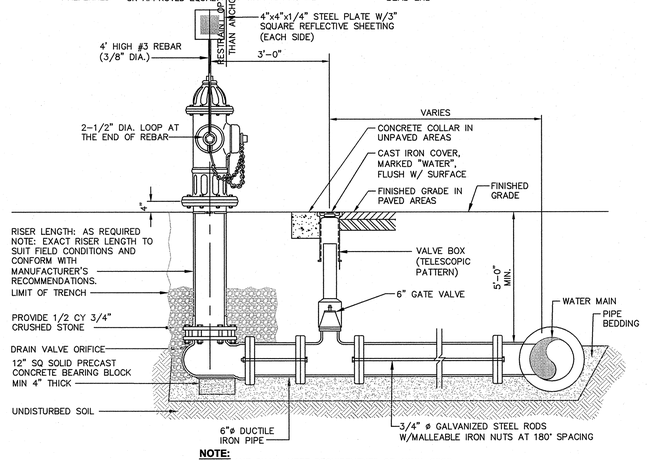
1. SAW CUT AS INDICATED, 18" BEYOND EXCAVATION.
2. FURNISH, PLACE, AND COMPACT SUBBASE.
3. TACK COAT IN ACCORDANCE WITH NYSDOT STANDARD SPEC.
4. FURNISH AND PLACE ASPHALT CONCRETE PAVEMENT AS SPECIFIED.

® 6 / C503 **TRENCH SURFACE RESTORATION IN ASPHALT PAVEMENT**
SCALE: NOT TO SCALE



NOTES:

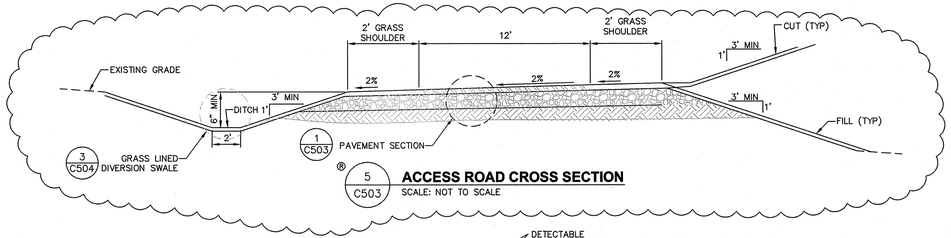
1. HYDRANTS SHALL BE MUELLER SUPER CENTURION 250 OR APPROVED EQUVALENT BY THE AUTHORITY HAVING JURISDICTION. HYDRANTS SHALL MEET REQUIREMENTS OF AWWA STANDARD C–502.
2. HYDRANTS SHALL BE CAST IRON BODY, DRY BARREL DESIGN, COMPRESSION–TYPE VALVE, OPENING AGAINST PRESSURE AND CLOSING WITH PRESSURE, 6–INCH MECHANICAL JOINT INLET FOOT PIECE, 5 ¼ INCH MAIN VALVE OPENING, O–RING TYPE PACKING, RATED FOR 250–PSI WORKING PRESSURE, TWO (2) 2 ½ INCH HOSE NOZZLES AND ONE (1) 4 ½ INCH PUMPER NOZZLE.
3. NOZZLE OUTLET THREADS SHALL MEET LOCAL FIRE DEPARTMENT REQUIREMENTS AND HAVE CAST IRON CAPS WITH NON–KINKING STEEL CHAINS. OPERATING AND CAP NUTS: PENTAGON 1 ½ INCH POINT TO FLAT. HYDRANT VALVES SHALL BE OPENED BY TURNING OPERATING NUT TO THE LEFT, OR COUNTERCLOCKWISE.
4. HYDRANTS SHALL BE TRAFFIC TYPE WITH BREAKABLE SAFETY FLANGE WITH RED EXTERIOR ALKYD GLOSS ENAMEL PAINT. HYDRANTS SHALL BE TOUCHED UP TO REMOVE ANY MARKS OR SCRAPED PAINT CAUSED BY INSTALLATION OR TRANSIT.



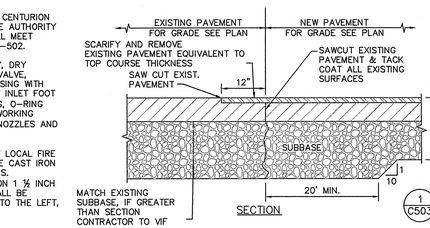
NOTE:

1. HYDRANT SHALL MEET REQUIREMENTS OF AWWA C502.

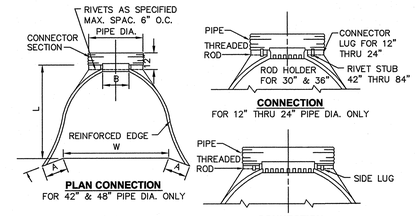
® 2 / C503 **HYDRANT ASSEMBLY DETAIL**
SCALE: NOT TO SCALE

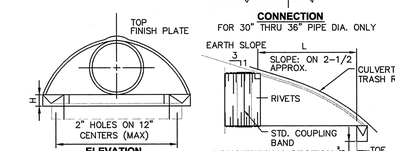


® 5 / C503 **ACCESS ROAD CROSS SECTION**
SCALE: NOT TO SCALE



® 3 / C503 **PAVEMENT TRANSITION DETAIL**
SCALE: NOT TO SCALE





TYPICAL CORRUGATED METAL END SECTION

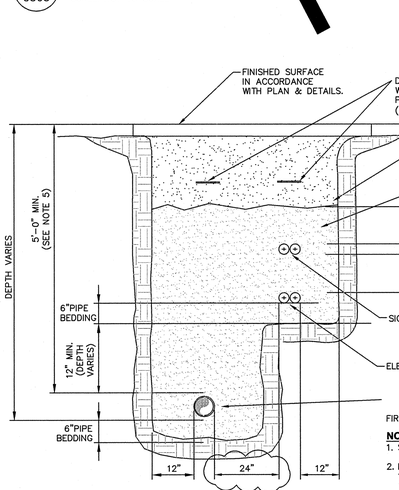
PIPE DIA.	GAGE	END SECTION DIMENSIONS (WITH TOLERANCE) A 1" TOL	B MAX.	H 1" TOL	L 1–1/2"	W 2" TOL.
12"	16	6"	6"	6"	21"	24"
15"	16	7"	8"	6"	26"	30"

END SECTION SHALL BE FURNISHED WITH A GAGE EQUAL TO THE GAGE OF THE PIPE BEING ATTACHED TO OR AS SHOWN ABOVE, WHICHEVER IS THE LARGEST GAGE.

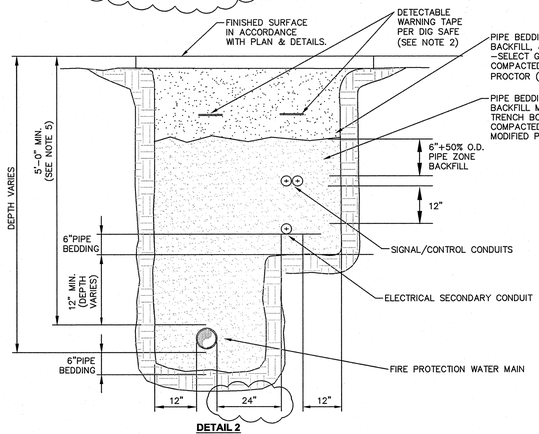
NOTES:

1. TOE PLATE TO BE PUNCHED TO MATCH HOLE IN SKIRT LIP. 3/8" GALV. BOLTS TO BE FURNISHED. LENGTH OF TOE PLATE = W + 10 FOR 12" DIA. PIPE.
2. SKIRT SECTION FOR 12" THRU 24" DIA. PIPE TO BE MADE IN ONE PIECE.
3. SKIRT SECTION FOR 30" THRU 48" DIA. PIPE MAY BE MADE FROM TWO SHEETS BY RIVETING OR BOLTING ON CENTER LINE.
4. CONNECTOR SECTION, CORNER PLATE TO BE SAME GAGE AS SKIRT.
5. TOE PLATE TO BE FURNISHED IN ALL END SECTIONS UNLESS OTHERWISE NOTED.
6. DETAILS ON TABLE SHOWN ARE BASED UPON METAL PIPE. CONTRACTOR TO VERIFY DIMENSIONS FOR HDPE END SECTIONS. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.
7. PROVIDE TRASH RACK ONLY WHERE SPECIFIED ON SITE PLANS.

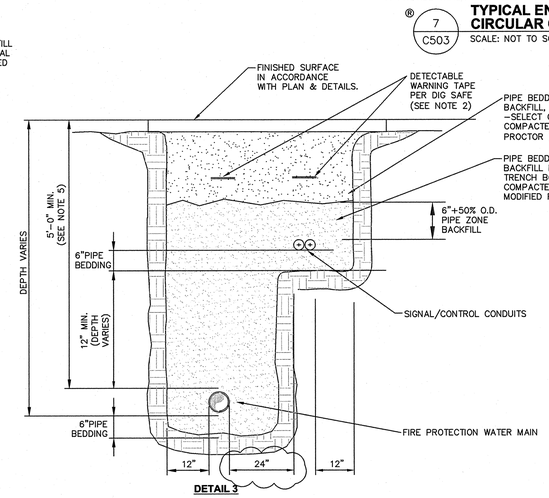
® 7 / C503 **TYPICAL END SECTION CIRCULAR CORRUGATED METAL PIPE**
SCALE: NOT TO SCALE



DETAIL 1



DETAIL 2



DETAIL 3

NOTES:

1. SELECT GRANULAR MATERIAL SHALL BE INSTALLED IN 6" LIFTS AND COMPACTED TO 98% MODIFIED PROCTOR COMPACTION.
2. FURNISH AND INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING, EXCEPT 6" BELOW SUBGRADE UNDER PAVEMENTS & SLAB.
3. TRENCHING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.
4. 5'–0" MIN COVER SHALL BE APPLIED TO WATER MAIN.
5. HORIZONTAL SEPARATION BETWEEN THE INSIDE EDGES OF THE WATER MAIN AND ELECTRICAL CONDUITS SHALL BE A MIN. OF 24" AND VERTICAL SEPARATION BETWEEN THE BOTTOM OF WATER MAIN AND TOP OF ELECTRICAL CONDUITS SHALL BE A MIN. OF 18".
6. ALL TRENCHING, BACKFILL, COMPACTION, SITE RESTORATION AND PAVEMENT REPAIR SHALL BE PROVIDED BY THE C–CONTRACT.

® 8 / C503 **COMMON WATER/ELECTRICAL TRENCH DETAIL**
SCALE: NOT TO SCALE

NYS OFFICE OF GENERAL SERVICES

Serving New York

ANDREW M. CUOMO
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CONSULTANT

CHAZEN ENGINEERING, LAND SURVEYING
LANDSCAPE ARCHITECTURE CO., P.C.

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CHAZEN JOB# 31232.01

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK — RICHARD H. CHAZEN — LICENSED PROFESSIONAL ENGINEER — 085618

CONTRACT:
CONSTRUCTION

TITLE:
MACCORMICK SECURE CENTER FIRE PROTECTION SYSTEM IMPROVEMENTS

LOCATION:
MACCORMICK SECURE CENTER
BROOKTONDALE, TOMPKINS COUNTY, NY

CLIENT:
NYS OFFICE OF CHILDREN AND FAMILY SERVICES

MARK	DATE	DESCRIPTION
	1/15/14	ADDENDUM 1
	07/22/13	FINAL SUBMISSION
	03/15/13	100% SUBMISSION
	02/22/13	SCHEMATIC

PROJECT NUMBER:	44535-C
DESIGNED BY:	RGL
DRAWN BY:	RGL
FIELD CHECK:	
APPROVED:	EPJ

SHEET TITLE:
GENERAL CIVIL CONSTRUCTION DETAILS

DRAWING NUMBER:
C503

SHEET 13 OF 14

Jan 15,2014 – 11:19am
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36x24 PLOT SHEET