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DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
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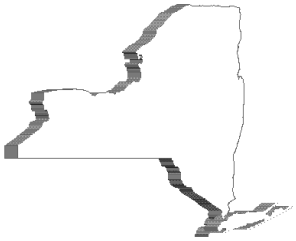

ADDENDUM NO. 2 TO PROJECT NO. 44496

CONSTRUCTION WORK, HVAC WORK AND ELECTRICAL WORK
REPLACE UNDER GROUND HEAT AND WATER LINES
ULSTER CORRECTIONAL FACILITY
750 BERME ROAD
NAPANOCH, NY

January 29, 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.

HVAC WORK SPECIFICATIONS

1. Document 003132: Add the attached Document (Pages 1 thru 29-Geotchnical Data) to the Project Manual.

2. Page 013113-2, Article 1.04: Delete this Article in its entirety and replace with the following:

"1.04 SCHEDULE PREPARER

A. The HVAC Contractor shall designate a Schedule Preparer responsible for the preparation of the Preliminary Project Schedule, the Baseline Project Schedule, and all required updates and reporting for the Project Schedule. The Schedule Preparer shall possess a minimum of five (5) years of construction related scheduling experience, shall have developed and maintained at least two (2) schedules for projects of similar size and scope, and shall be competent in the use of the specified Scheduling Software.

1. Submit intended Schedule Preparer's qualifications to the Director's Representative prior to the Project Schedule Definition Meeting including qualifying project names, locations, scope description, project construction value, the type of scheduling software utilized and the submitted representative's direct role on the projects noted.
2. During the period encompassing Project Award to Physical Completion, any substitution for the Schedule Preparer, needed or requested, will require the resubmission of qualifications to the Director's Representative in accordance with this article.
3. If a Schedule Preparer is needed by the Director's Representative to comply with the requirements of this section or related sections, the HVAC Contractor will assume all costs associated with the preparation and execution of the Preliminary, Baseline, and updated Project Schedule required by the Director's Representative."

3. Page 019113-19, Paragraph 3.9, A.: Add the following Subparagraph:
   "1. A maximum of 6 facility personnel will be included in the training."

4. Page 091114-2, Paragraph 1.3, A. 1. J.: Change "(241000)" to read "(019113)".

5. Page 011000-3, Paragraph 1.07, C. 1.: Add the following to this Subparagraph: "Remove the temporary boiler following completion of piping installation."

6. Pages 115120-1 thru 115120-5: Change Section Number in footer to read "115120".

7. Pages 115120-1, Article 1.01: Add the following Paragraph:
   "C. Provide the boiler for a maximum of 180 days and provide sufficient fuel for the required for the boiler to operate at its 100% operating capacity of 4,000 lbs/hr for that duration."

8. Page 230923-2, Paragraph 1.03 C: Delete this Paragraph in its entirety.

9. Page 230923-35, Subparagraph 230923, 3.05 A. 5. b. 3.: Delete this Subparagraph in its entirety.

10. Page 230923-40, Subparagraph 230923, 3.05 B. 3. a. 7.: Delete this Subparagraph in its entirety.

11. Page 230923-40, Subparagraph 230923, 3.05, B. 3. a. 10.: Delete this Subparagraph in its entirety.

12. Page 230923-40, Subparagraph 230923, 3.05 B. 3. b. 2.: Delete this Subparagraph in its entirety.

13. Page 230923-51, Subparagraph 230923, 3.05. E. 9. b: Delete this sentence in its entirety.

14. Page 230923-44, Paragraph 230923, 3.05 C: Add the following Subparagraph:
   "12. AC-1/ACCU-1
      a. Occupied Mode:
         1. The AC-1 supply fan H-O-A switch shall be manually placed in the automatic position.
         2. The DDC System shall start the supply fan and open the outside air damper whenever the DDC System building clock indicates the building is in occupied mode.
         3. The hot water coil control valve and the cooling system shall modulate in sequence with a deadband to maintain the space heating and cooling setpoints (adjustable).
         4. If the space requires cooling, The DDC shall enable the condensing unit ACCU-1, per existing unit mounted controller, to maintain the cooling space temperature setpoint.
         5. If the space requires heating, the associated 3-way control valve shall modulate to maintain the space temperature.
         6. The DDC shall prevent the discharge air temperature from dropping below 55 degrees F (adjustable) and shall alarm if the supply temperature drops below this setpoint.
      b. Unoccupied Mode:
         1. The supply fan shall cycle on and the heating control valve shall modulate as needed to maintain unoccupied space temperature setpoint of 55 degrees F (adjustable).
         2. Cooling and humidification shall be disabled when scheduled to be unoccupied.
      c. Monitor supply fan status with a current sensor and alarm at DDC if commanded on but unit is off.

d. Monitor supply air temperature and alarm at DDC if 10 degrees F (adjustable) less than or greater than setpoint.
e. Monitor the differential static pressure between the inlet and outlet of the filter and alarm if the pressure is outside of the systems operating range (adjustable).
f. Low-temperature stat (freeze-stat) shall protect the unit from freezing:
1. If temperature sensed by freeze-stat is 36 degrees F or below (adjustable), the outside air damper shall close, the supply fan shall stop, and the DDC shall alarm."

15. Page 230923-50, Subparagraph 230923, 3.05 E. 7. a. 2: Change "mixed air temperature set point" to read "supply air temperature set point".

16. Page 230923-50, Subparagraph 230923, 3.05 E. 7. a. 4: Change "fin tube" to read "hot water heating coil".

17. Page 230923-51, Paragraph 230923, 3.05 E: Add the following Subparagraph:
"11. Exhaust Fan (EF-6):
a. Energize fan to maintain space temperature of 85 degrees F (adjustable) as measured by either temperature sensor in the electrical room or the mechanical room."

18. Page 230923-25, Paragraph 2.12 C: Add the following Subparagraph:
"1. Aquastat shall be a totally enclosed Micro Switch snap-acting switches operating on temperature rise to set-point, single pole double throw switching, range of 65 - 200 degrees F, Honeywell Model L6006C1018 or equal. Provide bracket for strap on mounting."

19. Page 232123 -3, Subparagraph 2.02, B 2: Change "300 psi" to read "minimum 150 psi".

20. Page 232123 -3, Subparagraph 2.02, B 7: Change "Viton elastomers and Carbon/Silicon Carbide faces, rated up to 250 degrees F" to read "Ethylene Propylene Rubber (EPR) and Carbon/Silicon Carbide faces, rated up to 300 degrees F."

21. Page 230923-62, Subparagraph 230923, 3.05, K 1, a 4: Change "6,8,16,18 and 23" to read "6,8,16,10 and 23" in the last sentence.

22. Page 260502–3, Subparagraph 260502, 2.01, H1: Change "Wet Locations:" to read "For Exterior Communication Conduits."

23. Page 260502–9, Subparagraph 260502, 3.02, G1 e: Delete in its entirety and replace with the following
"e. Use expansion fittings where raceways cross expansion joints in the exterior overhead piping support steel."

HVAC WORK DRAWINGS

1. Drawing No. M-410, Detail 2, GENERAL NOTES: Add the following Note:
"2. 18'x6' chain link fence surrounding mechanical equipment shall be 8 feet high."

2. Drawing No. M-411, Detail 3: Delete this Detail in its entirety. Refer to Addendum Drawing No. M-412 dated 1/29/14 for Revised Detail.

3. Drawings No. M-700 POINTS LIST: Add the following point to Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
Pump PP-1 High Level	X				A

4. Drawing No. M-700, Keyed Notes, Note 5: Add the following at the end of the Note: "Provide modbus interface for communication with electrical power meter."

5. Drawing No. M-304, General Notes: Add the following Note:
"3. Continue 1 inch fiber optic communications conduit through utility tunnel alongside piping to Building 21 DDC panel location."

6. Drawing No. G-002, Notes, Note 26: Change "1 inch" to read "1-1/4 inch" in the first sentence.

7. Drawing No. M-702, Detail 1: Add an outdoor air temperature sensor on the exterior of the west wall of the building.

8. Drawing No. M-702, Points List: Change "Outdoor Air Temperature" to read "Outdoor Air Temperature (EAST)".

9. Drawing No. M-702, Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
Outdoor Air Temperature (WEST)			X		T

10. Drawing No. M-703 POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
AC-1A filter differential pressure			X		T, A
AC-1 filter differential pressure			X		T, A
AC-2 filter differential pressure			X		T, A
AC-3 filter differential pressure			X		T, A
Chiller Alarm	X				A

11. Drawing No. M-704 POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
Fan EF-1 Start/Stop		X			
Fan EF-1 Status	X				A
Condensing Unit CU-1 Enable Stage 2	X				RT,T

12. Drawing No. M-714, DETAIL 5: Add existing duct smoke detector in supply duct.

13. Drawing No. M-709, KEYED NOTES, Note 7: Delete the phrase "and 18" from the note.

14. Drawing No. M-714 POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
TYP ERV Smoke Detector	X				A

15. Drawing No. M-714, POINTS LIST, Delete the following points: RHC-A Control Valve, RHC-A Supply Air Temperature and RHC-A Low Temperature Stat.

16. Drawing No. M-712, DETAIL 1: Delete this Detail in its entirety. Refer to Addendum Drawing No. M-717 dated 1/29/14 for Revised Detail.

17. Drawing No. M-712, POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
UEF-3 Start/Stop		X			RT,T
UEF-3 Status	X				A
EF-6 Start/Stop		X			
Electrical Room Space Temp			X		T
Mechanical Room Space Temp			X		T
Fan CEF-1 Status	X				A
Fan CEF-2 Status	X				A
Fan CEF-3 Status	X				A

18. Drawing No. M-715, POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
PHW Differential Pressure			X		T

19. Drawing No. M-706, POINTS LIST: Add the following points to the Points List:

Item	Digital Input	Digital Output	Analog Input	Analog Output	Notes
Chiller Alarm	X				A
PHW Differential Pressure			X		T

20. Drawing No. M-708, POINTS LIST: Delete "EF-1 Start/Stop" and "EF-2 Start/Stop" points. Fans are operated by existing wall switches.

21. Drawing No. M-708, POINTS LIST: Change "Compressor Rm Intake Damper (Typ 2) from an analog output to read "digital output".

22. Drawing No. H-101: DETAIL 2: Delete this Detail in its entirety. Refer to Addendum Drawing No. H-102 dated 1/29/14 for Revised Detail.

23. Drawing No. M-505, DETAILS:
    a. Delete portion of DETAIL 1: Refer to Addendum Drawing No. M-507 dated 1/29/14 for Revised Detail.
    b. Delete portion of DETAIL 2: Refer to Addendum Drawing No. M-508 dated 1/29/14 for Revised Detail.

24. Drawing No. S-502, DETAILS:
    a. DETAIL 7: Delete this Detail in its entirety. Refer to Addendum Drawing No. S-507 dated 1/29/14 for Revised Detail.
    b. DETAIL 8: Delete this Detail in its entirety. Refer to Addendum Drawing No. S-508 dated 1/29/14 for Revised Detail.
    c. DETAIL 10: Refer to Addendum Drawing No. S-509 dated 1/29/14 for Revised Detail.
    d. DETAIL 11: Refer to Addendum Drawing No. S-510 dated 1/29/14 for Revised Detail.

25. Drawing No. S-503, DETAILS:
    a. DETAIL 6: Delete this Detail in its entirety. Refer to Addendum Drawing No. S-511 dated 1/29/14 for Revised Detail.
    b. DETAIL 7: Delete this Detail in its entirety. Refer to Addendum Drawing No. S-512 dated 1/29/14 for Revised Detail.

26. Drawing No. S-504, DETAIL 6: Delete in its entirety. Refer to Addendum Drawing No. S-513 dated 1/29/14 for revised Detail.

27. Drawing No. S-505, Detail 7: Delete in its entirety. Refer to Addendum Drawing No. S-514 dated 1/29/14 for revised Detail.

28. Drawing Nos. S-101 through S-107: Add the following General Plan Note to all sheets: "5. Refer to Drawing M-101 through M-107 for stanchion numbering."

29. Drawing No. G-002: Delete symbol for "butterfly valve" in its entirety. Refer to specifications for valve application.

30. Drawing No. S-505, Details 2, 3, 4, 6, 10, 11: Change "1" Control Conduit" note to read "1-1/4" Control Conduit".

31. ADDENDUM DRAWINGS:
    a. Drawing Nos H-102, M-412, M-507, M-508, M-717, S-507, S-508, S-509, S-510, S-511, S-512, S-513, and S-514 noted "Addendum Drawing 1/29/2014" accompany this addendum and form part of the contract documents.

END OF ADDENDUM

James Dirolf, P.E.
Director of Design

DENTE ENGINEERING

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April 23, 2013

Mr. James Brzezinski, P.E.
Sage Engineering Associates, LLP
1211 Western Avenue
Albany, New York 12203

Re: Geotechnical Evaluation for
Overhead Pipe Support Foundations
Ulster Correctional Facility - Napanoch, New York
Dente File No. FDE-13- 047

Dear Mr. Brzezinski,

Presented herein are the results of a Geotechnical Evaluation we completed to assist in planning for design and construction of foundations for new overhead pipe supports at the Ulster Correctional Facility. The evaluation was conducted in accord with our proposal number PFDE-12-199 and included:

1. Review of the original site construction drawings and soil boring logs for the correctional facility.

2. Completion of 15 test borings to supplement the original investigation information.

3. Preparation of this report which summarizes the findings of our review and supplemental investigation and provides recommendations to assist in planning for the pipe support foundations.

This report and the recommendations contained within it were developed for specific application to the site and construction planned, as we currently understand it. Corrections in our understanding, changes in the structure locations, their grades, loads, etc. should be brought to our attention so that we may evaluate their effect upon the recommendations offered in this report.

It should be understood that this report was prepared, in part, on the basis of a limited number of site explorations. The explorations were made at discrete locations and the overburden soils sampled at specific depths. Conditions are only known at the locations and through the depths investigated. Conditions at other locations and depths may be different, and these differences may impact upon the conclusions reached and the recommendations offered.

A sheet entitled *"Important Information about your Geotechnical Engineering Report"* prepared by the Association of Engineering Firms Practicing in the Geosciences is attached. This sheet should never be separated from this report and be carefully reviewed as it sets the only context within which this report should be used.

BACKGROUND INFORMATION

In 1985 the NYSDOT Soil Mechanics Bureau made 44 test borings across the project site to investigate the subsurface conditions. Results of these borings are shown in profile views on the original project Drawings No. L-1 and L-2 (8/1989).

The original correctional facility site development required cuts up to 20 feet deep to lower a knob in the central portion of the site and fills up to 15 feet deep to fill in a dry streambed. Based on the original site plan notes, it is assumed that suitable portions of the on-site cut soils were used as fill throughout the site. Reportedly, by change order a four feet deep undercut was made over the entire site removing a significant quantity of boulders.

Our review of the original investigation and site plans revealed several potential concerns with respect to planning for the new overhead pipe support foundations. These concerns included the unconfirmed composition of the deep fills that were placed to grade the site and the presence of very loose, slightly organic soils and/or high groundwater levels in some areas. Our supplemental test borings were positioned to investigate these concerns and fill gaps in the original site explorations.

RESULTS OF SUPPLEMENTAL BORINGS

The site conditions were investigated by Dente Engineering through the completion of 15 supplemental test borings at the approximate locations shown on the attached Subsurface Investigation Plan (Drawing No. 1). The boring locations were staked by our personnel based on measurements from existing site features. The ground surface elevation for each boring was estimated based on our interpolation between topographic contours shown on the site plans provided to us.

The borings were made using a rotary drill rig equipped with hollow stem augers. As the augers were advanced, the soils were sampled and their relative density determined using split-spoon sampling techniques in general accord with ASTM D1586 procedures. Representative portions of the soil samples recovered from the borings were transported to our office for visual classification by a Geotechnical Engineer. Individual subsurface logs, which were prepared based upon the visual classifications, are attached together with a key that explains the terms used in their preparation.

The supplemental borings revealed four distinct soil types as shown on the attached Test Boring Profiles (Drawings No. 2 and 3) and described as follows.

Fill Material: Fill materials of loose to very compact density were found extending to depths ranging between nil and about ten feet at the boring locations. The fills generally consisted of fine or fine to medium sand with trace to some silt. These materials are similar to the native soils found in areas of the site where cuts where made, this

confirming that on-site soils were likely reused as fills. It appears that varying amounts of sandstone rock fragments were added to the native soils prior to their reuse.

Brown/Gray Mottled Silt: An approximate five feet thick layer of loose silt with no visible organic matter was found in only one boring location, SB-14. A very thin layer of silt with trace amounts of organic matter was also present in boring SB-10 beneath about five feet of fill. This layer was less than one foot thick. No silt layers and/or organic matter were found in the remaining test borings.

Brown Sand: This soil sequence consisted of loose to firm density fine or fine to medium sand with trace to some silt. It was present throughout the entire 16 feet depth explored in several locations or as layers of varying thickness in other locations.

Brown/Gray Sand and Gravel: Generally found beneath the soil layers described above, this layer consisted of firm to compact mixtures of gravel and sand which also appear to contain cobbles and boulders. The soils were found as shallow as five feet below grade on the extreme east side of the site and from eight to greater than 16 feet deep in other areas of the site.

Groundwater was found at depths ranging between 8 and 15 feet below grade at the time of our investigation. In general it appears that the groundwater flows in a northeast direction across the site, with groundwater surface elevations being at or slightly above 266 feet on the west end of the site and between 263 and 264 feet in the east portion of the site.

CONCLUSIONS AND RECOMMENDATIONS

Our review of historical site information and supplemental explorations revealed the following:

- It appears that the four feet deep undercuts reportedly made for the site development removed most of the very loose slightly organic soils that were found in the original site investigation borings. Evidence of these soils was found in only one of our supplemental boring locations in a layer less than one foot thick.

- It appears that on-site cut soils comprised of sand with some added gravel (sandstone rock fragments) were reused as fills for the site development.

- Cobbles and boulders were generally found in a native gravel and sand layer at least six to eight feet below grade. This does not preclude the possibility that cobbles and boulders may be found in the site fills or native soils at shallower depths in some areas of the site between the boring locations.

- Groundwater was generally found deeper than eight feet below grade at the time of our supplemental investigation.

Based on our evaluation of these subsurface conditions, it is our opinion that standard concrete filled drilled shafts may be used to support the new overhead piping installations. For planning purposes, the shaft lengths should be a maximum depth of eight feet to limit the potential for encountering groundwater, cobbles and boulders during their installation. The contractor should be informed of the possibility that cobbles and boulders may be encountered in some locations and that he should be prepared to penetrate through or remove them as required. The use of a temporary casing may be required to prevent the sides of the shafts from caving.

For planning purposes, the drilled shafts should have a maximum length of eight feet, minimum 36 inch diameter, and otherwise designed using the following soil parameters:

- Soil's Angle of Internal Friction = 32 degrees
- Total Unit Weight of Soil = 114 pcf
- Coefficient of Passive Soil Pressure = 3.25
- Coefficient of Active Soil Pressure = 0.31
- Relative Density = 35%
- Lateral Modulus of Subgrade Reaction = 50 pci
- Groundwater Table at 8' Below Final Grade
- Allowable End Bearing Pressure = 3,000 psf

Based on preliminary information provided by Sage Engineering Associates, we applied the recommended design parameters to three loading conditions and determined the minimum required shaft lengths to limit deflection at the top of the shaft to less than one-half inch. These load conditions and minimum lengths are tabulated below.

DRILLED SHAFT EVALUATION SUMMARY				
Load Condition	**Vertical Load (kips)**	**Shear Load (kips)**	**Moment (Kip-feet)**	**Minimum Shaft Length (feet)**
1	10	2.0	50	8.0
2	8	1.7	35	7.5
3	5	1.0	25	7.0

Settlement of the shafts under vertical loads should be less than one-quarter inch. The estimated settlement and maximum 0.5 inch lateral displacement predicted for the tabulated load conditions and shaft lengths were made assuming that good construction practices are implemented following ACI 336.1-89 and 336.3R-93 procedures.

If the drilled shaft loads differ from those we assumed, we should be provided the opportunity to evaluate the designs and loads to verify that the selected shaft lengths and diameters will limit movements to tolerable ranges.

Seismic Design Considerations

For seismic design purposes, we have evaluated the site conditions in accord with Section 1613 of the New York State Building Code (2010). On this basis, we have

determined that Seismic Site Class “D - Stiff Profile” is applicable to this project. Based on the groundwater conditions, and composition and density of the soils at this site, liquefaction of the soils due to earthquake motions should not be a concern.

Construction Observations

All shaft installations should be observed by the Geotechnical Engineer to confirm that the actual subsurface conditions encountered are similar to those assumed based on our review of the original and supplemental subsurface information.

CLOSURE

This report was prepared for specific application to the project site and construction planned based on our review of historical and supplemental subsurface information for the site. Dente Engineering should be retained to review plans and specifications prior to their release for bidding to confirm that the recommendations contained herein were properly understood and applied. Dente Engineering should also be retained during construction to validate that the actual site conditions are similar to those assumed for development of the recommendations contained in this report.

This report was prepared using methods and practices common to Geotechnical Engineering, no other warranties expressed or implied are made. Should questions arise or if we may be of any other service, please contact us at your convenience.

Yours truly,
Dente Engineering, P.C.

Edward C. Gravelle, P.E.
Vice President

Fred A. Dente, P.E.
President

Attachments:

Information About Geotechnical Report
Subsurface Investigation Plan and Test Boring Profiles
Subsurface Logs and Key

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one - not even you* - should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from alight industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes - even minor ones - and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ-sometimes significantly from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the express purpose of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in-this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechnical Engineer For Additional Assistance

Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE
The Best People on Earth

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
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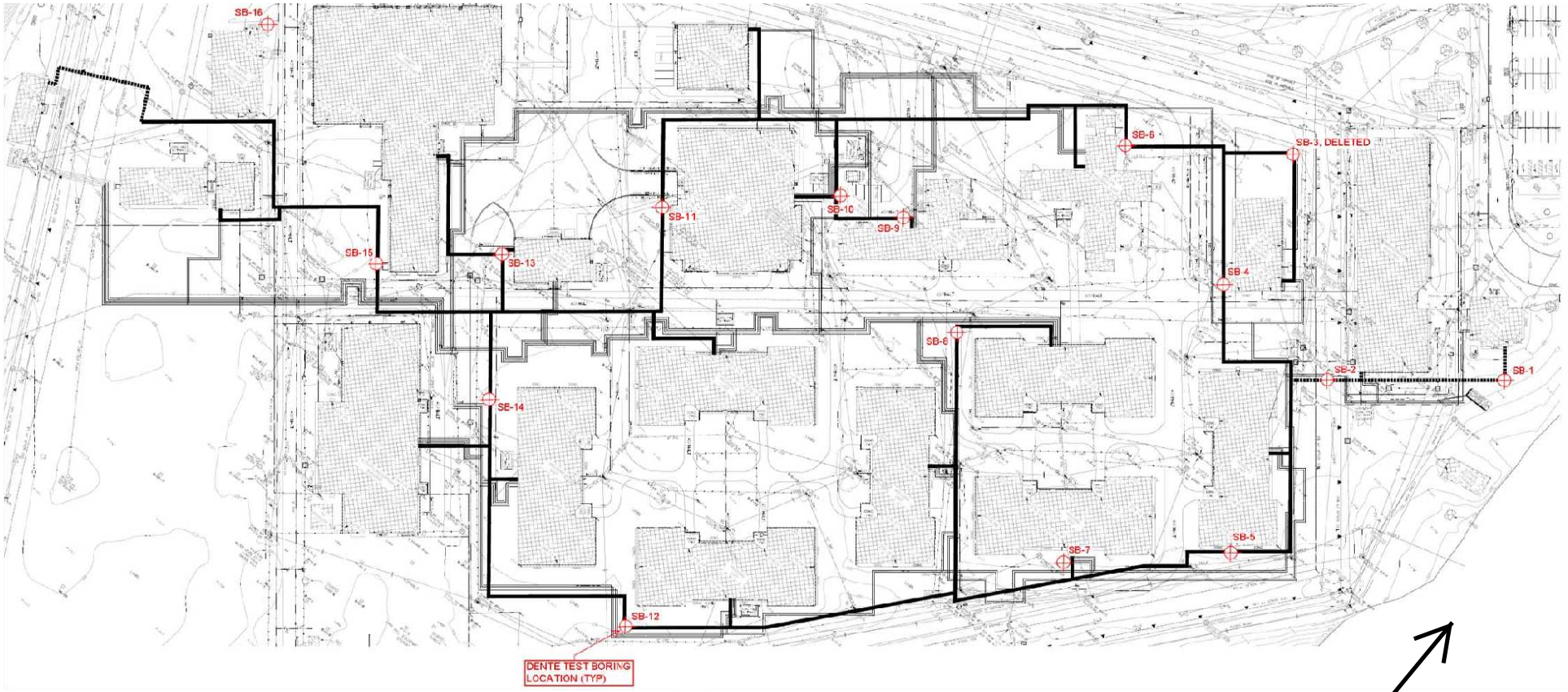
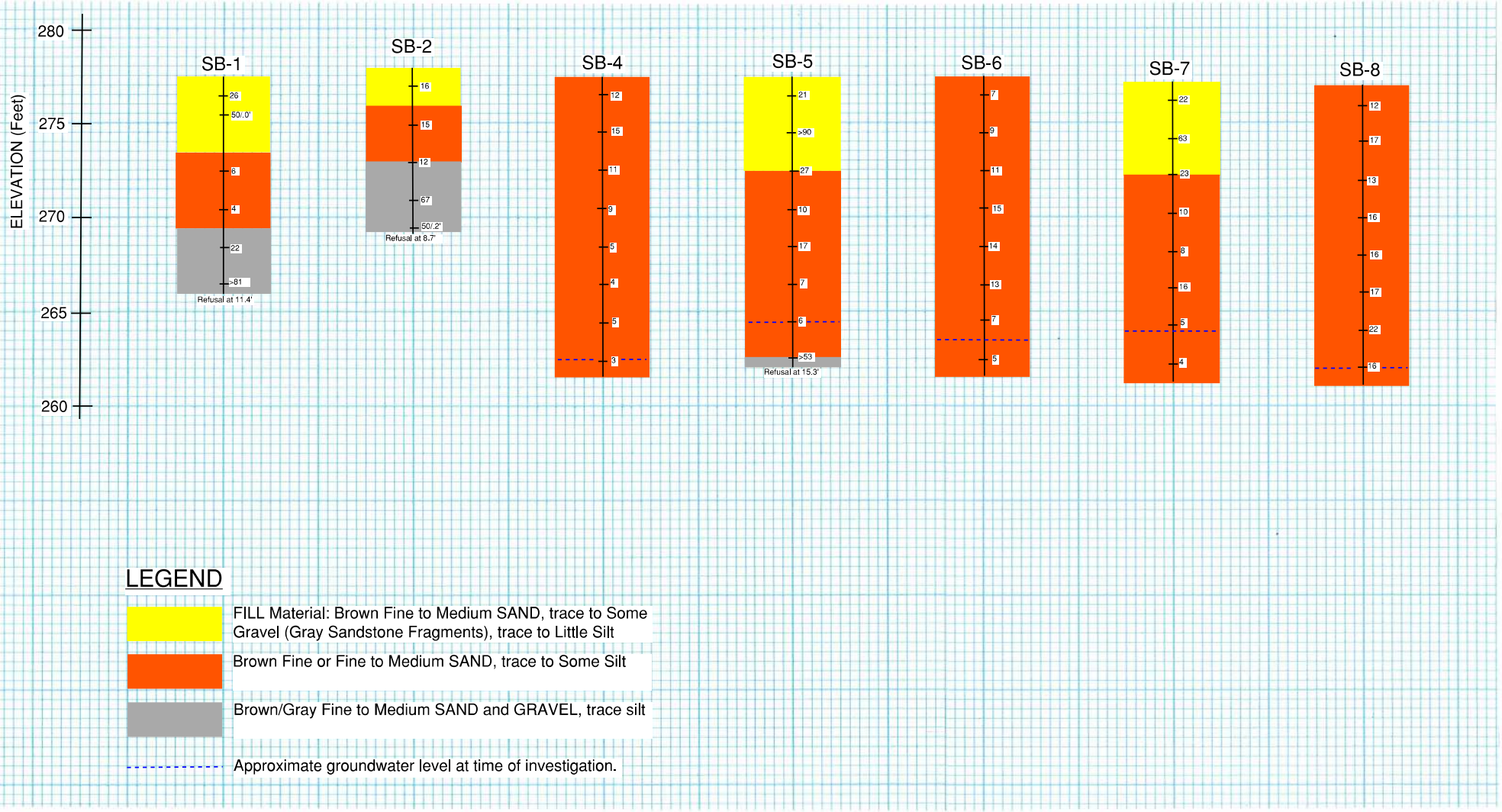
SUBSURFACE INVESTIGATION PLAN
AND TEST BORING PROFILES

Ulster Correctional Facility
Napanoch, New York



D E N T E E N G I N E E R I N G, P. C.
594 Broadway - Watervliet, New York 12189
Voice 518-266-0310 Fax 518-266-9238

Scale: N.T.S.	**SUBSURFACE INVESTIGATION PLAN**	**Drawn By:** NA
Date: 04/16/2013	***Above Ground Piping at Ulster Correctional Facility*** ***Napanoch, New York***	**Drawing No.** 1



LEGEND

- FILL Material: Brown Fine to Medium SAND, trace to Some Gravel (Gray Sandstone Fragments), trace to Little Silt
- Brown Fine or Fine to Medium SAND, trace to Some Silt
- Brown/Gray Fine to Medium SAND and GRAVEL, trace silt
- Approximate groundwater level at time of investigation.

DENTE ENGINEERING
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WATERVLIET, NY 12189
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www.dente-engineering.com

NOTES:

1. Subsurface conditions are known only at the discrete test boring locations. The subsurface conditions can vary in an unknown manner between the test locations.
2. Groundwater levels were measured at the time of investigations under the conditions noted on the subsurface logs. Groundwater conditions can vary seasonally and in response to changes in land use.
3. Refer to the individual subsurface logs for the actual subsurface conditions at each discrete test location.

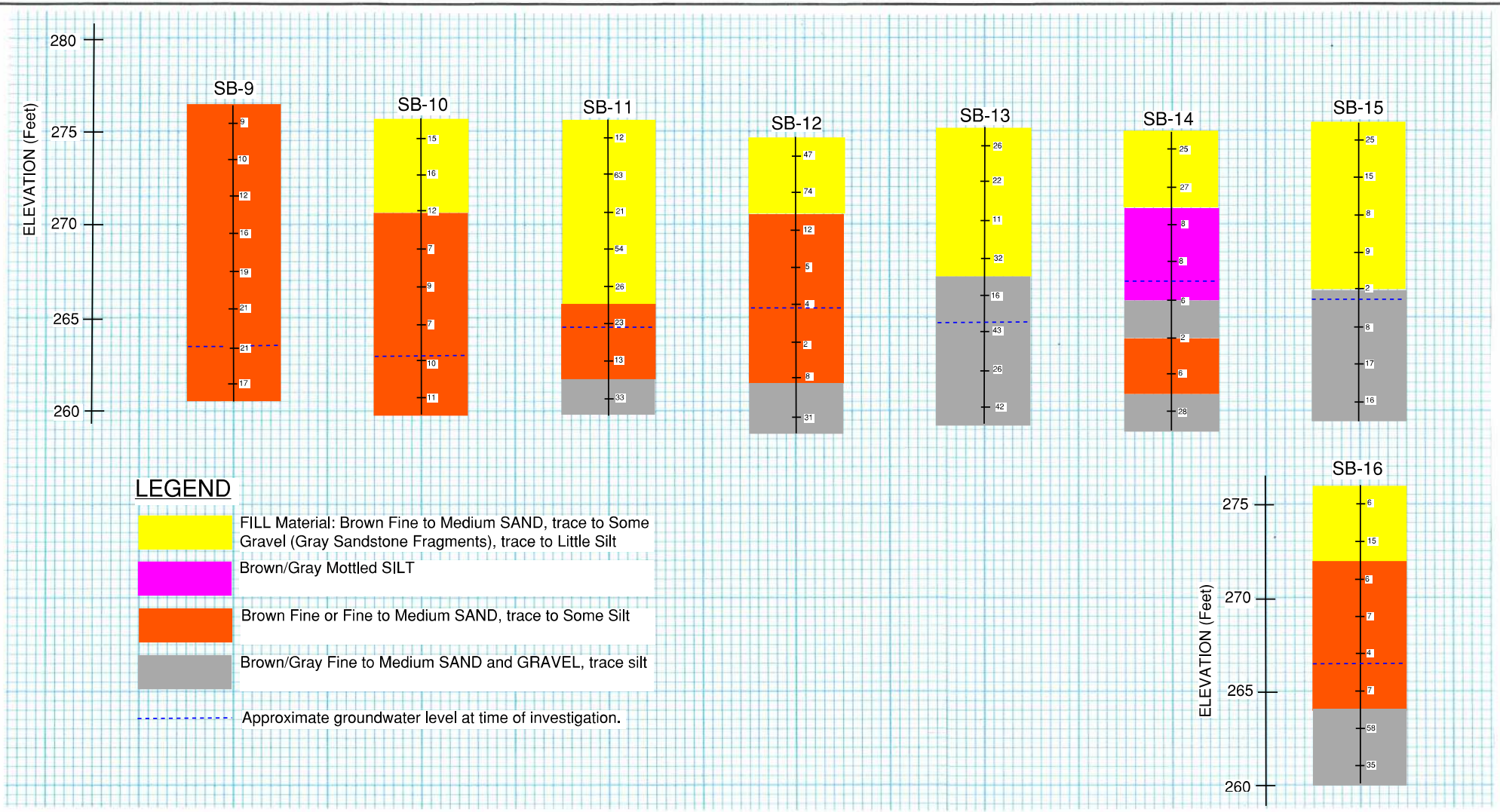
TEST BORING PROFILES

ULSTER CORRECTIONAL FACILITY

NAPONACH, NEW YORK

DATE: April 19, 2013 DRAWN BY: ECG

SCALE: As Shown DRAWING NO. 2



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NOTES:

1. Subsurface conditions are known only at the discrete test boring locations. The subsurface conditions can vary in an unknown manner between the test locations.
2. Groundwater levels were measured at the time of investigations under the conditions noted on the subsurface logs. Groundwater conditions can vary seasonally and in response to changes in land use.
3. Refer to the individual subsurface logs for the actual subsurface conditions at each discrete test location.

TEST BORING PROFILES

ULSTER CORRECTIONAL FACILITY

NAPONACH, NEW YORK

DATE: April 19, 2013 DRAWN BY: ECG

SCALE: As Shown DRAWING NO. 3

SUBSURFACE LOGS AND KEY

Ulster Correctional Facility
Napanoch, New York

INTERPRETATION OF SUBSURFACE LOGS

The Subsurface Logs present observations and the results of tests performed in the field by the Driller, Technicians, Geologists and Geotechnical Engineers as noted. Soil/Rock Classifications are made visually, unless otherwise noted, on a portion of the materials recovered through the sampling process and may not necessarily be representative of the materials between sampling intervals or locations.

The following defines some of the terms utilized in the preparation of the Subsurface Logs.

SOIL CLASSIFICATIONS

Soil Classifications are visual descriptions on the basis of the Unified Soil Classification ASTM D-2487 and USBR, 1973 with additional comments by weight of constituents by BUHRMASTER. The soil density or consistency is based on the penetration resistance determined by ASTM METHOD D1586. Soil Moisture of the recovered materials is described as DRY, MOIST, WET or SATURATED.

SIZE DESCRIPTION		RELATIVE DENSITY/CONSISTENCY (basis ASTM D1586)			
SOIL TYPE	PARTICLE SIZE	GRANULAR SOIL		COHESIVE SOIL	
BOULDER	> 12	DENSITY	BLOWS/FT.	CONSISTENCY	BLOWS/FT.
COBBLE	3" - 12"	LOOSE	< 10	VERY SOFT	< 3
GRAVEL-COARSE	3" - 3/4"	FIRM	11 - 30	SOFT	4 - 5
GRAVEL - FINE	3/4" - #4	COMPACT	31 - 50	MEDIUM	6 - 15
SAND - COARSE	#4 - #10	VERY COMPACT	50 +	STIFF	16 - 25
SAND - MEDIUM	#10 - #40			HARD	25 +
SAND - FINE	#40 - #200				
SILT/NONPLASTIC	< #200				
CLAY/PLASTIC	< #200				

SOIL STRUCTURE		RELATIVE PROPORTION OF SOIL TYPES	
STRUCTURE	DESCRIPTION	DESCRIPTION	% OF SAMPLE BY WEIGHT
LAYER	6" THICK OR GREATER	AND	35 - 50
SEAM	6" THICK OR LESS	SOME	20 - 35
PARTING	LESS THAN 1/4" THICK	LITTLE	10 - 20
VARVED	UNIFORM HORIZONTAL PARTINGS OR SEAMS	TRACE	LESS THAN 10

Note that the classification of soils or soil like materials is subject to the limitations imposed by the size of the sampler, the size of the sample and its degree of disturbance and moisture.

ROCK CLASSIFICATIONS

Rock Classifications are visual descriptions on the basis of the Driller's, Technician's, Geologist's or Geotechnical Engineer's observations of the coring activity and the recovered samples applying the following classifications.

CLASSIFICATION TERM	DESCRIPTION
VERY HARD	NOT SCRATCHED BY KNIFE
HARD	SCRATCHED WITH DIFFICULTY
MEDIUM HARD	SCRATCHED EASILY
SOFT	SCRATCHED WITH FINGERNAIL
VERY WEATHERED	DISINTEGRATED WITH NUMEROUS SOIL SEAM
WEATHERED	SLIGHT DISINTEGRATION, STAINING, NO SEAMS
SOUND	NO EVIDENCE OF ABOVE
MASSIVE	ROCK LAYER GREATER THAN 36" THICK
THICK BEDDED	ROCK LAYER 12" - 36"
BEDDED	ROCK LAYER 4" - 12"
THIN BEDDED	ROCK LAYER 1" - 4"
LAMINATED	ROCK LAYER LESS THAN 1"
FRACTURES	NATURAL BREAKS AT SOME ANGLE TO BEDS

Core sample recovery is expressed as percent recovered of total sampled. The ROCK QUALITY DESIGNATION (RQD) is the total length of core sample pieces exceeding 4" length divided by the total core sample length for N size cored.

GENERAL

- Soil and Rock classifications are made visually on samples recovered. The presence of Gravel, Cobbles and Boulders will influence sample recovery classification density/consistency determination.
- Groundwater, if encountered, was measured and its depth recorded at the time and under the conditions as noted.
- Topsoil or pavements, if present, were measured and recorded at the time and under the conditions as noted.
- Stratification Lines are approximate boundaries between soil types. These transitions may be gradual or distinct and are approximated.

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-1**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.5'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	2	5				**FILL:** Brown Fine to Medium SAND, Little Gravel and Silt
				21	50	26	
	2	50/.0'				REF	No sample 2 recovered
							(MOIST, FIRM)
	3	4	3				Brown Fine to Medium SAND, Little Silt,
5'				3	3	6	
	4	2	2				Grades Some Silt
				2	1	4	**(MOIST, LOOSE)**
	5	8	15				Brown Fine to Coarse SAND and GRAVEL,
				7	6	22	trace silt
10'	6	19	31				**(MOIST, FIRM TO VERY COMPACT)**
				50/4'		>81	
							Boring Ended at 11.4' with Spoon Refusal
							No measurable groundwater in augers at
15'							completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-2**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 278.0'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	6				**FILL:** ± 3" Topsoil over Brown Fine-Medium
				10	9	16	SAND, Little Gravel, trace silt **(MOIST)**
	2	9	7				Brown Fine to Medium SAND, trace silt,
				8	8	15	
	3	5	6				
5'				6	5	12	**(MOIST, FIRM)**
	4	10	46				Gray/Brown GRAVEL and Fine to Coarse
				21	29	67	SAND, trace silt
	5	38	50/.2'			>50	**(MOIST, VERY COMPACT)**
10'							Boring Ended at 8.7' with Spoon Refusal
							No measurable groundwater in augers at completion of drilling and sampling.
15'							
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-4**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.5'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	6				± 3" Topsoil over Brown Fine to Coarse
				6	6	12	SAND, Some Gravel, Little Silt **(MOIST)**
	2	6	7				Brown Fine to Medium SAND, trace silt,
				8	8	15	Moist
	3	5	5				
5'				6	5	11	
	4	4	4				
				5	3	9	
	5	3	3				
				2	2	5	
10'	6	2	2				Similar with Occasional 1" to 3" Silt Seams
				2	4	4	
	7	3	3				
				2	3	5	
	8	3	2				Becomes Wet, No Silt Seams
15'				1	1	3	**(MOIST TO WET, FIRM TO LOOSE)**
							Boring Ended at 16.0'
							Groundwater in augers at 15.1' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-5**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.5'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	5				**FILL:** ± 3" Topsoil over Brown Fine-Medium
				16	21	21	SAND, Little Gravel and Silt
	2	28	40				Grades Some Gravel
				50/.3'		>90	
5'	3	12	16				
				11	27	27	**(MOIST, FIRM)**
	4	6	6				Brown Fine SAND, Little Silt, Moist
				4	5	10	
	5	9	9				No Recovery in Sample 5
				8	5	17	
10'	6	2	4				
				3	4	7	
	7	3	3				Grades Fine to Medium SAND, trace silt,
				3	2	6	Becomes Wet
	8	2	3				**(MOIST TO WET, LOOSE TO FIRM)**
15'				50/.3'		>53	Cobble at 15' depth
							Boring Ended at 15.3' with Spoon Refusal
							Groundwater in augers at 13.5' below grade
							at completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-6**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.6'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	3				± 6" Topsoil over Brown Fine to Medium
				4	6	7	SAND, Little Silt, Moist
	2	5	5				Grades trace silt with Occasional 1" Silt
				4	5	9	Seams
	3	4	5				Grades No Silt Seams
5'				6	5	11	
	4	6	7				
				8	6	15	
	5	5	7				
				7	7	14	
10'	6	5	6				
				7	5	13	
	7	4	4				Similar with Occasional Silt Seams
				3	3	7	
	8	2	2				Becomes Wet
15'				3	3	5	**(MOIST TO WET, LOOSE TO FIRM)**
							Boring Ended at 16.0'
							Groundwater in augers at 14.2' below grade
							at completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-7**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.2'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	2	9				**FILL:** ± 3" Topsoil over Brown Fine-Coarse
				13	16	22	SAND, Some Gravel, trace silt
	2	17	24				
				39	30	63	
	3	13	14				**(MOIST, FIRM TO VERY COMPACT)**
5'				9	6	23	Brown Fine to Medium SAND, Little Silt,
	4	7	5				trace gravel, Moist
				5	5	10	
	5	3	4				Grades Fine SAND, Little Silt, Moist
				4	7	8	
10'	6	9	8				
				8	6	16	
	7	5	2				Grades Fine to Medium SAND, trace silt,
				3	3	5	Becomes Wet
	8	3	2				
15'				2	3	4	**(MOIST TO WET, FIRM TO LOOSE)**
							Boring Ended at 16.0'
							Groundwater in augers at 13.2' below grade
							at completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-8**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/12/13	FINISH: 4/12/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 277.0'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	2	4				± 1" Topsoil over Brown Fine to Medium
				8	10	12	SAND, trace silt and gravel, Moist
	2	8	8				Grades No Gravel
				9	8	17	
	3	5	5				
5'				8	8	13	
	4	7	7				
				9	10	16	
	5	7	9				
				7	9	16	
10'	6	7	9				
				8	10	17	
	7	7	11				
				11	13	22	
	8	8	8				Becomes Very Moist
15'				8	8	16	**(MOIST TO VERY MOIST, FIRM)**
							Boring Ended at 16.0'
							No measurable groundwater in augers at
							completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-9**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 276.6'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	4	4				± 4" Asphalt over Brown Fine to Medium
				5	5	9	SAND, trace silt, Moist
	2	4	4				
				6	5	10	
	3	5	6				
5'				6	9	12	
	4	10	8				
				8	10	16	
	5	7	9				
				10	10	19	
10'	6	9	10				
				11	11	21	
	7	10	12				
				9	11	21	Becomes Wet
	8	10	8				
15'				9	6	17	**(MOIST TO WET, LOOSE TO FIRM)**
							Boring Ended at 16.0'
							Groundwater in augers at 13.5' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-10**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 275.8'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	5	5				**FILL:** ± 4" Asphalt over Brown Fine to
				10	14	15	Coarse SAND, Some Gravel
	2	8	8				
				8	8	16	
	3	6	4				**(MOIST, FIRM)**
5'				8	7	12	Gray SILT, trace organics **(MOIST)**
	4	3	4				Brown Fine to Medium SAND, Some Gravel,
				3	4	7	Little Silt, Moist
	5	3	3				
				6	5	9	
10'	6	5	4				Grades Brown Fine to Medium SAND, trace
				3	4	7	silt, Moist
	7	6	5				Grades Gray Medium to Fine SAND, Wet
				5	4	10	
	8	4	4				Grades Gray Fine SAND, trace silt, Wet
15'				7	8	11	**(MOIST TO WET, LOOSE)**
							Boring Ended at 16.0'
							Groundwater in augers at 12.7' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-11**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/12/13	FINISH: 4/12/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 275.7'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	5				**FILL:** Brown Fine to Coarse SAND, Some
				7	10	12	Gravel, trace silt
	2	17	39				
				24	11	63	
	3	13	11				
5'				10	9	21	
	4	29	23				
				31	23	54	
	5	12	13				
				13	20	26	**(MOIST, FIRM TO VERY COMPACT)**
10'	6	13	10				Brown Fine SAND, trace silt and gravel
				13	10	23	
	7	4	6				
				7	9	13	**(MOIST TO WET, FIRM)**
	8	11	15				Brown/Gray Fine to Coarse SAND and
15'				18	17	33	GRAVEL, trace silt **(WET, COMPACT)**
							Boring Ended at 16.0'
							Groundwater in augers at 11.8' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-12**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 274.7'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	2	12				**FILL:** ± 4" Topsoil over Brown Fine-Coarse
				35	40	47	SAND and GRAVEL, Little to trace silt
	2	22	39				
				35	26	74	**(MOIST, VERY COMPACT)**
	3	5	6				Brown Fine SAND, Some Silt, Moist
5'				6	5	12	
	4	2	2				Grades Little Silt
				3	3	5	
	5	2	2				Grades Fine to Medium SAND, trace silt,
				2	2	4	Becomes Wet
10'	6	1	1				
				1	2	2	
	7	1	1				**(MOIST TO WET, FIRM TO LOOSE)**
				7	7	8	Brown/Gray/Red GRAVEL, Some Fine to
	8	14	15				Coarse Sand
15'				16	16	31	**(WET, COMPACT)**
							Boring Ended at 16.0'
							Groundwater in augers at 9.8' below grade
							at completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-13**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 275.2'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	9				**FILL:** ± 2" Topsoil over Brown Fine to
				17	20	26	Medium SAND, Little Silt, Occasional Gravel
	2	15	11				
				11	7	22	
	3	6	7				Grades trace silt
5'				4	10	11	
	4	17	13				
				19	7	32	**(MOIST, FIRM TO COMPACT)**
	5	4	7				Brown Fine to Coarse SAND and GRAVEL,
				9	20	16	Little to trace silt, Moist
10'	6	20	28				Becomes Wet
				15	16	43	
	7	15	14				
				12	10	26	
	8	13	22				**(MOIST TO WET, FIRM TO COMPACT)**
15'				20	10	42	Becomes Brown Fine SAND at 15.5'
							Boring Ended at 16.0'
							Groundwater in augers at 10.0' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-14**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 275.0'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	6				**FILL:** ± 4" Topsoil over Brown Fine to
				19	19	25	Medium SAND, Little to trace Silt, Some
	2	17	15				Gravel
				12	9	27	**(MOIST, FIRM)**
5'	3	3	3				Brown/Gray Mottled SILT, Moist
				5	5	8	
	4	6	4				
				4	4	8	Becomes Wet
	5	1	2				**(MOIST TO WET, LOOSE)**
				4	4	6	Gray GRAVEL, Some Fine to Coarse Sand
10'	6	3	1				**(WET, LOOSE)**
				1	1	2	Brown Fine SAND, trace silt
	7	3	1				
				1	1	2	**(WET, LOOSE)**
	8	6	14				Gray GRAVEL, Some Fine to Coarse Sand
15'				14	13	28	**(WET, FIRM)**
							Boring Ended at 16.0'
							Groundwater in augers at 8.4' below grade
20'							at completion of drilling and sampling.
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-15**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/11/13	FINISH: 4/11/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 275.5'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

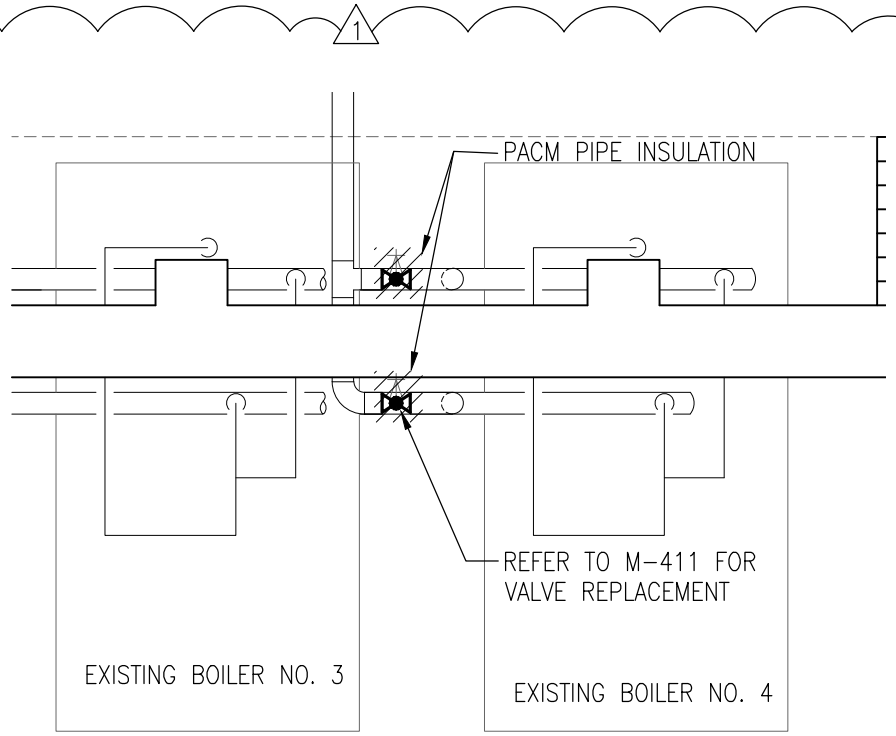
SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	8				**FILL:** ± 2" Topsoil over Brown Fine to
				17	12	25	Medium SAND, trace silt, Occasional Gravel
	2	12	10				
				5	7	15	
5'	3	4	4				
				4	9	8	
	4	15	4				
				5	4	9	
	5	2	1				**(MOIST, FIRM TO LOOSE)**
				1	2	2	Gray to Brown Fine to Coarse SAND and
10'	6	1	2				GRAVEL, trace silt, Wet
				6	8	8	
	7	7	10				
				7	10	17	
	8	4	7				
15'				9	10	16	**(WET, LOOSE TO FIRM)**
							Boring Ended at 16.0'
							Groundwater in augers at 10.0' below grade
							at completion of drilling and sampling.
20'							
25'							

DENTE ENGINEERING, P.C.	SUBSURFACE LOG **SB-16**

PROJECT: ABOVE GROUND PIPING	**DATE**	START: 4/15/13	FINISH: 4/15/13

LOCATION: Ulster Correctional Facility	**METHODS:** 3-1/4" I.D. Hollow Stem Augers
CLIENT: Sage Engineering Associates, LLP	with ASTM D1586 Sampling
JOB NUMBER: FDE-13-047	**SURFACE ELEVATION:** ± 276.0'
DRILL TYPE: CME 45C Trailer Mounted Rig	**CLASSIFICATION:** E. Gravelle, PE

SAMPLE		BLOWS ON SAMPLER					CLASSIFICATION / OBSERVATIONS
DEPTH	#	6"	12"	18"	24"	N	
	1	1	2				**FILL:** ± 2" Topsoil over Dark Brown Fine to
				4	6	6	Coarse SAND, Little Silt
	2	6	8				Grades Brown Fine to Medium SAND, Some
				7	7	15	Gravel, Little Silt **(MOIST, LOOSE TO FIRM)**
	3	4	4				Brown Fine SAND, Some to Little Silt, Moist
5'				2	3	6	
	4	3	4				
				3	3	7	
	5	3	2				
				2	3	4	
10'	6	3	4				Grades Fine-Medium SAND, trace silt, Wet
				3	14	7	**(MOIST TO WET, LOOSE)**
	7	24	24				Brown/Gray GRAVEL, Some Fine to Coarse
				34	28	58	Sand
	8	9	17				
15'				18	9	35	**(WET, VERY COMPACT)**
							Boring Ended at 16.0'
							Groundwater in augers at 9.6' below grade
							at completion of drilling and sampling.
20'							
25'							



BUILDING NO. 50 ASBESTOS LOCATION AND ABATEMENT PLAN

2 / H-101

SCALE: 1/8"=1'-0"

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: H-101

SHEET TITLE: REVISION TO DETAIL 2

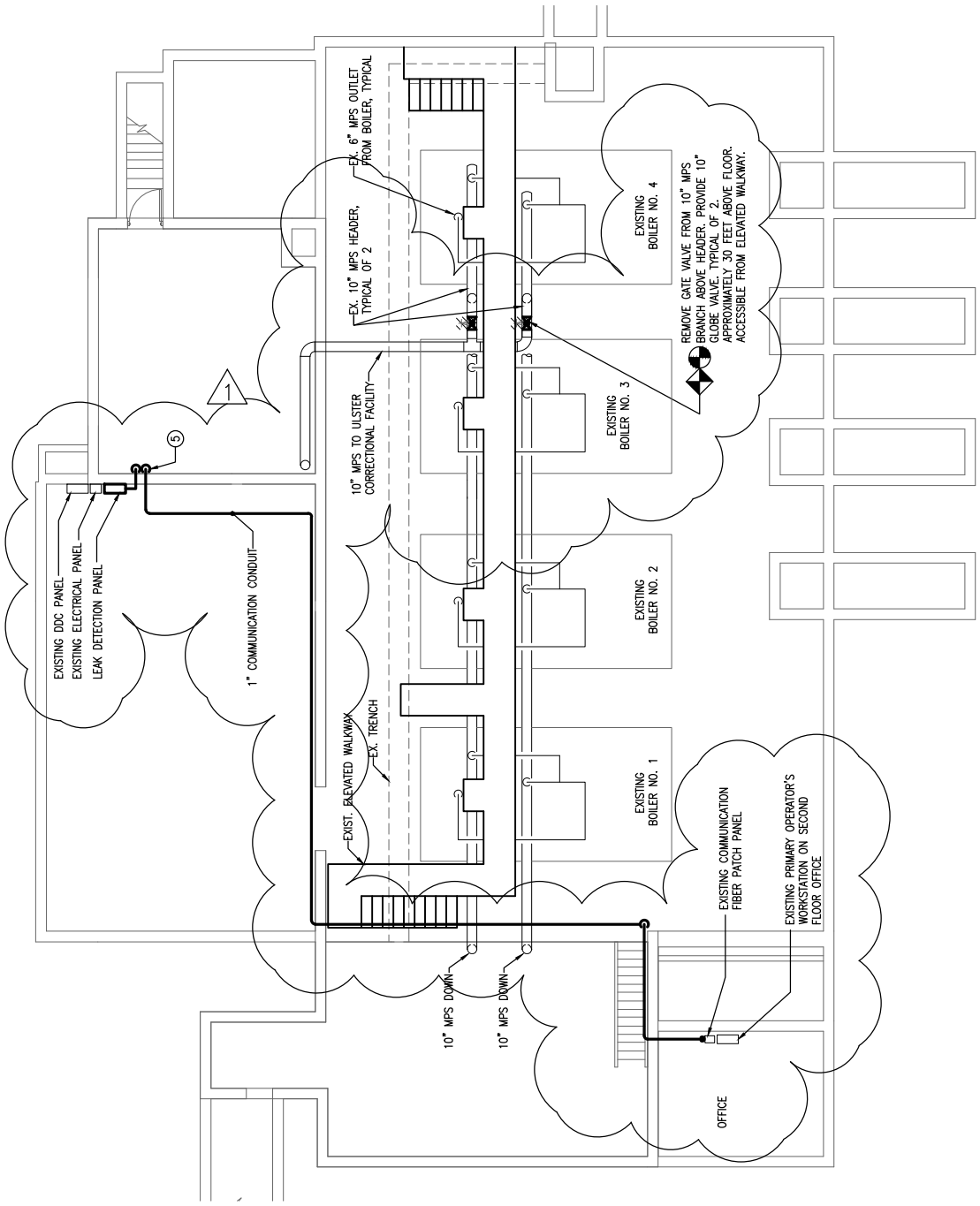
PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JGC
APPROVED:	MCO

SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

DWG NO: H-102



SCALE: N.T.S.

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: M-411

NYS OFFICE OF GENERAL SERVICES
Serving New York

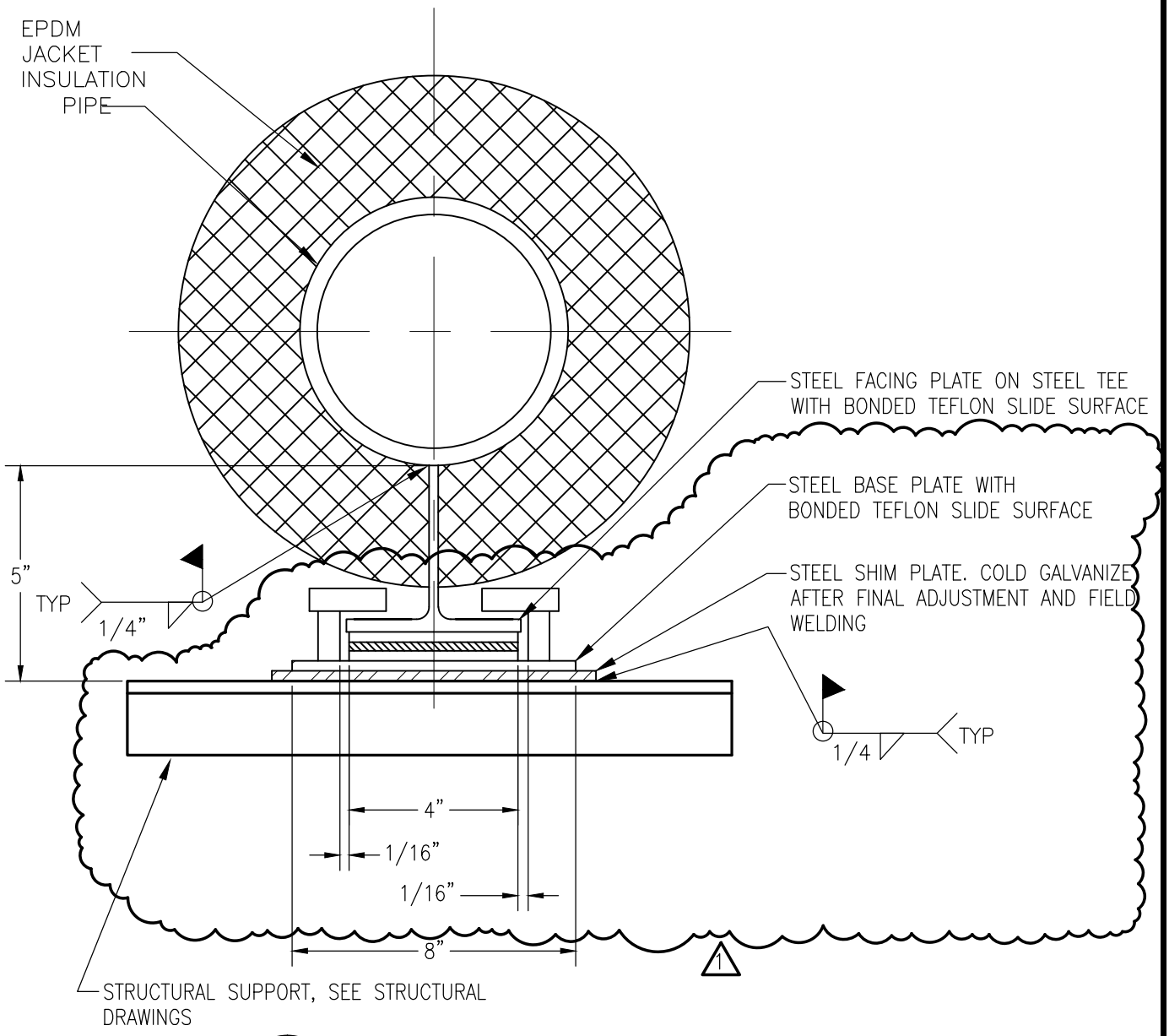
CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JGC
APPROVED:	DPL

SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO DETAIL 3, BUILDING NO. 50 FIRST FLOOR PLAN

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES ULSTER CORRECTIONAL FACILITY

DWG NO: M-412



1 / M505 PIPING GUIDE SUPPORT DETAIL

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: M–505

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496–H
DATE:	01/29/14
DRAWN:	KJL
APPROVED:	JEB

SAGE ENGINEERING ASSOCIATES, LLP
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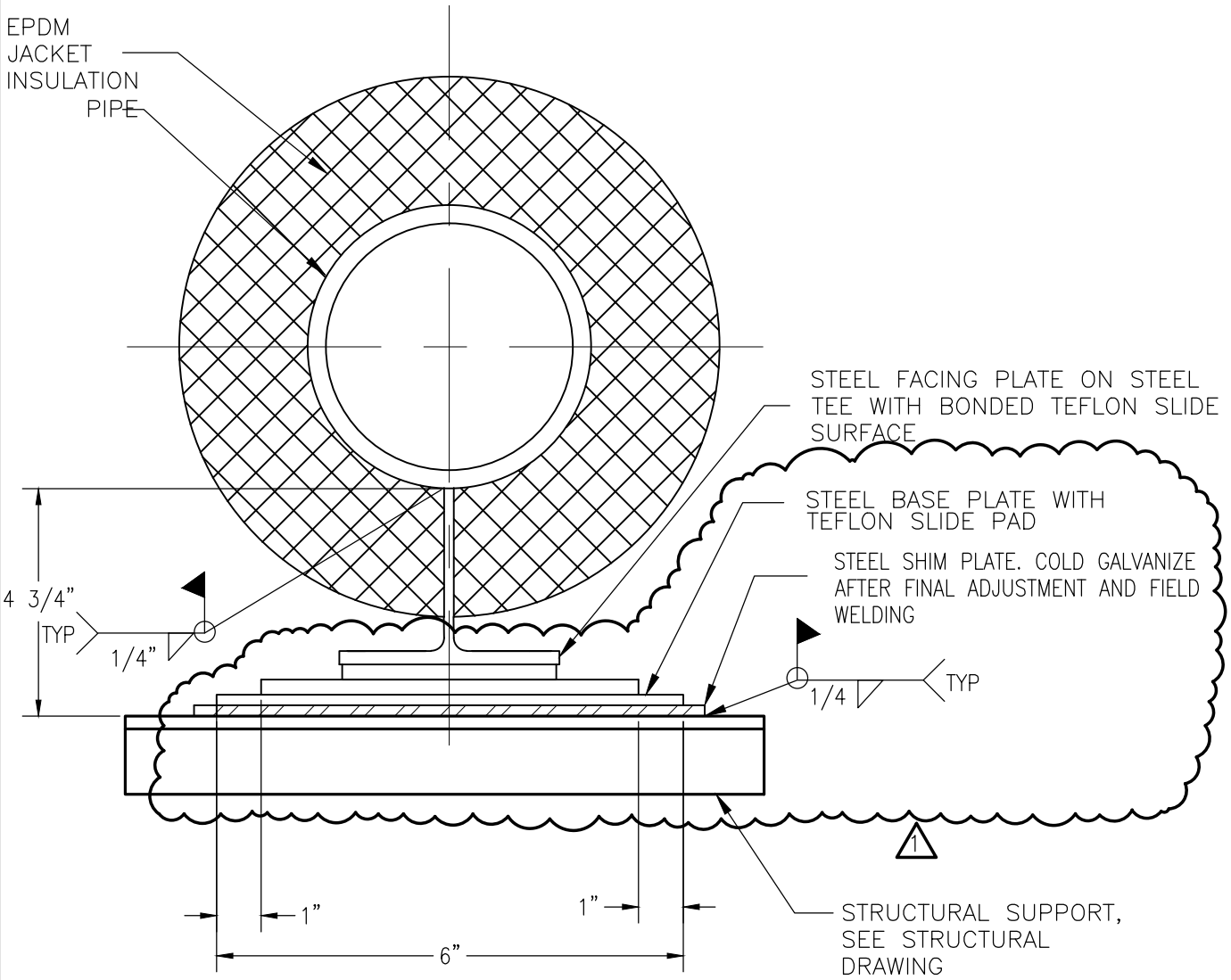
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO DETAILS 5

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: M–507



2 / M505 PIPING SLIDE SUPPORT DETAIL

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: M-505

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	KJL
APPROVED:	JEB

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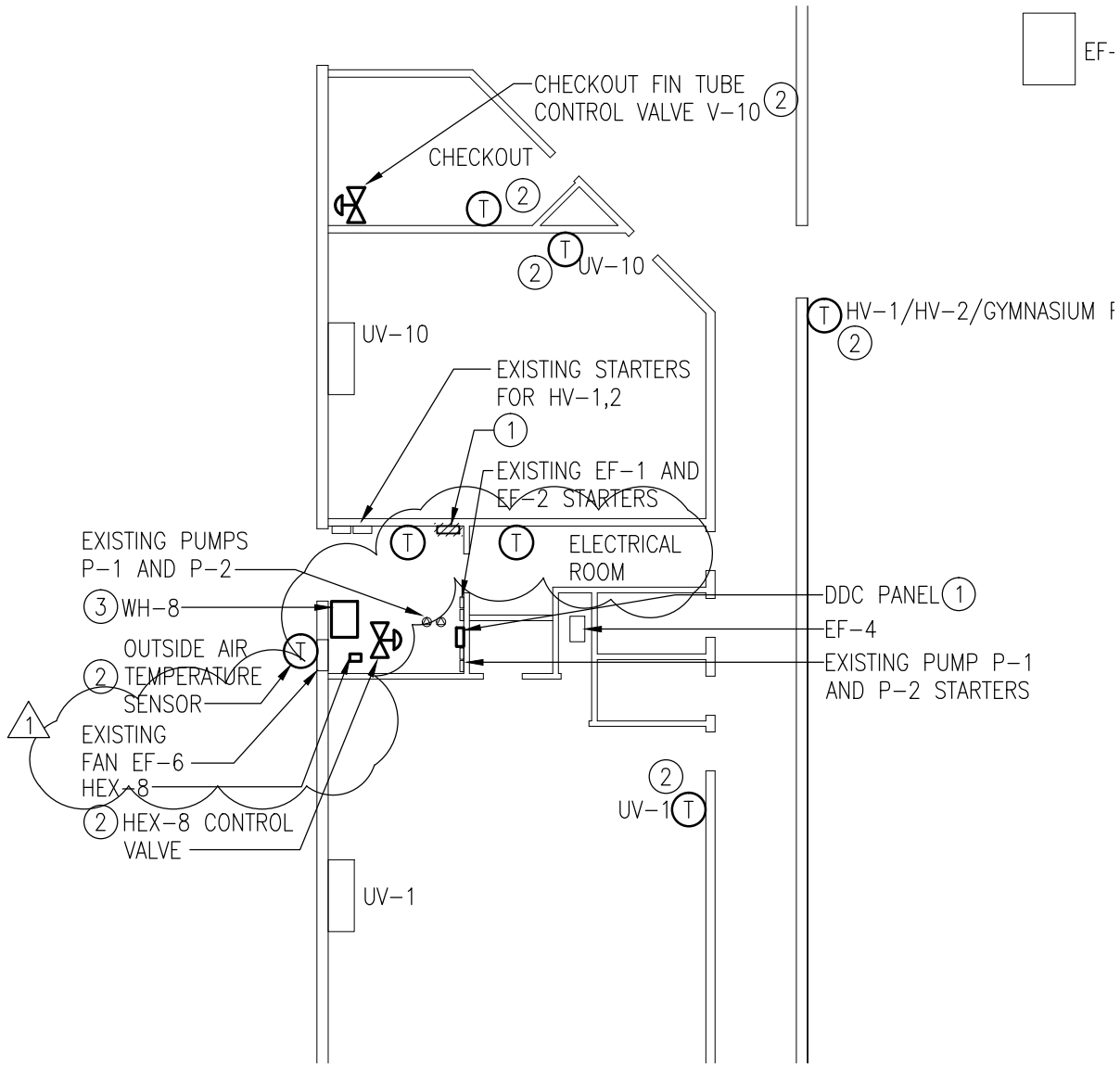
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO DETAILS 5

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: M-508



SCALE: 1/8"=1'-0"

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: M-712

NYS OFFICE OF GENERAL SERVICES

Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JGC
APPROVED:	DPL

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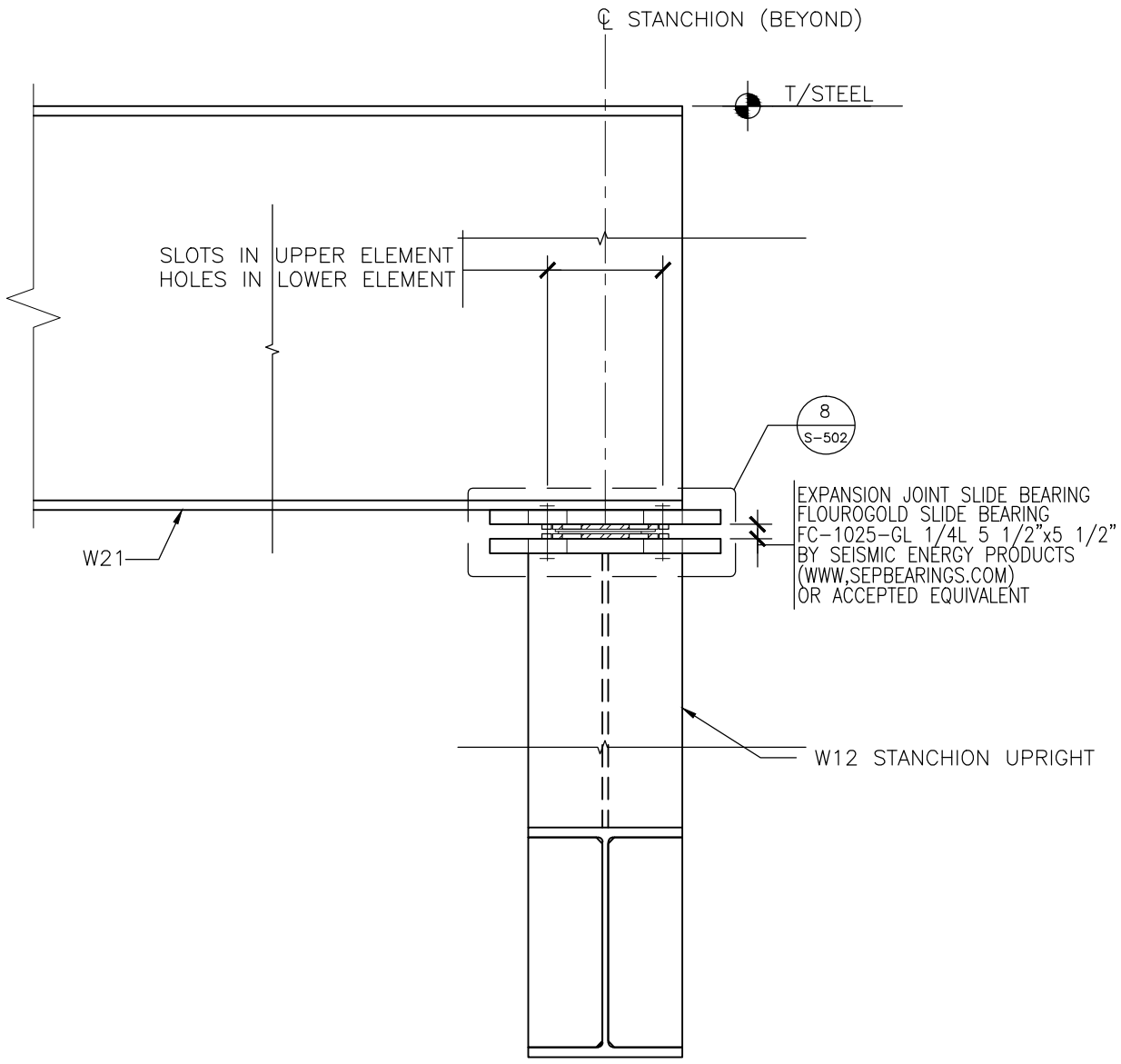
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO BUILDING 8 FLOOR PLAN

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: M-717



7
S-502

SECTION (EXPANSION JOINT)

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-502

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

SAGE ENGINEERING ASSOCIATES, LLP
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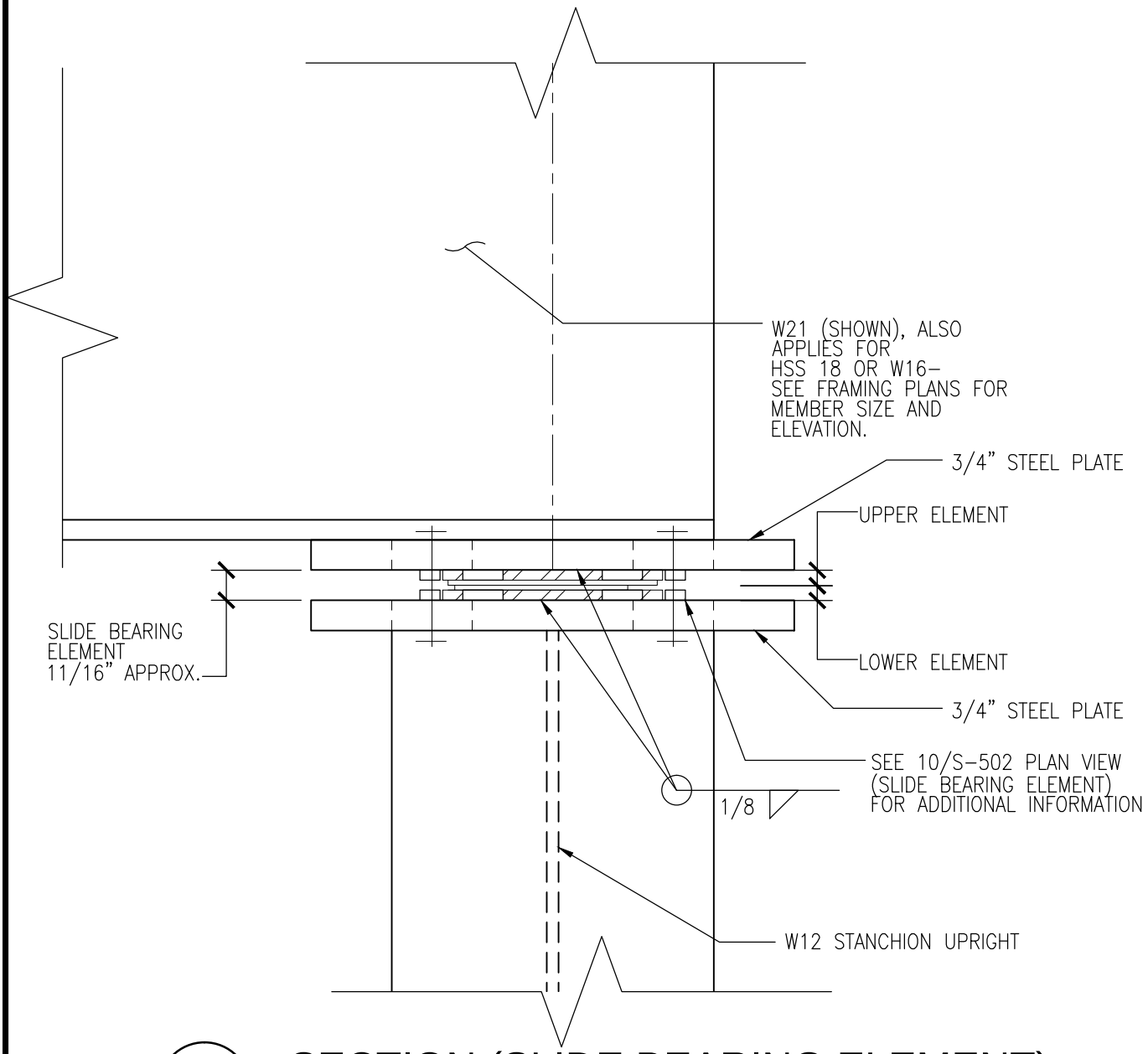
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO TYPICAL DOUBLE BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S-507



8 / S–502

SECTION (SLIDE BEARING ELEMENT)

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S–502

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496–H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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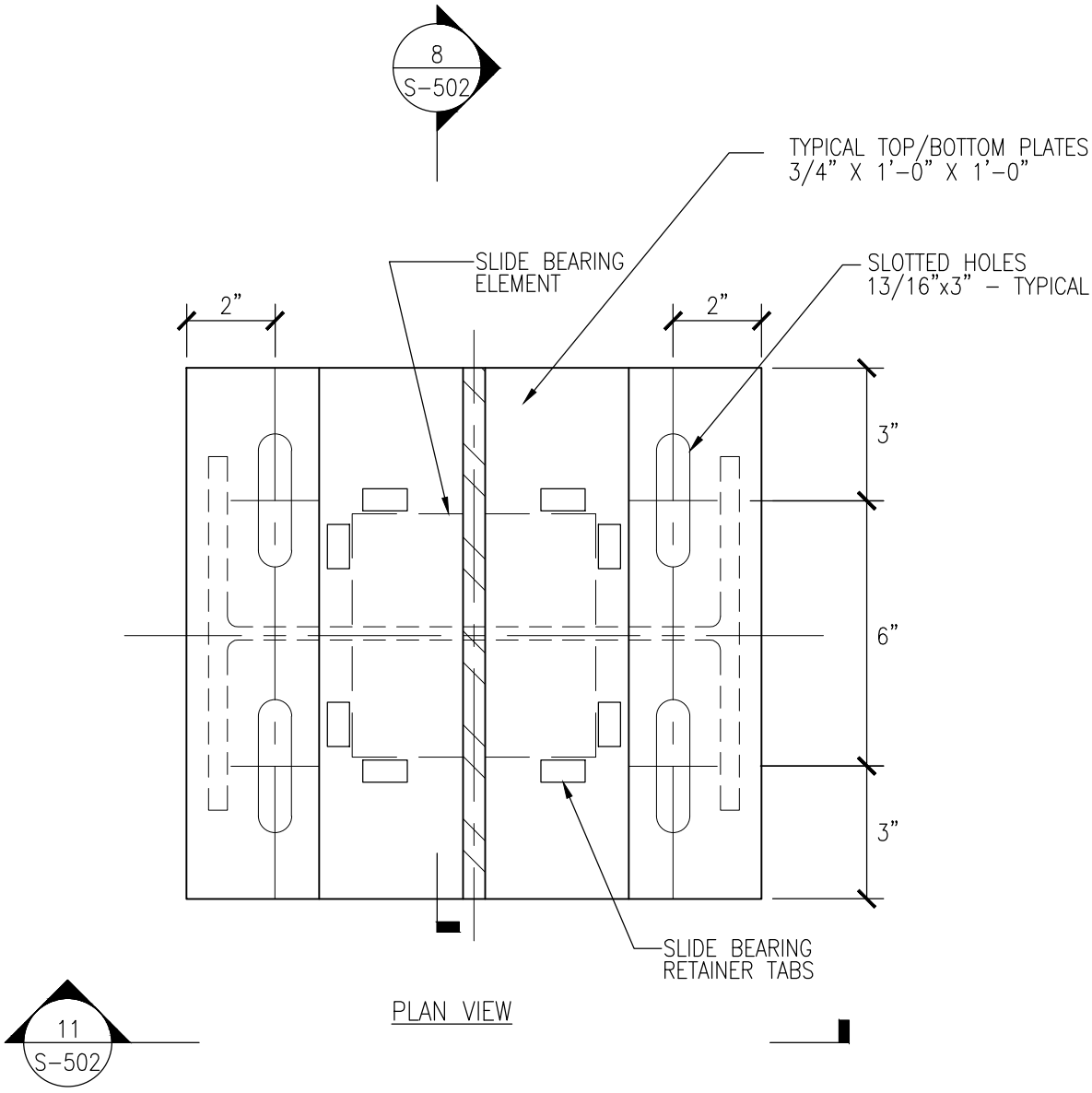
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO TYPICAL DOUBLE BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGORUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S–508



10 / S-502

PLAN VIEW (SLIDE BEARING ELEMENT)

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-502

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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ALBANY, NY 12203
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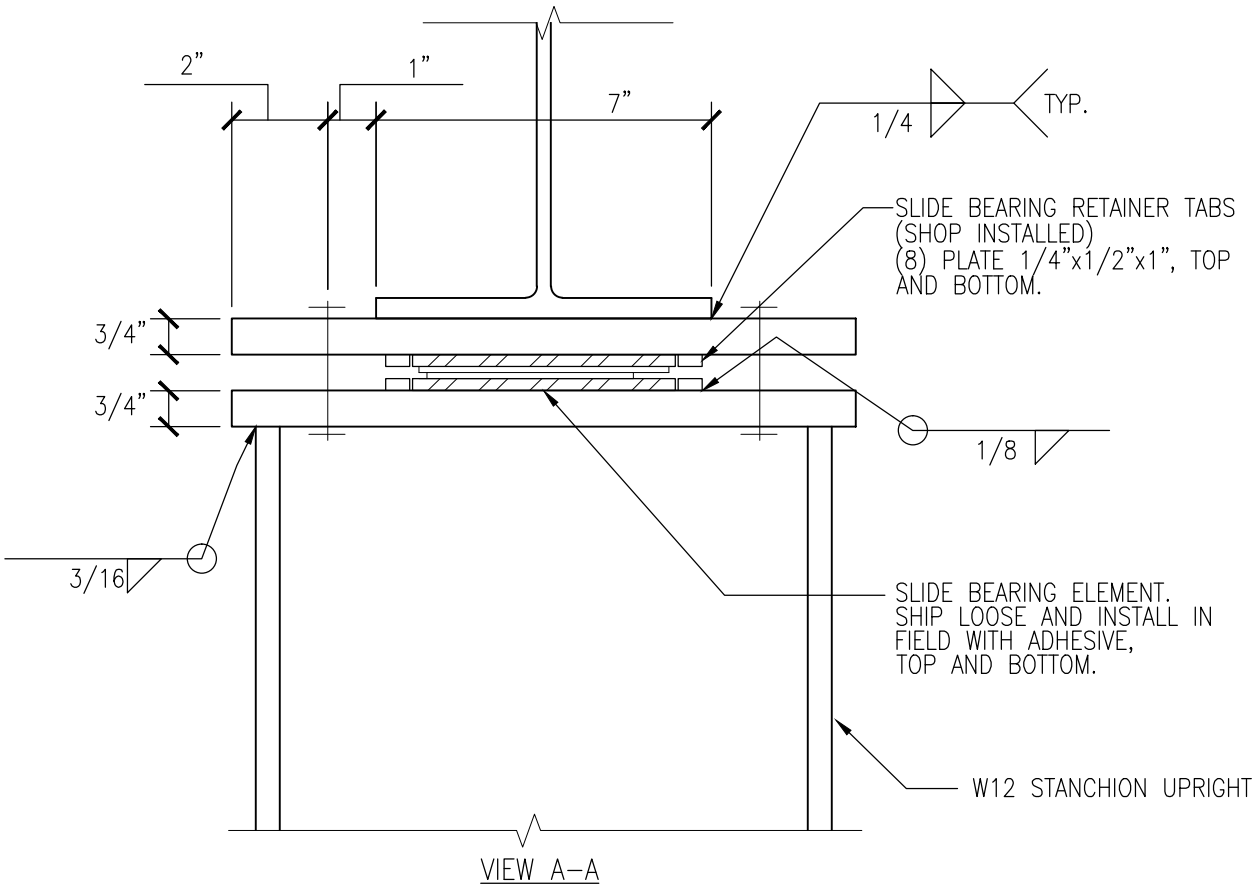
SHEET TITLE: REVISION TO TYPICAL DOUBLE BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S-509



11
S–502

SECTION (EXPANSION JOINT)

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S–502

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496–H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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ALBANY, NY 12203
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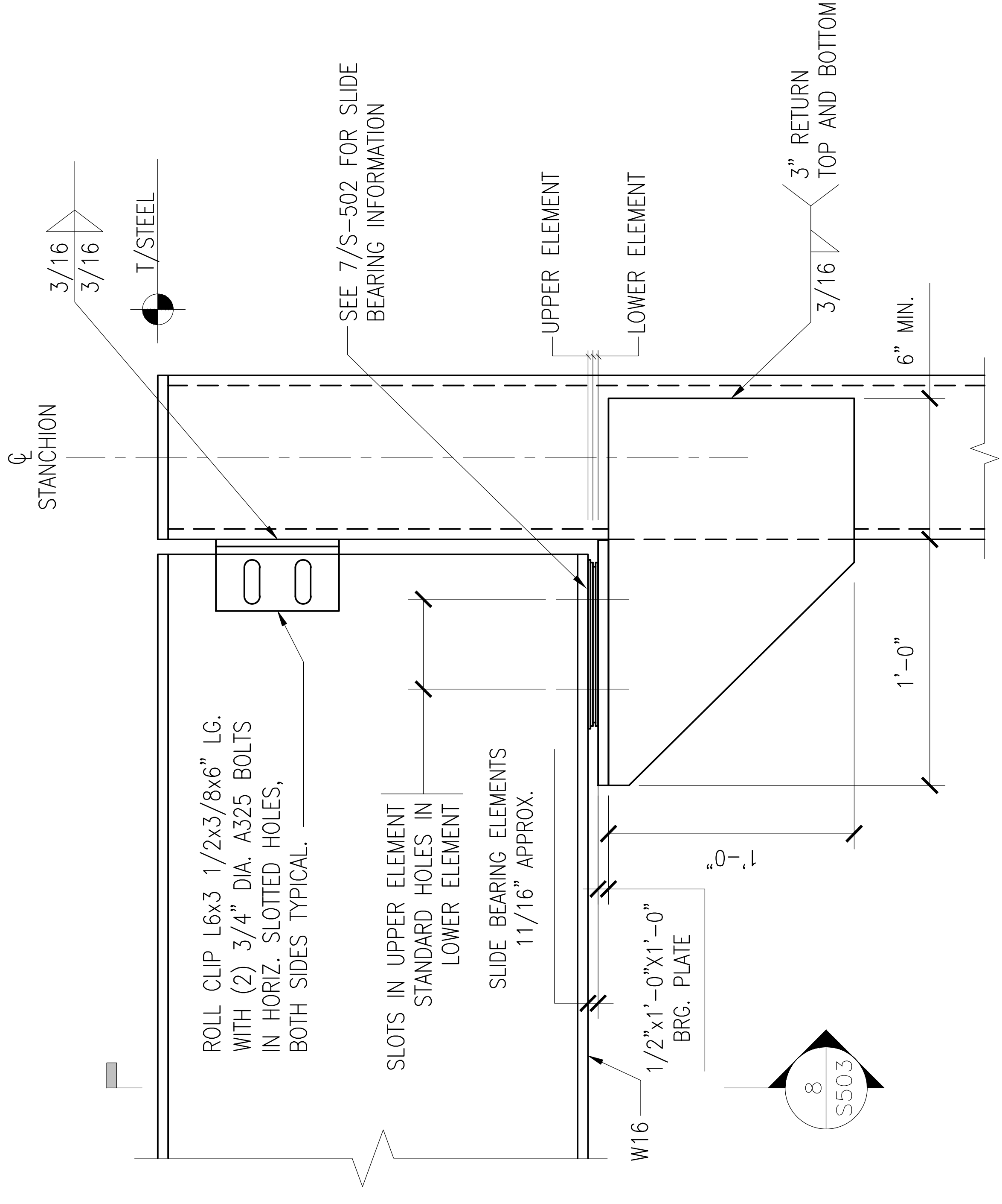
SHEET TITLE: REVISION TO TYPICAL DOUBLE BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S–510



6 / S-503 STANCHION SECTION (W-SHAPE/EXPANSION JOINT)

NOTE: SEE FRAMING PLANS FOR SPECIFIC MEMBER SIZE AT EACH STANCHION

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-503

SHEET TITLE: REVISION TO TYPICAL BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGROUND HEAT & WATER LINES ULSTER CORRECTIONAL FACILITY

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
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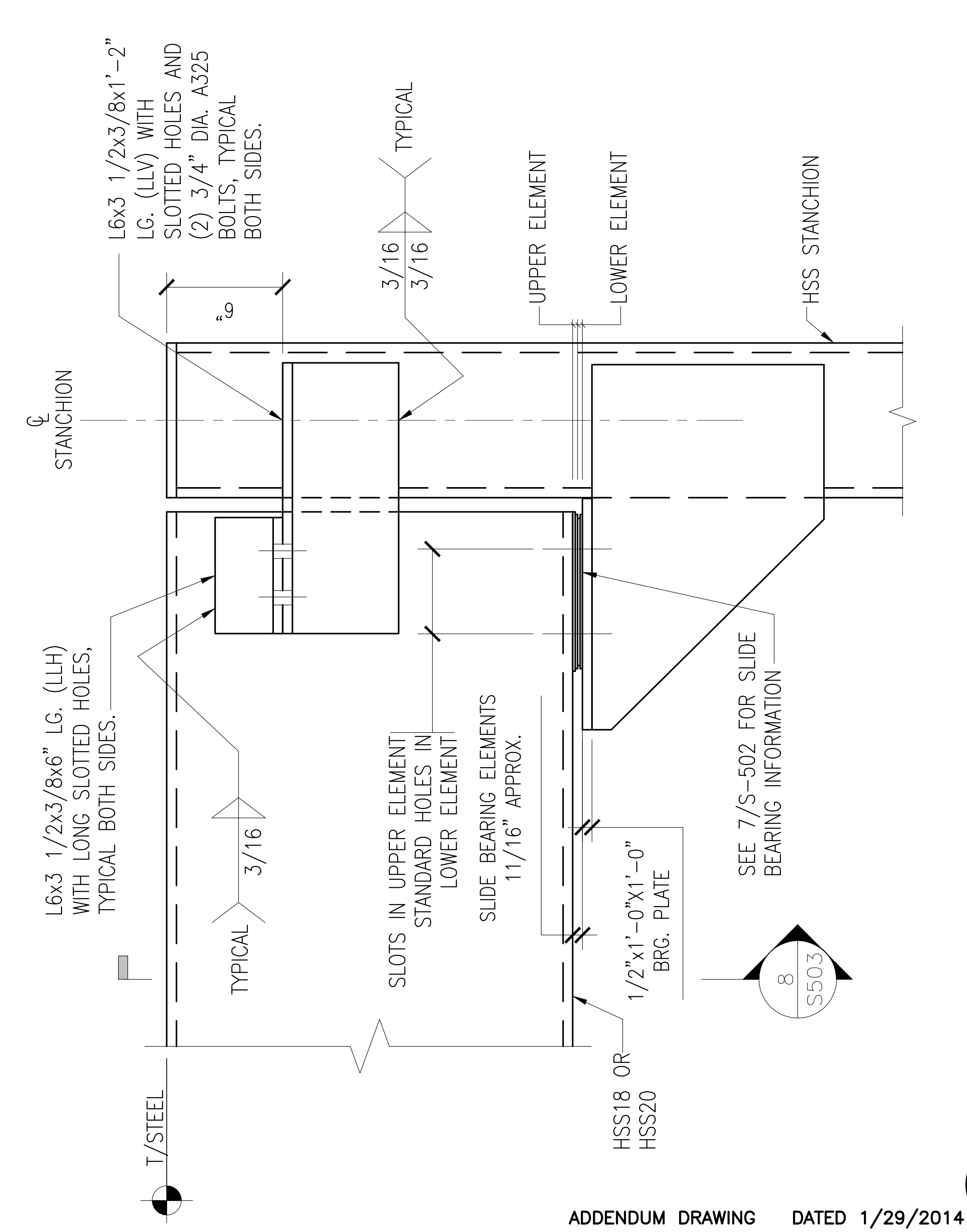
DWG NO: S-511



7
S-503

STANCHION SECTION (HSS-SHAPE/EXPANSION JOINT)

NOTE: SEE FRAMING PLANS FOE SPECIFIC MEMBER SIZE AT EACH STANCHION

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-503

SHEET TITLE: REVISION TO TYPICAL BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGORUND HEAT & WATER LINES ULSTER CORRECTIONAL FACILITY

OGS NYS OFFICE OF GENERAL SERVICES

Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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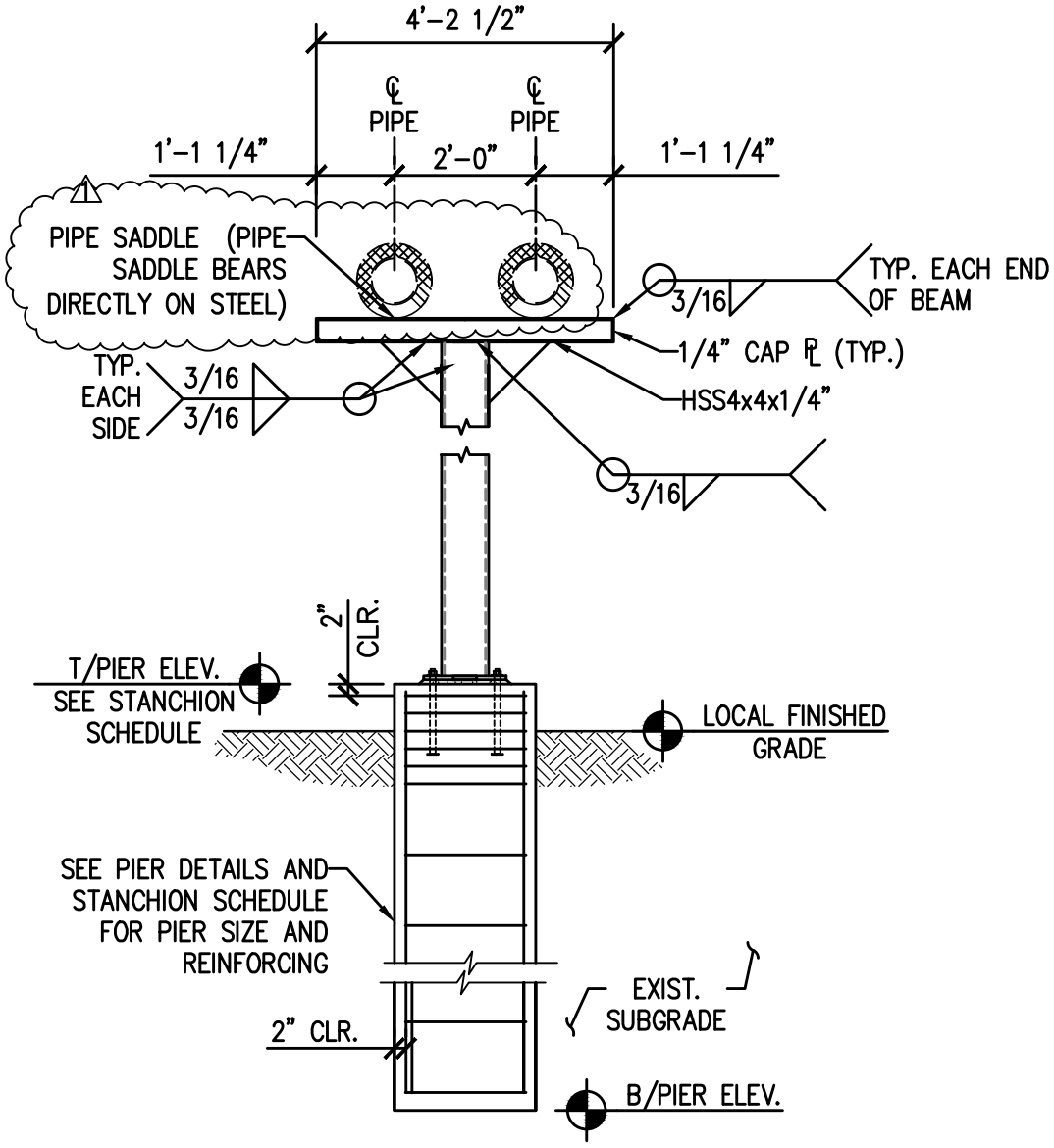
DWG NO: S-512



6
S-504

PIPE SUPPORT @ BLDG.

SCALE: NOT TO SCALE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-504

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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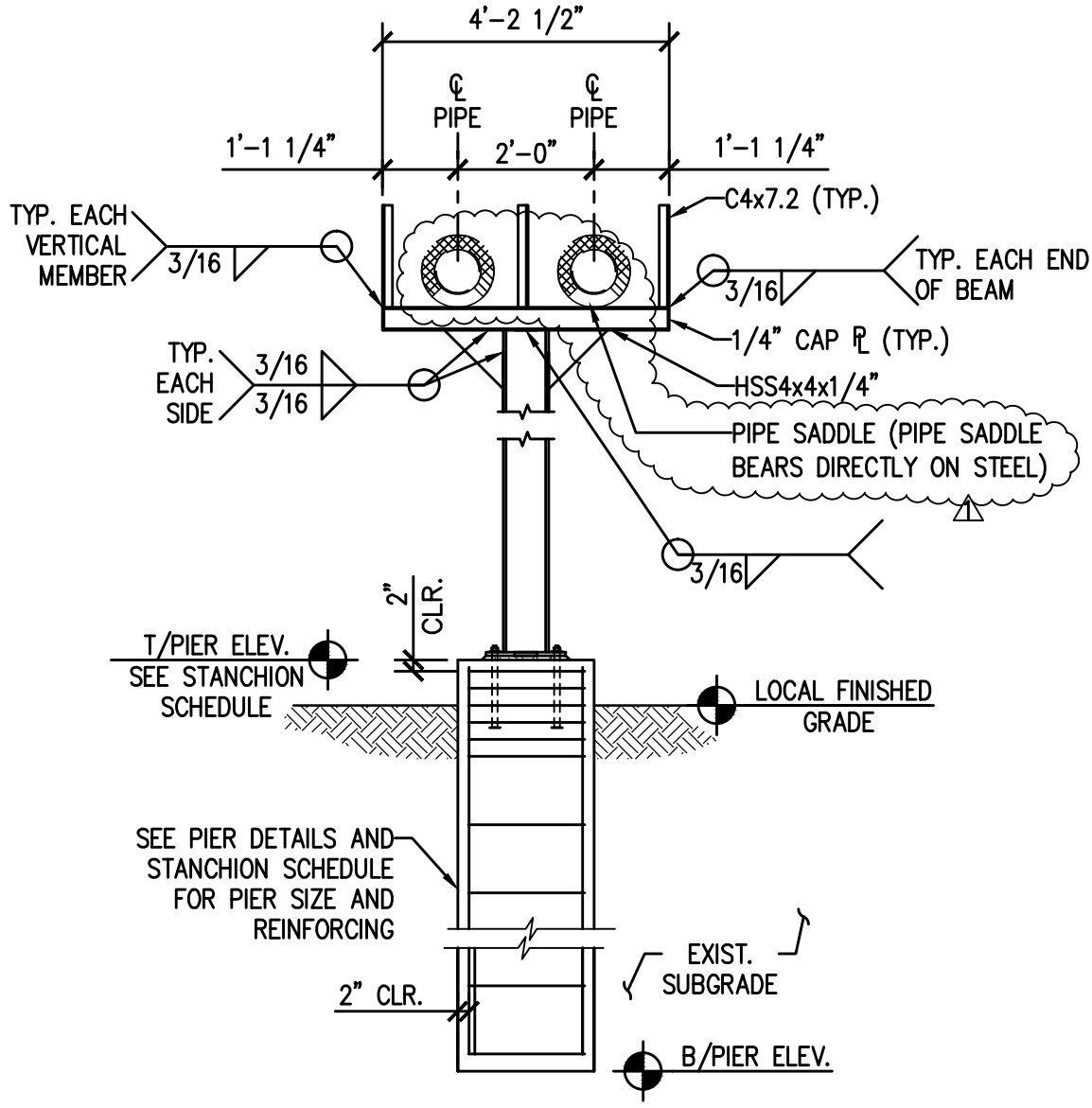
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO TYPICAL BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGORUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S-513

8.5x11 PLOT SHEET



7 / S-505 PIPE SUPPORT @ BLDG.

SCALE: NONE

ADDENDUM DRAWING DATED 1/29/2014

ADDENDUM NO.1 REFERENCE DRAWING: S-505

NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	HVAC
PROJ. NO:	44496-H
DATE:	01/29/14
DRAWN:	JWP
APPROVED:	JEB

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1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

SHEET TITLE: REVISION TO TYPICAL BEAM FRAMING PLAN, SECTIONS AND DETAILS

PROJECT: REPLACE UNDERGORUND HEAT & WATER LINES
ULSTER CORRECTIONAL FACILITY

DWG NO: S-514

8.5x11 PLOT SHEET