NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 3 TO PROJECT NO. 45552

CONSTRUCTION, HVAC, PLUMBING AND ELECTRICAL WORK
PROVIDE SUB HEADQUARTERS BUILDING
205 LIME KILN ROAD
EAST FISHKILL, NEW YORK

November 24, 2021

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.

REVISION TO PREVIOUSLY ISSUED ADDENDUM

1. ADDENDUM 02 Item 2: Page 033000 – 6, Paragraph 2.01.S: ADD the accompanying subparagraph:

   "3. Dosage Rate: 4 gal/cu.yd."

CONSTRUCTION WORK SPECIFICATIONS

2. SECTION 310000 – EARTHWORK: Discard the Section bound in the Project Manual and substitute the accompanying Section (Pages 310000-1 thru 310000-15) noted "REVISED 11/18/2021".

PLUMBING WORK SPECIFICATIONS

3. SECTION 211313 – SPRINKLER SYSTEMS: Discard the Section bound in the Project Manual and substitute the accompanying Section (Pages 211313-1 thru 211313-6) noted "REVISED 11/18/2021".

4. SECTION 220900 – DOMESTIC WATER BOOSTER PUMP CONTROLS: Discard the Section bound in the Project Manual and substitute the accompanying Section (Pages 220900-1 thru 220900-3) noted "REVISED 11/18/2021".

CONSTRUCTION WORK DRAWINGS

5. Drawing No. A-001:
   a. General Partition Notes: C.1. REVISE note to read:

      "ALL INTERIOR STEEL STUD FRAMING SHALL BE 4" OR 6", 25 GA. MIN. 16" ON CENTER, UNLESS NOTED OTHERWISE."

6. Revised Drawings:
   a. Drawing Nos. CG-100, C-002, C-100, C-102, C-301, C-302, C-507, C-508, C-509, noted "REVISED DRAWING 11/18/2021" accompany this Addendum and supersede the same numbered originally issued Drawings.

END OF ADDENDUM

Erik T. Deyoe, P.E.
Director, Division of Design
Design & Construction

MM/BJ:jc

SECTION 310000

EARTHWORK

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Topsoil: Section 329120.

B. Seeding: Section 329219.

1.02 DEFINITIONS

A. The following terms have the meanings ascribed to them in this Article, wherever they appear in this Section.

1. Earth Excavation: The removal of all surface and subsurface material not classified as rock as defined below.
2. Rock: Limestone, sandstone, shale, granite, and similar material in solid beds or masses in its original or stratified position which can be removed only by blasting operations, drilling, wedging, or use of pneumatic tools, and boulders with a volume greater than 1.0 cu yd. Concrete building foundations and concrete slabs, not indicated, with a volume greater than 1.0 cu yd shall be classified as rock.
    a. Limestone, sandstone, shale, granite, and similar material in a broken or weathered condition which can be removed with an excavator or backhoe equipped with a bucket with ripping teeth or any other style bucket shall be classified as earth excavation.
    b. Masonry building foundations, whether indicated or not, shall be classified as earth excavation.
3. Unclassified Earth Excavation: The excavation and disposal of all surface and subsurface materials of any description necessary to perform the work of this contract. This will include:
    a. All soil deposits of any description both above and below groundwater levels. These may be naturally deposited or placed by previous construction operations.
    b. Ledge rock of all quality. (Limestone, Sandstone, Shale, Granite and similar materials in solid beds or masses in its original or stratified position which can only be removed by drilling, wedging, use of pneumatic tools or heavy ripping equipment.) Blasting operations will not be permitted to loosen any ledge rock necessary to be removed in this contract.
    c. Boulders of any size.
    d. Any materials of man-made origin.
4. Subgrade Surface: Surface upon which subbase or topsoil is placed.
5. Subbase: Select granular material or subbase course Type 2 which is placed immediately beneath pavement or concrete slabs.
6. Foundation Bearing Grade: Grade/elevation at which the bottom-of-footings are constructed.

7. Maximum Density: The dry unit weight in pounds per cubic foot of the soil at "Optimum Moisture Content" when determined by ASTM D 698 (Standard Proctor), or ASTM D 1557 (Modified Proctor).
8. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
9. Landscaped Areas: Areas not covered by structures, walks, roads, paving, or parking.
10. Unauthorized Excavation: The removal of material below required elevation indicated on the Drawings or beyond lateral dimensions indicated or specified without specific written direction by the Director's Representative.

1.03 SUBMITTALS

A. Product Data:
1. Filter Fabric: Manufacturer's catalog sheets, specifications, and installation instructions.
2. Absorption System Fill: Submit borrow pit in-situ percolation test reports signed by a N.Y.S. licensed engineer.
3. Temporary and Permanent Sheeting, Shoring, and Bracing: Specifications for materials and accessories.
4. For all materials in Part 2.

B. Samples: Submit samples as follows. Take the samples in the presence of the Director's Representative and submit to the Director's Representative the laboratory test results for gradation, proctors and soundness tests, when required. These tests will be performed in accordance with ASTM standards, will be performed and signed by a certified soils laboratory, and will be submitted as part of the original submittal. At a minimum the samples taken will be of the following quantities:
1. Select Granular Material: 50 - 60 lb. (Two Samples).
2. Subbase Course Type 2: 50 - 60 lb. (Two Samples).
3. Cushion Material: 30 lb.
4. Drainage Fill: 40 - 50 lb.
5. Crushed Stone (No. 1 and 3 Course Agg): 30 Lbs
6. Screened Gravel (Wastewater): 30 Lbs
7. Absorption System Fill: 30 lb.

D. Quality Control Submittals:
1. Subbase Materials: Name and location of source and the DOT Source Number. If the material is not being taken from an approved DOT Source the results of the gradation and soundness tests performed by an ASTM certified soils laboratory will be required.
2. Other Aggregates: Name and location of source and soil laboratory test results.
3. Excavation Procedure: Submit a lay out drawing or detailed outline of intended excavation procedure for the Director's information. This submittal will not relieve the Contractor of responsibility for the successful performance of intended excavation methods.

4. Sheeting, Shoring, and Bracing (Not shown on the Drawings): Submit a detailed plan of intended sheeting, shoring and bracing, signed by a New York State licensed Professional Engineer, for the Director's information. This submittal will not relieve the Contractor of responsibility for the successful performance of the intended sheeting, shoring and bracing methods.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Protect filter fabric from sunlight during transportation and storage.

1.05 PROJECT CONDITIONS

A. Protect existing trees and plants during performance of the Work unless otherwise indicated. Box trees and plants indicated to remain within the grading limit line with temporary steel fencing or solidly constructed wood barricades as required. Protect root systems from smothering. Do not store excavated material or allow vehicular traffic or parking within the branch drip line. Restrict foot traffic to prevent excessive compaction of soil over root systems.

B. Cold Weather Requirements:
   1. Excavation: When freezing temperatures are anticipated, do not excavate to final required elevations for concrete work unless concrete can be placed immediately.
   2. Backfilling: If backfill is being placed during freezing temperatures the backfilling operations will be monitored by the Director's Representative and the following procedures will be followed:
      a. Frozen ground will be removed in its entirety from beneath and five feet beyond the area of fill placement.
      b. The fill material placed will consist of Selected Fill and will be free of all frozen chunks that exceed four inches in size. The material transported to the project site will only consist of material excavated from below the frost depth.
      c. At the end of the workday, the area of fill placement will be covered with insulated blankets or left unprotected. Other means of protection (hay, wood chips, etc.) may also be used for protection provided it is approved by the Director's Representative.
      d. Following workday - Remove the insulated blankets and/or strip the area of all frozen material as specified previously.
      e. Upon establishing the subgrade elevations, protect the grades with insulated blankets or place additional material that will adequately insulate the exposed earth surface from frost. This additional fill or protective material will be stripped just prior to pouring concrete.

C. Thru-traffic or fill placement with heavy construction vehicles or equipment which causes rutting or weaving to occur within the perimeter of a building will not be permitted. If rutting or weaving occurs during placement of fill, place

specified fill in a stable area outside building perimeter and spread with tracked equipment to specified layer thickness.

PART 2 PRODUCTS

2.01 MATERIALS

A. Select Granular Material: Stockpiled, sound, durable, sand, gravel, stone, or blends of these materials, free from organic and other deleterious materials. Comply with the gradation and material requirements specified below:

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
3 inch	50.8	100
1/4 inch	6.35	30-65
No. 40	0.425	5-40
No. 200	0.075	0-10

1. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after four test cycles.
2. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve will not exceed 5.0.
3. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve will consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than three times its least dimension.

B. Subbase Course Type 2: Stockpiled, crushed ledge rock or approved blast furnace slag, conforming to New York State Department of Transportation, paragraph 304-2.02, Type 2. Comply with the gradation and material requirements specified below:

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
2 inch	50.8	100
1/4 inch	6.35	25-60
No. 40	0.425	5-40
No. 200	0.075	0-10

1. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after four test cycles.
2. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve will not exceed 5.0.
3. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve will consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than three times its least dimension.

C. Suitable Material (Fill and Backfill for Landscaped Areas): Material consisting of mineral soil (inorganic), blasted or broken rock and similar materials of

natural or man-made origin, including mixtures thereof. Maximum particle size will not exceed 2/3 of the specified layer thickness prior to compaction. NOTE: Material containing cinders, industrial waste, sludge, building rubble, land fill, muck, and peat will be considered unsuitable for fill and backfill, except topsoil and organic silt may be used as suitable material in landscaped areas provided it is placed in the top layer of the subgrade surface.

D. Cushion Material: Will consist of clean, hard, durable, uncoated particles, free from lumps of clay and all deleterious substances and will meet the following gradation requirements:

Sieve Size		Percent Passing
Sieve Size	Size opening (mm)	
1/4 inch	6.35	100
No. 60	0.25	0-35
No. 100	0.15	0-10

E. Drainage Fill: Comply with DOT Article 703-02 for screened gravel.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
1/2 inch	12.7	100
1/4 inch	6.35	90-100
1/8 inch	3.17	0-15
No. 200 Sieve	0.075	0-1

F. No. 1 Coarse Aggregate: Crushed Stone that complies with material requirements of DOT Article 703-02 and meets the following gradation.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
1 inch	25.4	100
1/2 inch	12.7	90-100
1/4 inch	6.35	0-15

G. No. 3 Coarse Aggregate: Crushed Stone that complies with material requirements of DOT Article 703-02 and meets the following gradation.

Sieve		Percent Passing
Sieve Size	Size opening (mm)	
2 1/2 inch	53.0	100
2 inch	50.8	90-100
1 1/2 inch	37.5	35-70
1 inch	12.7	0-15

H. Rip Rap: Medium Stone Filling that complies with DOT Article 620-2.02 for stone filling.

I. Flowable Fill: Shall consist of a mixture of Portland cement, sand, water and admixtures proportioned to provide a non-segregating, free-flowing, self-consolidating material that will result in a hardened, dense backfill.
   1. Shall have a 28-day compressive strength between 40 and 100 psi.

J. On-Site Soils: Do not use unless approved by Geotechnical engineer.

2.02 GEOTECHNICAL FABRICS

A. Filter Fabric (GeoTextile):
   1. Drainage and Erosion Control: Amoco 1199 & 2019, Maccaferri MacTex MX140 & MX155, Mirafi 140N & 160N, Fiberweave 403 & 404 or equivalent.
   2. Separation for foundation drains, underdrains, undercuts: Amoco 2002 & 2004, Contech Construction Products Inc. C-180, Synthetic Industries Geotex 250ST & 315ST, Mirafi Geolon HP570 & HP1500 or equivalent.
   3. Separation/Stabilization beneath pavements: GeoTex 801, Bonded Fibers Products PN080, Maccaferri Gabions MacTex MX275 & 340, Mirafi 160N & 180N or equivalent.

2.03 WASTEWATER MATERIAL

A. Screened Gravel (Wastewater): Comply with applicable portions of DOT Section 703-02, except as otherwise indicated.

   1. ABSORPTION TRENCHES
      a. Gradation: 3/4 to 1-1/2 inches.

B. Absorption System Fill: Soil containing sand and gravel, or a mixture of gravelly loam (gravel, sand, silt, clay mixture) free of deleterious material and having a hydraulic conductivity (percolation rate) between 1 and 15 minutes per inch.

   1. Perform at least two (2) in-situ percolation tests in the borrow pit prior to excavation. Tests shall be conducted by a N.Y.S. licensed engineer.

2.04 LANDSCAPE EDGE MATERIAL

A. Landscape Edge Material shall 3/16" thick metal edging 4" in height, Border Guard, as manufactured by Border Concepts, 7621 Little Ave, Suite 426, Charlotte, NC 28226 800-845-3343, or approved equal. Stakes shall be supplied by the manufacture of the edging and shall be made for the edging submitted.

PART 3 EXECUTION

3.01 CLEARING AND GRUBBING

A. Clear and grub the Site of trees, shrubs, brush, other prominent vegetation, debris, and obstructions except for those items indicated to remain. Completely remove stumps and roots protruding through the ground surface.

B. Fill depressions caused by the clearing and grubbing operations in accordance with the requirements for filling and backfilling, unless further excavation is indicated.

3.02 REMOVAL OF TOPSOIL

A. Remove existing topsoil from areas within the Grading Limit Line where excavation or fill is required.

B. Stockpile approved topsoil where directed until required for use. Place, grade, and shape stockpiles for proper drainage.
   1. Topsoil will be tested prior to stockpiling. Stockpile only quantities of topsoil approved in writing for re-use.

3.03 UNDERGROUND UTILITIES

A. Locate existing underground utilities prior to commencing excavation work. Determine exact utility locations by hand excavated test pits. Support and protect utilities to remain in place.

B. Do not interrupt existing utilities that are in service until temporary or new utilities are installed and operational.

C. Utilities to remain in service: Will be re-routed as shown on the Contract Drawings.

D. Utilities abandoned beneath and five feet laterally beyond the structure's proposed footprint will be removed in their entirety. Excavations required for their removal will be backfilled and compacted as specified herein.

E. Utilities extending outside the five feet limit specified above may be abandoned in place provided their ends are adequately plugged as described below.
   1. Permanently close open ends of abandoned underground utilities exposed by excavations, which extend outside the limits of the area to be excavated.
   2. Close open ends of metallic conduit and pipe with threaded galvanized metal caps or plastic plugs or other approved method for the type of material and size of pipe. Do not use wood plugs.
   3. Close open ends of concrete and masonry utilities with concrete or flow-able fill.

3.04 EXCAVATION

A. Excavate earth as required for the Work.

B. Install and maintain all erosion and sedimentation controls during all earthwork operations as specified on the Contract Drawings or as directed by local officials. If the erosion and sedimentation controls specified by the local officials are more stringent than those specified on the Contract Drawings contact the Director's Representative.

C. Maintain sides and slopes of excavations in a safe condition until completion of backfilling. Comply with Code of Federal Regulations Title 29 - Labor, Part 1926 (OSHA).

1. Trenches: Deposit excavated material on one side of trench only. Trim banks of excavated material to prevent cave-ins and prevent material from falling or sliding into trench. Keep a clear footway between excavated material and trench edge. Maintain areas to allow free drainage of surface water.

D. Stockpile excavated materials classified as suitable material where directed, until required for fill. Place, grade, and shape stockpiles for proper drainage as approved by the Director's Representative.

E. Excavation for Structures: Conform to elevations, lines, and limits indicated. Excavate to a vertical tolerance of plus or minus 1 inch. Extend excavation a sufficient lateral distance to provide clearance to execute the Work.

F. Footings and Foundations: The foundation bearing grade will be established just prior to constructing the concrete foundations when concrete is to bear on undisturbed soil.

1. Stepping Footings: Cut sloping surfaces under footings, foundations, steps, and where required for other Work as indicated.
2. Where footings and other Work requiring similar soil support will rest entirely on rock, remove loose soil and loose rock and place concrete to the required elevations. Where footings and other Work requiring similar soil support will rest partially on rock and partially on soil, immediately notify the Director before any backfilling or concrete placement occurs; the Director will determine the correct foundation treatment for the Work.

G. Slabs and Floors: Excavate to the following depths below bottom of concrete for addition of slab subbase material:

1. Interior Floors: 8 inches unless otherwise indicated.
2. Exterior Slabs and Steps: 12 inches unless otherwise indicated.

H. Pipe Trenches: Open only enough trench length to facilitate laying pipe sections. Unless otherwise indicated on the Drawings, excavate trenches approximately 24 inches wide plus the outside pipe diameter, equally divided on each side of pipe centerline. Cut trenches to cross section, elevation, profile, line, and grade indicated. Accurately grade and shape trench bottom for uniform bearing of pipe in undisturbed earth. Excavate at bell and coupling joints to allow ample room for proper pipe connections.

1. Trench in Rock: Excavate an additional 6 inches below bottom of pipe for bed of cushion material under the piping.

I. Open Ditches: Cut ditches to cross sections and grades indicated.

J. Pavement: Excavate to subgrade surface elevation.

K. Unauthorized Excavations: Unless otherwise directed, backfill unauthorized excavation under footings, foundation bases, and retaining walls with compacted select granular material without altering the required footing elevation. Elsewhere, backfill and compact unauthorized excavation as specified for authorized excavation of the same classification, unless otherwise directed by the Director.

1. Unauthorized excavations under structural Work such as footings, foundation bases, and retaining walls will be reported immediately to the Director before any concrete or backfilling Work commences.

L. Notify the Director's Representative upon completion of excavation operations. Do not proceed with the Work until the excavation is inspected and approved. Inspection of the excavation by the Director's Representative will be made on three working days notice.

M. Removal of Unsuitable Material Beneath Structures and Other Improvements: Excavate encountered unsuitable materials, which extend below required elevations, to additional depth as directed by the Director. Have cross sections taken, under the supervision of an independent Land Surveyor, to determine the quantity of such excavation. Do not backfill this excavation prior to quantity measurement.

1. Such additional excavation and backfilling, not due to error, fault or neglect of the Contractor and exceeding the numeric quantities indicated on the Drawings, will be paid for at the unit prices specified in this Section.

3.05 DEWATERING

A. Prior to the performance of any excavations provide dewatering methods such that the groundwater table is maintained at an elevation that is beneath the excavated depth.

B. Prevent surface and subsurface water from flowing into excavations and trenches and from flooding the site and surrounding area.

C. Do not allow water to accumulate in excavations or trenches. Remove water from all excavations immediately to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Furnish and maintain pumps, sumps, suction and discharge piping systems, and other system components necessary to convey the water away from the Site.

D. Convey water removed from excavations, and rainwater, to collecting or run-off area after passing it through settlement tank or other device. Cut and maintain temporary drainage ditches and provide other necessary diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

E. Provide temporary controls to restrict the velocity of discharged water as necessary to prevent erosion and siltation of receiving areas. Maintain discharge from settlement tank (or other settlement device) from causing erosion.

3.06 PLACING FILTER FABRIC

A. Place and overlap filter fabric in accordance with the manufacturer's installation instructions, unless otherwise shown.

B. Cover tears and other damaged areas with additional filter fabric layer extending three feet beyond the damage.

C. Do not permit traffic or construction equipment directly on filter fabric.

D. Backfill over filter fabric within two weeks after placement. Backfill in accordance with the fabric manufacturer's instructions and in a manner to prevent damage to the fabric.

3.07 PLACING FILL AND BACKFILL

A. Surface Preparation of Fill Areas: Strip topsoil, remaining vegetation, and other deleterious materials prior to placement of fill. Remove all asphalt pavement in its entirety from areas requiring the placement of fill or break up old pavements to a maximum size of four inches. Prior to placement of fill, smooth out and compact areas where wheel rutting has occurred due to stripping or earthwork operations.

B. Excavations: Backfill as promptly as Work permits, but not until completion of the following:
   1. Acceptance by the Director's Representative of construction below finish grade including, where applicable, dampproofing, waterproofing, perimeter insulation, and bearing capacity of supporting soil.
   2. Inspection, testing, approval, and recording locations of underground utilities.
   3. Removal of concrete formwork.
   4. Removal of temporary sheeting or sheetpiling and backfilling of voids caused by removals.
   5. Cutting off top of permanent sheeting or sheetpiling.
   6. Removal of trash and debris.
   7. Installation of permanent or temporary bracing on horizontally supported walls.

C. Do not place fill material on surfaces that are muddy, frozen, or contain frost or ice.

D. Use Select Granular Material to increase grades within building areas, as interior backfill against foundations and in trenches, as exterior backfill against walls with footing drains and as exterior backfill where pavement or walkways abut building.

E. Contractor may use flowable fill to increase grades and as interior backfill against foundations and in trenches. Allow fill to cure for at least 7 days before setting forms for concrete foundations or placing slab on grade.

F. Use Subbase Material directly below slabs and pavements as shown in drawings.

G. Use Suitable Material to increase grades outside building area except as otherwise specified.

H. Use Drainage Fill around footing drains as detailed in drawings. Wrap drainage fill with filter fabric.

I. Place backfill and fill materials in layers not more than eight inches thick in loose depth unless otherwise specified. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or covered with ice.

1. Place fill and backfill against foundation walls, and in confined areas such as trenches not easily accessible by larger compaction equipment, in maximum six inch thick loose depth layers.
2. For large fill areas, the layer thickness may be modified by the Director's Representative, at the Contractor's written request, if in the Director's Representative's judgment, the equipment used is capable of compacting the fill material in a greater layer thickness. This request will include the type and specifications of compaction equipment intended for use.
3. For Open Graded Stone/Clean Stone (Item B-12, No. 1 crushed stone, No. 2 crushed stone, etc.) in excess of six inches: Material must be wrapped in separation fabric.

J. Concrete walls:

1. Do not place fill or backfill against concrete walls until the walls have attained 70 percent of their design strength. Place backfill against walls of structures only after structural members are in place and any concrete components have attained 70 percent of their concrete design strength.
2. Prevent wedging action of backfill against structures backfilled on both sides, by placing backfill uniformly around structure so that the elevation on each side never differs by more than 24 inches.

K. Foundation Drains:

1. Line pipe trench loosely with filter fabric. Lap successive sheets 18 inches.
2. Place drainage fill a minimum of 4 inches deep under pipe and 6 inches on both sides and over top of drain pipe.
3. Completely wrap drainage fill with filter fabric.
4. Within two weeks complete balance of backfill with selected fill extending 2 feet out from foundation wall and up to 6 inches below finished grade.

L. Perimeter Insulation: Before the insulation is installed, place and tamp specified backfill to a smooth plane even with the required elevation of the lower surface of the insulation.

M. Under Exterior Concrete Slabs and Steps:

1. Up to Subgrade Surface Elevation: Place Select Granular Material when fill or backfill is required.
2. Subbase Material: Place 12 inches of slab subbase material over subgrade surface.

N. Under Interior Concrete Slabs:
   1. Up to Subgrade Surface Elevation: Place Select Granular Material when fill or backfill is required.
   2. Subbase Material: Place six inches of slab subbase material over subgrade surface.

O. Under Pavements and Walks:
   1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
   2. Subbase Material: Place as indicated.

P. Landscaped Areas: Place suitable material when required to complete fill or backfill areas up to subgrade surface elevation. Do not use material containing rocks over four inches in diameter within the top 12 inches of suitable material.

Q. Plastic Pipe in Trenches: Place cushion material a minimum of six inches deep under pipe, 12 inches on both sides, and 12 inches above top of pipe. Complete balance of backfill as specified.
   1. Trench in Rock: Place a minimum six inch deep bed of cushion material under pipe.

R. Copper Tubing and Steel Gas Pipe in Trenches: Place cushion material a minimum of six inches deep under pipe, 12 inches on both sides, and 12 inches above top of pipe. Complete balance of backfill as specified.

S. Backfilling Excavation Resulting From Removal of Unsuitable Material Beneath Structures and Other Improvements: Backfill the excavation with compacted select granular material.
   1. Such additional backfilling, exceeding the numeric quantities indicated on the Drawings, is included in the unit prices specified in this Section.

3.08 COMPACTION

A. All materials with exception of open graded stone (No. 2 Coarse aggregate, No. 1 Coarse aggregate, Item B-12, etc.):
   1. Compact each layer of fill and backfill for the following area classifications to the percentage of maximum density specified below and at a moisture content suitable to obtain the required densities, but at not less than three percent drier or more than two percent wetter than the optimum content as determined by ASTM D 698 (Standard Proctor) or 1557 (Modified Proctor).
      a. Structures (entire area within ten feet outside perimeter): 95 percent.
      b. Concrete Slabs and Steps: 95 percent.
      c. Landscaped Areas: 90 percent.
      d. Pavements and Walks: 95 percent.
      e. Pipes and Tunnels: 95 percent.
      f. Pipe Bedding: 95 percent.
   2. When the existing ground surface to be compacted has a density less than that specified for the particular area classification, break up and

pulverize, and moisture condition to facilitate compaction to the required percentage of maximum density.

3. Moisture Control:
   a. Where fill or backfill must be moisture conditioned before compaction, uniformly apply water to the surface and to each layer of fill or backfill. Prevent ponding or other free water on surface subsequent to, and during compaction operations.
   b. Remove and replace, or scarify and air dry, soil that is too wet to permit compaction to specified density. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing, until moisture content is reduced to a value which will permit compaction to the percentage of maximum density specified.
4. If a compacted layer fails to meet the specified percentage of maximum density, the layer will be recompacted and retested. If compaction cannot be achieved the material/layer will be removed and replaced. No additional material may be placed over a compacted layer until the specified density is achieved.

B. Open graded Stone: Place material in maximum twelve inch lifts. Each lift shall be raked smooth and compacted through several passes of a walk behind vibratory roller. Compaction Testing is **not** required.

3.09 ROUGH GRADING

A. Interior Grading: Trim unexcavated spaces within the building to levels indicated.
   1. Subgrade for Interior Slabs: Compact as specified to receive fill material. Finish subgrade surface within 1 inch above or below level specified for fill required.

B. Exterior Grading: Trim and grade area within the Grading Limit Line and excavations outside the limit line, required by this Contract, to a level of 4 inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.
   1. Slope cut and fill in transition areas, outside of the grading limit line, to meet corresponding levels of existing grades at a slope of 1 vertical to 2 horizontal unless otherwise indicated.
   2. Landscaped Areas: Provide uniform subgrade surface within 1 inch of required level to receive topsoil thickness specified. Compact fill as specified to within three inches of subgrade surface. Remove objectionable material detrimental to proper compaction or to placing full depth of topsoil. If the top three inches of subgrade has become compacted before placement of topsoil, harrow or otherwise loosen rough graded surface to receive topsoil to a depth of three inches immediately prior to placing topsoil.

3.10 SUBGRADE SURFACE FOR WALKS AND PAVEMENT

A. Shape and grade subgrade surface as follows:
   1. Walks: Shape the surface of areas under walks to required line, grade and cross section, with the finish surface not more than 1 inch above or below the required subgrade surface elevation.
   2. Pavements: Shape the surface of areas under pavement to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subgrade surface elevation.

B. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.

C. Thoroughly compact subgrade surface for walks and pavement by mechanical rolling, tamping, or with vibratory equipment as approved to the density specified.

D. Shoulders: Place shoulders along edges of filled subgrades to prevent lateral movement. Construct shoulders of selected fill material, placed in such quantity to compact to thickness of each subgrade course layer. Compact and roll at least a 2'-0" wide additional layer of each subgrade course.

3.11 FINISH GRADING

A. Uniformly grade rough graded areas within limits of the Grading Limit Line to finish grade elevations indicated.

B. Grade and compact to smooth finished surface within tolerances specified, and to uniform levels or slopes between points where finish elevations are indicated or between such points and existing finished grade.

C. Grade areas adjacent to building lines so as to drain away from structures and to prevent ponding.

D. Finish surfaces free from irregular surface changes, and as follows:
   1. Grassed Areas: Finish areas to receive topsoil to within one inch above or below the required subgrade surface elevations.
   2. Walks: Place and compact subbase material as specified. Shape surface of areas under walks to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subbase elevation.
   3. Pavements: Place and compact subbase material as specified. Shape surface of areas under pavement to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subbase elevation.
   4. Building Slabs: Grade subbase material smooth and even, free of voids, compacted as specified, and to required subbase elevation. Finish final grades within a tolerance of 1/4 inch when tested with a ten foot straightedge.
   5. Surfaces To Receive Vapor Barrier: Provide smooth surfaces graded, tamped and/or rolled, entirely free of obstructions or protruding objects.

E. Spread topsoil directly upon prepared subgrade surface to a depth measuring FOUR inches after natural settlement of the topsoil has occurred in areas to be seeded or to receive sod. Place to greater depth when necessary to adjust grades to required elevations.
   1. Approved existing topsoil within the Grading Limit Line may be used. Provide additional topsoil from outside sources as required.

F. Finish topsoil surface free of depressions which will trap water, free of stones over 1 inch in any dimension, and free of debris.

3.12 MAINTENANCE AND RESTORATION

A. Restore grades to indicated levels where settlement or damage due to performance of the Work has occurred. Correct conditions contributing to settlement. Remove and replace improperly placed or poorly compacted fill materials.

B. Restore pavements, walks, curbs, lawns, and other exterior surfaces damaged during performance of the Work to match the appearance and performance of existing corresponding surfaces as closely as practicable.

C. Topsoil and seed or sod damaged lawn areas outside the GLL and new lawn areas inside the GLL. Water as required until physical completion of the Work.

3.13 DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS

A. Remove from State property and dispose of excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements.

3.14 FIELD QUALITY CONTROL

A. Compaction Testing: Notify the Director's Representative at least three working days in advance of all phases of filling and backfilling operations. Compaction testing will be performed by the Director's Representative to ascertain the compacted density of the fill and backfill materials. Compaction testing will be performed on certain layers of the fill and backfill as determined by the Director's Representative. If a compacted layer fails to meet the specified percentage of maximum density, the layer will be recompacted and will be retested. No additional material may be placed over a compacted layer until the specified density is achieved.

3.15 PROTECTION

A. Protect graded areas from traffic and erosion, and keep them free of trash and debris.

END OF SECTION

SECTION 211313

SPRINKLER SYSTEMS

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Mechanical Painting: Section 099103.

B. Pipe Hangers and Supports: Section 210529.

C. Sprinkler Piping: Section 211300.

D. Fire Pump System: Section 213000.

1.02 REFERENCES

A. NFPA 13 - National Fire Protection Association Standard for the Installation of Sprinkler Systems.

1.03 SYSTEM DESCRIPTION

A. Type of System:
   1. Wet System – Hydraulically calculated system.

B. Occupancy Classification:
   1. Light Hazard Occupancy.
   2. Ordinary Hazard Occupancy.

1.04 SUBMITTALS

A. Shop Drawings:

   1. Complete sprinkler system layout indicating the locations of sprinkler heads, devices, and accessories. Include separate details of special or not easily visualized piping arrangements and inspector's test valves and connections.
   2. Hydraulic calculations shall be complete and cross referenced to the appropriate drawing sheets.

B. Product Data: Catalog sheets, specifications, and installation instructions. Indicate UL or FM approval for each product. Include the following additional information:
   1. Electrical Devices: Complete description of intended use, wiring diagrams, data plate information and, in the case of switching devices, whether normally on, or normally off. Include motor test data.
   2. Mechanical Devices: Complete description of intended use, including normal operating capacities and working pressures.

3. Enclosures: Dimensions, materials, gages of metals; type of door hinges and locks, and methods of securing the enclosure members to the building construction.
4. Hose Threads: Verify that hose threads on fire department connections match threads on equipment used by the local or servicing fire department.

C. Quality Control Submittals:
1. Design Data: The portions of the sprinkler system not sized on the Contract Drawings shall be sized in accordance with NFPA requirements for Hydraulically Designed Systems. Submit drawings and hydraulic calculations for approval.
2. Certificates: As required under Quality Assurance Article.
3. Installers Qualification Data:
a. Name of each person who will be performing the Work.
b. Upon request, furnish names and addresses of the required number of similar projects that each person has worked on which meet the experience criteria.

D. Contract Closeout Submittals:
1. Operation and Maintenance Data. Deliver 2 copies to the Director's Representative:
a. Instruction manual describing the operation and maintenance of the system.
b. Parts list for each mechanical and electrical device.
c. Publication NFPA 25, Inspection, Testing, and Maintenance of Water Based Fire Protection Systems.

1.05 QUALITY ASSURANCE

A. Qualifications: The persons employed to perform the Work of this Section and their supervisor shall be personally experienced in sprinkler work and shall have been regularly performing such work for a minimum of 5 years while in the employ of a company or companies engaged in the installation of sprinkler systems.
1. Upon request, furnish to the Director the names and addresses of five similar projects which the foregoing people have worked on during the past 3 years.

B. Regulatory Requirements:
1. Materials for the Work of this Section shall be Underwriter's Laboratories listed, and/or Factory Mutual approved.

C. Certification: NFPA Contractor's Material and Test Certificate.

1.06 MAINTENANCE

A. Spare Parts: Furnish the following items and deliver to the Director's Representative for storage in spare sprinkler head cabinets:
1. Spare sprinkler heads of required temperature range as follows:

QUANTITY	TYPE
6	Standard Response Upright
2	QR Horizontal Sidewall with Head Guard
6	Quick Response Recessed Pendent

2. One sprinkler head wrench to fit each type sprinkler head listed above.

PART 2 PRODUCTS

2.01 VALVES AND ACCESSORIES

A. Gate Valves (175 psig non-shock working pressure):
   1. 3/4 inch to 2 inch: Bronze body, OS & Y indicating type; double or wedge disc with threaded ends.
   2. 2-1/2 inch and larger: IBBM, OS & Y indicating type; double or wedge disc with end connections as required to suit the piping system.

B. Valve Locking Devices:
   1. Chain: 3/16 inch galvanized steel, welded link.
   2. Padlock: Series 800 by Yale, Eaton Corp., Charlotte, NC: Key all locks alike. Furnish 2 keys for each lock.
   3. Key Tags: 1-1/2 inch dia., brass, stamped with valve number and service.
   4. "S" Hooks: Brass, for securing keys to key tags.

C. Riser Check Valve:
   1. Two piece cast iron body, bolted and gasketed.
   2. Moving parts brass, bronze, or stainless steel with replaceable rubber clapper facing.
   3. Right or left hand trimming as required.
   4. Suitable for horizontal or vertical installation.
   5. Two pressure gages.
   6. Main drain tap.
   7. Factory finish with corrosion resistant red paint.
   8. Trim Package: Angle valve, globe valve, pipe nipples and fittings.

D. Check Valves: IBBM, single clapper swing check with metal to metal or rubber faced checks, suitable for horizontal and vertical installation; end connections as required to suit the piping system; 175 psig non-shock working pressure.
   1. Ball Drip (where shown on Drawings): Brass, automatic; threaded on both ends.

F. Pressure Gages: Range of 2 times system working pressure at point where installed. Equip with gage cock and provisions for draining.

G. Inspector's Test Connection: Cast brass, capped, sprinkler line tester fitting; Elkhart Brass Mfg. Co.'s. No. 112, or Seco Mfg., Inc.'s No. 445 or 446. Each valve shall also serve as a low point drain and shall be lockable (with pad locks) in both the open and closed positions.

H. Indicating-Type Butterfly Valves:
1. Manufacturers: Subject to compliance with requirements, provide products by one of available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
a. Victaulic Company.
b. Tyco Fire & Building Products LP.
c. Anvil International, Inc.
2. Standard: UL 1091.
3. Pressure Rating: 175 psig minimum.
4. Valves NPS 2 and Smaller:
a. Valve Type: Ball or butterfly.
b. Body Material: Bronze.
c. End Connections: Threaded.
5. Valves NPS 2-1/2 and Larger:
a. Valve Type: Butterfly.
b. Body Material: Cast or ductile iron.
c. End Connections: Flanged, grooved, or wafer.
6. Valve Operation: Integral switch electrical, 115-VAC, prewired, two-circuit, supervisory switch, visual indicating device.

2.02 SPRINKLER HEADS AND APPURTENANCES

A. Sprinkler Heads: Brass or bronze, with standard orifice, and deflector:
1. Upright: Deflector designed to distribute water downward in a uniform hemispherical spray pattern.
2. Recessed Pendent Type: All or part of sprinkler body including shank thread mounts above lower plane of finished ceiling.
3. Sidewall Type: Horizontal sprinklers with special deflectors designed to discharge most of the water away from nearby wall in a pattern resembling 1/4 of a sphere with a small portion of discharge directed at wall behind sprinkler.
4. Markings: Stamp sprinkler type on deflector in addition to NFPA's color code requirements covering temperature classification.

B. Sprinkler Guards For Exposed Piping: Welded steel wire cage with cast or pressed steel base plate and suitable retaining clamps.
1. Finish: Paint to match sprinkler piping.

C. Spare Sprinkler Head Cabinet: Steel, with hinged cover, constructed of minimum 20 gage material and fitted with 16 gage steel racks designed to hold quantities and types of spare sprinkler heads and sprinkler head wrenches.
1. Finish: Bright red, baked on enamel.

2.03 FIRE DEPARTMENT CONNECTION

A. Siamese Connection: Two way projecting wall type, brass with polished finish; size 2-1/2 x 2-1/2 x 4 inch , with two 2-1/2 inch female connections, 2 individual drop clapper valves, plugs and chains, and escutcheon.

1. Equip above with integral sillcock having hose bibb end, cap, chain and removable tee handle key. Furnish 2 keys. Deliver to the Director's Representative.

B. Identification: Cast the word "AUTOSPKLR" on escutcheon.

2.04 WATER FLOW ALARM DEVICE

A. Vane Type Waterflow Switch: Autocall Div., Federal Signal Corp.'s 4160, Potter Electric Signal Co.'s VSR-F, or Reliable's Model A., having:
1. Corrosion-resistant vane.
2. Splash/dust resistant enclosure with anti-tamper switch.
3. Adjustable pneumatic retard.
4. Screw type wiring terminals.
5. Switch rated minimum 7.0 amps at 125 V ac and 0.25 amps at 125 V dc.

2.05 ELECTRIC ALARM GONG

A. 6 inch diameter vibrating bell; 120 V ac. Sound rating 92 db at 10 feet minimum; Viking's 03115BA or Edward's 438-6N5.
1. Markings: The words FIRE ALARM in block lettering on a contrasting background.
2. Mounting: Suitable for both wall and ceiling mounting.

2.06 VALVE SUPERVISORY SWITCHES

A. Mechanically actuated, designed to close contacts and sound an alarm when supervised valve is closed and when switch cover removed.
1. For Gate Valves: Potter Electric Signal Co.'s OSYSU-A, or Grinnell's F640.
2. For Butterfly Valves: Potter Electric Signal Co.'s PCVS, or Potter-Roemer, Inc.'s 6223.

2.07 SIGNS

A. Steel with vitreous enamel finish, lettering on contrasting background to identify and indicate the function of:
1. Control valves.
2. Drain, test, air supply and alarm check valves.
3. Water motor alarm.
4. Hydraulic Design Nameplate Data: Size approx. 9 x 12 inches, inscribed with the following::
   a. SPRINKLER SYSTEM HYDRAULICALLY DESIGNED (in block letters).
   b. Location and area of hydraulically designed section.
   c. Discharge density over designed area in gallons per minute.
   d. Residual pressure at base of riser supplying water to designed section.

PART 3 EXECUTION

3.01 INSTALLATION

A. Unless otherwise shown or specified, install the Work of this section in accordance with NFPA 13, and the item manufacturer's installation instructions.

B. Locking Valves:
   1. Lock gate valves in open position with chain looped through handwheel and around adjacent sprinkler pipe. Secure with padlock.
   2. Lock test outlet valve in closed position with padlock.

C. Spare Sprinkler Head Cabinet: Secure to building wall or other permanent structure in vicinity of main valve controlling sprinkler system, unless otherwise directed.

D. Signs: Install signs identifying the following:
   1. Valves: One for each size, type and function.
   2. Hydraulically Designed System.

3.02 FIELD QUALITY CONTROL

A. Tests: Unless otherwise shown or specified, perform tests in accordance with NFPA 13.
   1. Flushing: In addition to the requirements of the Standard, flush new piping before making final connection to existing systems and before performing hydrostatic test. Flush at rates of flow prescribed in the Contractor's Material and Test Certificate. After making final connections, flush entire system and assure that debris is removed from piping and there are no stoppages or obstructions in the system.
   2. System Tests:
      a. Test all new Work.
      b. Notify the Director's Representative when the Work of this Section is ready for testing.
      c. Perform the tests when directed, and in the Director's Representatives presence.

END OF SECTION

SECTION 220900

DOMESTIC WATER BOOSTER PUMP CONTROLS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Simplex, constant-speed booster pump controller.

B. Related Sections:
   1. Water Supply Accessories: Section 221119
   2. Pumps: Section 221123
   3. General Commissioning Requirements: Section 019113

1.02 SUBMITTALS

A. Product Data: For each type of product indicated. Include operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Quality Control Submittals:
   1. Performance curves for each pump, showing gpm, brake HP and efficiency from free delivery to shut-off. Chart curves on manufacturer's factory tests shall be conducted in accordance with the recommended procedures of the Hydraulic Institute, and certified thereto by the manufacturer.

C. Contract Close Out Submittals:
   1. Operation, Maintenance Data, and Parts Lists: Deliver 2 copies, for each type of pump or pumping apparatus, to the Director's Representative.

1.03 QUALITY ASSURANCE

A. UL Compliance for Pumping Systems:
   1. UL 508, "Industrial Control Equipment."

B. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 8 working hours.

PART 2 PRODUCTS

2.01 SIMPLEX, CONSTANT-SPEED BOOSTER PUMP CONTROLLER

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Boulay Fabrication, Inc.
   2. Advanced Interconnect Manufacturing

3. Bevco Engineering Company, Inc.

B. A single control panel shall be provided to monitor the storage tank water level and domestic water pressure at the hydro-pneumatic tank. Panel shall control the booster pump operation and provide all required alarm and interlocking functions. All instrumentation required to accomplish the above shall be provided.
   1. Control Logic: Electromechanical system with switches, relays, and other devices in the controller.
   2. Enclosure: NEMA 250, Type 1.
   3. Motor Overload Protection: Overload relay in each phase.
   4. Starting Devices: Hand-off-automatic selector switch in cover of control panel, plus pilot device for automatic control.
   5. Pump Operation: Pressure sensing method.
   6. Control panel shall include at a minimum the following features:
      a. Duplex control of two 3 HP pumps operating at 480V/3phase.
      b. Pump and controller breakers.
      c. Control transformer: 120V to 24V.
      d. Motor starters with overloads.
      e. Hand-off-auto switch for each pump.
      f. Run light for each pump.
      g. Duplex alternation via adjustable timeclock.
      h. Process meter with digital readout and a minimum of four programmable relays to monitor tank level, Precision Digital PD6000.
      i. Process meter with digital readout and a minimum of four programmable relays to monitor system pressure, Precision Digital PD6000 or approved equal.
      j. Low tank level visual and audible alarm. Pumps shall cutout on alarm.
      k. High pressure visual and audible alarm.
      l. Low pressure visual and audible alarm.

2.02 STORAGE TANK LEVEL TRANSDUCER

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. TE Connectivity
   2. Vega Americas, Inc.
   3. Branom Instrument Co.

B. Submersible hydrostatic level transducer; UL listed
   1. Waterproof vented housing. Welded 316 stainless steel or titanium body.
   2. 22 AWG cable with polyurethane jacket. Extend factory provided cable from vent filter enclosure in Pump House to control panel in Mechanical Room with 18/2 AWG shielded wiring.
   3. Level range of 0-10 feet.
   4. Lifetime lighting protection at both ends of cabling.
   5. Protection rating: IP 68, NEMA 6P.
   6. Coordinate exact cable length prior to ordering.

7. Desiccant vent filter. Install one in vent filter enclosure and provide one (1) spare.

2.03 TRANSDUCER

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. TE Connectivity
   2. Vega Americas, Inc.
   3. Branom Instrument Co.

B. Non-Submersible Pressure Transducer; UL listed
   1. Waterproof vented housing. Welded 316 stainless steel or titanium body.
   2. 22 AWG cable with polyurethane jacket.
   3. Level range of 0-160 psig.
   4. Protection rating: IP 67.
   5. Coordinate exact cable length prior to ordering.

PART 3 EXECUTION

3.01 STARTUP SERVICE

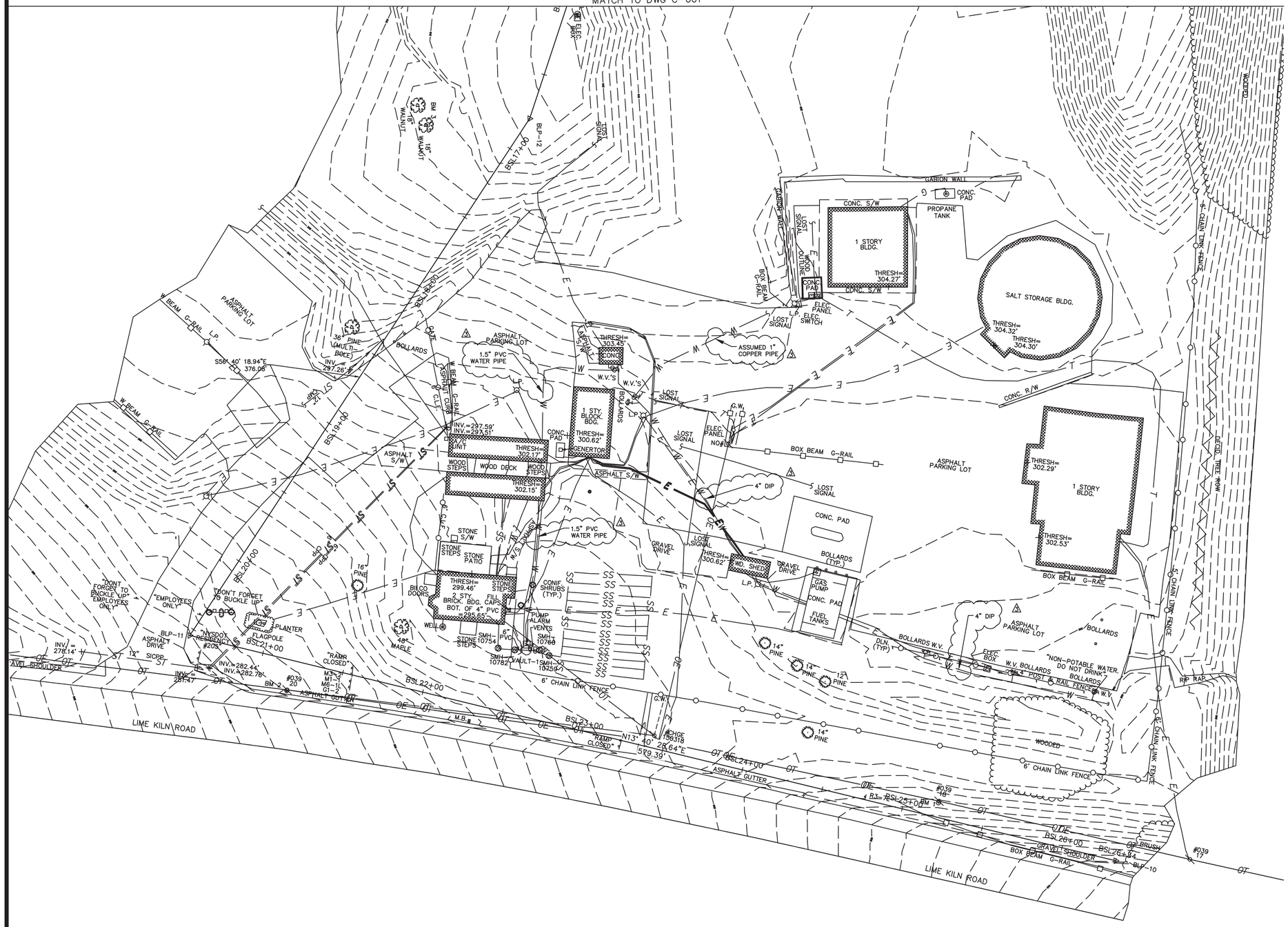
A. Engage a company field advisor for a minimum of 8 hours to perform startup service.

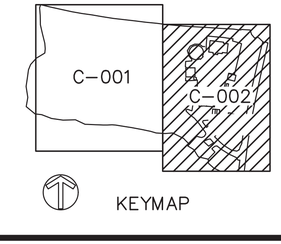
3.02 DEMONSTRATION

A. Engage the company field advisor to train Facility's maintenance personnel to adjust, operate, and maintain booster pumps.

END OF SECTION

MATCH TO DWG C-001





0 30 60 Feet

LEGEND

EXISTING

- MULTI-POST SIGN
- SIGN
- DELINEATOR
- DECIDUOUS TREE
- CONIFEROUS TREE
- CONIFEROUS SHRUB
- UNKNOWN VENT
- LANDSCAPE ROCK
- POST
- FLAGPOLE
- ELECTRIC METER
- WATER VALVE
- FIRE HYDRANT
- WATER MANHOLE
- GAS MANHOLE
- GAS METER
- SANITARY MANHOLE
- STORM MANHOLE
- SQUARE CATCH BASIN
- DRAINAGE INVERT
- LIGHT POLE
- UTILITY POLE
- BASELINE POINT
- BENCHMARK
- BORING/TEST PIT LOCATION
- PROPERTY MONUMENT
- 945 MAJOR CONTOUR
- MINOR CONTOUR
- ST STORM SEWER
- SS SANITARY SEWER
- W WATER LINE
- E ELECTRIC LINE
- G GAS LINE
- OHE OH ELECTRIC
- OH TELECOM
- EDGE OF WOODS

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

STATE OF NEW YORK JAMES M. CUMMINS 080668 LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID
MARK	DATE	DESCRIPTION

PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

SHEET TITLE: EXISTING CONDITIONS

DRAWING NUMBER: **C-002**

36x24 PLOT SHEET

Nov 22,2021 - 3:52pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C001-C002_Existing_Conditions.dwg

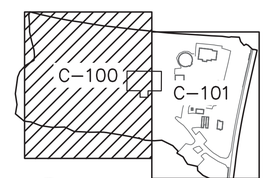
NOTES:
1. ROLLED EROSION CONTROL PRODUCT SHALL BE USED ON ALL SLOPES, 1 ON 3 OR GREATER, OR WHERE SHOWN ON THE PLANS, OR WHERE ORDERED BY THE ENGINEER.
2. BIORETENTION AREAS SHALL HAVE UNDERDRAIN, STONE AND BIORETENTION SOIL INSTALLED ONCE CONTRIBUTING AREA HAS BEEN FINAL GRADED, SEEDED AND MULCHED OR PAVED. IF UNDERDRAIN, STONE AND BIORETENTION SOIL ARE INSTALLED BEFORE THE CONTRIBUTING AREA IS ESTABLISHED THEN PLACE SILT FENCE AROUND THE INTERIOR EDGE OF THE BIORETENTION AREA.
3. ALL AREAS NOT RECEIVING SPECIFIC SURFACE TREATMENT (ASPHALT, CONCRETE, STONE, MULCH, ECT.) SHALL RECEIVE TOPSOIL AND SEED. DETAIL C500/104.
4. COORDINATE WITH PLUMBER AND PLUMBING DRAWINGS FOR CONNECTIONS TO BUILDING PLUMBING AND PLUMBING DETAILS. SITE UTILITIES TO BE CONNECTED AT 5' OUTSIDE THE BUILDING.
5. RESTORE ALL DISTURBED AREAS OUTSIDE OF LIMIT OF GRADING USING DETAIL C-500/104.
6. CONNECT TO DOWNSPOUTS USING DETAIL C-501/112.
7. PUMP STATION SHALL NOT BE INSTALLED UNTIL AFTER SUB HEAD QUARTERS AND SEPTIC SYSTEM ARE INSTALLED, OPERATIONAL, AND PERMITTED. COORDINATE WITH DIRECTOR'S REPRESENTATIVE TO SHUT OFF WATER TO HOUSE AND TRAILERS DURING INSTALLATION.
8. SEQUENCE THE WORK SO THERE IS LESS THAN 5 ACRES OPEN AND DISTURBED (NON-FINAL RESTORED) AT ALL TIMES.
9. ALL PIPE WORK INSIDE AND WITHIN 5' OF THE PUMP HOUSE BUILDING SHALL BE THE RESPONSIBILITY OF THE P-CONTRACT. ALL PIPING OUTSIDE 5' FROM THE BUILDING SHALL BE THE RESPONSIBILITY OF THE C-CONTRACT.
10. E-CONTRACT WILL PROVIDE CONDUIT FOR ALARM CIRCUIT. C-CONTRACT SHALL PULL ALARM CIRCUIT AND CONNECT IT TO PANEL. COORDINATE WITH E-CONTRACT.
11. REFER TO ELECTRICAL PLANS FOR SITE ELECTRICAL CONDUITS.

C-502/100 BIORETENTION AREA BA-1
C-501/115 C-501/100 PROVIDE CATCH BASIN CB-7 MATCH INVERT IN AND OUT TO UNDERDRAIN PIPE INVERT 287.75
RIM ELEVATION: 292.75'
C-502/106 PROVIDE 48" x 44" TYPE 1 STONE APRON (SA-2)
C-502/105 PROVIDE PIPE END SECTION ES-2
C-501/109 PROVIDE 8" SOLID WALL PVC PIPE FROM UNDERDRAINS
C-502/107 PROVIDE 24" THICK MEDIUM STONE RIP-RAP SPILLWAY
PROVIDE 8" PERFORATED PVC UNDERDRAIN (TYP.)
C-502/101 PROVIDE CLEANOUT
C-502/107 PROVIDE 24" THICK MEDIUM STONE RIP-RAP SPILLWAY
C-500/104 GRASS-LINED PRETREATMENT AREA
C-502/106 PROVIDE 96" x 84" TYPE 1 STONE APRON (SA-1)
C-502/105 PROVIDE PIPE END SECTION ES-1
C-502/106 PROVIDE 48" x 44" TYPE 1 STONE APRON (SA-3)
C-502/105 PROVIDE PIPE END SECTION ES-3
C-501/101 C-501/100 PROVIDE CATCH BASIN CB-4 PLACE CURB INLET ALONG WEST CURB
C-501/109 PROVIDE 24" SICPP ST PIPE-3
C-500/111 PROVIDE DROP CURB FOR DRIVEWAY
C-501/101 C-501/100 PROVIDE CATCH BASIN CB-3
C-501/109 PROVIDE 6" PVC FROM OIL/WATER SEPARATOR
C-501/109 PROVIDE 8" PVC FROM ROOF LEADERS
C-501/109 PROVIDE 12" SICPP ST PIPE-5
C-501/101 C-501/100 PROVIDE CATCH BASIN CB-5
C-500/107 PROVIDE PARKING SPACE MARKINGS (TYP.)
C-501/109 PROVIDE 8" SICPP FROM PUMPHOUSE
C-505/103 30,000 GAL FIRE PROTECTION TANK
C-509/104 PROVIDE 45° BEND
C-509/105 PROVIDE 4" D.I.P. WATER LINE TO FIRE PUMP
PUMPHOUSE (FFE: 302.00) (SEE NOTE 9)
C-509/105 6" D.I.P. POTABLE WATER TANK DRAIN
C-505/102 15,000 GAL POTABLE WATER TANK
C-509/105 PROVIDE 4" D.I.P. WATER LINE TO DOMESTIC WATER PUMP
C-509/105 PROVIDE 4" COPPER FILL LINE FOR DOMESTIC WATER TANK
C-509/109 PROVIDE 6" WATER VALVE
C-509/104 PROVIDE 45° BEND
C-509/105 PROVIDE 6" D.I.P. FUTURE MUNICIPAL WATER LINE
C-500/106 PROVIDE HANDICAP PARKING SPACE MARKINGS AND SIGNS
C-509/104 PROVIDE 45° BEND
LIMIT OF GRADING
C-501/109 PROVIDE 24" SICPP ST PIPE-4
37.5'
20.0'
PROVIDE CLEANOUT C-502/101
ACCESS ROAD C-500/105
BP: 10+00.00
BSL#10+00
BSL#14+00
BSL#12+00
BSL#16+00
156'
100.0'
25% SLOPE
CREATE LEVEL PAD USING SUITABLE FILL TO BUILD ABSORPTION BED ON
PROVIDE GRADED AREA FOR 100% ABSORPTION FIELD REPLACEMENT AREA. REPLACEMENT AREA IS GRADED USING ABSORPTION SYSTEM FILL, TOPSOIL AND SEEDED/MULCHED USING DETAIL 500/104.
PROVIDE ABSORPTION FIELD C-508/103 C-500/108 WARNING SIGN (TYP.)
PROVIDE SEPTIC C-508/100 ABSORPTION FIELD
9 OUTLET C-507/102 DISTRIBUTION BOX
9 OUTLET C-507/102 DISTRIBUTION BOX
PROVIDE 2" PVC C-509/105 C-507/105 SANITARY FORCE MAIN INSULATE FORCE MAIN
60" PRECAST VALVE VAULT VMH-1 C-507/100
PROVIDE 2" PVC C-509/105 C-507/105 SANITARY FORCE MAIN INSULATE FORCE MAIN
EFFLUENT DOSING PUMP STATION PMH-1 C-507/100
PROVIDE 18" SICPP C-501/109 ST PIPE-2
PROVIDE CATCH BASIN C-501/100 C-501/101 CB-2 PLACE CURB INLET ALONG WEST CURB
PROVIDE 6" PVC TO EFFLUENT DOSING PUMP STATION C-501/109 SS PIPE-3
2000 GAL. C-507/101 SEPTIC TANK
PROVIDE 6" PVC TO C-501/109 SEPTIC TANK SS PIPE-2
PROVIDE 2000 GALLON C-501/110 OIL/WATER SEPARATOR (SEE NOTE 10)
PROVIDE FORCE MAIN C-507/104 RECEIVING MANHOLE FMH-1
4-2" GALVANIZED STEEL OIL/WATER SEPARATOR VENT PIPES MANIFOLDED INTO 1-4" GALVANIZED STEEL VENT PIPE AS CLOSE TO THE OWS AS POSSIBLE. COORDINATE NO. OF 2" VENTS WITH MANUFACTURER.
PROVIDE 15" SICPP C-501/109 ST PIPE-1
PROVIDE 6" PVC BETWEEN C-501/109 OIL/WATER/GRIT SEPARATOR
PROVIDE 2000 GALLON C-501/111 GRIT/SAND SEPARATOR
PROVIDE 6" PVC TO C-501/109 GRIT/SAND SEPARATOR
PROVIDE 4" PVC C-501/109 SS PIPE-1
PROVIDE MANHOLE C-501/106 STMH-1
PROVIDE MANHOLE C-501/106 STMH-2
PROVIDE 6" PVC FROM 109 OIL/WATER SEPARATOR C-501
12" DEEP 4500 PSI CONCRETE PAD PER DETAIL C-501/110
132.0'
C-500/113 GENERATOR AND CONDENSING UNIT LAYING PADS (COORDINATE PAD SIZES WITH E CONTRACT AND H CONTRACT.)
BEGIN 6" CONCRETE CURB RL INV: 300.52'
END 6" CONCRETE CURB
C-500/102 PROVIDE 6" CONCRETE CURB
R = 3.00'
21.0'
6.0'
BEGIN 6" CONCRETE CURB
PROVIDE 4" D.I.P. C-509/105 FIRE PROTECTION WATER LINE
REFER TO DWG. NO. P-101 FOR CONTINUATION OF VENT PIPING
PROVIDE 1 1/2" C-509/105 PVC SANITARY FORCE MAIN
WATERMAIN/SEWER C-509/110 CROSSING
PROVIDE TRENCHING AND BACKFILL C-509/108 FOR 4" PE GAS SERVICE
RL INV: 300.75'
RL INV: 300.87'
82.0'
PROVIDE 3" COPPER C-509/105 DOMESTIC WATER LINE
RL INV: 300.92'
RL INV: 300.94'
RL INV: 301.02'
RL INV: 301.00'
SUB-HEADQUARTERS BUILDING (FFE: 304.5)
RL INV: 301.18'
PROVIDE 8" PVC ROOF C-501/109 LEADER COLLECTION PIPE (SEE NOTE 6)
RL INV: 301.08'
PROVIDE PARKING C-500/107 SPACE MARKINGS (TYP.)
PROVIDE CLEANOUT C-501/113 RL INV: 300.83' RL INV: 300.86' BEGIN 6" CONCRETE CURB
PROVIDE 6" C-500/102 CONCRETE CURB
RL INV: 300.55'
RL INV: 300.57'
RL INV: 300.51'
RL INV: 300.50'
RL INV: 300.89'
RL INV: 300.88'
END 6" CONCRETE CURB RL INV: 300.82'
PROVIDE 6" THICK NO. 1 COARSE AGGREGATE BEHIND CURB AND AROUND EQUIPMENT PADS.
PROVIDE 6" PVC TO C-501/109 OIL/WATER/GRIT SEPARATOR
PROVIDE 8" PVC ROOF C-501/109 LEADER COLLECTION PIPE (SEE NOTE 6)
PROVIDE CATCH BASIN C-501/100 C-501/101 CB-1
ASPHALT PAVEMENT C-500/100 SECTION
SL16+00
SL14+00
SL12+00
SL10+00
MATCH TO DWG C101

LEGEND

EXISTING		PROPOSED
	MULTI-POST SIGN	
	SIGN	
	DELINEATOR	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	CONIFEROUS SHRUB	
	UNKNOWN VENT	
	LANDSCAPE ROCK	
	POST	
	FLAGPOLE	
E	ELECTRIC METER	
	WATER VALVE	
	FIRE HYDRANT	
W	WATER MANHOLE	W
G	GAS MANHOLE	
G	GAS METER	
S	SANITARY MANHOLE	
S	STORM MANHOLE	D
	SQUARE CATCH BASIN	
	DRAINAGE INVERT	
	LIGHT POLE	
	UTILITY POLE	
	BASELINE POINT	
	BENCHMARK	
	BORING/TEST PIT LOCATION	
	PROPERTY MONUMENT	
945 MAJOR CONTOUR		945
MINOR CONTOUR		
ST STORM SEWER		ST
	ROOF LEADER(RL)	RL
SS SANITARY SEWER		SS
W WATER LINE		W
E ELECTRIC LINE		E
G GAS LINE		GAS
OHE OH ELECTRIC		
OH TELECOM		
PLASTIC BARRIER FENCE		
SILT FENCE		
LIMIT OF GRADING		LOG
FENCE		X
REMOVALS		X
EDGE OF WOODS		
CONSTRUCTION ENTRANCE		
ROLLED EROSION CONTROL MAT		
PROPOSED PAVEMENT		
TREE REMOVAL		
PAVEMENT REMOVAL		
LAWN RESTORATION		
BIORETENTION AREA		
PRETREATMENT AREA		
SPILLWAY/STONE APRON		
CRUSHED STONE		
TOP OF CURB		T.C.
BOTTOM OF CURB		B.C.
SEPTIC ABSORPTION FIELD		

0 30 60 Feet



KEYMAP

NEW YORK STATE OF OPPORTUNITY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:
SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

STATE OF NEW YORK · JAMES M. CUMMINGS · 080968 · LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY, 205 LIME KILN RD., EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

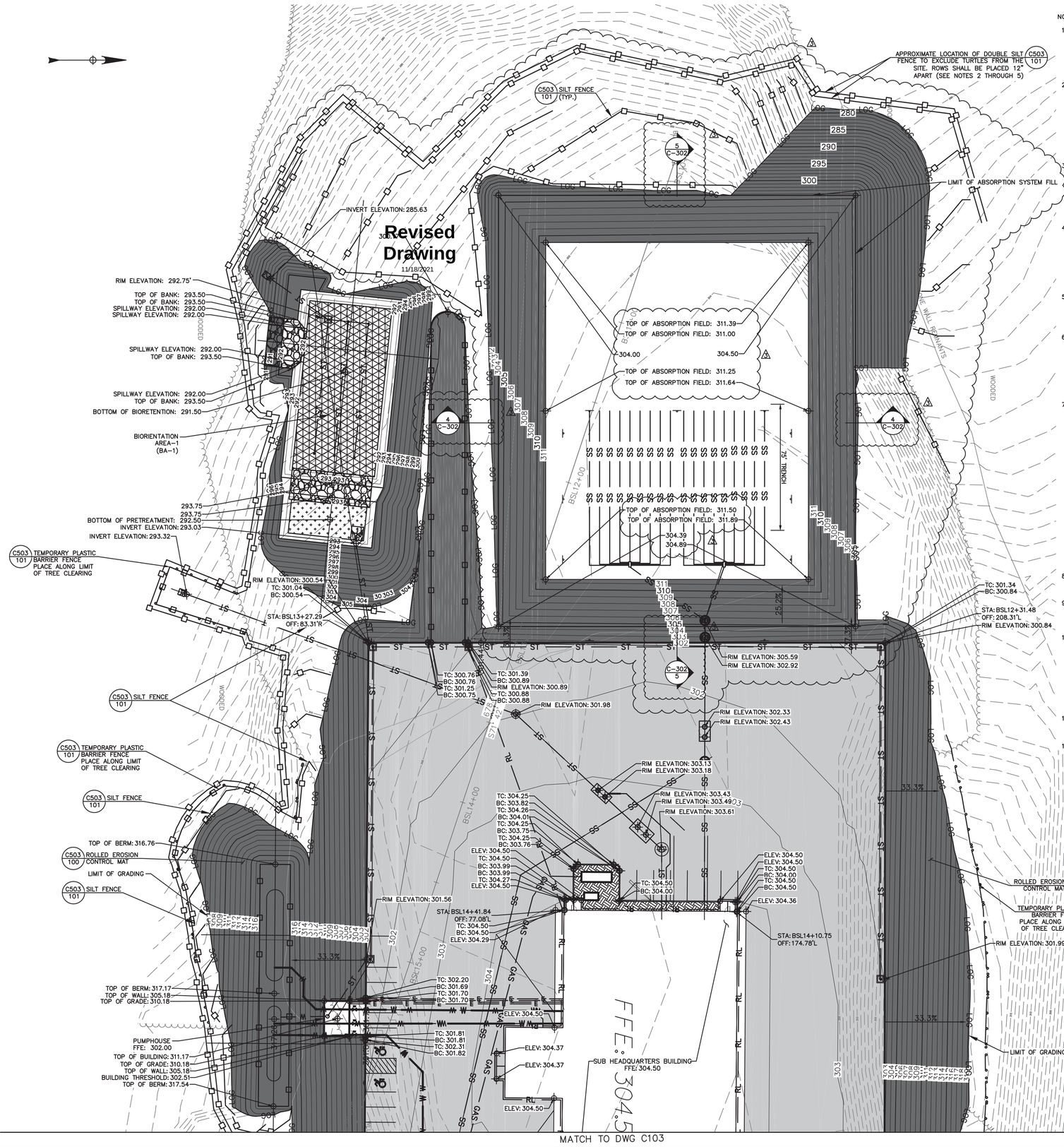
MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID
PROJECT NUMBER:	45552-C	
DESIGNED BY:	EFN	
DRAWN BY:	AWR	
FIELD CHECK:		
APPROVED:	JMC	

SHEET TITLE: SITE LAYOUT /SITE PLANS/UTILITY PLANS

DRAWING NUMBER: **C-100**

Nov 22,2021 – 3:53pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C100-C101_Site_Layout_Site_Plans_Utility_Plans.dwg

36x24 PLOT SHEET



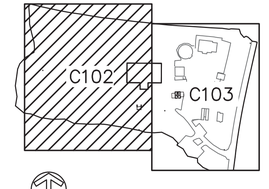
NOTES:

1. BIORETENTION AREAS SHALL HAVE UNDERDRAIN, STONE AND BIORETENTION SOIL INSTALLED ONCE CONTRIBUTING AREA HAS BEEN FINAL GRADED, SEEDED AND MULCHED OR PAVED. IF UNDERDRAIN, STONE AND BIORETENTION SOIL ARE INSTALLED BEFORE THE CONTRIBUTING AREA IS ESTABLISHED THEN PLACE SILT FENCE AROUND THE INTERIOR EDGE OF THE BIORETENTION AREA.
2. INSTALL TOED-IN (BURIED) DOUBLE SILT FENCING, PLACED 12 INCHES APART, AT THE LIMITS OF DISTURBANCE OF THE WORK AREA AND ANY STAGING AREAS ON THE SOUTH AND WEST SIDES ON THE SITE ADJACENT TO THE WETLANDS. ENSURE SOIL IS LEVEL WITH GRADE AND PRESSED AGAINST THE INSIDE AND OUTSIDE OF THE SILT FENCE, SO THERE IS NO POTENTIAL FOR TURTLES TO APPROACH THE FENCE AND FALL INTO A TRENCH ON EITHER SIDE OF THE FENCE. WHEN WORK IS FINISHED AND THE SITE IS STABILIZED, REMOVE ALL SILT FENCING AND FILL IN ANY TRENCHES OR FURROWS TO GRADE.
3. A LICENSED BOG TURTLE SURVEYOR PROVIDED BY THE DIRECTOR'S REPRESENTATIVE MUST OVERSEE AND MONITOR THE INSTALLATION OF THE DOUBLE SILT FENCING IF INSTALLED DURING THE BOG TURTLE'S ACTIVE SEASON, FROM APRIL 1ST TO OCTOBER 1ST. PRIOR TO INSTALLATION THE SURVEYOR MUST SEARCH THE PROJECT SITE FOR THE PRESENCE OF BOG TURTLES IF INSTALLED DURING THE ACTIVE SEASON.
4. THE SILT FENCE SHALL BE INSPECTED DAILY, DURING THE BOG TURTLE'S ACTIVE SEASON, BEFORE WORK BEGINS TO ENSURE THERE ARE NO BREACHES OR TURTLES IN THE FENCE. ALL WORK AREAS, EQUIPMENT, AND STAGING AREAS SHALL ALSO BE INSPECTED DAILY FOR BOG TURTLES PRIOR TO THE START OF WORK. THE DAILY INSPECTOR SHALL BE A TRAINED INDIVIDUAL PROVIDED BY THE DIRECTOR'S REPRESENTATIVE; THEY DO NOT NEED TO BE A LICENSED BOG TURTLE SURVEYOR.
5. REPAIR ANY BREACHES IN THE SILT FENCE IMMEDIATELY AND DO NOT RESTART WORK UNTIL THEY ARE REPAIRED. IF THERE IS A BREACH IN THE SILT FENCE AND A TURTLE IS FOUND ON THE SITE, CONDUCT A BOG TURTLE SURVEY WITHIN THE WORK AREA BEFORE RESTARTING WORK.
6. THE EDUCATION AND ENCOUNTER PLAN SHALL BE PROVIDED TO CONTRACTORS AND THE FACILITY STAFF. PROVIDE APPROPRIATE TRAINING TO ALL CONTRACTORS AND WORKERS ON THE POSSIBLE PRESENCE OF PROTECTED TURTLES AND WHAT TO DO IF A TURTLE IS ENCOUNTERED DURING CONSTRUCTION OR ON THE PROJECT SITE. THE TRAINING SHOULD BE CONDUCTED BY SOMEONE KNOWLEDGEABLE WITH THE SPECIES AND ITS ECOLOGY. THIS TRAINING CAN BE, BUT IS NOT REQUIRED TO BE, CONDUCTED BY THE BOG TURTLE SURVEYOR.
7. IF A BOG TURTLE IS ENCOUNTERED ON THE SITE:
   A. STOP WORK IMMEDIATELY AND DO NOT MOVE THE TURTLE EXCEPT TO MOVE IT OUT OF THE WAY OF IMMEDIATE HARM. BOG TURTLES CAN ONLY BE MOVED BY SOMEONE WITH A SPECIAL LICENSE FROM THE NYSDEC (A LICENSED BOG TURTLE MONITOR OR SURVEYOR).
   B. CONTACT NYSDEC'S REGIONAL WILDLIFE OFFICE AND USFWS'S NEW YORK FIELD OFFICE FOR FURTHER INSTRUCTION AND TO REPORT THE INCIDENT. PROVIDE THE LOCATION, PROJECT NAME, AND EXPLANATION OF INCIDENT. THE NYSDEC AND THE USFWS SHALL BE NOTIFIED OF ANY ENCOUNTERS WITHIN 24 HOURS. CONTACT THE BOG TURTLE SURVEYOR AS NEEDED TO COMPLETE COORDINATION, MOVE THE TURTLE IF NECESSARY, AND SEARCH THE SITE.
   C. WORK CAN RESUME ONCE THE TURTLE HAS BEEN MOVED APPROPRIATELY OR LEAVES ON ITS OWN, THE SILT FENCE HAS BEEN CHECKED AND REPAIRED, AND THE PROJECT SITE HAS BEEN SEARCHED FOR THE PRESENCE OF BOG TURTLES.
8. A LOG OF TURTLE ENCOUNTERS AND TRAININGS, INCLUDING WHO IS TRAINED, SHALL BE KEPT FOR INSPECTION.
9. PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), EMPLOY BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL TO PREVENT SEDIMENT FROM ENTERING DOWNSTREAM WATERS.
10. TO AVOID INTRODUCTION OF INVASIVE SPECIES THOROUGHLY WASH CONSTRUCTION EQUIPMENT OFFSITE. DO NOT ALLOW WASH WATER TO ENTER WETLANDS, WATERBODIES, OR STORMWATER CONVEYANCES.
    CONTACT LIST:
    NYSDEC REGIONAL WILDLIFE OFFICE
    LISA MASI, PHONE: 845-256-3098,
    EMAIL: WILDLIFE.R3@DEC.NY.GOV
    USFWS NEW YORK FIELD OFFICE
    NOELLE RAYMAN-METCALF, PHONE: 607-753-9334,
    EMAIL: NOELLE_RAYMAN@FWS.GOV
11. SEQUENCE THE WORK SO THERE IS LESS THAN 5 ACRES OPEN AND DISTURBED (NON-FINAL RESTORED) AT ALL TIMES.
12. ALL EXCESS SPOILS SHALL BE REMOVED FROM THE SITE.

LEGEND

EXISTING		PROPOSED
	MULTI-POST SIGN	
	SIGN	
	DELINEATOR	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	CONIFEROUS SHRUB	
	UNKNOWN VENT	
	LANDSCAPE ROCK	
	POST	
	FLAGPOLE	
E	ELECTRIC METER	
	WATER VALVE	
	FIRE HYDRANT	
W	WATER MANHOLE	W
G	GAS MANHOLE	
G	GAS METER	
S	SANITARY MANHOLE	
D	STORM MANHOLE	D
	SQUARE CATCH BASIN	
	DRAINAGE INVERT	
	LIGHT POLE	
	UTILITY POLE	
	BASELINE POINT	
	BENCHMARK	
	BORING/TEST PIT LOCATION	
	PROPERTY MONUMENT	
945	MAJOR CONTOUR	945
	MINOR CONTOUR	
ST	STORM SEWER	ST
	ROOF LEADER(RL)	RL
SS	SANITARY SEWER	SS
W	WATER LINE	W
E	ELECTRIC LINE	E
G	GAS LINE	GAS
OHE	OH ELECTRIC	
	OH TELECOM	
	PLASTIC BARRIER FENCE	
	SILT FENCE	
LOG	LIMIT OF GRADING	
X	FENCE	
X	REMOVALS	
	EDGE OF WOODS	
	CONSTRUCTION ENTRANCE	
	ROLLED EROSION CONTROL MAT	
	PROPOSED PAVEMENT	
	TREE REMOVAL	
	PAVEMENT REMOVAL	
	LAWN RESTORATION	
	BIORETENTION AREA	
	PRETREATMENT AREA	
	SPILLWAY/STONE APRON	
	CRUSHED STONE	
T.C.	TOP OF CURB	
B.C.	BOTTOM OF CURB	
	SEPTIC ABSORPTION FIELD	

0 30 60 FEET



KEYMAP

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

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 — JAMES M. CUMMINGS — 080968 — LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID
MARK	DATE	DESCRIPTION

PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

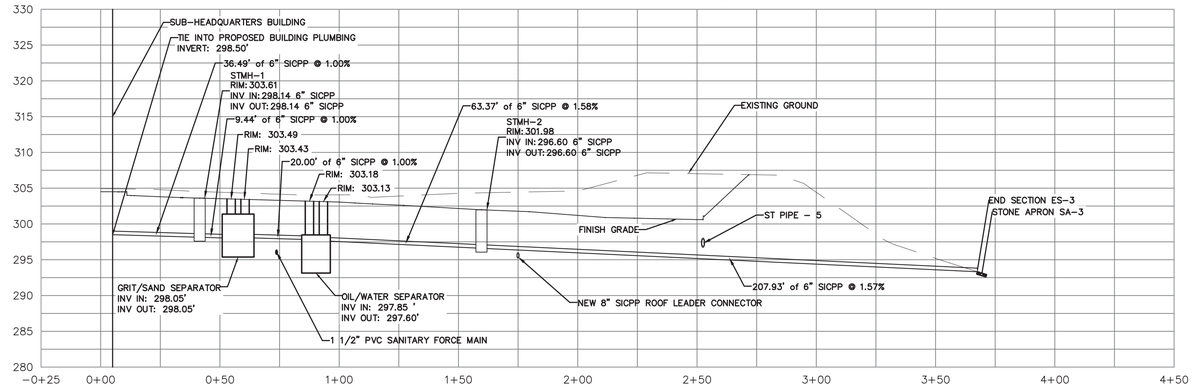
SHEET TITLE: GRADING/EROSION AND SEDIMENT CONTROL PLANS

DRAWING NUMBER: **C-102**

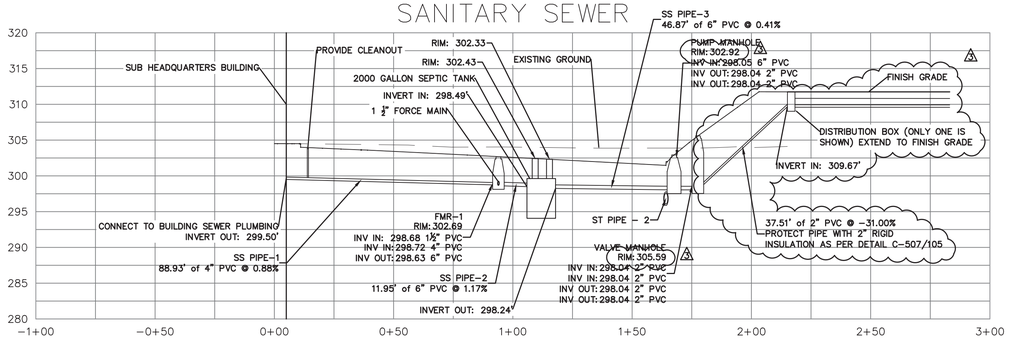
36x24 PLOT SHEET

Nov. 22,2021 - 3:54pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C102-C103_Grading_Erosion_and _Sediment_Control_Plans_Addendum1_without clouds.dwg

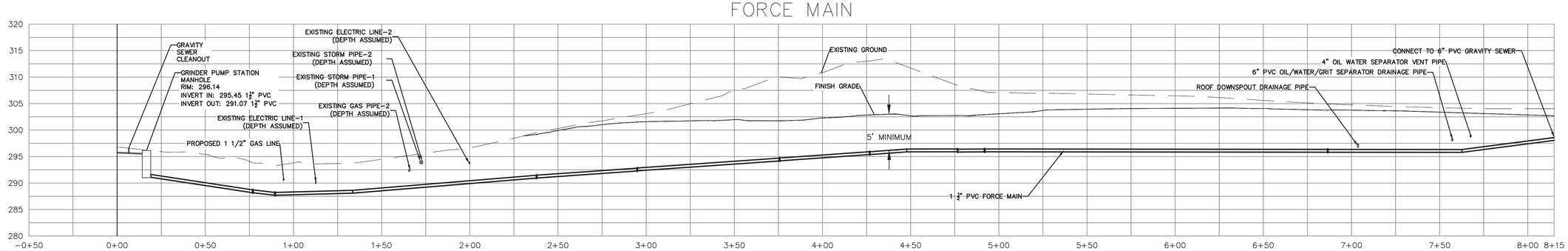
BUILDING TRENCH DRAIN OUTLET PIPE



SANITARY SEWER



FORCE MAIN



VERTICAL SCALE
0 30 60 Feet

HORIZONTAL SCALE
0 30 60 Feet

36x24 PLOT SHEET

Nov 22,2021 - 3:55pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C300_C301_C302_Road_and_Utility_Profiles.dwg

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

SHUMAKER
Consulting Engineering & Land Surveying, D.P.C.

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
JAMES M. CUMMINGS
080968
LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION:
DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID

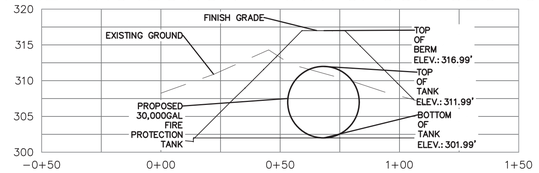
PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

SHEET TITLE:

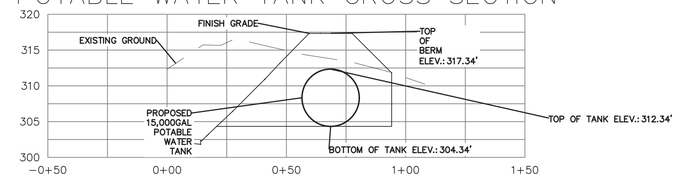
OIL/WATER SEPARATOR AND SEPTIC SYSTEM PROFILES

DRAWING NUMBER:
C-301

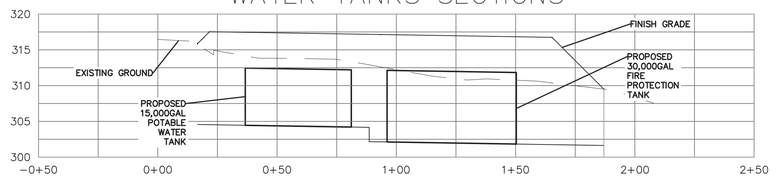
FIRE PROTECTION TANK CROSS SECTION



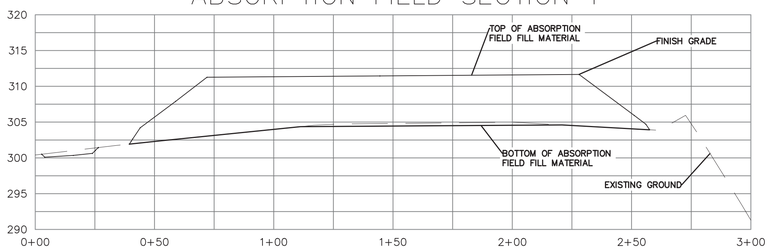
POTABLE WATER TANK CROSS SECTION



WATER TANKS SECTIONS

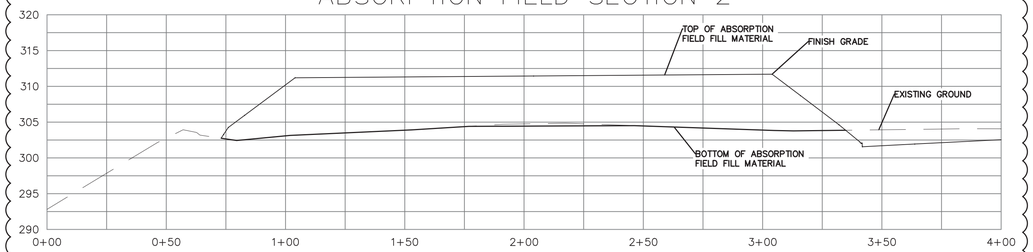


ABSORPTION FIELD SECTION 1



4 / C−302 ABSORPTION FIELD EAST−WEST SECTION

ABSORPTION FIELD SECTION 2



5 / C−302 ABSORPTION FIELD NORTH−SOUTH SECTION

VERTICAL SCALE
0 10 20 FEET

HORIZONTAL SCALE
0 30 60 FEET

36x24 PLOT SHEET

Nov 22,2021 – 3:55pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C300_C301_C302_Road_and_Utility_Profiles.dwg

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

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 · JAMES M. CUMMINGS · 080968 · LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

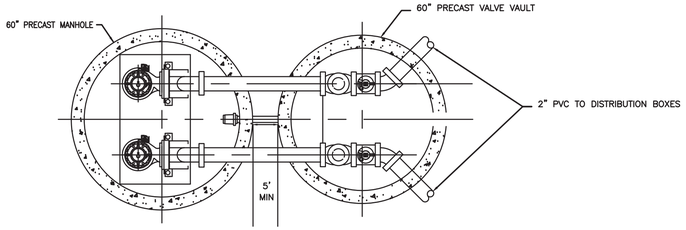
Revised Drawing
11/18/2021

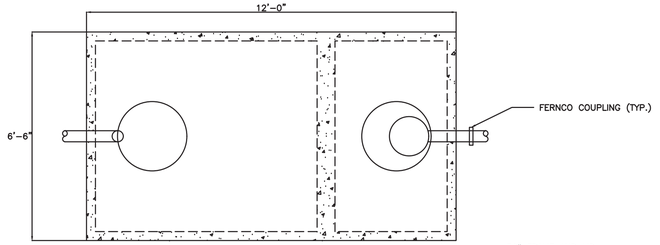
MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID

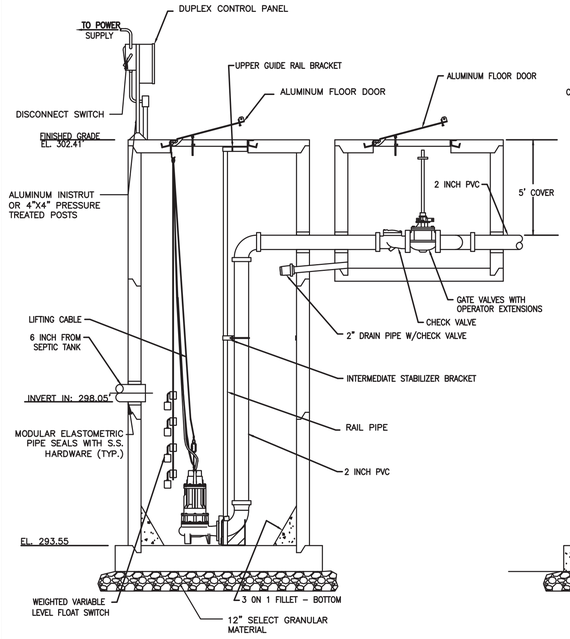
PROJECT NUMBER: 45552-C
DESIGNED BY: EFN
DRAWN BY: AWR
FIELD CHECK:
APPROVED: JMC

SHEET TITLE: POTABLE WATER TANK, FIRE SUPPRESSION TANK AND ABSORPTION FIELD CROSS SECTIONS

DRAWING NUMBER: **C-302**

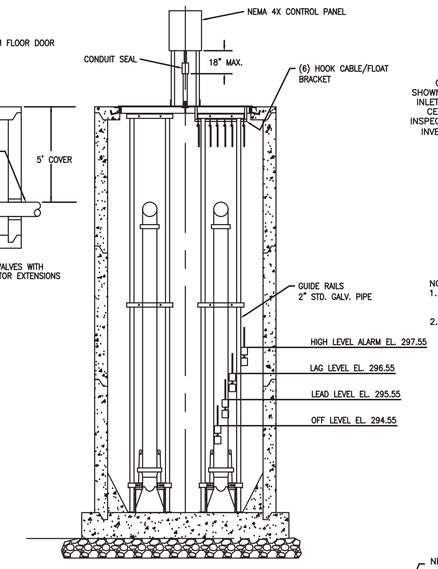


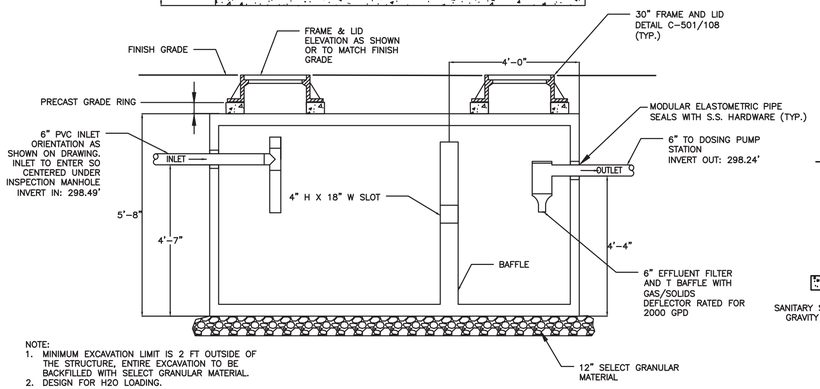




NOTE:
1. MINIMUM EXCAVATION LIMIT IS 2 FT OUTSIDE OF THE STRUCTURE, ENTIRE EXCAVATION TO BE BACKFILLED WITH SELECT GRANULAR MATERIAL.

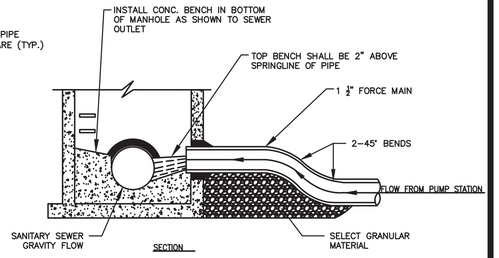
C-507 / 100 SEPTIC EFFLUENT DOSING STATION DETAIL
NOT TO SCALE

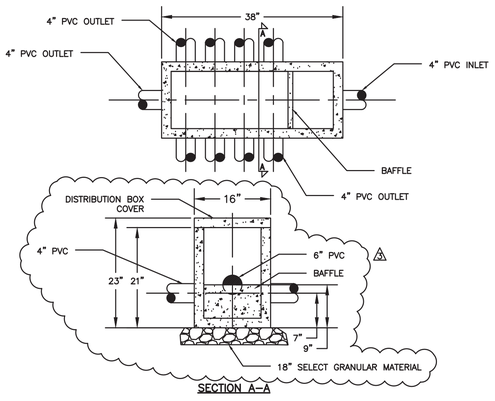




NOTE:
1. MINIMUM EXCAVATION LIMIT IS 2 FT OUTSIDE OF THE STRUCTURE, ENTIRE EXCAVATION TO BE BACKFILLED WITH SELECT GRANULAR MATERIAL.
2. DESIGN FOR H2O LOADING.

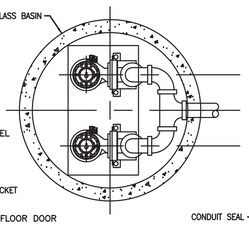
C-507 / 101 2000 GALLON SEPTIC TANK DETAIL
NOT TO SCALE

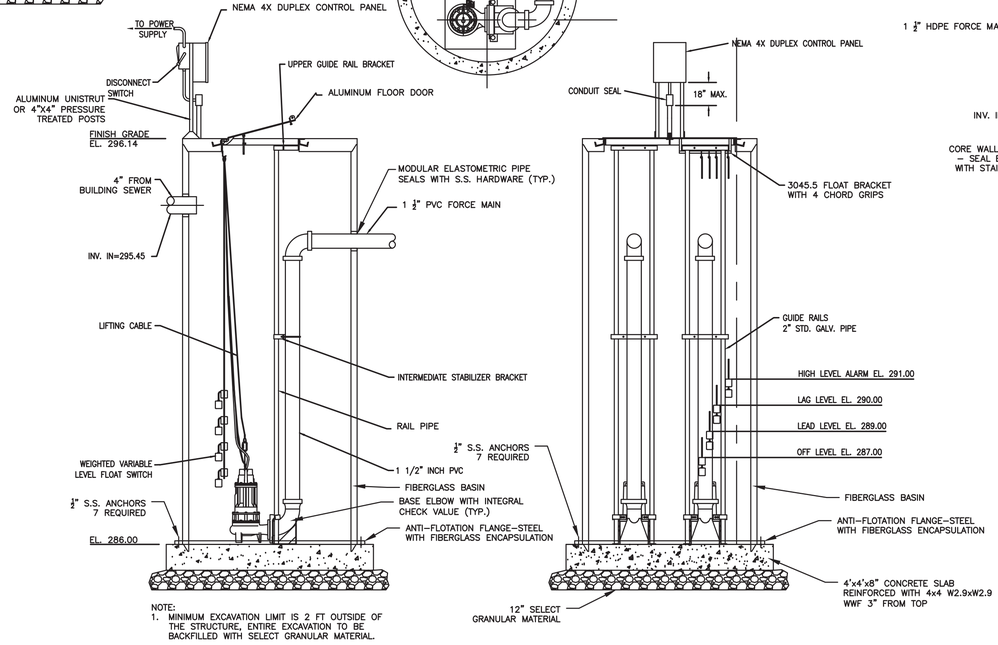




NOTES:
1. PROVIDE SEALS AND LIQUID LEVELERS AT ALL OUTLETS.

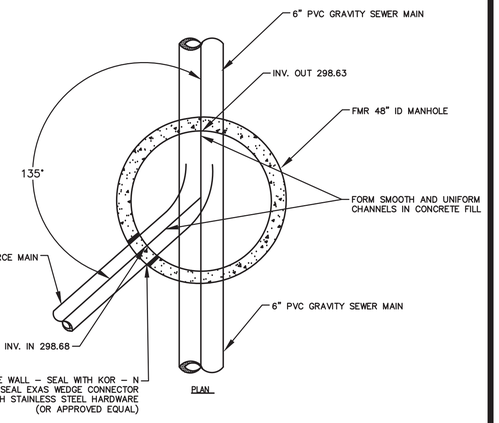
C-507 / 102 TYPICAL DISTRIBUTION BOX DETAIL
NOT TO SCALE



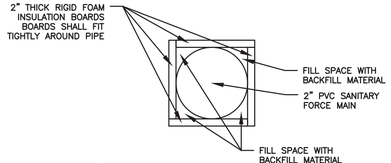


NOTE:
1. MINIMUM EXCAVATION LIMIT IS 2 FT OUTSIDE OF THE STRUCTURE, ENTIRE EXCAVATION TO BE BACKFILLED WITH SELECT GRANULAR MATERIAL.

C-507 / 103 GRINDER PUMP STATION DETAIL
NOT TO SCALE



C-507 / 104 FORCE MAIN CONNECTION TO CONCRETE MANHOLE
NOT TO SCALE



C-507 / 104 FORCE MAIN INSULATION DETAIL
NOT TO SCALE

NEW YORK STATE OF OPPORTUNITY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:
SHUMAKER
Consulting Engineering & Land Surveying, D.P.C.

STATE OF NEW YORK — JAMES M. CUMMINGS — 080968 — LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION:
DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID

PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

SHEET TITLE:
SANITARY DETAILS

DRAWING NUMBER:
C-507

GENERAL NOTES – SUBSURFACE TREATMENT SYSTEM

1. REFER TO STANDARD NOTES FOR COMMERCIAL PROJECTS AND ADDITIONAL NOTES FOR FILL SECTIONS ON DRAWING CG–100.
2. SYSTEM DESIGN AND CONSTRUCTION SHALL BE IN COMPLIANCE DUTCHESS COUNTY DESIGN AND CONSTRUCTION STANDARDS FOR RESIDENTIAL AND COMMERCIAL ONSITE WASTEWATER TREATMENT SYSTEMS.
3. NO ROOF, FOOTING, COOLING WATER, OR WATER SOFTENER BACKWASH WATER SHALL BE CONNECTED TO THE SYSTEM.
4. SYSTEM SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE SYSTEM.
5. ANY CHANGE IN CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE DIRECTOR'S REPRESENTATIVE. ANY CHANGES IN THE SYSTEM MUST BE APPROVED BY THE DUTCHESS COUNTY DEPARTMENT OF HEALTH.

SYSTEM DESIGN – TYPE II LOT IMPROVEMENT

1. 30 EMPLOYEES X [15 GPD (FIXTURES) + 10 GPD (SHOWERS)] x 0.8 X 2 SHIFTS PER DAY = 1200 GPD. NOTE: THIS INCLUDES A 20 PERCENT REDUCTION OF THE PER–UNIT HYDRAULIC LOADING RATE FOR LOW FLOW FIXTURES.
2. PERCOLATION TESTING AT 24" DEPTH INDICATES HYDRAULIC CONDUCTIVITY OF > 60 MINUTES PER INCH (MPI).
3. DESIGN OF SYSTEM IS BASED ON APPLICATION RATE OF 0.45 GPD/SQ.FT. FOR SILT LOAM.
4. REQUIRED LATERAL LENGTH = (1200 GPD / 0.45 GPD/SQ.FT.) X 1 LF/ 2 SQ.FT. = 1333 LF. USE EIGHTEEN (18) 75' LONG LATERALS.

TYPE II LOT IMPROVEMENT SYSTEM CONSTRUCTION

1. ROPE OFF THE SITE TO PREVENT DAMAGE TO THE AREA DURING CONSTRUCTION ACTIVITY. VEHICULAR TRAFFIC OVER THE AREA IS PROHIBITED TO AVOID COMPACTION.
2. STAKE OUT THE SYSTEM IN THE PROPER ORIENTATION.
3. CREATE A PAD TO CONSTRUCT THE TYPE II LOT IMPROVEMENT SYSTEM ON BY LEVELING AREA AND FILLING LOW AREAS WITH SUITABLE FILL.
4. PRIOR TO PLACING FILL, PLOW THE AREA WITHIN THE SYSTEM PERIMETER. USE A TWO BOTTOM OR LARGE MOLDBOARD PLOW, PLOWING 7–8 INCHES DEEP PARALLEL TO THE CONTOURS. SINGLE BOTTOM PLOWS SHALL NOT BE USED, AS THE TRACE WHEEL RUNS IN EVERY FURROW, COMPACTING THE SOIL. EACH FURROW SHOULD BE THROWN UPSLOPE. A CHISEL PLOW MAY BE USED IN PLACE OF A MOLDBOARD PLOW. ROTOTILLING IS NOT RECOMMENDED BECAUSE OF THE DAMAGE IT DOES TO THE SOIL STRUCTURE. HOWEVER, ROTOTILLING MAY BE USED IN GRANULAR SOILS, SUCH AS SANDS. PLOWING SHALL NOT BE DONE WHEN THE SOIL IS TOO WET AS SMEARING AND COMPACTION WILL OCCUR. IF A SAMPLE OF THE SOIL TAKEN FROM THE PLOW DEPTH FORMS A WIRE WHEN ROLLED BETWEEN THE PALMS, THE SOIL IS TOO WET. IF IT CRUMBLES, PLOWING MAY PROCEED, AS DIRECTED.

ABSORPTION SYSTEM FILL PLACEMENT GENERAL REQUIREMENTS

1. FILL SHALL BE FROM AN APPROVED SOURCE WITH A PERCOLATION RATE BETWEEN 1 AND 15 MPI STABILIZED IN PLACE.
2. PLACE THE FILL ON THE UPSLOPE EDGES OF THE PLOWED AREA. KEEP TRUCKS OFF THE PLOWED AREA.
3. MOVE THE FILL INTO PLACE WITH A SMALL TRACK–TYPE TRACTOR WITH A BLADE. ALWAYS KEEP A MINIMUM OF 6–INCHES OF MATERIAL BENEATH THE TRACKS OF THE TRACTOR TO MINIMIZE COMPACTION OF THE SOIL.
4. THE STRUCTURE OF THE SOIL BENEATH THE SYSTEM SHALL BE PROTECTED FROM DAMAGE FROM TRUCKS OR MACHINERY THROUGHOUT THE CONSTRUCTION PROCESS. TRACK–MOUNTED EQUIPMENT SHALL BE USED TO PLACE THE FILL.
5. A SLIGHT DRAINAGE SWALE SHALL BE CONSTRUCTED UPSLOPE OF THE SYSTEM TO PREVENT INFILTRATION OF THE SURFACE RUNOFF INTO THE SYSTEM.

STABILIZATION METHODS

1. FILL PLACEMENT AND COMPACTION SHALL BE WITNESSED BY THE DIRECTOR'S REPRESENTATIVE.
2. PLACE FILL IN LAYERS NOT MORE THAN 6 (6) INCHES THICK IN LOOSE DEPTH TO THE ELEVATIONS SHOWN.
3. PLACE 6" TOPSOIL AS SHOWN ON PLANS THEN SEED AND MULCH ENTIRE SURFACE.
4. FILL SHALL SETTLE AND STABILIZE FOR A PERIOD OF AT LEAST SIX MONTHS AND INCLUDE ONE FREEZE–THAW CYCLE BEFORE CONSTRUCTING ABSORPTION TRENCHES.
5. AT LEAST TWO (2) 24" DEEP PERCOLATION TESTS SHALL BE PERFORMED WITHIN THE STABILIZED ABSORPTION FIELD BY A LICENSED ENGINEER RETAINED BY THE CONTRACTOR, AFTER THE 6 MONTH SETTLING PERIOD. TESTS SHALL BE SCHEDULED WITH THE REVIEWING ENGINEER OF THE AUTHORITY HAVING JURISDICTION (DUTCHESS COUNTY) SO THAT HE/SHE CAN WITNESS IF SO DESIRED. PERFORM ADDITIONAL TESTS IF SO DIRECTED BY THE REVIEWING ENGINEER. PERCOLATION RATE SHALL BE BETWEEN FIVE (5) AND SIXTY (60) MPI. NOTIFY THE DIRECTOR'S REPRESENTATIVE IF RATE IS NOT WITHIN THIS LIMIT.
6. ABSORPTION TRENCHES, EFFLUENT DOSING PUMP STATION, VALVE VAULT, AND DISTRIBUTION BOXES SHALL NOT BE INSTALLED UNTIL AFTER THE 6–MONTH SETTLING AND STABILIZATION PERIOD HAS ENDED AND THE DIRECTOR'S REPRESENTATIVE HAS INSPECTED AND APPROVED THE TYPE II LOT IMPROVEMENT.

ABSORPTION TRENCHES

1. CONSTRUCT ABSORPTION TRENCHES 18 INCHES DEEP MEASURED FROM TOP OF FILL TO BOTTOM OF TRENCH, AND IN ACCORDANCE WITH THE DETAILS PRESENTED ON THIS DRAWING.
2. REPLACE TOPSOIL OVER DISTURBED AREAS AND SEED AND MULCH.

COVERING

1. PLACE 6 INCHES OF TOPSOIL OVER THE ENTIRE SYSTEM.
2. ENTIRE SYSTEM SHALL BE SEEDED AND MULCHED.

REQUIRED INSPECTIONS

INSPECTION #1: SUITABLE MATERIAL PLACED IN LOW AREAS TO CREATE A LEVEL PAD FOR PLACEMENT OF ABSORPTION SYSTEM SHALL BE INSPECTED AND TESTED FOR COMPACTION IN ACCORDANCE WITH THE SPECIFICATIONS.

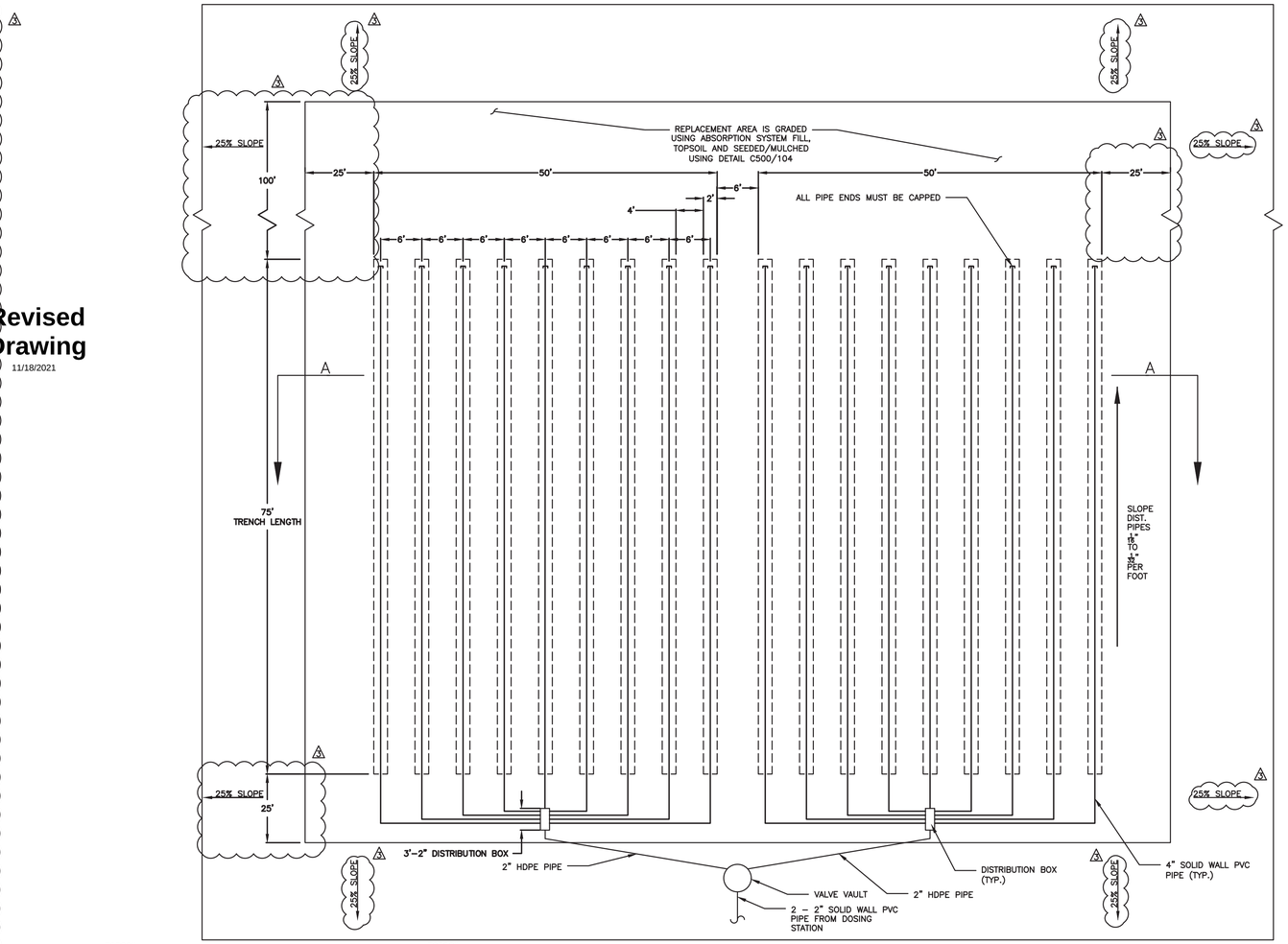
INSPECTION #2: INSPECTION OF STABILIZED FILL METHOD: DIRECTOR'S REPRESENTATIVE SHALL WITNESS PLACEMENT OF FILL AND PERCOLATION TESTS.

INSPECTION #3: UPON COMPLETION OF INSTALLING TRENCHES, PIPING, TANKS AND EFFLUENT DOSING PUMP STATION PRIOR TO BACKFILLING. FACILITIES TO BE INSPECTED INCLUDE THE FOLLOWING:

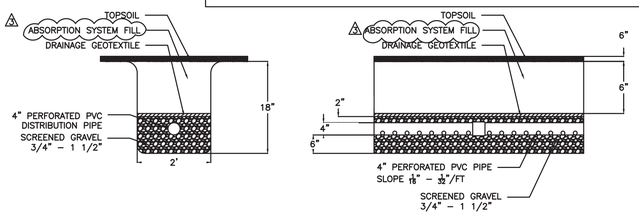
- SAND AND GRAVEL ABSORPTION SYSTEM FILL MATERIAL IN–PLACE (FULL DEPTH) INCLUDING ABSORPTION TRENCHES WITH DISTRIBUTION LATERALS EXPOSED.
- ALL PIPING AND TANKS INSTALLED INCLUDING DOSING PUMP STATION. PUMPS AND ALARM TO BE OPERABLE. CONTRACTOR TO PROVIDE ADEQUATE VOLUME OF WATER TO TEST PUMPS AND ALARM AND TO VERIFY DOSE VOLUMES (2 TEST RUNS PER PUMP MINIMUM).

INSPECTION #4: UPON COMPLETION OF FINAL GRADING INCLUDING PLACEMENT OF TOPSOIL AND FINAL SEEDING.

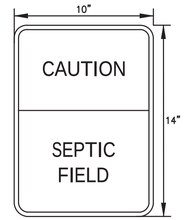
Revised Drawing
11/18/2021



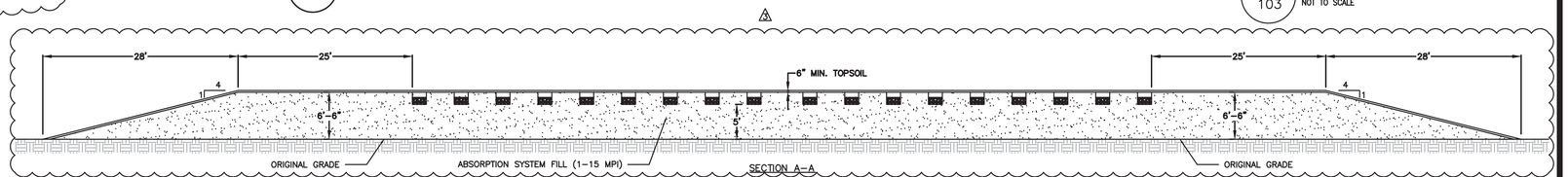
C–508 / 100 ABSORPTION FIELD PLAN VIEW
NOT TO SCALE



C–508 / 101 TYPICAL ABSORPTION TRENCH DETAIL
NOT TO SCALE



C–508 / 103 ABSORPTION FIELD WARNING SIGN
NOT TO SCALE



C–508 / 102 ABSORPTION FIELD SECTION VIEW
NOT TO SCALE

NOTES:
1. THE AREA EXCAVATED AND FILLED MUST PROVIDE AT LEAST A 25' FOOT BUFFER IN EACH DIRECTION BEYOND THE TRENCHES AND THE REPLACEMENT AREA.
2. ORIGINAL UNUSEABLE SOIL SHOULD NOT BE USED AS BACKFILL ABOVE THE TRENCHES.
3. A MINIMUM OF 5' VERTICAL SEPARATION FROM BOTTOM OF TRENCH TO BEDROCK OR IMPERMEABLE STRATA IS REQUIRED.

NEW YORK STATE OF OPPORTUNITY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:
SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

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 · JAMES M. CUMMINGS · 080968 · LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY, 205 LIME KILN RD., EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	45552-C	
DESIGNED BY:	EFN	
DRAWN BY:	AWR	
FIELD CHECK:		
APPROVED:	JMC	

SHEET TITLE: ABSORPTION FIELD DETAILS

DRAWING NUMBER: **C-508**

NOTES:

1. THRUST RESTRAINT USING THRUST BLOCKS AND TIE RODS ARE SHOWN ON THESE SHEETS. RESTRAINED JOINTS AND RETAINER GLANDS ARE ALSO ACCEPTABLE METHODS.

2. IF THE CONTRACTOR ELECTS TO RESTRAIN INDIVIDUAL JOINTS, EACH JOINT THAT FALLS WITHIN THE MINIMUM RESTRAINED LENGTH, MEASURED FROM THE CENTER OF THE FITTING, AS SHOWN ON THESE SHEETS SHALL BE RESTRAINED, AND SHALL WITHSTAND THE MAXIMUM PRESSURE APPLIED TO THE SYSTEM.

3. CONCRETE SHALL NOT BE PLACED UNDER WATER. IF WATER IS ENCOUNTERED IN THE EXCAVATION THEN THE CONTRACTOR SHALL DEWATER THE EXCAVATION.

4. CONCRETE FOR THRUST BLOCKS SHALL NOT BE ALLOWED TO COVER OR INTERFERE WITH JOINT OR RESTRAINT HARDWARE. PLASTIC SHEETING OR BUILDING FELT MAY BE PLACED OVER PIPE FOR FITTINGS TO PREVENT CONCRETE FROM ADHERING TO SURFACES. CONCRETE FOR THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL.

5. FOR BENDS, BEARING AREA SHALL BE PARALLEL TO THE EDGE OF THE FITTING AT THE FITTING MIDPOINT.

6. FOR TEES, BEARING AREA SHALL BE PERPENDICULAR TO THE BRANCH (SINGLE LEG) AXIS.

7. FOR REDUCERS, BEARING AREA SHALL BE PERPENDICULAR TO THE FITTING AXIS. THE MINIMUM THICKNESS ALONG THE FITTING AXIS SHALL BE 1ft OR THE LENGTH BETWEEN THE BELLS, WHICHEVER IS SMALLER.

8. TO DETERMINE REQUIRED SIZES FOR DIFFERENT CONDITIONS, MULTIPLY THE DIMENSION BY A FACTOR OF THE SPECIFIC VALUE DIVIDED BY A STANDARD VALUE.

   EXAMPLE:
   FOR 12 NPS 45° BEND WITH 100 psi TEST PRESSURE:

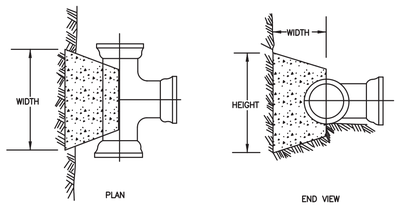
   AREA REQUIRED = (4.7' X 2.3') X (100 / 200) = 5.4 ft^2
   WIDTH = 3.3 ft
   HEIGHT = 1.7 ft

9. ALL FITTINGS SHALL BE RESTRAINED WITH BOTH THRUST BLOCKS AND MECHANICAL JOINT RETAINER GLANDS.

10. ALL PIPE JOINTS WITHIN THE RESTRAINED LENGTH OF PIPE SHALL BE RESTRAINED WITH MECHANICAL JOINT RETAINER GLANDS.

11. ALL REFERENCES TO NYSDOT STANDARD SPECIFICATIONS, OR STANDARD SPECIFICATIONS, MEAN THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, OFFICE OF ENGINEERING (JANUARY 1, 2019) ALL REFERENCES TO THE NYSMUTCD SHALL MEAN THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 17B NYCRR.

C-509 100 THRUST BLOCK NOTES
NOT TO SCALE

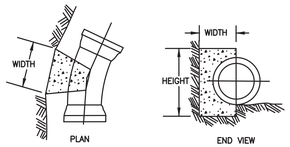


SIZE	WIDTH	HEIGHT	SIZE	WIDTH	HEIGHT
4	24"	12"	14	68"	40"
6	36"	16"	16	80"	44"
8	40"	24"	18	92"	48"
10	52"	28"	20	104"	52"
12	64"	32"	24	124"	64"

NOTE:

1. THRUST BLOCKS SHALL BE CONSTRUCTED OF CONCRETE FOR PIPELINES, CLASS C CONCRETE.

C-509 101 TEE/DEAD END THRUST BLOCK DETAILS
NOT TO SCALE



SIZE	WIDTH	HEIGHT	SIZE	WIDTH	HEIGHT
4	12"	5"	14	36"	16"
6	14"	8"	16	40"	20"
8	20"	10"	18	44"	20"
10	24"	12"	20	44"	24"
12	28"	14"	24	56"	28"

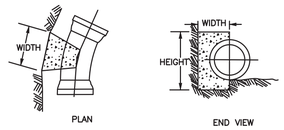
NOTES:

1. THRUST BLOCKS SHALL BE CONSTRUCTED OF CONCRETE FOR PIPELINES CLASS C CONCRETE.

2. THRUST BLOCKS SIZES AND MINIMUM RESTRAINED LENGTHS SHOWN ON THESE SHEETS ARE BASED UPON THE FOLLOWING STANDARD CONDITIONS:

   1.5 SAFETY FACTOR
   5 FT DEPTH OF COVER
   200 PSI WATER SYSTEM TEST PRESSURE
   14 PSI SOIL BEARING CAPACITY
   90 PCF SOIL UNIT WEIGHT

C-509 102 11.25° BEND THRUST BLOCK
NOT TO SCALE



SIZE	WIDTH	HEIGHT	SIZE	WIDTH	HEIGHT
4 NPS	14"	8"	14 NPS	44"	24"
6 NPS	24"	10"	16 NPS	56"	26"
8 NPS	28"	14"	18 NPS	60"	30"
10 NPS	36"	16"	20 NPS	60"	36"
12 NPS	40"	20"	24 NPS	76"	40"

NOTE:

1. THRUST BLOCKS SHALL BE CONSTRUCTED OF CONCRETE FOR PIPELINES CLASS C CONCRETE.

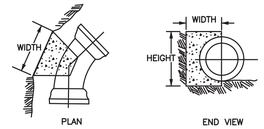
2. THRUST BLOCKS SIZES AND MINIMUM RESTRAINED LENGTHS SHOWN ON THESE SHEETS ARE BASED UPON THE FOLLOWING STANDARD CONDITIONS:

   1.5 SAFETY FACTOR
   5 FT DEPTH OF COVER
   200 PSI WATER SYSTEM TEST PRESSURE
   14 PSI SOIL BEARING CAPACITY
   90 PCF SOIL UNIT WEIGHT

MINIMUM RESTRAINED LENGTH OF PIPE (ft)											
FITTING	NOMINAL PIPE SIZE										
HORIZONTAL BENDS	4 NPS	6 NPS	8 NPS	10 NPS	12 NPS	14 NPS	16 NPS	18 NPS	20 NPS	24 NPS	
11 1/4°	1.3'	2.0'	2.7'	3.0'	3.7'	4.0'	4.7'	5.0'	5.7'	6.3'	
22 1/2°	1.3'	2.0'	2.7'	3.0'	3.7'	4.0'	4.7'	5.0'	5.7'	6.7'	
45°	3.0'	4.0'	5.3'	6.3'	7.7'	8.7'	9.7'	10.7'	11.7'	13.7'	
90°	7.0'	10.0'	12.7'	15.7'	18.3'	31.0'	23.3'	26.0'	28.3'	33.0'	
DEAD ENDS	8.7'	12.7'	16.3'	16.3'	23.3'	26.7'	30.0'	33.3'	36.7'	43.0'	

NOTE: FOR POLYETHYLENE WRAPPED PIPE, MULTIPLY VALUES IN TABLE BY 1.45

C-509 103 22.5° BEND THRUST BLOCK
NOT TO SCALE



SIZE	WIDTH	HEIGHT	SIZE	WIDTH	HEIGHT
4 NPS	24"	10"	14 NPS	64"	32"
6 NPS	32"	14"	16 NPS	68"	40"
8 NPS	40"	20"	18 NPS	88"	40"
10 NPS	48"	24"	20 NPS	88"	48"
12 NPS	56"	28"	24 NPS	108"	56"

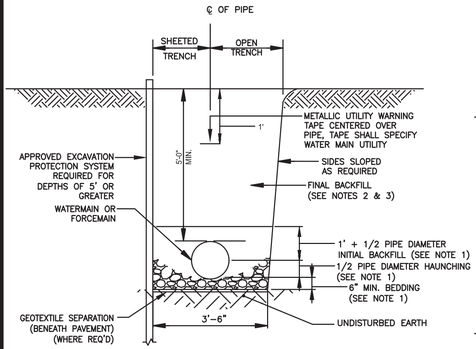
NOTE:

1. THRUST BLOCKS SHALL BE CONSTRUCTED OF CONCRETE FOR PIPELINES CLASS C CONCRETE.

2. THRUST BLOCKS SIZES AND MINIMUM RESTRAINED LENGTHS SHOWN ON THESE SHEETS ARE BASED UPON THE FOLLOWING STANDARD CONDITIONS:

   1.5 SAFETY FACTOR
   5 FT DEPTH OF COVER
   200 PSI WATER SYSTEM TEST PRESSURE
   14 PSI SOIL BEARING CAPACITY
   90 PCF SOIL UNIT WEIGHT

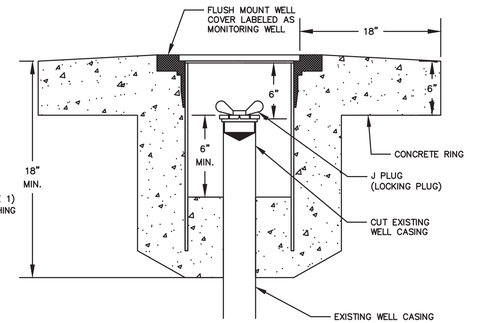
C-509 104 45° BEND THRUST BLOCK
NOT TO SCALE



NOTES:

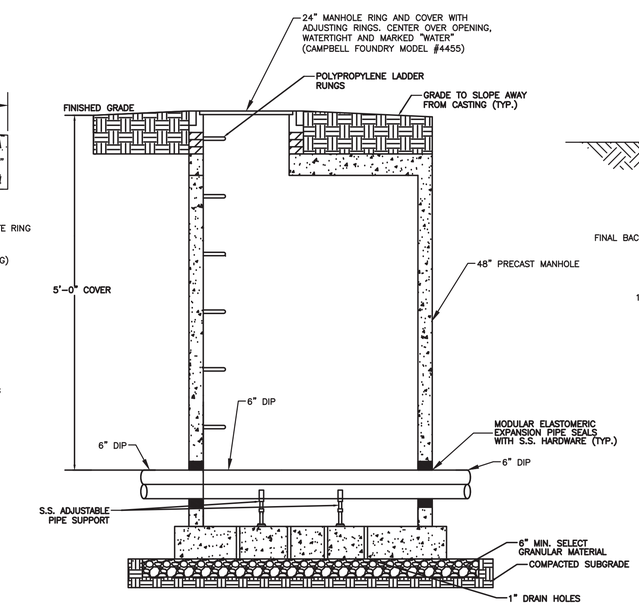
1. BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL BE CUSHION MATERIAL.
2. FINAL BACKFILL SHALL BE SUITABLE MATERIAL IN GRASS AREAS.
3. FINAL BACKFILL SHALL BE SELECT GRANULAR MATERIAL WITHIN AND 5 FEET EACH SIDE OF ALL HARD SURFACES (ASPHALT, CONCRETE AND GRAVEL PAVEMENT).
4. IN UNSTABLE MATERIAL OR ROCKY AREAS, PROVIDE BEDDING AND FOUNDATION AT LEAST 6" DEEP BELOW NORMAL BEDDING AND TO THE APPROVAL OF THE DIRECTORS REPRESENTATIVE.
5. RESTORE TRENCH TO ORIGINAL CONDITIONS.

C-509 105 WATERMAIN AND SANITARY SEWER FORCE MAIN TRENCH
NOT TO SCALE

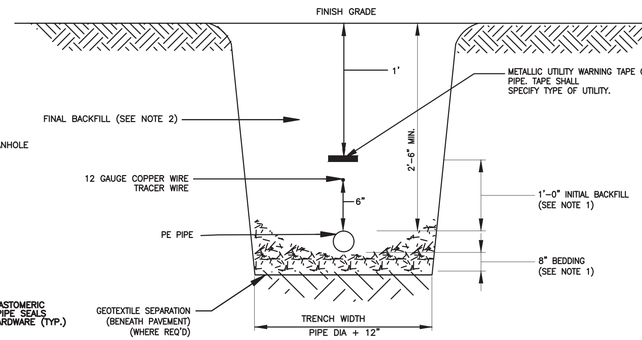


NOTES:
1. CUT EXISTING WELL CASING TO 6" BELLOW FINISH GRADE.
2. PLACE WELL COVER AT FINISH GRADE AND PROVIDE CONCRETE RING AROUND COVER.

C-509 106 WELL CAP
NOT TO SCALE

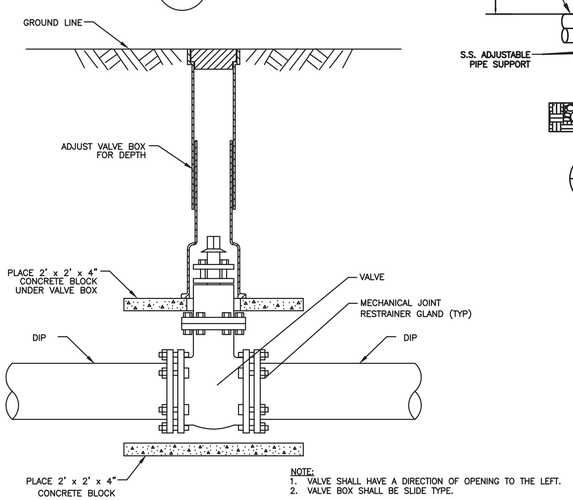


C-509 107 MANHOLE FOR FUTURE AIR/VAC VALVE
NOT TO SCALE



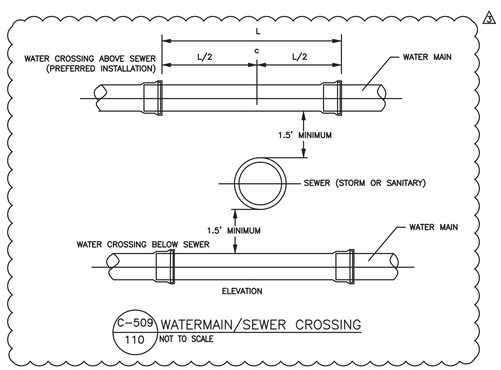
NOTE:
1. BEDDING, HAUNCHING AND INITIAL BACKFILL SHALL BE CUSHION MATERIAL.
2. FINAL BACKFILL SHALL BE SUITABLE MATERIAL IN GRASS AREAS. FINAL BACKFILL IN PAVED AREAS SHALL BE SELECT GRANULAR MATERIAL.
3. FOR TRENCH DEPTHS OF 5' OR GREATER AN APPROPRIATE EXCAVATION SYSTEM IS REQUIRED.

C-509 108 GAS MAIN TRENCH DETAIL
NOT TO SCALE



NOTE:
1. VALVE SHALL HAVE A DIRECTION OF OPENING TO THE LEFT.
2. VALVE BOX SHALL BE SLIDE TYPE.

C-509 109 VALVE DETAIL
NOT TO SCALE



C-509 110 WATERMAIN/SEWER CROSSING
NOT TO SCALE

Nov 22,2021 - 3:55pm
E:\2017\17095-East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_C510_WATER SYSTEM_Details.dwg

36x24 PLOT SHEET

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT:

SHUMAKER
Consulting Engineering & Land Surveying, D.P.C.

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
JAMES M. CUMMINS
080968
LICENSED PROFESSIONAL ENGINEER

CONTRACT:
CONSTRUCTION

TITLE:
PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION:
DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID

PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

SHEET TITLE:

WATER DETAILS

DRAWING NUMBER:
C-509

GENERAL NOTES:

1. EXISTING INFORMATION AND CONDITIONS ARE NOT GUARANTEED CONTRACTOR MUST VERIFY EXISTING CONDITIONS. THE CORRECTNESS AND COMPLETENESS OF THE INFORMATION SHOWING EXISTING CONDITIONS IS NOT GUARANTEED. BEFORE BEGINNING CONSTRUCTION, PERFORM THE FOLLOWING TASKS:
   a. NOTIFY DIG SAFELY NY AND HAVE ANY PRIVATE UTILITIES WITHIN THE LIMITS OF CONSTRUCTION MARKED OUT AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL HIRE A UTILITY MARK–OUT FIRM TO MARK–OUT ALL UTILITIES ON THE DOT PROPERTY. MAINTAIN MARKINGS THROUGHOUT CONSTRUCTION;
   b. COORDINATE AND REVIEW ANY INFORMATION THAT COULD LEAD TO THE DISCOVERY OF UTILITIES NOT LOCATED BY SURVEY WITH THE DIRECTORS REPRESENTATIVE;
   c. VERIFY THE GENERAL ACCURACY OF THE EXISTING CONDITIONS SHOWN ON THE SITE DRAWINGS BY VISUAL INSPECTION OF THE SURFACE OF THE SITE AND ALL EXISTING STRUCTURES, PAVING, AND UTILITY APPURTENANCES VISIBLE THEREON.
   d. VERIFY THE EXISTENCE, SIZE, LOCATION AND ELEVATION OF EXISTING UTILITIES INCLUDING BUT NOT LIMITED TO: STORM DRAINS, SANITARY LINES, WATER LINES, GAS LINES, ELECTRIC LINES, TELEPHONE LINES, AND COMMUNICATION LINES, AND ALL MANHOLES, INLETS, CLEAN–OUTS, VALVES, HANDHOLES, ETC. WITHIN THE LIMIT OF CONTRACT, IN ORDER TO, (I) AVOID DAMAGING OR DISRUPTING SERVICE, AND (2) TO COORDINATE AND FACILITATE CONSTRUCTION OF PROPOSED UTILITIES AND OTHER IMPROVEMENTS. UNDERGROUND FACILITIES SHALL BE VERIFIED AS TO LOCATION AND DEPTH PRIOR TO EXCAVATING. EXISTING UTILITY INVERTS SHALL BE FIELD VERIFIED PRIOR TO ORDERING STRUCTURES.
   e. IMMEDIATELY REPORT TO THE DIRECTORS REPRESENTATIVE THE RESULTS OF STEPS (A), (B), (C) AND (D) WHICH MIGHT INDICATE ANY DISCREPANCY BETWEEN ACTUAL CONDITIONS AND THOSE SHOWN ON THE PLAN, AND POTENTIAL CONFLICTS BETWEEN PROPOSED IMPROVEMENTS AND EXISTING CONDITIONS.
2. VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE DIRECTORS REPRESENTATIVE PRIOR TO STARTING WORK.
3. IN THE EVENT THAT THE CONTRACTOR OR CONTRACTOR'S SUBCONTRACTORS DAMAGES ANY EXISTING SITE FEATURE (IE, CURB, PAVEMENT, UTILITY, TREE, LAWN, ETC.) NOT INDICATED TO BE REMOVED, INSIDE OR OUTSIDE LIMIT OF CONTRACT, OR ANY NEWLY INSTALLED IMPROVEMENT, REPAIR AND REPLACE SAID DAMAGE TO THE DIRECTOR'S REPRESENTATIVE'S SATISFACTION, AT NO ADDITIONAL COST TO THE STATE.
4. UNLESS NOTED OTHERWISE, PROVIDE MATERIALS AND LABOR FOR CONSTRUCTION, SURVEY, AND STAKE OUT OF PROPOSED IMPROVEMENTS. UNLESS OTHERWISE NOTED ON THESE PLANS, ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT AND ALL EXCESS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF SITE IN A LAWFUL MANNER.
5. ROADS AND PARKING LOTS SHALL BE KEPT CLEAN OF MUD, DUST, AND DEBRIS AT ALL TIMES.
6. SITE SURVEY SHOWN IN THE PLANS WAS CONDUCTED BY SHUMAKER CONSULTING ENGINEERING AND LAND SURVEYING, D.P.C., 143 COURT ST. BINGHAMTON, NY 13901, (607)798–8081 DATED: OCTOBER 2018.
7. COORDINATE THE LOCATION FOR CONTRACTORS STAGING AREA (TRAILER, STORAGE, OR STOCKPILE AREAS) WITH THE DIRECTORS REPRESENTATIVE AND THE FACILITY. ALL AREAS USED FOR STAGING AND STOCKPILES SHALL BE ENCIRCLED WITH SILT FENCE AND SHALL BE RESTORED TO EXISTING CONDITIONS AT THE CONCLUSION OF CONSTRUCTION. STAGING AND STOCKPILE AREAS SHALL NOT ENCROACH ON NYSDOT OPERATIONAL AREAS.
8. UNLESS NOTED OTHERWISE ON DRAWINGS, REMOVAL OF EXISTING CONDITIONS INCLUDES COMPLETE REMOVAL AND LEGAL DISPOSAL OF ENTIRE FEATURE OR STRUCTURE INCLUDING FOOTINGS.
9. USE COORDINATE SYSTEM AND BASELINE TO LAYOUT PROPOSED WORK IN THE FIELD. ALL FEATURES SHALL BE STAKED OUT BY A LICENSED LAND SURVEYOR.
10. BECOME FAMILIAR WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
11. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE DIRECTORS REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
12. COORDINATE EFFORTS WITH ALL TRADES.
13. NYSDOT OPERATION AT THE SITE SHALL NOT BE IMPACTED BY THE CONTRACTORS OPERATIONS. ACCESS TO ALL BUILDINGS AND NON WORK AREAS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTORS OPERATIONS SHALL BE COORDINATED WITH THE SITE TO ENSURE THAT NYSDOT OPERATIONS ARE NOT DISRUPTED.
14. NYSDOT WILL RELOCATE ANY EQUIPMENT OR MATERIALS OUT OF THE CONTRACT WORK LIMIT NOT SHOWN TO BE REMOVED BY THE CONTRACTOR.
15. SEQUENCE THE WORK SO THERE IS LESS THAN 5 ACRES OPEN AND DISTURBED (NON–FINAL RESTORED) AT ALL TIMES.
16. SUPPLY ALL WATER NEEDED FOR FLUSHING AND TESTING ALL WATER AND SANITARY SYSTEMS AND COMPONENTS: TANKS, PIPES, PUMPS, STRUCTURES, ETC. UNTIL SUBSTANTIAL AND PHYSICAL COMPLETION ARE APPROVED.
17. C–CONTRACTOR IS RESPONSIBLE FOR ALL FINAL SITE RESTORATION ABOVE TRENCHES.

EROSION AND SEDIMENT CONTROL NOTES:

1. PERFORM ALL CONSTRUCTION OPERATIONS IN A MANNER SO AS TO MINIMIZE SOIL EROSION AND ENSURE SEDIMENT CONTROL. EROSION CONTROL MEASURES ARE ITEMS WHICH MINIMIZE THE EROSION OF SOIL. SEDIMENT CONTROL MEASURES ARE ITEMS WHICH KEEP SEDIMENT FROM LEAVING THE PROJECT SITE. EFFECTIVE SOIL EROSION AND SEDIMENT CONTROL HAVING TEMPORARY OR PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE. PERIMETER SEDIMENT CONTROL MEASURES ALONE ARE NOT CONSIDERED ADEQUATE PROTECTION.
2. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT DIRECT OR INDIRECT CONTAMINATION OF ALL WATER BODIES (INCLUDING WETLANDS) BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS,EPOXY COATINGS, CONCRETE LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEDURES. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE DIRECTLY OR INDIRECTLY ON TO THE GROUND OR ANY WATER BODIES (INCLUDING WETLANDS), NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ESCAPE DIRECTLY OR INDIRECTLY INTO ANY WATER BODIES (INCLUDING WETLANDS).
3. TEMPORARY SOIL AND EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AS PER DETAILS AND NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) REQUIREMENTS STATED IN THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. THE COST OF MAINTAINING AND REMOVING TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE BID PRICE. ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AFTER EACH STORM EVENT OF 1" OR MORE IN A 12 HOUR PERIOD. AT LEAST DAILY DURING PROLONGED RAINFALL. IF NO RAINFALL OCCURS, INSPECTION SHALL BE PERFORMED ONCE EVERY SEVEN CALENDAR DAYS.
4. PERIMETER SEDIMENT CONTROL MEASURES AND VEGETATION PROTECTION FENCES SHALL BE PLACED PRIOR TO STARTING CLEARING AND GRUBBING OR OTHER CONSTRUCTION OPERATIONS. THESE MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE PERMANENTLY PROTECTED WITH FINAL STABILIZATION MEASURES.
5. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO THE WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WETLANDS OR WATERS. DO NOT WASH CONCRETE TRUCKS OUT ONTO THE BARE GROUND OR DIRECTLY TO THE STORM OR SANITARY SEWER. WASH WATER SHALL BE COLLECTED IN A WASHOUT BASIN(SEE DETAIL C–503/102).
6. ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THIS PROJECT SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM GROUND AND DISPOSED OF PROPERLY.
7. IF DEWATERING OF THE SITE IS NECESSARY, PUT ALL DISCHARGE THROUGH A SETTLING TANK OR SIMILAR DEVICE BEFORE BEING DISCHARGED ONTO THE GROUND OR INTO THE STORM SEWER. DO NOT DISCHARGE TURBID WATER TO THE GROUND, STORM OR ANY WATER BODY. WATER SHALL BE DISCHARGED IN A MANNER THAT WILL NOT CAUSE EROSION.
8. ENCIRCLE STOCKPILES WITH SILT FENCE AND COVER THEM WITH A TARP OR OTHER FORM OF EROSION CONTROL MEASURE WITHIN 7 DAYS OF FORMATION.
9. EROSION CONTROL PRACTICES SHOWN ARE A MINIMUM, AND ADDITIONAL PRACTICES MAY BE NECESSARY. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL PRACTICES REQUIRED TO MAINTAIN PROPER PROTECTION OF THE SITE.
10. TEMPORARY SEED AND MULCH ANY DISTURBED AREA THAT WILL NOT BE WORKED ON IN 7 DAYS. COST OF TEMPORARY SEEDING AND MULCHING SHALL BE INCLUDED IN THE BID PRICE.
11. ESTABLISH A CONSTRUCTION ENTRANCE (REFER TO DETAIL C–503/103) AT EACH ENTRANCE/EXIT TO THE SITE.
12. ABIDE BY THE PROJECT'S SWPPP.

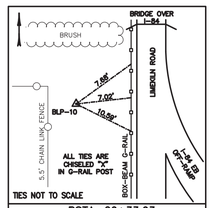
STANDARD NOTES FOR COMMERCIAL PROJECTS:
(ONSITE WATER SOURCE & SEWAGE DISPOSAL) – W/PWS

1. THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:
   – "NEW YORK STATE DESIGN STANDARDS FOR INTERMEDIATE SIZED WASTEWATER TREATMENT SYSTEMS",
   – NYSDEC "APPENDIX 75–A, WASTE TREATMENT – INDIVIDUAL HOUSEHOLD SYSTEMS, NEW YORK STATE SANITARY CODE."
   – "RECOMMENDED STANDARDS FOR SEWAGE TREATMENT WORKS, (TEN STATES)."
   – "RECOMMENDED STANDARDS FOR WATER WORKS (TEN STATES)."
   – "NEW YORK STATE DEPARTMENT OF HEALTH AND DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DIVISION POLICIES, PROCEDURES AND STANDARDS."
   – "DUTCHESS COUNTY AND NEW YORK STATE SANITARY CODES."
   – "DUTCHESS COUNTY ENVIRONMENTAL HEALTH SERVICES DIVISION CERTIFICATE OF APPROVAL LETTER."
2. THIS PLAN IS APPROVED AS MEETING THE APPROPRIATE AND APPLIED TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES FOR ARRANGEMENT OF SEWAGE DISPOSAL AND TREATMENT AND WATER SUPPLY FACILITIES.
3. UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED, AND CERTIFIED COMPLETE TO THE DCDH BY THE NEW YORK STATE REGISTERED DESIGN PROFESSIONAL SUPERVISING CONSTRUCTION. NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE DC EHSD.
4. APPROVAL OF ANY PLAN(S) OR AMENDMENT THERETO SHALL BE VALID FOR A PERIOD OF 5 YEARS FROM THE DATE OF APPROVAL. FOLLOWING THE EXPIRATION OF SAID APPROVAL, THE PLAN(S) SHALL BE RE–SUBMITTED TO THE COMMISSIONER OF HEALTH FOR CONSIDERATION FOR RE–APPROVAL. RE–SUBMISSION OR REVISED SUBMISSION OF PLANS AND/OR ASSOCIATED DOCUMENTS SHALL BE SUBJECT TO COMPLIANCE WITH THE TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES IN EFFECT AT THE TIME OF THE RE–SUBMISSION.
5. ALL WELLS AND ONSITE WASTEWATER TREATMENT SYSTEM EXISTING OR APPROVED WITHIN 300 FEET OF THE PROPOSED WELLS AND ONSITE WASTEWATER TREATMENT SYSTEM ARE SHOWN ON THIS PLAN ALONG WITH ANY OTHER ENVIRONMENTAL HAZARDS IN THE AREA THAT MAY AFFECT THE DESIGN AND FUNCTIONAL ABILITY OF THE ONSITE WASTEWATER TREATMENT SYSTEM AND WELL.
6. IT SHALL BE DEMONSTRATED BY THE CONTRACTOR TO THE DC EHSD FIELD INSPECTOR AND/OR DESIGN PROFESSIONAL THAT THE TANK IS SEALED, WATERTIGHT AND ACCEPTABLE FOR USE. THIS SHALL REQUIRE, AT A MINIMUM, THE FILLING OF THE TANK WITH WATER TO OBSERVE IF IT IS IN FACT SEALED, WATERTIGHT AND ACCEPTABLE FOR USE. THE TANK MUST ALSO MEET ANY LOCAL TESTING REQUIREMENTS, INCLUDING POSSIBLE ELECTRICAL AND SAFETY STANDARDS.
7. ALL PROPOSED WELLS AND SERVICE LINES ON THIS PLAN ARE ACCESSIBLE FOR INSTALLATION AND PLACEMENT.
8. NO CELLAR, FOOTING, FLOOR, GARAGE, COOLER OR ROOF DRAINS SHALL BE DISCHARGED INTO THE ONSITE WASTEWATER TREATMENT SYSTEM OR WITHIN 50 FEET OF ANY WELL.
9. ALL BUILDINGS SHALL BE CONSTRUCTED AT AN ELEVATION HIGH ENOUGH TO ENSURE GRAVITY FLOW TO THE ONSITE WASTEWATER TREATMENT SYSTEM.
10. THERE SHALL BE NO VEHICULAR TRAFFIC OVER THE ONSITE WASTEWATER TREATMENT SYSTEM. PRIOR TO CONSTRUCTION, THE AREA OF THE SYSTEM SHALL BE STAKED OUT AND FENCED OFF.
11. ONSITE WASTEWATER TREATMENT SYSTEMS SHALL NOT BE INSTALLED IN WET OR FROZEN SOIL.
12. THE DC EHSD SHALL BE NOTIFIED PRIOR TO THE BACKFILLING OF ANY COMPLETED ONSITE WASTEWATER TREATMENT SYSTEM SO THAT A FINAL INSPECTION MAY BE PERFORMED.
13. THE DC EHSD SHALL BE NOTIFIED SIXTY DAYS PRIOR TO ANY CHANGE IN USE; USE CHANGES MAY REQUIRE RE– APPROVAL BY THE DC EHSD.
14. ALL REQUIRED EROSION & SEDIMENT CONTROL AND STORMWATER POLLUTION PREVENTION WATER QUALITY & QUANTITY CONTROL STRUCTURES, PERMANENT AND TEMPORARY, ARE SHOWN ON THE PLANS.
15. THE UNDERSIGNED OWNERS OF THE PROPERTY HEREON STATE THAT THEY ARE FAMILIAR WITH THIS MAP, ITS CONTENTS AND ITS LEGENDS AND HEREBY CONSENT TO ALL SAID TERMS AND CONDITIONS AS STATED HEREON

Gary Robinson — SIGNATURE
11/23/2021 — DATE

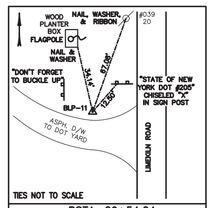
ADDITIONAL NOTES FOR FILL SECTIONS:

1. SEPTIC FILL SPECIFICATION: SAND AND GRAVEL FILL, WITH A STABILIZED PERCOLATION RATE WHICH IS LESS THAN OR EQUIVALENT TO THE PERCOLATION RATE OF THE VIRGIN SOIL, AND NO MORE THAN 15 MINUTES PER INCH SHALL BE USED.
2. A NEW YORK STATE REGISTERED DESIGN PROFESSIONAL SHALL CERTIFY IN WRITING THAT THE FILL MATERIAL IS IN THE PROPER LOCATION, OF THE PROPER QUANTITY AND DIMENSIONS, AND OF PROPER QUALITY. PROPER QUALITY MUST BE DEMONSTRATED BY STABILIZED PERCOLATION TESTS, THE RESULTS OF WHICH SHALL BE SUBMITTED WITH THE ENGINEER'S CERTIFICATION.
3. PRIOR TO THE PLACEMENT OF THE FILL, THE AREA OF THE OWTS SHALL BE CLEARED OF DEBRIS, AND ALL BRUSH, TREES, OR OTHER VEGETATION CUT TO THE LEVEL OF THE VIRGIN GROUND. NO TOPSOIL SHALL BE REMOVED UNLESS SPECIFICALLY INDICATED ON THE PLANS.



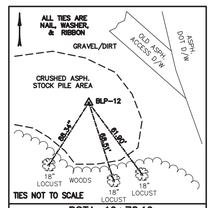
BSTA. 26+33.63
10" DOCK SPIKE SET IN GRASS ±8' WEST OF LIMEKILN ROAD AND ±480' NORTH OF THE ENTRANCE TO THE EAST FISHKILL NYSDOT YARD.

NYSPCS NAD 83 EAST ZONE
N: 982837.65 E: 680370.57



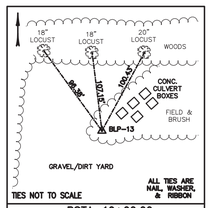
BSTA. 20+54.24
10" DOCK SPIKE SET IN GRASS ±25' WEST OF LIMEKILN ROAD AND ±3.5' NORTH OF THE ASPHALT DRIVEWAY TO THE EAST FISHKILL NYSDOT YARD.

NYSPCS NAD 83 EAST ZONE
N: 982274.69 E: 680233.59



BSTA. 16+78.16
10" DOCK SPIKE SET IN REMNANTS OF A CRUSHED ASPH. STOCKPILE AREA ±100' WEST OF ASPH. D/W FOR THE DOT YARD AND ±190' SOUTH OF S/W CORNER OF WESTERN MOST BUILDING AT THE YARD.

NYSPCS NAD 83 EAST ZONE
N: 982481.32 E: 679919.36



BSTA. 10+00.00
10" DOCK SPIKE SET IN GRAVEL ±100' SOUTH OF THE WOODLINE ALONG I–84 AND ±700' WEST OF THE SOUTHWEST CORNER OF THE WESTERN MOST CORNER OF THE NYSDOT YARD.

NYSPCS NAD 83 EAST ZONE
N: 982694.21 E: 679275.49

VERTICAL DATUM: NAVD88

BM	STA./OFF.	DESCRIPTION	ELEV.
1	25+20.5/ 8.8' LT.	RAILROAD SPIKE IN IN UTILITY POLE #039/18 LOCATED ±15' WEST OF LIMEKILN ROAD PAVEMENT EDGE AND ±475' NORTH OF THE ENTRANCE TO THE NYSDOT YARD.	304.84'
2	21+19.4/ 18.6' RT.	RAILROAD SPIKE IN UTILITY POLE #039/20 LOCATED ±3' WEST OF LIMEKILN ROAD PAVEMENT EDGE AND ±60' NORTH OF THE ENTRANCE TO THE NYSDOT YARD.	287.04'
3	17+15.4/ 49.7' RT.	RAILROAD SPIKE IN AN 18" LOCUST TREE LOCATED ±95' WEST OF THE ASPHALT DRIVEOF THE NYSDOT YARD AND ±251' SOUTH OF THE SOUTHWEST CORNER OF THE WESTERN MOST BUILDING IN THE YARD.	315.48'

EAST FISHKILL DRIVEWAY CENTERLINE ALIGNMENT

POINT TYPE	STATION/ DISTANCE	DIRECTION	NORTHING EASTING
BP	0+00.00		
	24.419	N79°25'47.17"W	
PC	0+24.42		
RADIUS:	252.768	DELTA: 42°12'52.84"	RIGHT
LENGTH:	186.236	DOC(ARC): 22°40'02.28"	
CHORD:	182.052	DIRECTION: N58°19'20.75"W	
TANGENT:	97.572	DIRECTION:	
PT	2+10.65		
	70.498	N37°12'54.33"W	
PC	2+81.15		LEFT
RADIUS:	596.758	DELTA: 09°04'54.55"	
LENGTH:	94.591	DOC(ARC): 09°36'04.32"	
CHORD:	94.492	DIRECTION: N41°45'21.60"W	
TANGENT:	47.395	DIRECTION:	
PT	3+75.74		
	43.914	N46°17'48.88"W	
PC	4+19.66		LEFT
RADIUS:	227.087	DELTA: 23°04'25.46"	
LENGTH:	91.451	DOC(ARC): 23°13'50.52"	
CHORD:	90.834	DIRECTION: N57°50'01.61"W	
TANGENT:	46.354	DIRECTION:	
EP	5+11.11		

NEW YORK STATE OF OPPORTUNITY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:
SHUMAKER Consulting Engineering & Land Surveying, D.P.C.

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 — JAMES M. CUMMINS — 080958 — LICENSED PROFESSIONAL ENGINEER

CONTRACT: CONSTRUCTION

TITLE: PROVIDE SUB-HEADQUARTERS BUILDING

LOCATION: DOT REGION 8, DUTCHESS COUNTY
205 LIME KILN RD.
EAST FISHKILL, NEW YORK

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

Revised Drawing
11/18/2021

MARK	DATE	DESCRIPTION
3	11/18/2021	ADDENDUM #3
1	09/15/2021	REBID

PROJECT NUMBER:	45552-C
DESIGNED BY:	EFN
DRAWN BY:	AWR
FIELD CHECK:	
APPROVED:	JMC

SHEET TITLE: CIVIL NOTES AND BASELINE TIES AND BENCHMARKS

DRAWING NUMBER: **CG-100**

Nov 22,2021 – 3:52pm
E:\2017\17095–East Fishkill NYSDOT Site\Construction\Addendum No. 3\PLANS\17095_CG100_Civil_Notes_and_Baseline_Ties_and_Benchmarks.dwg

36x24 PLOT SHEET