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CONSTRUCTION MANAGEMENT

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November 18, 2025 File No. 01.0174955.30

Commonwealth Fusion Systems 148 Sydney Street Cambridge, Massachusetts 02139

Attention: Mr. Rich Holcomb, Head of Facilities and Construction, CFS

Re: Geotechnical Engineering Report

Proposed CFS-4 Development

11 Hospital Road

Devens, Massachusetts 01434

Dear Mr. Holcomb:

In accordance with our agreement executed on July 23, 2025, GZA GeoEnvironmental, Inc. (GZA) is pleased to submit to Commonwealth Fusion Systems (CFS, Client) this report summarizing the results of our geotechnical engineering evaluation for the proposed CFS-4 Development located within the CFS campus at 111 Hospital Road in Devens, Massachusetts (Site). The objectives of GZA's scope of work were to evaluate subsurface conditions and to develop geotechnical design and construction recommendations for the proposed development.

This report is subject to the Limitations set forth in **Appendix A** and the Terms and Conditions of our agreement.

BACKGROUND

PROJECT UNDERSTANDING

Our understanding of the project is based on correspondence with you and the project design team including Vanasse Hangen Brustlin, Inc. (VHB, project civil engineer), Jacobs (project architect) and Simpson Gumpretz & Heger (SGH, project structural engineer), Bond Brothers, Inc. (project construction manager) and the following:

- GZA's geotechnical design and construction phase services from 2020 through 2025
 related to certain CFS-2 development features, including pavement, retaining wall, an
 existing subsurface stormwater management system proximate to the south side of the
 CFS-4 development, and equipment pad areas;
- GZA's 2024 & 2025 geotechnical subsurface evaluation within portions of the CFS-3 development area adjacent to the east of the CFS-4 development, as summarized in GZA's geotechnical report dated xxxxx;
- An AutoCAD drawing depicting existing topography at the Site prepared by VHB with file name "Composite Existing Surface - EXIST and Stockpiles," transmitted to GZA on August 13, 2025:
- A 17-page draft set of civil plans for the CFS-4 development permit application prepared by VHB, transmitted to GZA on September 17, 2025; and
- Readily available on-line information, including aerial photographs and geologic maps.





Existing Site Conditions

For the purpose of this report, based on the existing site topography, setting, and proposed development features, the CFS-4 development Site is divided into two main areas: the Northern Area and Southern Area. Both areas are situated immediately west of the proposed CFS-3 development area. Summaries of existing site conditions for each area are provided below.

Northern Area (Includes the northern portion of the CFS-4 Building, Northern Equipment Pad, and Annex Building & Equipment Pad)

The Northern Area of the Site generally consists of predominantly undeveloped wooded land, with a former roadway area (Beech Street) at the northern end that was previously filled with about 2 to 3 feet of topsoil during the CFS-2 development project. The Northern Area is bordered: to the south by the Southern Area (described below), to the north by the former Beech Street and wooded land with an existing overhead 69kV electric transmission right-of-way (ROW) beyond, to the east by wooded and brush-covered land, and to the west by mostly wooded land with the end of the former Beech Street cul-de-sac area and a topsoil stockpile beyond. A granular soil stockpile is located at the southeastern portion of the Area.

Based on the existing topography plans, existing grades generally slope gradually down to the north and east, except for the aforementioned filled-in former Beech Street and the existing granular soil stockpile areas. Grades range from about elevation¹ (El.) 268 to 279, with the exception of the existing stockpile which rises to about El. 289.

Southern Area (Includes the southern portion of the CFS-4 Building, & Southern Equipment Pad, and Site Retaining Wall)

The Southern Area of the Site generally consists of wooded areas across the north and west, an existing soil stockpile in the east, and grassed areas at the central, eastern, and southern portions. Much of the Southern Area was previously called the "Ravine", which was filled in with up to about 26 feet of mostly topsoil during the CFS-2 development. The Southern Area is bordered to the west by an existing relatively steep wooded slope resource area (SRA, as defined in Massachusetts State Regulation No. 974 CMR 3.06), an existing soil stockpile to the east (with a gravel-paved contractor parking lot beyond), wooded/brush-covered land to the north, and an existing grass-covered slope to the south with an existing precast concrete subsurface stormwater infiltration structure (bottom of system at approximately El. 271) proximate to the south end of the Area.

Based on the existing topography plans, existing grades generally slope down gradually toward the east and more steeply to the west. Grades range from about El. 259 to 278, with the exception of the existing stockpile, which rises up to about El. 291.

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¹ Elevations in this report are referenced to the North American Vertical Datum of 1988 (NAVD88) and are in feet.



Proposed Development

CFS-4 Building & Equipment Pads (Northern and Southern Areas)

We understand the proposed structures that will occupy the majority of the eastern two-thirds of the Site include a large (approximately 335 feet by 135 feet in plan area), two-level concrete pad which will support multiple pieces of industrial manufacturing equipment including:

- Water Processing-Related Equipment (Southern End of Pad): non-enclosed equipment, approximately 135 feet by 110 feet in plan area, with racks extending up to about 75 feet above the pad grade of approximately El. 269;
- Beryllium Containment Area (Central Portion of Pad): a building enclosure, approximately 125 feet by 90 feet in plan area, extending 70 feet above the pad with lower-level finished floor and first level finished floor elevations of 269 and 281, respectively, and;
- Burner Area (Northern End of Pad): non-enclosed equipment, approximately 135 feet by 135 feet in plan area, with a stack extending up to about 85 feet above the pad grade of approximately El. 281.

Additional site features include pavement in both the Northern and Southern Areas; as well as a subsurface stormwater infiltration structure in the Northern Area. Proposed finished grades surrounding the proposed building and pad perimeter appear to generally range from about El. 260 to El. 283. Based on our understanding of existing grades, it appears fills up to about 4 feet through most of the proposed building and pad area, as well as the proposed pavement areas, will be required to reach proposed finished grades.

Annex Building & Equipment Pad Areas (Northern Area)

We understand that the proposed Annex Building and associated equipment pad area consists of an approximately 230-by 30-ft total footprint area with the Annex building at the center, occupying an approximate 150-foot by 30-foot footprint area. The remaining areas to the north and south of the Annex will consist of equipment pads. The finished floor elevation of the building and equipment pads is conceptualized as El. 273.5.

Site Retaining Wall Area (Southern Area)

The site retaining wall in the Southern Area is conceptualized as an up to 16-foot-tall prefabricated modular block retaining wall approximately 5 feet east of the existing SRA, supporting fill soil behind the wall with a slope of up to 3-horizontal to 1-vertical (3H:1V) and having a bottom of wall at approximately El. 259. The wall type and vendor has not yet been selected.

A site locus plan is provided as **Figure 1**. The existing Site with the proposed development parcel and the aforementioned proposed development features are shown on **Figure 2**.

SUBSURFACE EXPLORATIONS

PREVIOUS EXPLORATIONS BY OTHERS

Multiple previous explorations were performed throughout the proposed property by others. A summary of the explorations performed within the proposed development area is discussed below.





2020 Test Borings

Twelve test borings (B-42, B-53, B-67 through B-73, and B-134 through B-136) performed between August 2020 and November 2020 by TRC Companies, Inc. (TRC) of Windsor, Connecticut, were considered relevant to the proposed CFS-4 development area. The borings were performed using hollow stem auger or cased drilling techniques to approximate depths of 23 to 55 feet below existing ground surface (bgs). Split-spoon samples were obtained and Standard Penetration Tests (SPTs) were performed continuously to about 10 feet bgs and at approximately 5-foot-intervals thereafter.

A monitoring well was installed at three borings, B-53, B-68 and B-73, during the drilling program. The borings were logged by TRC and/or Haley & Aldrich (H&A, geotechnical engineer for the CFS-2-related Buildings). Refer to the boring logs by TRC and H&A, a summary table by H&A, and monitoring well readings included in **Appendix B** for more information. The boring locations are approximately shown on **Figure 2**.

2020 Test Pits

Five test pits (TP-14, TP-16, TP-18, TP-120 and TP-121) performed on behalf of TRC between August 2020 and September 2020 by W.G McClellan and Sons of Fallentimber, Pennsylvania, were considered relevant to the proposed CFS-4 development area. The test pits were excavated to a depth of 12 feet bgs, except TP-121 which was terminated at 11.8 feet bgs due to the excavation sidewalls caving in. The test pits were observed and logged by TRC. Refer to the test pit logs included in **Appendix B** for more information. The test pit locations are approximately shown on **Figure 2**.

RECENT EXPLORATIONS BY GZA

2024 Test Borings

Three borings (GZ-5, GZ-9 and GZ-15), performed between October 28 and November 6, 2024 by New England Boring Contractors, Inc. (NEBC) of Derry, New Hampshire, were considered relevant to the CFS-4 development area. The borings were performed with an ATV drill rig using hollow stem auger and/or cased drilling techniques. The borings were advanced to depths ranging from 21 to 64 feet bgs, corresponding to bottom of boring elevations ranging from El. 215 to El. 243.

Split-spoon samples were obtained and SPTs were generally performed continuously between 4 and 10 feet bgs and at approximately 5-foot-intervals thereafter. SPTs were performed in general accordance with ASTM D-1586 (using a 2-inch outside-diameter sampler driven 24 inches by blows from a 140-pound hammer falling freely for 30-inches). The number of blows required to drive the sampler each 6-inch increment was recorded and the Standard Penetration Resistance (SPT N-value) was recorded as the sum of the blows over the middle 12 inches of penetration. Upon completion, test boring GZ-9 was backfilled with drill cuttings to existing grade. A monitoring well was installed in borings GZ-5 and GZ-15 during the drilling program.

A GZA representative observed and coordinated the test borings on a full-time basis, obtained soil samples from the test borings for laboratory testing, visually classified the soil samples using the Modified Burmister Soil Classification System, and prepared the boring logs. In addition, GZA screened soil samples for volatile organic compounds (VOCs) using a photoionization detector; results are noted on the logs provided in **Appendix B**. The exploration locations are approximately shown on **Figure 2**.





2025 Test Pits

GZA engaged Cryan Landscaping Contractors, Inc. of Attleboro, Massachusetts to perform eighteen test pits (TP-306 through TP-323) within and proximate to the proposed CFS-4 development area between August 4 and 7, 2025 using a tracked excavator. The test pits were excavated to depths between 3 and 14 feet bgs (depth to penetrate the topsoil layer or the practical extent of the excavation due to either excavation sidewall collapse or the extent of the excavator reach). The test pits were backfilled with the excavated soils in approximately 12-inch-thick lifts, each compacted with the excavator bucket.

2025 Test Borings

GZA engaged NEBC of Derry, New Hampshire to perform twenty-two test borings (GZ-109 through GZ-111, GZ-113 through GZ-116, GZ-118 through GZ-122, GZ-124 through GZ-133) proximate to the proposed development between August 18, 2025 and September 5, 2025. The borings were advanced to depths ranging from approximately 11 to 54 feet bgs, corresponding to bottom of boring elevations ranging from approximately El. 216 to El. 265.5.

Split-spoon samples were obtained and SPTs were performed continuously from ground surface to depths ranging between 4 and 29 feet bgs (through the fill, topsoil fill, or buried topsoil strata) and at approximately 5-foot-intervals thereafter. SPTs were performed in general accordance with ASTM D-1586 (using a 2-inch outside-diameter sampler driven 24 inches by blows from a 140-pound hammer falling freely for 30-inches). The number of blows required to drive the sampler each 6-inch increment was recorded and the Standard Penetration Resistance (SPT N-value) was recorded as the sum of the blows over the middle 12 inches of penetration. Upon completion, the test borings were backfilled with drill cuttings to existing grade.

A GZA representative observed and coordinated the 2025 test borings and test pits on a full-time basis, obtained soil samples from the test borings and test pits for laboratory testing, visually classified the soil samples using the Modified Burmister Soil Classification System, and prepared the boring and test pit logs. In addition, GZA screened soil samples in the test borings and test pits for volatile organic compounds (VOCs) using a photoionization detector; results are noted on the logs provided in **Appendix B**. The exploration locations are approximately shown on **Figure 2**.

GEOTECHNICAL LABORATORY ANALYSES

2020 Laboratory Results

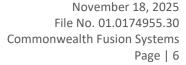
Laboratory grain size analyses (gradation distribution) were performed on eleven soil samples obtained from the 2020 test borings considered relevant to this evaluation. The relevant 2020 laboratory results are included in **Appendix C**.

2024 Laboratory Results

Laboratory grain size analysis (gradation distribution) was performed on one soil sample obtained from one 2024 test boring considered relevant to this evaluation. The relevant 2024 laboratory results are included in **Appendix C**.

2025 Laboratory Results

Select soil samples obtained from the 2025 borings and test pits were submitted to GZA's soils laboratory subcontractor, Thielsch Engineering of Cranston, Rhode Island. Four laboratory grain size analyses (gradation and/or hydrometer





distribution) and three organic content determinations were performed. Laboratory results for the 2025 soil samples are included in **Appendix C**.

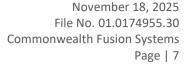
SUBSURFACE CONDITIONS

SOIL

Based on subsurface information from the relevant previous and recent borings and test pits, subsurface conditions within the proposed CFS-4 development area generally consist of topsoil, occasional subsoil, and/or fill overlying, in descending order, natural granular soils, glacial till, and bedrock. Due to the conditions observed in the explorations, separate subsurface condition summaries are provided for the two aforementioned areas: 1) Northern Area, and 2) Southern Area. A general description of each stratum for each area is provided below. Refer to the logs in **Appendix B** for specific conditions encountered at each exploration location and to the attached **Table 1** for a summary of the subsurface conditions encountered in the explorations. Subsurface conditions are expected to vary across the site within each Area.

Northern Area

- **Topsoil** Surficial layer with organic matter encountered in 18 of 19 explorations with thicknesses ranging from about 0.2 to 2.5 feet.
- **Subsoil** Relatively loose silty sand layer with roots encountered below the topsoil layer in one of the explorations (boring GZ-109) near the northeast end of the Site with a thickness of about 1.5-feet that extended to about 2 feet bgs.
- Granular Fill Encountered in 8 of 19 explorations below the topsoil to a depth of about 2 to 10.5 feet bgs (corresponding to approximately El. 259.5 to 267) with thicknesses ranging from 1.5 to 8 feet. The fill consisted of light brown to brown or occasionally brown to gray, fine to coarse or fine to medium sand with up to about 50 percent gravel, up to about 35 (but generally less than 20) percent silt, and trace amounts of roots/leaves. Occasionally the fill consisted of brown/light brown gravel with up to 50 percent fine to coarse sand, up to 35 percent silt, and trace amounts of roots. Six to seven inches of buried asphalt pavement was noted at the two borings within the former Beech Street area (GZ-110/110A and GZ-122) at depths of about 2.3 and 2.4 feet bgs in the fill stratum. SPT N-values ranged from 6 to 49 blows per foot (bpf), indicating loose to dense granular soil. In two test pits (TP-306 and TP-308) it was difficult to distinguish whether the material between about 1 and 5 feet bgs was fill or natural. Occasional boulders and occasional to more frequent cobbles were noted within some of the test pits within the fill.
- Natural Granular Soils Natural granular soils generally consisting of predominantly sand/gravel or sand with up to 35 percent silt including occasional silty sand and relatively thin sandy silt/clay seams and/or up to about 3.5-foot-thick layers between the granular soils at depths deeper than 13 feet bgs were encountered at each exploration below the topsoil or fill strata at a depth of about 0.5 to 10.5 feet bgs (corresponding to approximately El. 257 to 281.5). The natural soils were generally relatively thick and were only penetrated in three explorations indicating thicknesses of 33.5, 45, and 47.5 feet (corresponding to approximately El. 218.5 to 229). SPT N-values in the natural granular soils ranged from about 3 to 78 bpf, corresponding to very loose to very dense granular soils with one SPT N-value of 7 obtained in a clayey silt sublayer indicating medium stiff cohesive soil. The loose blow counts in the natural soils were encountered within the top 2 feet of the stratum





except for in boring GZ-110 where an initial loose blow count (SPT N-value of 9 bpf) was obtained during drilling without a positive head of drilling fluid from 13 to 15 feet bgs and a re-attempt at an offset boring (GZ-110A) at the same depth with a positive head of drilling fluid yielded a medium dense blow count (SPT N-value of 14 bpf). Occasional boulders and occasional to more frequent cobbles were noted within some of the natural granular soils.

• Glacial Till — Glacial till was encountered in three borings at depths of about 43.5, 47.5, and 48.5 feet bgs (corresponding to approximately El. 218.5 to 229). The stratum generally consisted of green or olive to brown sand with up to 50 percent gravel and up to 20 percent silt or clayey silt. Aside from one blow count believed to be unrepresentative because it was obtained below the groundwater level without maintaining a positive head of drilling fluid inside the augers, the SPT N-values ranged from 21 to 37 bpf, indicating a medium dense to dense granular soil.

Southern Area

- **Topsoil** Topsoil was encountered in 6 of the 14 explorations performed prior to the CFS-2 development and in a total of six explorations performed after the CFS-2 development in locations east, west, and south of the Ravine. The topsoil in this area was encountered from ground surface to depths of about 0.2 to 2 feet bgs (corresponding to approximately El. 249.5 to 283).
- **Topsoil Fill** In addition to the naturally deposited surficial topsoil and occasional subsoil encountered in several explorations outside of the Ravine Area, Topsoil Fill placed during the CFS-2 development was encountered in 21 recent explorations in the Ravine Area, to depths of about 3 to 26 feet bgs (corresponding to approximately El. 248 to 270).
- Subsoil A relatively loose silty sand layer with roots was encountered either at ground surface or below the
 topsoil layer in two of the pre-CFS-2 development explorations (boring B-72 and test pit TP-120) with thicknesses
 of about 1.5- and 2-feet that extended to about 2 to 2.5 feet bgs. The subsoil in the Southern Area is generally
 believed to have been removed during the CFS-2 development.
- Granular Fill Granular fill was encountered in 15 of 41 explorations either at ground surface or below the topsoil and extended to a depth of about 0.7 to 24.5 feet bgs (corresponding to approximately El. 247.5 to 279) with stratum thicknesses ranging from about 0.7 to 16 feet. The fill consisted of light brown to brown or occasionally brown to gray, fine to coarse or fine sand with up to about 50 percent gravel, up to about 35 (but generally less than 20) percent silt, and trace amounts of roots. Occasionally the fill consisted of brown/light brown/gray gravel with up to 50 percent fine to coarse sand, and up to 20 percent silt. At one 2020 boring (B-69), near the bottom of the Ravine area prior to the CFS-2 earthwork, the top 2 feet of fill appeared to consist of sandy silt. Aside from weight-of-hammer (WOH, using a 140-pound hammer) advancement at 2020 boring B-42, which was noted to have been performed in known disturbed soil from a pre-excavation trench used to clear for unexploded ordnances and/or a utility, SPT N-values ranged from 2 bpf to practical split spoon refusal (50 blows over less than 6 inches), indicating very loose to very dense granular soil. Occasional concrete was noted in the fill layer. Occasional to frequent cobbles were noted in the fill layer.
- **Buried Topsoil** Topsoil, buried below an overlying fill layer, was encountered at one exploration (boring GZ-129) from about 10.5 to 16 feet bgs (corresponding to approximately El. 265 to 270.5).



- Natural Granular Soils Predominantly sand/gravel, sand, or silty sand with up to 35 percent silt and with an occasional relatively thin sandy silt seam and/or layer at deeper depths was encountered at each exploration either at ground surface or at locations that penetrated the topsoil, fill, subsoil, or buried topsoil layers (33 of 41 explorations) at a depth range of about 0 to 24.5 feet bgs (corresponding to approximately El. 247.5 to 283). The natural soils were generally relatively thick and were penetrated in seven explorations, with thicknesses ranging from about 12.5 to 45.5 feet. SPT N-values in the natural granular soils ranged from about 8 to greater than 100 bpf, corresponding to loose to very dense granular soils. We note that the loose blow counts in the natural soils were encountered within the top 2 to 5 feet of the stratum. Occasional boulders and occasional to frequent cobbles were noted within some of the natural granular soils.
- Glacial Till Glacial till was encountered in seven explorations at a depth range of about 13.5 to 47.5 feet bgs (corresponding to approximately El. 229 to 242). The glacial till stratum was reportedly penetrated in two explorations performed on behalf of TRC, with thicknesses of about 10 and 15 feet. The stratum generally consisted of green or olive to brown to gray fine to medium or fine to coarse sand with up to 50 percent silt and up to 35 percent gravel. SPT N-values ranged from 22 bpf to practical split spoon refusal (50 blows over less than 6 inches), indicating medium dense to very dense granular soil.
- Bedrock No bedrock coring was performed in the relevant subsurface explorations. Probable bedrock was noted in two of the explorations (borings B-53 and B-135)based on drilling resistance and/or cuttings during 1.5 to 2 feet of drilling advancement at depths of 44.5 and 53.5 feet (corresponding to approximately El. 216.5 and 231). At other portions of the CFS campus in areas where bedrock was cored, the bedrock typically consists of Phyllite.

GROUNDWATER

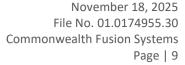
Groundwater level measurements and wet sample recoveries where obtained during the course of drilling indicated groundwater at a depth range of about 36 to 47 feet bgs in the Northern Area, corresponding to approximate El. range 230 to 233 feet; and at a depth range of about 18 to 42 feet bgs in the Southern Area, corresponding to approximate El. range 229 to 248.5. Groundwater was not encountered in the test pits.

Note that the groundwater level observed in the borings likely do not represent stabilized groundwater levels. Fluctuations in groundwater levels may occur due to variations in precipitation, season, site features and other factors different from those existing at the time of the explorations and water level measurements.

GEOTECHNICAL IMPLICATIONS OF SUBSURFACE CONDITIONS

The primary geotechnical issues for design and construction of the proposed development are:

• Presence of unsuitable materials, fill and loose soils — Due to their compressible and non-homogenous nature, the existing topsoil, topsoil fill, subsoil, buried topsoil, and fill (including debris/concrete foundations from previously demolished barracks buildings, if encountered) are considered unsuitable for support of building foundations, building slabs, equipment pads, and retaining wall foundations. In some locations within the proposed building areas, loose blow counts were also noted within the top portion of the natural granular soils. Due to the variability in gradation and relative density, the existing fill is difficult to distinguish from the natural granular soils in some areas at the Site.





Unless structural loads are transferred to more suitable natural bearing strata below the unsuitable materials, the unsuitable materials will need to be excavated and replaced with compacted structural fill prior to construction of shallow foundations and slabs on grade. Anticipated depths of over excavation (removal of unsuitable soils) include:

- The southern portion of the CFS-4 Building and southern CFS-4 equipment pad area: approximately 0 to 31.5 feet of over excavation anticipated below proposed exterior footings (to approximately El. 247.5 to 277), assuming bottom of footings will be 4 feet below proposed finished grade (El. 281 feet) for frost protection.
- o <u>Site retaining wall</u>: approximately 0 to 13.5 feet of over excavation anticipated below the lowest apparent finish grade in front of the wall base (assumed to be El. 259).
- The northern portion of CFS-4 Building and northern CFS-4 equipment pad areas: approximately 0 to 7.5 feet of over excavation anticipated below proposed exterior footings (to approximately El. 259.5 to 265), assuming bottom of footings will be 4 feet below finish grade (El. 269) for frost protection.
- Annex Building and adjacent equipment pad areas: approximately 0 to 4.5 feet of over excavation anticipated below proposed exterior footings (to approximately El. 265 to 269.5), assuming bottom of footings will be 4 feet below finish grade (El. 273.5) for frost protection.
- <u>Limitations on Reuse of On-site Soils</u> Some of the proposed excavated soils, particularly portions of the fill and upper portions of the natural granular soils have a relatively high silt content and may be difficult to reuse as structural fill, especially in wet/freezing conditions.
- <u>Boulders and Cobbles</u> Some of the subsurface explorations indicate the presence of cobbles and occasional boulders in the fill and/or natural granular soils strata. Boulders and cobbles should be accounted for when estimating excavation effort and in site cut/fill site balance considerations, as they may not be able to be reused as backfill within the building areas or utility trenches.
- <u>Stability of Temporary Slopes during Earthwork</u> The extent and depth of topsoil fill and buried topsoil (up to 26 feet deep) may impact the stability of temporary earthwork slopes during construction, particularly within the southern portion of the Site.

GEOTECHNICAL RECOMMENDATIONS

The geotechnical design and construction recommendations presented below are based on GZA's understanding of the currently proposed CFS-4 development area as described herein, and the 2021 International Building Code (IBC) and the Massachusetts Amendments to the 2021 IBC, 10th Edition (MSBC). The recommendations presented herein are subject to the limitations in **Appendix A**.

DESIGN

1. Foundations and Slabs

The existing topsoil, subsoil, topsoil fill, buried topsoil, and fill, as well as debris from previous buildings and abandoned utilities are considered unsuitable for support of the proposed building (CFS-4 & Annex buildings), equipment pads (south and north of the CFS-4 and Annex buildings), and site retaining wall foundations because of their potential for compression, heterogeneous nature, and variable density.

After removal of the unsuitable materials, the proposed structures may be supported on conventional shallow foundations and slabs-on-grade, bearing on densified natural granular soil subgrades, or upon compacted Structural





Fill (that is, Sand-Gravel Fill, Granular Fill, or Crushed Stone) placed in controlled lifts over natural densified granular soil subgrades. Refer to **Table 2** for recommended Structural Fill gradations.

Excavations for footings should include removal of unsuitable materials (as described above) down to the existing natural undisturbed granular soil stratum followed by proof compaction of the subgrade and replacement with compacted structural fill up to the bottom of footings or base slab base course. Foundation overexcavation may be required to be taken several feet below bottom of footing grade, depending on the proximity to observed loose zones and the extent of topsoil fill, buried topsoil, and/or fill as noted in the explorations. Refer to the Building and Equipment Pad Subgrade Preparation section of this report (see Item 1 under Construction Recommendations) for additional provisions.

Provided that foundation subgrades are prepared as described herein, the recommended maximum net allowable bearing pressure in tons per square foot (tsf) for the shallow footings bearing on the natural granular soils stratum or compacted Structural Fill placed over the densified natural soils layer is 3 tons per square foot (tsf).

Footings should be designed in accordance with the MSBC. Exterior footings and interior footings in unheated areas should bear at least 4 feet below the final exterior grades for frost protection. Proposed equipment pads should either bear 4 feet below the final exterior grades or alternatively on either non-frost susceptible soil (e.g. Sand-Gravel fill, Structural Fill containing less than 8-percent passing the No. 200 sieve and/or Crushed Stone wrapped in non-woven filter fabric) extending to 4 feet below final exterior grades or may incorporate the use of insultation (such as rigid insultation) to provide the equivalent frost protection while reducing the amount of frost susceptible soil below a pad area. GZA can provide more specific recommendations regarding frost protection design using rigid insulation upon request. Interior footings in heated areas should bear at least 18 inches below top of slab. In accordance with MSBC Section 1806.2, for footings less than three feet in least lateral dimension (width), the recommended allowable bearing pressure shall be 1/3 of the value indicated above, times the footing width in feet.

Slab-on-grade construction is recommended for the CFS-4 and Annex buildings on a base course consisting of a minimum 8-inch-thick layer of Sand-Gravel Fill or crushed stone wrapped in non-woven filter fabric (refer to **Table 2** for recommended gradations).

Although design structural loads are not available at this stage of design, we understand that the project structural engineer will increase the slab thickness and/or the steel reinforcing as required to adequately resist live loads and mitigate potential slab cracking due to the relatively high anticipated live loads in certain areas of the building associated with the proposed magnet manufacturing equipment and processes.

We recommend a vertical modulus of subgrade reaction (k_s) of 100 pounds per cubic inch (pci) for design of the slab-on-grade supported as recommended herein. This recommended value is based on empirical correlations and our experience on other projects with similar subsurface conditions. This modulus of subgrade reaction value is for loading applied over a 1-foot by 1-foot square area and must be adjusted for the actual size and geometry of the loaded area prior to use in analysis.

2. Foundation Settlement

Post-construction settlement for the proposed building foundations is anticipated to be less than 1 inch and differential settlement (between adjacent new columns) less than about ½ inch, provided that subgrades are prepared and foundations are designed and constructed as recommended herein.



3. Geotechnical Seismic Design Parameters

Based on the criteria of MSBC Section 1806.4 and Figure 1806.4, a qualitative liquefaction assessment was performed using SPT N-values, soil type, and estimated fines content from soil samples collected from the borings. The soils at the Site are not considered susceptible to liquefaction based on the criteria set forth in the MSBC.

The SPT N-values from the boring were used to evaluate seismic Site Class in accordance with Section 1613.5.5 of the MSBC, and the IBC. Based on this evaluation, we recommend <u>Site Class D</u> be used for seismic design. In accordance with Table 1604.11 of the MSBC, the mapped seismic design factors for the town of Shirley (which is the nearest municipality to the proposed WHX improvements that the village of Devens is partially encompassed by) are:

- S_s = 0.307, and
- $S_1 = 0.071$

Seismic loads on foundation walls should be calculated based on MSBC Section 1613.3.3(1) and (2), using the following parameters:

- Total Soil Unit Weight: 130 pcf
- Site Coefficient, F_a = 1.6
- Site Coefficient, F_v = 2.4

Based on the above, and in accordance with MSBC/IBC Section 1613.3.4, the recommended seismic design spectral response acceleration parameters are:

- $S_{DS} = 0.327$, and
- $S_{D1} = 0.114$

4. Lateral Earth Pressures

Retaining walls, buried foundation walls, and other permanent retaining structures subjected to unbalanced earth-loading conditions should be designed to resist lateral earth pressures. We recommend the following design criteria:

a) For the purpose of evaluating lateral earth pressures for retaining walls or other below-grade walls with unbalanced earth loading, we recommend the following equivalent weights:

flexible (cantilever) walls
 45 pounds/cubic foot (pcf)

rigid walls
 65 pcf

These values are for horizontal backfill and assume that the walls are backfilled with free draining soils such as Granular Fill (provided it has less than 8 percent passing sieve No. 200) or Sand Gravel Fill within at least 3 feet of the walls and that adequate drainage is provided (via weepholes and/or continuous drains behind the wall base that discharge via gravity at the wall ends) such that no water pressure acts at the back of the wall. Where the calculated earth pressure behind the wall is less than 250 pounds per square foot (psf), it should be increased to 250 psf to account for stresses created by compaction within 5 feet of the wall. This pressure does not account for surcharge loads from large equipment such as cranes and concrete trucks. Walls should also be designed for appropriate surcharge and seismic loads per Section 1807.2 of the MSBC.



- b) The recommended coefficient of friction to resist sliding between mass concrete/formed concrete and natural soils or compacted Structural Fill is 0.4.
- c) The minimum factor of safety for sliding and overturning under static loads should be 1.5 in accordance with MSBC Section 1807.2.3. Passive pressure at the toe of the walls should not be included as a resisting force when analyzing for overturning and sliding.

Once the wall type has been selected for the retaining wall in the Southern Area, the recommendations presented above should be re-evaluated. In addition, most prefabricated modular walls are proprietary and should be designed by the selected vendor. Typically, the vendor is provided with the allowable net bearing capacity and a check on global stability by the engineer, both of which are provided herein in Design Item 1 above and Design Item 5 below. GZA should be retained to prepare performance specifications for bidding the wall type and to review construction (or design) submittals for the selected wall type and vendor.

On-site finished slopes should be no steeper than 2.5 horizontal to 1 vertical. If steeper slopes are required, GZA can provide recommended slope treatments and/or slope stabilizing measures upon request. Stormwater runoff should be controlled so as not to undermine or erode the slope; typically, stormwater control on slopes is provided with swales at the top and bottom of the slope.

5. Global Slope Stability (Western SRA)

GZA performed two-dimensional global stability analyses using SLOPE/W computer software to evaluate conditions representative of the proposed slope proximate to the existing SRA at the southwest portion of the Site, which coincides with the proposed site retaining wall. The results of our analysis indicate a factor of safety (FS) for global stability of greater than 1.5, which is the minimum FS typically considered acceptable for permanent slopes of this type under static conditions. We note that our analyses discounted the presence of surficial concrete slabs at the top end of the computed failure surface and/or slope vegetation that would otherwise improve near-surface slope stability, which is conservative. Refer to **Appendix D** for the evaluation results.

6. Pavement

Refer to the construction recommendations item No. 2 for pavement-related recommendations regarding unsuitable soil removal. Existing inorganic fill may remain in place below proposed paved areas as long as the fill is densified in place as described in Construction Recommendation Item 2 below. The following pavement cross-sections are recommended for proposed asphalt paved areas (not including loading docks):

| | Minim | um Thicknesses |
|-------------------------|-------------|----------------------------|
| | Car Parking | Truck Loading ¹ |
| Finish Course | 1½ inches | 1½ inches |
| Binder Course | 2 inches | 2½ inches |
| Sand-Gravel Base Course | 10 inches | 12 inches |

Note: 1) Truck loading does not include additional loads from overweight trucks for transport of constructed magnets by truck via the haul road from the CFS-3 building.





7. Permanent Groundwater Control

Based on groundwater level measurements from observation wells and observations of groundwater levels noted on the boring logs, groundwater is expected to be approximately 9.5 to 47.5 feet below the proposed bottom of foundation elevations, based on foundations proposed to bear at approximately El. 258 to 277. These groundwater levels are sufficiently low enough to eliminate the need for perimeter drains or other permanent groundwater controls for the buildings and slabs. However, in accordance with MSBC 1805.2, provisions should be made to dampproof below grade portions of foundations and to slope exterior grades away from the buildings and equipment pads to the extent practical to divert stormwater away.

CONSTRUCTION

1. Building, Equipment Pad, & Retaining Wall Subgrade Preparation

Remove all existing topsoil, subsoil, existing fill (including previously disturbed natural granular soils), buried topsoil/subsoil, topsoil fill, foundations, demolition debris, and abandoned utilities (unsuitable bearing materials) within the zone of influence below proposed building, pad, and retaining wall areas down to undisturbed natural granular soils. The zone of influence is defined by a 1 horizontal to 1 vertical (1H:1V) line sloping downward and outward from 1 foot laterally outside the bottom exterior edge of the footings, pads, and wall base blocks and intersecting the undisturbed natural granular soil subgrade.

Removal of unsuitable soils below the buildings, equipment pads, and retaining walls should include native soils that have been disturbed by previous excavations by others to remove previous building foundations. Additionally, for proposed equipment pad areas which will bear shallower than 4 feet from proposed finished grades following the removal of unsuitable bearing soils, if in the opinion of the geotechnical engineer the natural granular soils contain greater than 8 percent fines within 4 feet of proposed finished grades, excavation should continue to the extent required to install non-frost susceptible materials to the equivalent frost protection level as 4 feet of footing embedment below proposed final grades. Non-frost susceptible materials should consist of Sand-Gravel fill, Structural Fill containing less than 8-percent passing the No. 200 sieve, and/or Crushed Stone wrapped in non-woven filter fabric.

Where practical, final excavation should be undertaken using a smooth-edged bucket to limit disturbance to the natural subgrades. Proof compact the exposed natural soil subgrade prior to placement of Structural Fill with at least ten passes of a minimum 10,000 pound (minimum static weight) vibratory roller.

Weak and unstable areas that are observed during proof compaction should be over-excavated and replaced with compacted Structural Fill (Granular Fill, Sand-Gravel, or Crushed Stone wrapped in filter fabric).

Some of the soils at the bottom of the excavation and at the intermittent subgrade levels, particularly those with higher silt content, will be susceptible to disturbance during excavation/earthwork performed in wet conditions. Excavations and earthwork for subgrade preparation should be sequenced and conducted in such a way to minimize disturbance of subgrades. Equipment (other than compaction equipment) should not operate directly on the final footing subgrade to limit disturbance. Where footing subgrades are silty and/or easily disturbed when wet, they may require a protective working mat, which should consist of 6-inches of compacted Sand Gravel fill or 4-inches of compacted Crushed Stone. Recommended gradations and compaction equipment/methodology for Crushed Stone and Sand Gravel are provided in **Tables 2** and **3**, respectively.

Darcant of



Footing, slab, pad, and retaining wall subgrades should be protected from frost at all times during construction. We recommend that a qualified geotechnical engineer provide full-time observation of earthwork below the footing/slab/base block level to evaluate the subgrade for suitability for building and retaining wall support, and to monitor proof compaction of the exposed natural soil subgrade as well as subsequent fill placement and compaction.

2. Pavement Subgrade Preparation

Remove topsoil, subsoil, buried topsoil, topsoil fill, and other unsuitable material containing organics to at least 2 ½ feet below proposed final pavement grade for standard-duty pavement areas. Remove existing inorganic fill to the minimum depth required to accommodate Finish, Binder, and Sand-Gravel base course. Proof-roll the existing subgrade with a minimum of six passes of a vibratory drum roller (with a minimum static drum weight of 10,000 pounds). Any weak, unstable or soft spots identified during proof-rolling should be excavated and replaced with compacted Structural Fill.

3. Placement and Compaction of Structural Fill Materials

Recommended gradations for off-site fill materials are provided in **Table 2**. Structural Fill should consist of off-site Granular Fill, Sand-Gravel, or Crushed Stone. Off-site fill for the Southern Area retaining wall should be in accordance with the recommendations of the selected wall vendor.

Use of %-inch Crushed Stone, in lieu of soil fill, at the bottom of excavations can aid in dewatering operations, where required. Crushed Stone greater than 4 inches in thickness should be wrapped in non-woven filter fabric (Mirafi 140N or equivalent).

Place Structural Fill in lifts and compact in accordance with the guidelines presented in **Table 3**, while meeting the recommended minimum degrees of compaction presented below. We recommend that a qualified geotechnical engineer observe placement and compaction of fill in the influence zone of building foundations and slabs to assess compliance with design bearing assumptions.

The recommended minimum degree of compaction of soils, based on percentage of maximum dry density as defined by ASTM D-1557, is specified below for different areas.

| | Percent of |
|--|--------------------|
| | Maximum |
| <u>Fill Area</u> | Dry Density |
| Within Building Areas and Below Foundations and Slabs | 95 |
| Behind Retaining Walls | 95 |
| Utility Trench Backfill | 95 |
| Pavement Base Course and within 2 feet of bottom of Pavement | 95 |
| More than 2 feet below bottom of Pavement | 92 |
| (and outside of Building influence zone) | |
| | |

Crushed Stone should be placed in lifts, with each lift compacted to an unyielding surface. Recommended maximum loose lift thickness and minimum number of passes of compaction equipment for Structural Fill are provided in **Table 3**.





Compaction within 5 feet of building walls and site retaining walls should be performed using a hand-operated vibratory roller or plate compactor. Backfill and compact all fills at approximately similar elevations on each side of foundation walls to avoid unbalanced loading. When temperatures may fall below 32 degrees Fahrenheit, concrete footings and slabs, as well as footing and slab subgrades should be protected from frost at all times. Fill should not be placed over frozen soil.

4. Construction Dewatering

Based on the groundwater level observed at the Site, groundwater is not anticipated to be encountered during construction. Limited temporary dewatering due to influx or runoff from precipitation events may on occasion be required within open excavations during construction. Grades surrounding excavations should be pitched away from the excavation, and temporary berms and trenches used to divert runoff away from excavations during construction. We anticipate that dewatering, if required, can be achieved using localized sumps, utilizing on-site reinjection of pumped water. Discharge of pumped groundwater off-site (while not anticipated) will need to be performed in accordance with all federal, state, and/or local regulations.

5. Excavation Slopes and Shoring

The Owner and the Contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our client. Under no circumstances should the information provided below be interpreted to mean that GZA is assuming responsibility for construction site safety or the Contractor's activities; such responsibility is not being implied and should not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, state, or federal safety regulations, e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations; such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

If any excavation, including a utility trench, is extended to a depth of more than 20 feet, it will be necessary to have the side slopes designed and stamped by a professional engineer registered in the Commonwealth of Massachusetts, and retained by the Contractor.

If sufficient space is not available to safely lay back excavations in accordance with OSHA regulations, a temporary earth support system will be required to support the excavation and maintain existing structures and utilities that are adjacent to proposed excavations. Temporary earth support systems, if required, should be selected by the site Contractor and designed by an experienced Professional Engineer registered in the Commonwealth of Massachusetts, and retained by the Contractor.

As a safety measure, it is recommended that all vehicles and soil piles be kept a lateral distance away from the top edge of the excavation at least equal to the slope height. Also, the exposed slope face of open-cut excavations should be protected against erosion and the elements.



6. Reuse of On-Site Materials

On site materials anticipated to be excavated during construction include fill and natural granular soils.

Based on visual and laboratory soil classifications, some of the existing inorganic on-site granular fill and the natural granular soils contain less than approximately 15 percent fines (primarily silt) and in many cases meet the gradation requirements for Granular Fill and therefore, may be used as Structural Fill.

The existing inorganic fill and natural granular soils that contain more than 15 percent silt do not meet the gradation requirements for Granular Fill. However, if weather conditions are favorable, the more silty existing fill and/or natural granular soils may be reused on site as a substitute for Structural Fill, provided that the soil is free from deleterious or organic matter, topsoil, roots, and particles greater than 6 inches in greatest dimension, its moisture content is controlled such that it can be placed in stable lifts and compacted to the degree recommended herein.

The Contractor should anticipate the need to import Sand-Gravel for the slab and pavement base course layers. The existing fill is not expected to meet the gradation requirements for Sand-Gravel Fill unless it is processed to remove boulders and large cobbles to produce a 3-inch-minus material.

Excess soil generated during construction that cannot be reused on-site should be disposed of in accordance with applicable local, state and federal regulations.

FINAL DESIGN AND CONSTRUCTION

We trust that the information presented herein addresses your current needs related to the geotechnical aspects of design and construction of the proposed CFS-4 development at this Site for permitting purposes.

Due to the former structures on site and given the amount of disturbance, reworking, and filling that the on-site soils may have been subjected to, we recommend that you retain GZA during foundation and site earthwork construction to observe subgrade conditions for consistency with our recommendations. It should also be noted that the Massachusetts State Building Code requires all foundation subgrades to be observed by a registered Professional Engineer or his/her representative. GZA's familiarity with the Site during multiple design and construction phases for the CFS campus and other nearby Devens sites will allow us to share lessons learned and help avoid unnecessary construction delays related to earthwork and foundation construction.





We appreciate the opportunity to work with you on this phase of the project. GZA looks forward to our continued involvement. Please call Michael Ostrowski at 781-603-5934 or Marty Rodick at 781-983-1604 or with any questions.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Michael J. Ostrowski, E.I.T.

Project Manager

Terese M. Kwiatkowski, P.E.

Consultant/Reviewer

Martin A. Rodick, P.E. Principal-in-Charge

Attachments: Tables

Figures

Appendix A – Limitations

Appendix B - Relevant Previous (2020 & 2024) and Recent (2025) Subsurface Exploration Data

Appendix C - Relevant Previous (2020 & 2024) and Recent (2025) Laboratory Results

Appendix D – Slope/w Evaluation Results

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CONSTRUCTION MANAGEMENT

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TABLES



TABLE 1

SUMMARY OF SUBSURFACE EXPLORATIONS PROPOSED CFS-4 DEVELOPMENT AREA 111 HOSPITAL ROAD DEVENS, MA GZA File No. 01.0174955.30 Proposed CFS-4 Development Area November, 2025 Page 1 of 2

| | | | | | | DEPT | H TO / ELEVAT | ION OF FEATU | RE OR TOP OF | STRATUM (FT) | 2,3 | | | | | |
|--------------|----------------|---------------------|-------------------|-------------------|-----------------------|---|---------------------------|----------------------|--------------|---|--------------|---------|--------------------------------------|---|-------------------------------------|---|
| Area of Site | Exploration ID | Exploration Type | Year Performed | Ground Surface | Bottom of Exploration | Refusal ⁴ (Drilling or Sampler) | Topsoil / Topsoil Fill | Subsoil ⁵ | Fill | Natural Granular Soils ⁶ | Glacial Till | Bedrock | Ground-water Reading ⁷ | Notes | Nearby Development Feature(s) | Exploration in "Ravine" Area? (Y/N) |
| | B-73 (MW-5) | boring | 2020 | 0 / 277.6 | 53.6 / 224 | -/- | 0 / 277.6 | -/- | -/- | 1 / 276.6 | 48.5 / 229.1 | -/- | 47 / 230.6 | Loose blow counts: 0 to 4 ft in topsoil and top of natural soil, SS refusal at 41.8 ft, See Note 8, MW installed | CFS-4, PVT | N |
| | GZ-110/110A | boring | 2025 | 0 / 271 | 26 / 245 | -/- | 0 / 271 | -/- | 2 / 269 | 6.9 / 264.1 | -/- | -/- | -/- | Buried asphalt: 2.3 to 2.9 ft, GZ-110 loose blowcounts: 2 to 4 ft in fill and 13 to 15 ft in natural sand, GZ-110A medium dense blowcount: 13 to 15 ft (water added) | CFS-4, PVT, SWB | N |
| | GZ-111 | boring | 2025 | 0 / 269 | 11 / 258 | -/- | -/- | -/- | 0 / 269 | 4.4 / 264.6 | -/- | -/- | -/- | - | CFS-4, PVT | N |
| | GZ-119 | boring | 2025 | 0 / 270 | 21 / 249 | -/- | 0 / 270 | -/- | -/- | 0.8 / 269.2 | -/- | -/- | -/- | V. loose blow count(s): 0 to 4 ft in topsoil & top of natural soil (sand) | CFS-4, PVT | N |
| | GZ-120 | boring | 2025 | 0 / 277.5 | 12 / 265.5 | -/- | 0 / 277.5 | -/- | -/- | 0.4 / 277.1 | -/- | -/- | -/- | - | CFS-4, PVT | N |
| Ø | GZ-121 | boring | 2025 | 0 / 269 | 22 / 247 | -/- | 0 / 269 | -/- | 0.8 / 268.2 | 4 / 265 | -/- | -/- | -/- | Sand/Clayey silt: 13.5 to 17 ft between natural granular strata | CFS-4 | N |
| Are | GZ-122 | boring | 2025 | 0 / 270 | 53.8 / 216.2 | -/- | 0 / 270 | -/- | 2.4 / 267.6 | 10.4 / 259.6 | 43.5 / 226.5 | -/- | 37.2 / 232.8 | Asphalt pavement in fill: 2.4 to 2.9 ft, clayey silt: 25.8 to 26.4 ft within natural granular strata, possible loose blow count: 45 to 47 ft in glacial till (no water added) | CFS-4, PVT | N |
| - | TP-315 | test pit | 2025 | 0 / 272.5 | 8 / 264.5 | -/- | 0 / 272.5 | -/- | -/- | 2 / 270.5 | -/- | -/- | -/- | - | CFS-4 | N |
| e | TP-317 | test pit | 2025 | 0 / 277 | 3 / 274 | -/- | 0 / 277 | -/- | -/- | 1.5 / 275.5 | -/- | -/- | -/- | Topsoil Fill: 0 to 1.5 ft | CFS-4 | N |
| <u>ج</u> | GZ-125 | boring | 2025 | 0 / 269 | 21 / 248 | -/- | 0 / 269 | -/- | 0.2 / 268.8 | 4 / 265 | -/- | -/- | -/- | - | Annex | N |
| L Z | GZ-126 | boring | 2025 | 0 / 269 | 22 / 247 | -/- | 0 / 269 | -/- | 0.6 / 268.4 | 2 / 267 | -/- | -/- | -/- | Clayey Silt: 13.5 to 15.5 ft between natural granular strata | Annex, PVT | N |
| l 8 | GZ-127 | boring | 2025 | 0 / 269 | 22 / 247 | -/- | 0 / 269 | -/- | 0.3 / 268.7 | 3.7 / 265.3 | -/- | -/- | -/- | possible boulder: 1.8 to 3 ft, Clayey Silt: 18.5 to 22 ft below natural granular stratum | Annex, PVT | N |
| | TP-14 | test pit | 2020 | 0 / 270.3 | 12 / 258.3 | -/- | 0 / 270.3 | -/- | -/- | 0.4 / 269.9 | -/- | -/- | -/- | - | Annex, PVT | N |
| | GZ-15 (OW) | boring | 2024 | 0 / 266 | 51 / 215 | -/- | 0 / 266 | -/- | 0.2 / 265.8 | 2.3 / 263.7 | 47.5 / 218.5 | -/- | 35.8 / 230.2 | Observation well installed | PVT | N |
| | GZ-109 | boring | 2025 | 0 / 259 | 17 / 242 | -/- | 0 / 259 | 0.6 / 258.4 | -/- | 2 / 257 | -/- | -/- | -/- | V. loose/loose blow counts: 0 to 4 ft in topsoil/subsoil/top of natural soil (sand) | PVT | N |
| | TP-18 | test pit | 2020 | 0 / 282.1 | 12 / 270.1 | -/- | 0 / 282.1 | -/- | -/- | 0.5 / 281.6 | -/- | -/- | -/- | - | PVT | N |
| | TP-306 | test pit | 2025 | 0 / 267 | 13 / 254 | -/- | 0 / 267 | -/- | -/- | 1.5 / 265.5 | -/- | -/- | -/- | Possible fill or Sand/Gravel: 1.5 to 4 ft | SWB, PVT | N |
| | TP-307 | test pit | 2025 | 0 / 269 | 8 / 261 | -/- | 0 / 269 | -/- | -/- | 0.5 / 268.5 | -/- | -/- | -/- | - | SWB, PVT | N |
| | TP-308 | test pit | 2025 | 0 / 268.5 | 13 / 255.5 | -/- | 0 / 268.5 | -/- | -/- | 1 / 267.5 | -/- | -/- | -/- | Possible fill or Sand/Gravel: 1 to 5 ft | PVT, SWB | N |

TABLE 1

SUMMARY OF SUBSURFACE EXPLORATIONS PROPOSED CFS-4 DEVELOPMENT AREA 111 HOSPITAL ROAD DEVENS, MA GZA File No. 01.0174955.30 Proposed CFS-4 Development Area November, 2025 Page 2 of 2

| | | | | DEPTH TO / ELEVATION OF FEATURE OR TOP OF STRATUM (FT) 2,3 | | | | | | | | | | | | |
|--------------|----------------|---------------------|-------------------|--|-----------------------|---|---------------------------|----------------------|--------------|---|--------------|--------------|--------------------------------------|---|-------------------------------------|---|
| Area of Site | Exploration ID | Exploration Type | Year Performed | Ground Surface | Bottom of Exploration | Refusal ⁴ (Drilling or Sampler) | Topsoil / Topsoil Fill | Subsoil ⁵ | Fill | Natural Granular Soils ⁶ | Glacial Till | Bedrock | Ground-water Reading ⁷ | Notes | Nearby Development Feature(s) | Exploration in "Ravine" Area? (Y/N) |
| | B-69 | boring | 2020 | 0 / 253.7 | 25 / 228.7 | -/- | -/- | -/- | 0 / 253.7 | 6 / 247.7 | -/- | -/- | 18.9 / 234.8 | Loose blow count: 0 to 2 ft in probable fill | CFS-4, PVT | N |
| | B-70 | boring | 2020 | 0 / 260.8 | 25 / 235.8 | -/- | -/- | -/- | 0 / 260.8 | 6 / 254.8 | -/- | -/- | 19.8 / 241 | Loose blow count: 0 to 2 ft in probable fill | CFS-4, PVT | N |
| | B-71 | boring | 2020 | 0 / 254.5 | 27 / 227.5 | -/- | 0 / 254.5 | -/- | -/- | 2 / 252.5 | -/- | -/- | -/- | Loose blow count: 0 to 2 ft in topsoil | CFS-4, PVT | N |
| | B-134 | boring | 2020 | 0 / 254.1 | 37 / 217.1 | -/- | 0 / 254.1 | -/- | -/- | 1/253.1 | 15 / 239.1 | -/- | -/- | See note 8 | CFS-4 | N |
| | GZ-114 | boring | 2025 | 0 / 273 | 29 / 244 | -/- | 0 / 273 | -/- | 19.5 / 253.5 | 24.5 / 248.5 | -/- | -/- | -/- | Topsoil fill: 0 to 19.5 ft | CFS-4, PVT | Υ |
| | GZ-115 | boring | 2025 | 0 / 279 | 26 / 253 | -/- | 0 / 279 | -/- | -/- | 22 / 257 | -/- | -/- | -/- | Loose blow count(s): 5 to 7 ft in topsoil fill, Topsoil fill: 0 to 22 ft | CFS-4, PVT | Υ |
| | GZ-116 | boring | 2025 | 0 / 274 | 29 / 245 | -/- | 0 / 274 | -/- | -/- | 26 / 248 | -/- | -/- | -/- | Topsoil fill: 0 to 26 ft | CFS-4 | Υ |
| | GZ-118 | boring | 2025 | 0 / 272.5 | 37 / 235.5 | -/- | 0 / 272.5 | -/- | -/- | 19.5 / 253 | -/- | -/- | -/- | Topsoil fill: 0 to 19.5 ft | CFS-4 | Υ |
| | GZ-128 | boring | 2025 | 0 / 279.5 | 16 / 263.5 | -/- | 0 / 279.5 | -/- | 4.5 / 275 | 14 / 265.5 | -/- | -/- | -/- | Topsoil Fill: 0 to 4.5 feet, Loose blow count(s): 5 to 9 ft in fill | CFS-4, PVT | Υ |
| | GZ-129 | boring | 2025 | 0 / 281 | 22 / 259 | -/- | 0 / 281 | -/- | 0.1 / 280.9 | 15.8 / 265.2 | -/- | -/- | -/- | Loose blow count(s): 10 to 12 ft in fill/topsoil, buried topsoil: 10.5 to 15.8 ft | CFS-4, PVT | Y |
| | GZ-130 | boring | 2025 | 0 / 270 | 19 / 251 | -/- | 0 / 270 | -/- | 16.3 / 253.7 | 18 / 252 | -/- | -/- | -/- | Topsoil Fill: 0 to 16.3 ft, Loose blow count(s): 5 to 7 ft in topsoil | CFS-4 | Υ |
| | GZ-131 | boring | 2025 | 0 / 272 | 19 / 253 | -/- | 0 / 272 | -/- | 16.3 / 255.7 | 18.3 / 253.7 | -/- | -/- | -/- | Topsoil Fill: 0 to 16.3 ft | CFS-4, PVT | Υ |
| | GZ-132 | boring | 2025 | 0 / 268.5 | 19 / 249.5 | -/- | 0 / 268.5 | -/- | -/- | 14.5 / 254 | -/- | -/- | -/- | Topsoil Fill: 0 to 14.5 ft, Loose blow count(s): 5 to 7 ft in topsoil | CFS-4, PVT | Y |
| | TP-309 | test pit | 2025 | 0 / 276 | 14 / 262 | -/- | 0 / 276 | -/- | -/- | 12 / 264 | -/- | -/- | -/- | Topsoil Fill: 0 to 12 ft | CFS-4, PVT | Υ |
| | TP-310 | test pit | 2025 | 0 / 273.5 | 14 / 259.5 | -/- | 0 / 273.5 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 14 ft | CFS-4 | Y |
| | TP-311 | test pit | 2025 | 0 / 274 | 14 / 260 | -/- | 0 / 274 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 14 ft | CFS-4 | Υ |
| | TP-312 | test pit | 2025 | 0 / 271.5 | 14 / 257.5 | -/- | 0 / 271.5 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 14 ft | CFS-4 | Υ |
| _ | TP-313 | test pit | 2025 | 0 / 278 | 14 / 264 | -/- | 0 / 278 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 14 ft | CFS-4, PVT | Υ |
| l ea | TP-314 | test pit | 2025 | 0 / 278 | 14 / 264 | -/- | 0 / 278 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 14 ft | CFS-4, PVT | Y |
| <u> </u> | TP-316 | test pit | 2025 | 0 / 275 | 6 / 269 | -/- | 0 / 275 | -/- | -/- | 5 / 270 | -/- | -/- | -/- | Topsoil Fill: 0 to 5 ft | CFS-4, RW, PVT | Y |
| | TP-318 | test pit | 2025 | 0 / 279 | 3 / 276 | -/- | 0 / 279 | -/- | -/- | 2 / 277 | -/- | -/- | -/- | Topsoil Fill: 0 to 2 ft | CFS-4, PVT | N N |
| _ | TP-319 | test pit | 2025 | 0 / 275 | 13 / 262 | -/- | 0 / 275 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 13 ft | CFS-4, PVT | Y |
| <u> </u> | TP-321 | test pit | 2025 | 0 / 266 | 13 / 253 | -/- | 0 / 266 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 13 ft | CFS-4, RW, PVT | , Y |
| <u> </u> | TP-323 | test pit | 2025 | 0 / 270.5 | 13 / 257.5 | -/- | 0 / 270.5 | -/- | -/- | -/- | -/- | -/- | -/- | Topsoil Fill: not penetrated at 13 ft | CFS-4 | Y |
| uth | GZ-124 | boring | 2025 | 0 / 268.5 | 22 / 246.5 | -/- | 0 / 268.5 | -/- | -/- | 0.2 / 268.3 | -/- | -/- | -/- | V. loose/loose blow count(s): 0 to 4 ft in topsoil/top of natural soil (sand), See Note 8 | Annex, RW | N |
| 1 0 | B-67 | boring | 2020 | 0 / 261.9 | 23.2 / 238.7 | 23.2 / 238.7 | -/- | -/- | -/- | 0 / 261.9 | 23 / 238.9 | -/- | 18.3 / 243.6 | Loose blow count: 0 to 2 ft in natural sand, SS refusal at 23.2 ft | RW | N |
| S | B-68 (MW-4) | boring | 2020 | 0 / 267.7 | 48.7 / 219 | 48.7 / 219 | -/- | -/- | 0 / 267.7 | 4.9 / 262.8 | 38.5 / 229.2 | -/- | 38.3 / 229.4 | V. loose/Loose blow count(s): 0 to 4 ft in probable fill, SS refusals: 4.9, 46.4, 48.7 ft, MW installed | RW | N |
| | B-135 | boring | 2020 | 0 / 270 | 55 / 215 | -/- | 0 / 270 | -/- | -/- | 1/269 | 38.5 / 231.5 | 53.5 / 216.5 | 21.5 / 248.5 | Loose blow count(s): 0 to 4 ft in topsoil/top of natural soil, See note 8, SS refusals at 45.1 and 50.4 ft, probable bedrock: 53.5 to 55 ft | RW, PVT | N |
| | B-136 | boring | 2021 | 0 / 250.4 | 32.4 / 218 | 32.4 / 218 | 0 / 250.4 | -/- | -/- | 0.7 / 249.7 | 13.5 / 236.9 | -/- | -/- | See note 8, SS refusals: 27.7 and 32.4 ft | RW | N |
| | TP-320 | test pit | 2025 | 0 / 259 | 4 / 255 | -/- | 0 / 259 | -/- | -/- | 3 / 256 | -/- | -/- | -/- | Topsoil Fill: 0 to 3 ft | RW | Υ |
| | TP-322 | test pit | 2025 | 0 / 253.5 | 10 / 243.5 | -/- | 0 / 253.5 | -/- | -/- | 8 / 245.5 | -/- | -/- | -/- | Topsoil Fill: 0 to 8 ft | RW | Υ |
| | B-42 | boring | 2020 | 0 / 273.3 | 32 / 241.3 | -/- | -/- | -/- | 0 / 273.3 | 9 / 264.3 | -/- | -/- | -/- | Very loose blow counts: 0 to 8 ft within UXO preclearing trench, See Note 8 | PVT | N |
| | B-53 (OW) | boring | 2020 | 0 / 275.5 | 46.5 / 229 | 46.5 / 229 | -/- | -/- | 0 / 275.5 | 5 / 270.5 | 33.5 / 242 | 43.5 / 232 | 37.7 / 237.8 | See Note 8, SS refusal at 45 ft, roller bit and casing practical refusal at 46.5 ft | PVT | N |
| | B-72 | boring | 2020 | 0 / 270.1 | 37 / 233.1 | -/- | -/- | 0 / 270.1 | -/- | 2 / 268.1 | -/- | -/- | -/- | Loose blow counts: 0 to 4 ft in subsoil and top of natural soil | PVT | N |
| | GZ-5 (OW) | boring | 2024 | 0 / 281 | 64 / 217 | -/- | -/- | -/- | 0 / 281 | 2 / 279 | 47.5 / 233.5 | -/- | 41.7 / 239.3 | Observation well installed | PVT | N |
| | GZ-9 | boring | 2024 | 0 / 264 | 21 / 243 | -/- | -/- | -/- | 0 / 264 | 0.7 / 263.3 | -/- | -/- | -/- | | PVT | N |
| | GZ-113 | boring | 2025 | 0 / 283.5 | 18 / 265.5 | -/- | -/- | -/- | 0 / 283.5 | 14 / 269.5 | -/- | -/- | -/- | Vacuum excavated: 0 to 5 ft, loose blow counts: 5 to 9 ft in fill | PVT | N |
| | GZ-133 | boring | 2025 | 0 / 266 | 12 / 254 | -/- | -/- | -/- | 0 / 266 | 7 / 259 | -/- | -/- | -/- | Loose blow count(s): 10 to 12 ft in fill | PVT | N |
| | TP-16 | test pit | 2020 | 0 / 283.4 | 12 / 271.4 | -/- | 0 / 283.4 | -/- | -/- | 0.3 / 283.1 | -/- | -/- | -/- | - | PVT | N |
| | TP-120 | test pit | 2020 | 0 / 274.5 | 12 / 262.5 | -/- | 0 / 274.5 | 0.7 / 273.8 | -/- | 2.3 / 272.2 | -/- | -/- | -/- | | PVT | N |
| | TP-121 | test pit | 2020 | 0 / 272.5 | 11.8 / 260.7 | -/- | -/- | -/- | 0 / 272.5 | 3.3 / 269.2 | -/- | -/- | -/- | Within apparent former building area | PVT | N |

Notes:

- 1) Definitions/Acronyms: "-" = Not observed or noted, v. = very, ft = depth measurement in feet, ref. = refusal, SS = splitspoon sampler, gw = groundwater observation/monitoring well installed in borehole upon drilling completion, WX = completely or very severely weathered bedrock, El. = elevation, TRC = TRC Companies, Inc., H&A = Haley & Aldrich, Inc., RW = retaining wall, PVT = Pavement, SWB = Stormwater Basin.
- 2) The subsurface information above is based on GZA's review of the exploration logs. Refer to the exploration logs in the appendices of this report for more detail.
- 3) The ground surface EI. for all explorations performed by TRC and/or H&A in 2020 were obtained from logs prepared by TRC and/or H&A. TRC has indicated the ground surface elevation at each boring location was determined by survey. We understand depths are relative to existing ground surface level at the time the exploration was performed. Elevations are in feet and we understand are referenced to the North American Vertical Datum of 1988 (NAVD88). Refer to the 2024 and 2025 GZA exploration logs for details on how the ground surface elevation was obtained.
- 4) Refusals noted above, either of drilling advancement (casing or roller bit) or split-spoon sampler (typically less than 6-inches advancement under 50 blows of a 140-pound hammer at a free-fall of 30-inches), where bedrock was not cored generally appear to be due to bedrock or cobbles/boulders in the glacial till.
- 5) Subsoil stratum categorized as Loess or Aeolian Silt deposits on the H&A logs in the Appendices.
- 6) Natural Granular Soils Stratum categorized as Glaciofluvial or Glaciolacustrine deposits on the H&A logs and occasionally on the TRC logs in the Appendices.
- 7) Groundwater observation wells were installed in 2020 borings B-53, B-68, and B-73 and the groundwater readings indicated for these borings were at the stabilization times noted by TRC/H&A. **Bold and blue-colored** groundwater level readings indicate groundwater level readings indicate groundwater level readings indicated groundwater level readings indicated obsciracy for these borings were at the stabilization times noted by TRC/H&A. **Bold and blue-colored** groundwater level readings indicate groundwater level readings indicate groundwater level readings indicated obsciracy for these borings were at the stabilization times noted by TRC/H&A. **Bold and blue-colored** groundwater level readings indicate groundwater level readings indicated for these borings were at the stabilization times noted by TRC/H&A. **Bold and blue-colored** groundwater level readings indicate groundwater level readings indicate groundwater level readings indicate groundwater level readings indicate groundwater level readings indicated gro
- 8) Cobbles and occasional boulders were noted in the H&A and TRC boring logs generally within the natural gravelly granular and glacial till strata and occasionally within the existing fill stratum.
- 9) Differences in strata depths/elevations in this table for borings B-134 to B-136 compared to the TRC boring logs are based on GZA review of soil samples from those borings provided by TRC.



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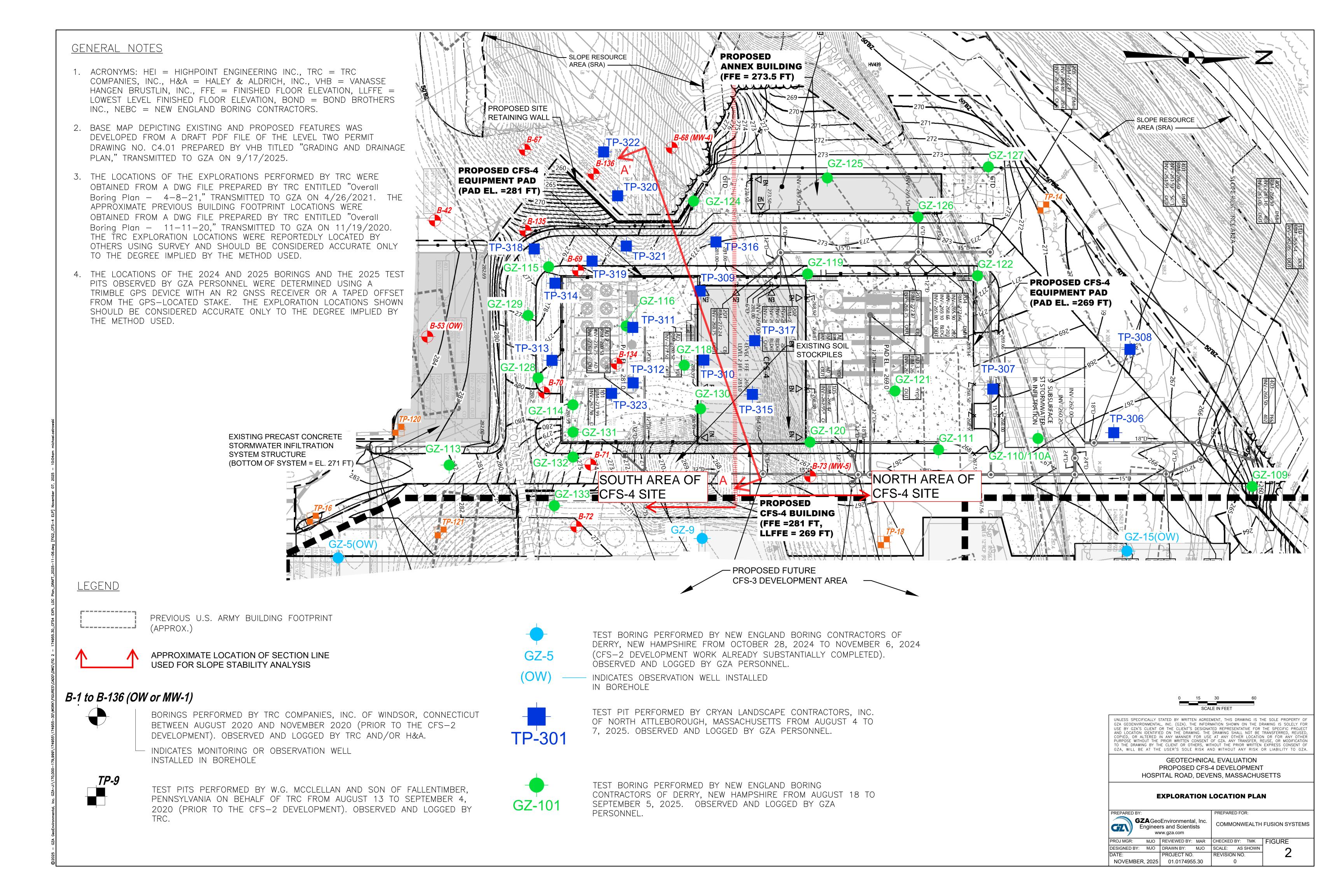
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FIGURES





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APPENDIX A

LIMITATIONS



November 2025



USE OF MEMO

1. GZA GeoEnvironmental, Inc. (GZA) prepared this Memo on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Memo. Use of this Memo, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the contract documents, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

- 2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in Proposal for Services and/or Memo, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. If conditions other than those described in this Memo are found at the subject location(s), or the design has been altered in any way, GZA shall be so notified and afforded the opportunity to revise the Memo, as appropriate, to reflect the unanticipated changed conditions.
- 3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.
- 4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Memo.

SUBSURFACE CONDITIONS

- 5. The generalized soil profile(s) provided in our Memo are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this Memo.
- 6. In preparing this Memo, GZA relied on certain information provided by the Client, state and local officials, and other parties referenced therein which were made available to GZA at the time of our evaluation. GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation.
- 7. Water level readings have been made in test holes (as described in this Memo) and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this Memo. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The water table encountered in the course of the work may differ from that indicated in the Memo.
- 8. GZA's services did not include an assessment of the presence of oil or hazardous materials at the property. Consequently, we did not consider the potential impacts (if any) that contaminants in soil or groundwater may have on construction activities, or the use of structures on the property.





01.0174955.30 Page | 2 November 2025

9. Recommendations for foundation drainage, waterproofing, and moisture control address the conventional geotechnical engineering aspects of seepage control. These recommendations may not preclude an environment that allows the infestation of mold or other biological pollutants.

COMPLIANCE WITH CODES AND REGULATIONS

10. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond our control.

COST ESTIMATES

11. Unless otherwise stated, our cost estimates are only for comparative and general planning purposes. These estimates may involve approximate quantity evaluations. Note that these quantity estimates are not intended to be sufficiently accurate to develop construction bids, or to predict the actual cost of work addressed in this Memo. Further, since we have no control over either when the work will take place or the labor and material costs required to plan and execute the anticipated work, our cost estimates were made by relying on our experience, the experience of others, and other sources of readily available information. Actual costs may vary over time and could be significantly more, or less, than stated in the Memo.

SCREENING AND ANALYTICAL TESTING

- 12. We collected soil samples at the locations identified in the Memo. These samples were analyzed for the specific parameters identified in the Memo.
- 13. Our interpretation of field screening and laboratory data is presented in the Memo. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.
- 14. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Memo, where applicable.

ADDITIONAL SERVICES

15. GZA recommends that we be retained to provide services during any future: site observations, design, implementation activities, construction and/or property development/redevelopment. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



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APPENDIX B

RELEVANT PREVIOUS (2020 & 2024) AND RECENT (2025) SUBSURFACE EXPLORATION DATA

(TABLES, LOGS, GROUNDWATER MEASUREMENTS)



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APPENDIX B.1

2020 TRC TEST PIT LOGS

KEY TO SYMBOLS

COARSE FRAGMENTS (% of Vol.)
15-35% 35-65% > 65% |
9 gravelly very gravelly extr. gravelly channery very channery extr.channery cobbly very cobbly extr. cobbly flaggy very flaggy extr. flaggy stony very stony extr. stony

TEXTURE cos - coarse sand s - sand fs - fine sand vfs - very fine sand lcos - loamy coarse sand ls - loamy sand lfs - loamy fine sand lvfs - loamy very fine sand cosl - coarse sandy loam sl - sandy loam fsl - fine sandy loam vfsl - very fine sandy loam l - loam sil - silt loam si - silt scl - sandy clay loam cl - clay loam sicl - silty clay loam sc - sandy clay sic - silty clay

c - clay

STRUCTURE Grade Structureless - 0 Weak - 1 Moderate - 2 Strong - 3 Type pl - platy pr - prismatic cpr - columnar gr - granular abk - angular blocky sbk - subangular blocky m - massive s - single grain Size vf - very fine f - fine m - medium co - coarse vc - very coarse vt - very thin t - thin th - thick vth - very thick

REDOX FEATURES Abundance f - Few c - Common 2-20% m - Many >20% Contrast f - Faint d - Distinct p - Prominent BOUNDARY Distinctness
Abrupt <1" (thick) Gradual 2.5 -5' Clear 1-2.5" Diffuse >5 Topography Smooth - boundary is nearly level Wavy - pockets with width greater than Irregular - pockets with depth greater than width Broken discontinuous

Table 2.3.3. 1982 Rawls Rates¹⁸

| Texture Class | NRCS Hydrologic Soil Group | Infiltration Rate |
|-----------------|----------------------------|-------------------|
| | (HSG) | Inches/Hour |
| Sand | A | 8.27 |
| Loamy Sand | A | 2.41 |
| Sandy Loam | В | 1.02 |
| Loam | В | 0.52 |
| Silt Loam | С | 0.27 |
| Sandy Clay Loam | С | 0.17 |
| Clay Loam | D | 0.09 |
| Silty Clay Loam | D | 0.06 |
| Sandy Clay | D | 0.05 |
| Silty Clay | D | 0.04 |
| Clay | D | 0.02 |

Massachusetts Stormwater Handbook, Volume 3, page 22, Table 2.3.3. 1982 Rawls Rate.





Test Pit #: TP-14

Date: 08/12/20

Project: CFS, Devens, MA Project #: 349440.0004

Depth to Massive Rock: Not Encountered Ground Surface Elevation: 270.3 ft

| Horizon | Depth (in) | Color | Texture | Structure | Consistence | Redox/ Mottling Features | Boundary | Hydrologic Group* | Estimated Infiltration Rate (in/hr)* |
|-----------------|------------|----------|--------------------------|-----------|-------------|--------------------------------|------------------|----------------------|--------------------------------------|
| A | 0.0-5.0 | 10YR 4/3 | sl | 1 m gr | fr | - | Abrupt Wavy | В | 1.02 |
| Bw ₁ | 5.0-27.0 | 10YR 6/4 | Very gravelly s | 0 m | loose | - | Abrupt Smooth | A | 8.27 |
| Bw_2 | 27.0-50.0 | 10YR 5/3 | Extr. Gravelly s | 0 m | loose | - | Abrupt Smooth | A | 8.27 |
| Bw ₃ | 50.0-96.0 | 10YR 6/1 | S | 0 m | loose | - | Abrupt Smooth | A | 8.27 |
| Bw ₄ | 96.0-144.0 | 10YR 6/2 | extr. Gravelly cos | 0 m | loose | - | - | A | 8.27 |
| | | | | | | | | | |
| | | | | | | | | | |

TRC Engineers, Inc. Representative: Charles Zielke

Notes:

No groundwater was encountered on the day of investigation.



Test Pit #: TP-16

Date: 08/14/20

Project: CFS, Devens, MA Project #: 349440.0004

Depth to Massive Rock: Not Encountered Ground Surface Elevation: 283.4 ft

| Horizon | Depth (in) | Color | Texture | Structure | Consistence | Redox/ Mottling Features | Boundary | Hydrologic Group* | Estimated Infiltration Rate (in.hr)* |
|-----------------|-------------|----------|------------------------|-----------|-------------|--------------------------------|------------------|----------------------|--------------------------------------|
| A | 0.0-3.0 | 10YR 5/1 | sl | 1 m gr | vfr | - | Abrupt Wavy | В | 1.02 |
| Bw_1 | 3.0-26.0 | 10YR 5/2 | cobbly sl | 0 m | loose | ı | Gradual Wavy | В | 1.02 |
| Bw_2 | 26.0-110.4 | 10YR 5/4 | Extr. cobbly cos | 0 m | loose | - | Abrupt Smooth | A | 8.27 |
| \mathbf{Bw}_3 | 110.4-144.0 | 10YR 5/1 | sl | 0 m | loose | - | - | В | 1.02 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

TRC Engineers, Inc. Representative: Charles Zielke

Notes:

No groundwater was encountered on the day of investigation.



Test Pit #: TP-18

Date: 08/13/20

Project: CFS, Devens, MA Project #: 349440.0004

Depth to Massive Rock: Not Encountered Ground Surface Elevation: 282.1 ft

| Horizon | Depth (in) | Color | Texture | Structure | Consistence | Redox/ Mottling Features | Boundary | Hydrologic Group* | Estimated Infiltration Rate (in/hr)* |
|-----------------|-------------|----------|-------------------------|-----------|-------------|--------------------------------|-------------------|----------------------|--------------------------------------|
| A | 0.0-6.0 | 10YR 4/3 | sl | 1 m gr | vfr | - | Abrupt Smooth | В | 1.02 |
| Bw_1 | 6.0-21.0 | 10YR 6/6 | fs | 0 m | loose | - | Gradual Smooth | A | 8.27 |
| Bw_2 | 21.0-72.0 | 10YR 7/4 | fs | 0 m | loose | - | Gradual Smooth | A | 8.27 |
| Bw ₃ | 72.0-120.0 | 10YR 7/4 | Extr. Gravelly fs | 0 m | loose | - | Gradual Smooth | A | 8.27 |
| Bw_4 | 120.0-144.0 | 10YR 7/4 | fs | 0 m | loose | - | - | A | 8.27 |
| | | | | | | | | | |
| | | | | | | | | | |

TRC Engineers, Inc. Representative: Charles Zielke

Notes:

No groundwater was encountered on the day of investigation.



Test Pit #: TP-120

Date: 09/04/20

Project: CFS, Devens, MA Project #: 349440.0004

Depth to Massive Rock: Not Encountered Ground Surface Elevation: 274.5 ft

| Horizon | Depth (in) | Color | Texture | Structure | Consistence | Redox/ Mottling Features | Boundary | Hydrologic Group* | Estimated Infiltration Rate (in/hr)* |
|-----------------|------------|----------|------------------------|-----------|-------------|--------------------------------|-----------------|----------------------|--------------------------------------|
| A | 0.0-8.0 | 10YR 4/2 | 1 | 1 m gr | vfr | - | Gradual Wavy | В | 0.52 |
| Bw_1 | 8.0-28.0 | 10YR 6/4 | Gravelly sil | 1 m sbk | fr | - | Gradual Wavy | С | 0.27 |
| Bw ₂ | 28.0-144.0 | 10YR 5/4 | Extr. Cobbly cos | 0 m | loose | - | - | A | 8.27 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

TRC Engineers, Inc. Representative: Charles Zielke

Notes:

No groundwater was encountered on the day of investigation.



Test Pit #: TP-121

Date: 09/04/20

Project: CFS, Devens, MA Project #: 349440.0004

Depth to Massive Rock: Not Encountered Ground Surface Elevation: 272.5 ft

| Horizon | Depth (in) | Color | Texture | Structure | Consistence | Redox/ Mottling Features | Boundary | Hydrologic Group* | Estimated Infiltration Rate (in/hr)* |
|-------------------|-------------|----------|---------------|-----------|-------------|--------------------------------|------------------|----------------------|--------------------------------------|
| FILL ₁ | 0.0-38.0 | 10YR 6/1 | Cobbly sil | 1 m sbk | fi | - | Abrupt Smooth | С | 0.27 |
| FILL ₂ | 38.0-40.0 | 10YR 4/1 | Gravel | 0 m | loose | - | Abrupt Smooth | - | - |
| Bb | 40.0-136.0 | 10YR 6/4 | fs | 0 m | loose | - | Abrupt Smooth | A | 8.27 |
| Bw | 136.0-141.6 | 10YR 7/2 | Cobbly s | 0 m | loose | - | - | A | 8.27 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

TRC Engineers, Inc. Representative: Charles Zielke

Notes:

No groundwater was encountered on the day of investigation.

FILL₂ – contained gravel and concrete

Excavation terminated at 141.6 in. due to pit's sidewalls caving.

^{*}Based on Massachusetts Stormwater Handbook, Volume 3, page 22, Table 2.3.3. 1982 Rawls Rate. See Key to Symbols.



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APPENDIX B.2

2020 TRC TEST BORING LOGS

KEY TO SYMBOLS

Symbol Description Symbol Description Strata symbols Misc. Symbols ∇ Water table first encountered Bedrock Poorly-graded Gravel \blacksquare Water table first reading after drilling \mathbf{V} Water table second reading after drilling \mathbf{V} Water table third reading after drilling Poorly-graded Gravel with NR Not Recorded Boulders / Cobbles Clay МН Moh's Hardness Sample Type Highly Weathered or Poorly-graded Gravel with Decomposed Rock Rock Core Poorly-graded Sandy Split Barrel Fill (made ground) Well-graded Gravel with Silty, Clayey Gravel Lab Symbols Silty Gravel Silt with Low Plasticity FINES = Fines % LL = Liquid Limit %

Notes:

COLUMN A) Soil sample number.

Gneiss

COLUMN B) FOR SOIL SAMPLE (ASTM D 1586): indicates number of blows obtained for each 6 ins. penetration of the standard split-barrel sampler. FOR ROCK CORING (ASTM D2113): indicates percent recovery (REC) per run and rock quality designation (RQD). RQD is the % of rock pieces that are 4 ins. or greater in length in a core run.

USCS Sandy Silt

PI = Plasticity Index %

W/V = Unit Weight

U_c = Unconfined Compressive Strength

COLUMN C) Strata symbol as assigned by the geotechnical engineer.

DESCRIPTION) Description including color, texture and classification of subsurface material as applicable (see Descriptive Terms). Estimated depths to bottom of strata as interpolated from the borings are also shown.

DESCRIPTIVE TERMS: F = fine M = medium C = coarse

RELATIVE PROPORTIONS:

| -Descriptive Term- Trace | -Symbol- TR | -Est. Percentages- 1-10 |
|-----------------------------|----------------|----------------------------|
| Trace to Some | TR to SM | 10-15 |
| Some | SM | 15-30 |
| Silty, Sandy, | | |
| Clayey, Gravelly | - | 30-40 |
| And | and | 40-50 |

REMARKS) Special conditions or test data as noted during investigation. Note that W.O.P. indicates water observation pipes.

^{*} Free water level as noted may not be indicative of daily, seasonal, tidal, flood, and/or long term fluctuations.



PROJECT: CFS

LOCATION: DEVENS, MA

BORING

B-42 G.S. ELEV. 273.3

1 OF 1

FILE 349440.0004 SHEET

| DRILLER | | G. PEEL | |
|------------|-------|------------|--|
| HELPER | D. (| CARPENTER | |
| INSPECTOR | | S. PRATT | |
| DATE START | ED | 08/24/2020 | |
| DATE COMP | LETED | 08/24/2020 | |

| | GROUNDWATER DATA | | | | | | | |
|---------|-----------------------|------|--------------|--|--|--|--|--|
| FIRST I | FIRST ENCOUNTERED N/A | | | | | | | |
| DEPTH | HOUR | DATE | ELAPSED TIME | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| M | ETHOD O | F ADVANO | CING BO | REHOLE | |
|---|---------|----------|---------|--------|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | |
| h | FROM | 10.0 ' | TO | 32.0 ' | |
| | | | | | |
| | | | | | |
| | | | | | |

PP DEPTH Α В С **DESCRIPTION** REMARKS S-1 WOH/2.0' S-2 WOH/2.0' LIGHT BROWN F/M/C SAND, SM GRAVEL, TR CLAY, TR SILT, DRY S-3 WOH/2.0' S-4 WOH/1.5' 8.0 265.3 WATER INTRODUCED AT 10.0 FT 10 S-5 8 9 20 18 10.0-15.0 FT - SOME **COBBLES** LIGHT BROWN SILTY F/M SAND WITH F/C GRAVEL, DRY 15.0 258.3 15 S-6 8 10 15 15 17.0 FT - BORING LIGHT BROWN F/ SANDY SILT COLLAPSED 20 20.0 253.3 NEW PROJECTS TEST BORING LOG 349440.0004 CFS.GPJ SITE BLAUVELT.GDT 4/2/21 S-7 16 14 19 25 25 BROWN F/M/C SAND, SM F/ GRAVEL, SM SILT S-8 26 15 13 16 30 242.3 BROWN SILTY SAND, TRACE TO LITTLE F/ S-9 10 10 6 8 32.0 GRAVEL, GLACIAL TILL 241.3 **END OF BORING AT 32'** DRN. TBT JPB CKD.



GROUNDWATER DATA

DATE

ELAPSED TIME

PROJECT: CFS

DEPTH HOUR

LOCATION: DEVENS, MA

FIRST ENCOUNTERED N/A

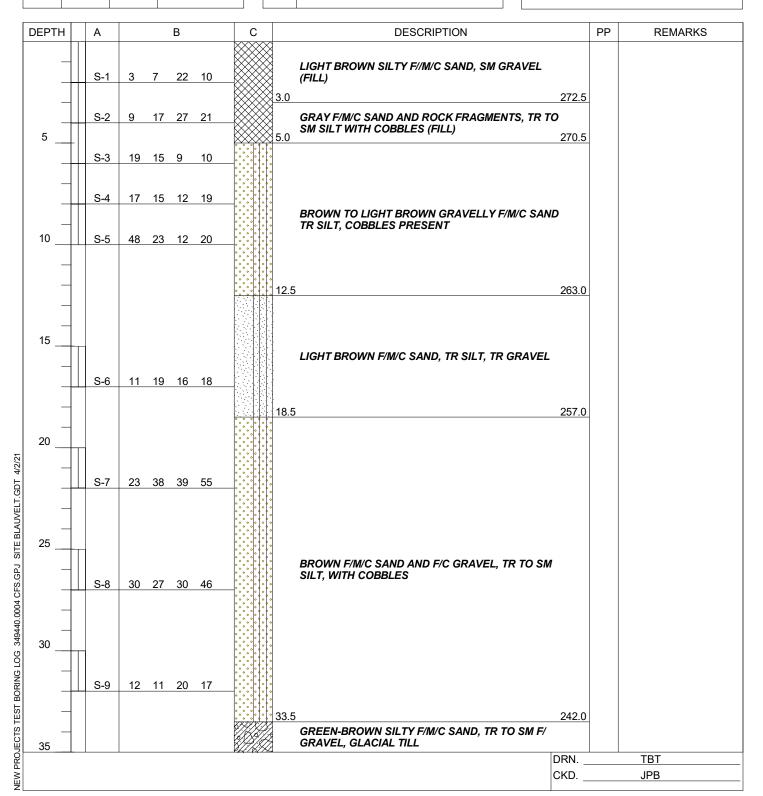
TRC TEST BORING LOG

BORING B-53 G.S. ELEV. 275.5

FILE 349440.0004 SHEET 1 OF 2

| METHOD OF ADVANCING BOREHOLE | | | | | | | |
|------------------------------|------|--------|----|--------|--|--|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | | | |
| h | FROM | 10.0 ' | TO | 46.5 ' | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| DRILLER | A. PETERS |
|---------------|--------------|
| HELPER | C. CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 10/23/2020 |
| DATE COMPLETE | D 10/29/2020 |
| | |





PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-53 G.S. ELEV. 275.5

FILE 349440.0004

SHEET 2 OF 2

| DEPTH | | Α | | | В | | С | | | DESCRIPTION | | PP | REMARKS |
|-------|---|------|------|----|----|----|---|----|------|---|-------|----|--------------------------|
| _ | | S-10 | 12 | 12 | 15 | 21 | | | | | | | |
| 40 | | | | | | | | | | GREEN-BROWN SILTY F/M/C SAND, TR TO SM F/ GRAVEL, GLACIAL TILL | | | |
| _ | | S-11 | 17 | 18 | 40 | 32 | | | | | | | 43.0-44.0 FT: BOULDER |
| 45 | | S-12 | 80/0 | ' | | | | | 44.5 | PROBABLE BEDROCK | 231.0 | | 44.0-44.5: SANDY |
| _ | | | | | | | | ×. | 46.5 | | 229.0 | | |
| _ | | | | | | | | | | END OF BORING AT 46.5' | | | |
| 50 | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
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| _ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| 60 | - | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| 65 | - | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 75 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |



PROJECT: CFS

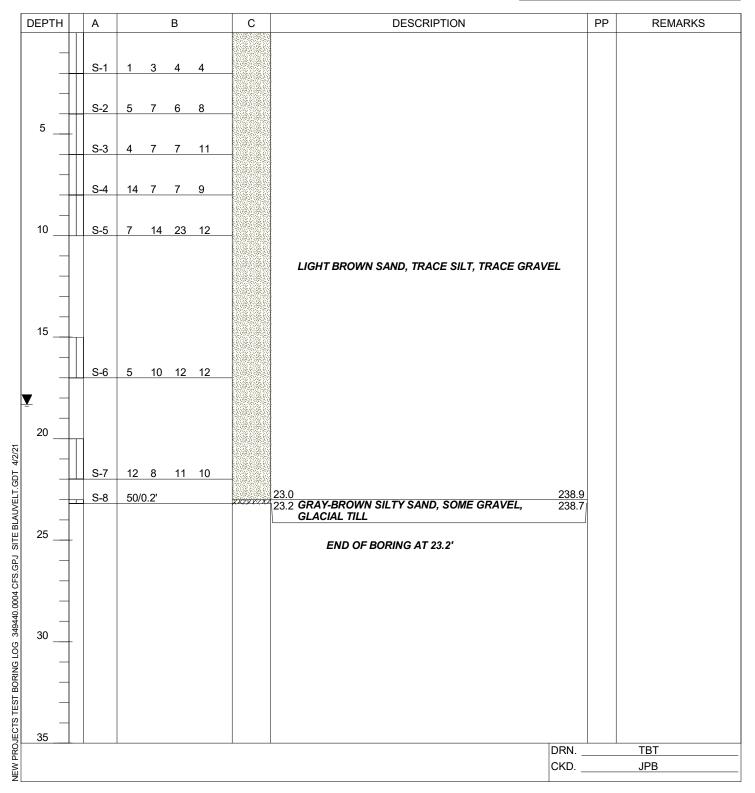
LOCATION: DEVENS, MA

BORING B-67 G.S. ELEV. 261.9

FILE 349440.0004

| | GROU | GROUNDWATER DATA | | | M | ETHOD C | F ADVANO | CING BO | REHOLE |
|-----------------------|------|------------------|------|---|---|---------|----------|---------|--------|
| FIRST ENCOUNTERED N/A | | | | | а | FROM | 0.0 ' | TO | 10.0 ' |
| DEPTH | HOUR | | | _ | h | FROM | 10.0 ' | TO | 23.2 ' |
| 18.3' | NR | 8/25 | 0 HR | ▼ | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| DRILLER | A. PETERS |
|---------------|--------------|
| HELPER | C. CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 08/25/2020 |
| DATE COMPLETE | D 08/25/2020 |
| | |





PROJECT: CFS

LOCATION: DEVENS, MA

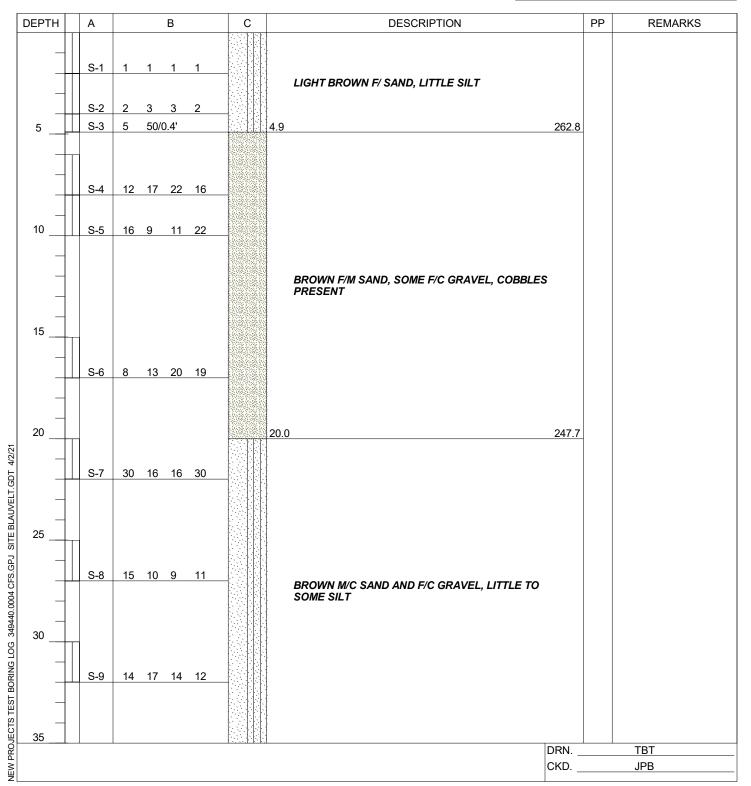
BORING B-68 G.S. ELEV. 267.7

FILE 349440.0004

| | | | | _ | | |
|---------|---------|----------|----|-------|------|--|
| | GROU | | M | ETHOD | | |
| FIRST I | ENCOUNT | ∇ | а | FROM | | |
| DEPTH | HOUR | DATE | _ | h | FROM | |
| 38.3' | NR | 11/11 | NR | ▼ | | |
| | | | | _ | | |
| | | | | | | |

| | METHOD OF ADVANCING BOREHOLE | | | | | | | | |
|----------|------------------------------|------|--------|----|--------|--|--|--|--|
| ∇ | а | FROM | 0.0 ' | TO | 10.0 ' | | | | |
| _ | h | FROM | 10.0 ' | TO | 48.7 ' | | | | |
| ▼ | | | | | | | | | |
| _ | | | | | | | | | |
| | | | | | | | | | |

| DRILLER A | A. PETERS |
|----------------|------------|
| HELPERC | :. CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 08/26/2020 |
| DATE COMPLETED | 08/26/2020 |
| | |



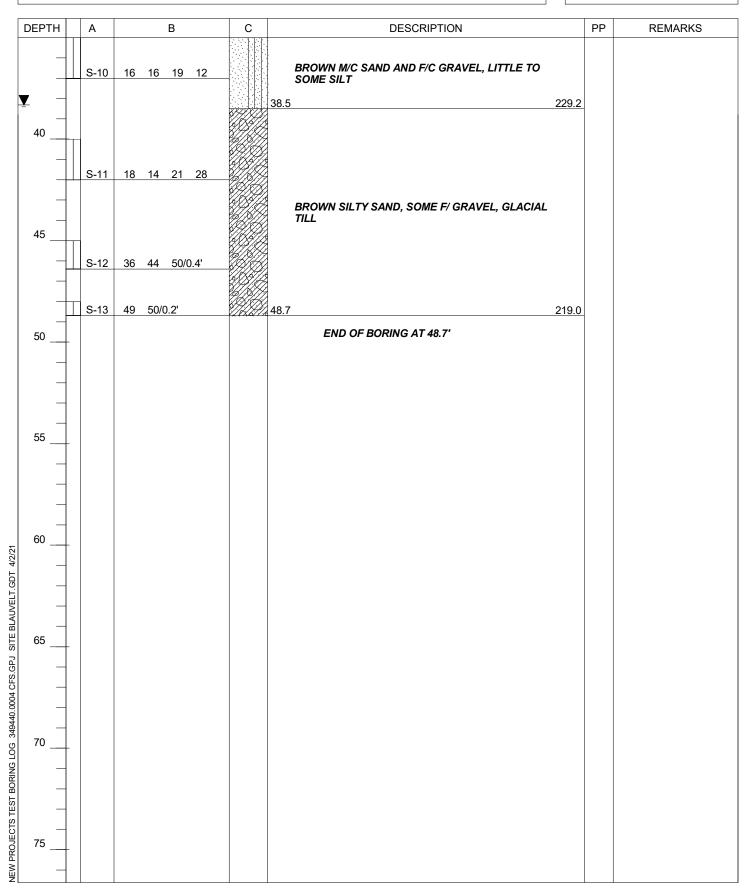


PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-68 G.S. ELEV. 267.7

FILE 349440.0004 SHEET 2 OF 2





PROJECT: CFS

LOCATION: DEVENS, MA

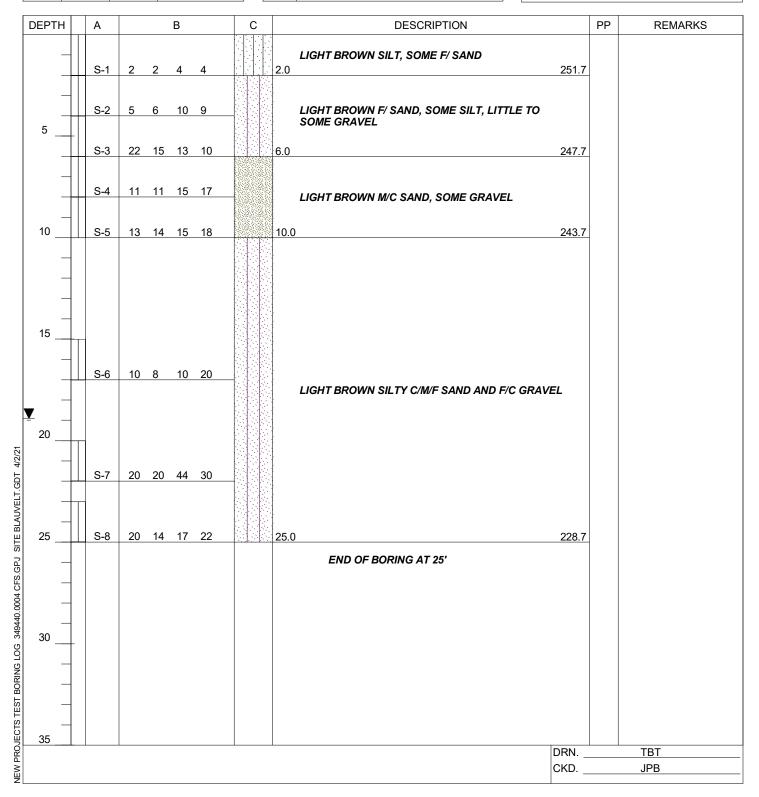
BORING **B-69** G.S. ELEV. 253.7

FILE 349440.0004 SHEET 1 OF 1

| | GROUNDWATER DATA | | | | | | | |
|---------|-----------------------|------|--------------|---|--|--|--|--|
| FIRST I | FIRST ENCOUNTERED N/A | | | | | | | |
| DEPTH | HOUR | DATE | ELAPSED TIME | | | | | |
| 18.9' | NR | 8/26 | 0 HR | 1 | | | | |
| | | | | 1 | | | | |
| | | | | 1 | | | | |

| | М | METHOD OF ADVANCING BOREHOLE | | | | | | | | |
|----------|---|------------------------------|--------|----|--------|--|--|--|--|--|
| ∇ | а | FROM | 0.0 ' | TO | 10.0 ' | | | | | |
| _ | h | FROM | 10.0 ' | TO | 25.0 ' | | | | | |
| ▼ | | | | | | | | | | |
| _ | | | | | | | | | | |
| | | | | | | | | | | |

| DRILLER _ | Α | . PETERS | |
|-----------|--------|------------|--|
| HELPER _ | C. | . CHERRY | |
| INSPECTO | R | S. PRATT | |
| DATE STAF | RTED | 08/26/2020 | |
| DATE COM | PLETED | 08/26/2020 | |
| | | | |





PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-70 G.S. ELEV. 260.8

FILE 349440.0004

| _ | | | | | | | | | |
|------------------|--------------|--------|---------|---------|--|--|--|--|--|
| GROUNDWATER DATA | | | | | | | | | |
|] | I/A | ERED N | ENCOUNT | FIRST E | | | | | |
| | ELAPSED TIME | DATE | HOUR | DEPTH | | | | | |
| 1 | 0 HR | 8/26 | NR | 19.8' | | | | | |
|] | | | | | | | | | |
| 1 | | | | | | | | | |

| | М | METHOD OF ADVANCING BOREHOLE | | | | | | | | |
|----------|---|------------------------------|--------|----|--------|--|--|--|--|--|
| ∇ | а | FROM | 0.0 ' | TO | 10.0 ' | | | | | |
| _ | h | FROM | 10.0 ' | TO | 25.0 ' | | | | | |
| ▼ | | | | | | | | | | |
| _ | | | | | | | | | | |
| | | | | | | | | | | |

| DRILLER | A. PETERS |
|----------------|------------|
| HELPER | C. CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 08/25/2020 |
| DATE COMPLETED | 08/26/2020 |
| | |

| DEPTH | Н | Α | | | В | | | С | | DESCRIPTION | PP | REMARKS |
|-------------|---|-----|-----|----|----|----|---|---|------|--|----|---------|
| | | S-1 | 2 | 2 | 3 | 4 | | | | LIGHT PROMANCH TV F/M CAND, TRACE CRAVEL | | |
| | 4 | S-2 | 5 | 5 | 5 | 5 | | | | LIGHT BROWN SILTY F/M SAND, TRACE GRAVEL | | |
| 5 _ | _ | S-3 | 5 | 6 | 8 | 12 | | | 6.0 | 254.8 | 3 | |
| | - | S-4 | 12 | 10 | 8 | 8 | | | | | | |
| | | | | | | | | | | | | |
| 10 _ | | S-5 | 5 | 6 | 8 | 9 | | | | | | |
| | - | | | | | | | | | LIGHT PROMINANO SAND TRACE ORANGI | | |
| 45 | 7 | | | | | | | | | LIGHT BROWN M/C SAND, TRACE GRAVEL | | |
| 15 _ | | | | | | | | | | | | |
| | | S-6 | 10 | 12 | 11 | 15 | _ | | | | | |
| Z 20 | - | | | | | | | | 20.0 | 240.8 | | |
| | | | | | | | | | 20.0 | LIGHT BROWN M/C SAND AND GRAVEL | | |
| | | S-7 | 12 | 15 | 10 | 15 | | 7 | 23.0 | | 3 | |
| 25 | _ | S-8 | 9 | 10 | 12 | 9 | | | 25.0 | BROWN SILTY F/M SAND, SOME GRAVEL 235.8 | 3 | |
| _ | | | | | | | | | | END OF BORING AT 25' | | |
| | | | | | | | | | | | | |
| 30 _ | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| | _ | | · · | | _ | _ | _ | | _ | DRN. | _ | TBT |



GROUNDWATER DATA FIRST ENCOUNTERED N/A
DEPTH HOUR DATE ELAPSED TIME

PROJECT: CFS

DEPTH HOUR

LOCATION: DEVENS, MA

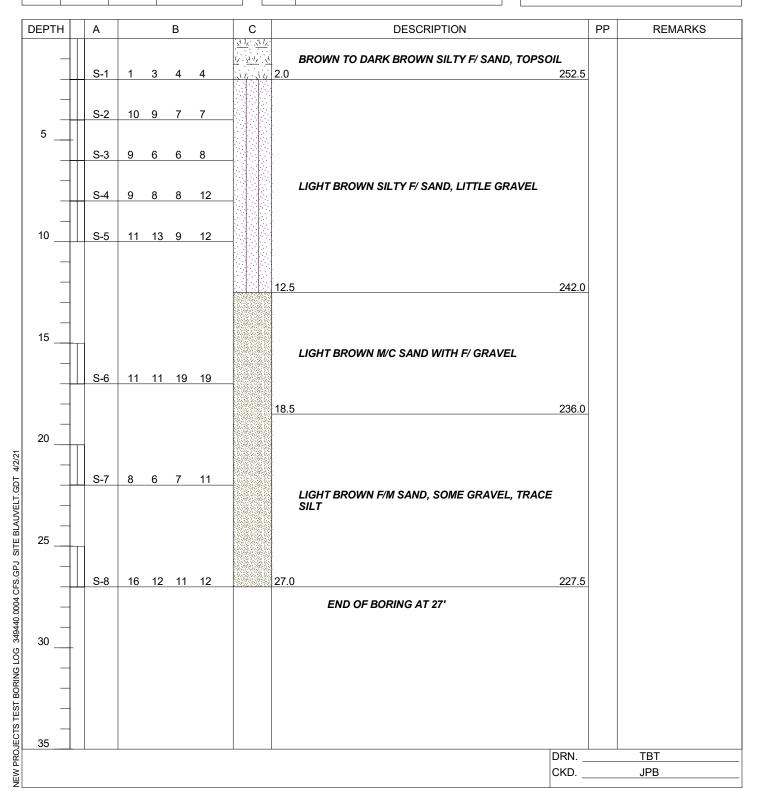
TRC TEST BORING LOG

BORING B-71 G.S. ELEV. 254.5

FILE 349440.0004

| M | METHOD OF ADVANCING BOREHOLE | | | | | | | | | |
|---|------------------------------|--------|--------|--------|--|--|--|--|--|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | | | | | | |
| h | FROM | 10.0 ' | 27.0 ' | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| DRILLER | A. PETERS |
|----------------|------------|
| HELPER C | CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 09/22/2020 |
| DATE COMPLETED | 09/22/2020 |
| | |





PROJECT: CFS

LOCATION: DEVENS, MA

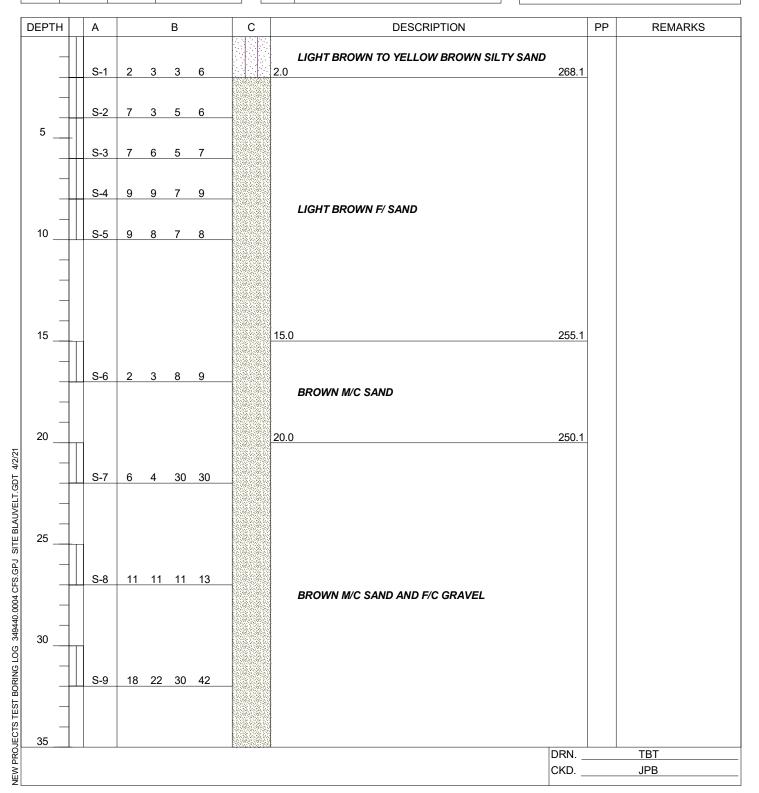
BORING **B-72** G.S. ELEV. 270.1

> FILE 349440.0004

| | GROUNDWATER DATA | | | | | | | | | | |
|---------|------------------------------|--|--|--|--|--|--|--|--|--|--|
| FIRST I | FIRST ENCOUNTERED N/A | | | | | | | | | | |
| DEPTH | DEPTH HOUR DATE ELAPSED TIME | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| M | METHOD OF ADVANCING BOREHOLE | | | | | | | | | |
|---|------------------------------|--------|----|--------|--|--|--|--|--|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | | | | | | |
| h | FROM | 10.0 ' | TO | 37.0 ' | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| DRILLER _ | Α | N. PETERS | |
|-----------|--------|------------|--|
| HELPER | C. | . CHERRY | |
| INSPECTOR | ₹ | S. PRATT | |
| DATE STAR | TED | 08/28/2020 | |
| DATE COM | PLETED | 08/28/2020 | |
| | _ | | |





PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-72 G.S. ELEV. 270.1

FILE 349440.0004

SHEET 2 OF 2

| ## S-10 32 41 38 38 37.0 233.1 ## END OF BORING AT 37' ## END OF | DEPT | Н | Α | | | В | | С | DESCRIPTION | PP | REMARKS |
|--|-------------------------|-----------|-----|------|------|----|----|---|-------------------------------|----|---------|
| END OF BORING AT 37' 45 50 60 | | | | | | | | | BROWN M/C SAND AND F/C GRAVEL | | |
| 40 | | + | S-1 | 0 32 | 2 41 | 38 | 38 | | | | |
| 45 | | - | | | | | | | END OF BORING AT 37' | | |
| 50 | 40 _ | | | | | | | | | | |
| 50 | | 4 | | | | | | | | | |
| 50 | | - | | | | | | | | | |
| 50 | | - | | | | | | | | | |
| 55 | 45 _ | 1 | | | | | | | | | |
| 55 | | 4 | | | | | | | | | |
| 55 | | - | | | | | | | | | |
| 55 | | | | | | | | | | | |
| | 50 _ | \dashv | | | | | | | | | |
| | | + | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 60 | 55 _ | _ | | | | | | | | | |
| 60 | | - | | | | | | | | | |
| 60 | | | | | | | | | | | |
| 65 | | - | | | | | | | | | |
| 65 | 60 - | + | | | | | | | | | |
| 65 | GDT 4 | | | | | | | | | | |
| 65 | UVELT | \perp | | | | | | | | | |
| 70 | 85 EBLA | + | | | | | | | | | |
| | ଆଧାର ଆଧାର | \exists | | | | | | | | | |
| 70 | 4 CFS.(| 4 | | | | | | | | | |
| 70 | 40.000 | + | | | | | | | | | |
| 75 | 76 8 0 70 | | | | | | | | | | |
| 75 | NG LO | 1 | | | | | | | | | |
| 75 | T BORI | + | | | | | | | | | |
| | IS TES | + | | | | | | | | | |
| | 75 _ | | | | | | | | | | |
| | EW PF | \perp | | | | | | | | | |



PROJECT: CFS

LOCATION: DEVENS, MA

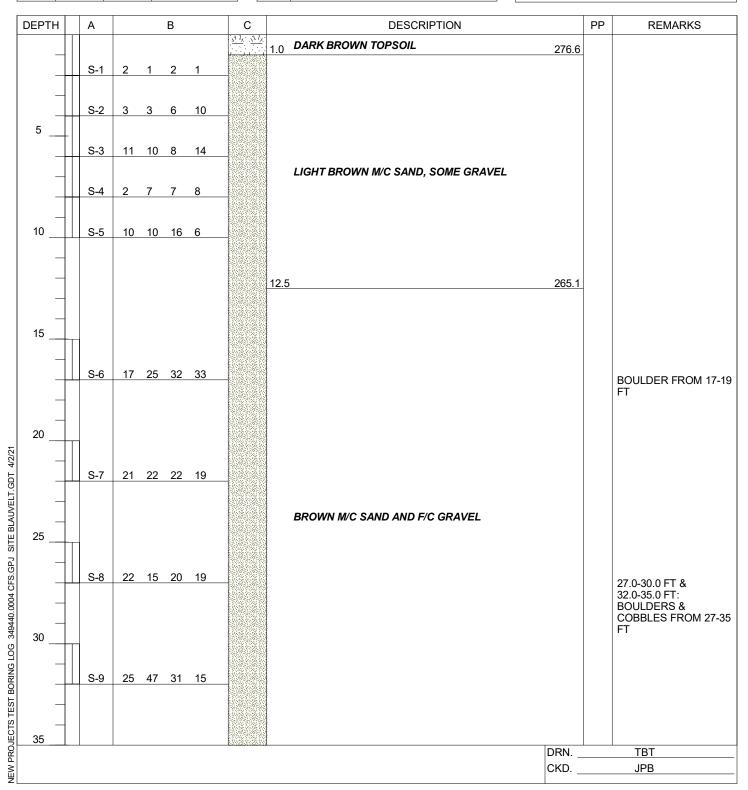
BORING **B-73** G.S. ELEV. 277.6

FILE 349440.0004

| | GROUNDWATER DATA | | | | | | | |
|------------|-----------------------|------------------------------|----------|--|--|--|--|--|
| ∇ | FIRST ENCOUNTERED N/A | | | | | | | |
| _ | ELAPSED TIME | DEPTH HOUR DATE ELAPSED TIME | | | | | | |
| lacksquare | NR | 11/11 | 47.0' NR | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | М | METHOD OF ADVANCING BOREHOLE | | | | | | | |
|----------|---|------------------------------|--------|----|--------|--|--|--|--|
| ∇ | а | FROM | 0.0 ' | TO | 10.0' | | | | |
| _ | h | FROM | 10.0 ' | TO | 53.6 ' | | | | |
| ▼ | | | | | | | | | |
| _ | | | | | | | | | |
| | | | | | | | | | |

| DRILLER | A. PETERS |
|----------------|------------|
| HELPERC | CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 09/21/2020 |
| DATE COMPLETED | 09/21/2020 |
| | |





PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-73 G.S. ELEV. 277.6

FILE 349440.0004 SHEET 2 OF 2

| DEPTH | | Α | | | В | | С | | DESCRIPTION | | PP | REMARKS |
|----------------|---|------|----|----|----|--------|---|------|--|-------|----|---------------------------|
| _ | | S-10 | 35 | 39 | 24 | 19 | | | | | | |
| 40 | | S-11 | 8 | 12 | 50 | 50/0.3 | | | BROWN M/C SAND AND F/C GRAVEL | | | COBBLE FROM 41-41.8 FT |
| 45 | | S-12 | 27 | 27 | 25 | 16 | | | | | | |
| 50 | | | | | | | | 48. | 5 | 229.1 | | |
| | | S-13 | 11 | 6 | 15 | 30 | | 53.6 | GREEN-BROWN SILTY F/M SAND, TRACE ROCK FRAGMENTS/GRAVEL | 224.0 | | |
| 55 | - | | | | | | | | END OF BORING AT 53.6' | | | |
| 60 | _ | | | | | | | | | | | |
| 65 70 75 | _ | | | | | | | | | | | |
| _ _ _ | | | | | | | | | | | | |
| 70 <u> </u> | - | | | | | | | | | | | |
| 75 <u> </u> | - | | | | | | | | | | | |



PROJECT: CFS

LOCATION: DEVENS, MA

BORING

G.S. ELEV. 254.1

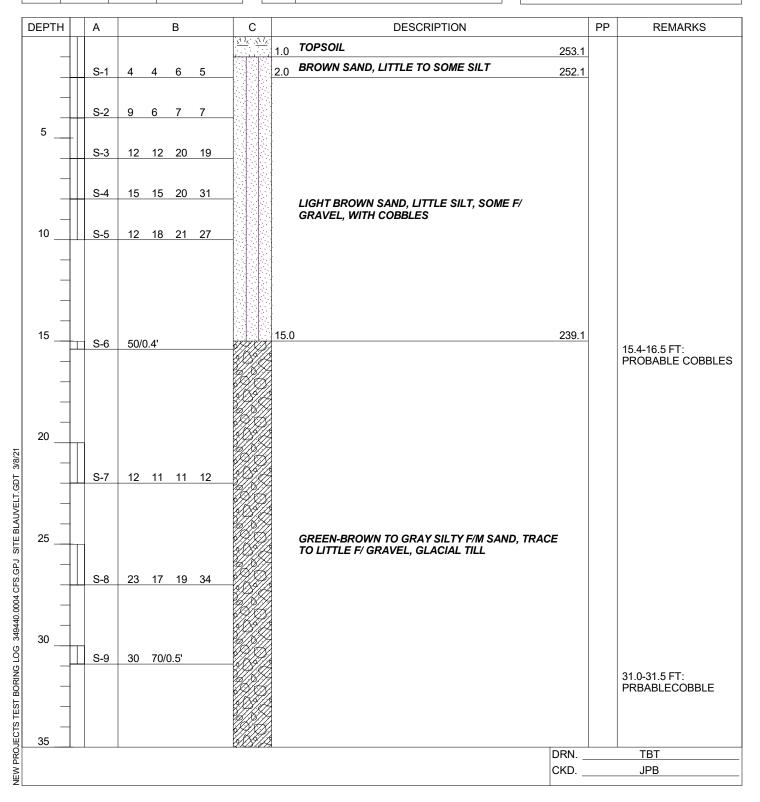
FILE 349440.0004

B-134

| | | М | ETH | | | | |
|---------|-----------------------|---|-----|----|--|--|--|
| FIRST I | FIRST ENCOUNTERED N/A | | | | | | |
| DEPTH | HOUR | | h | FR | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| N | METHOD OF ADVANCING BOREHOLE | | | | | | |
|---|------------------------------|--------|----|--------|--|--|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | | | |
| h | FROM | 10.0 ' | TO | 37.0 ' | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| DRILLER | P | A. PETERS | |
|------------|------|------------|----------|
| HELPER | С | . CHERRY | |
| INSPECTOR | | S. PRAT | Γ |
| DATE START | ED | 11/18/2020 | <u> </u> |
| DATE COMPL | ETED | 11/18/2 | 020 |
| | | | |





PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-134 G.S. ELEV. 254.1

FILE 349440.0004

SHEET 2 OF 2

| DEPTH | Α | | ı | В | С | DESCRIPTION | PP | REMARKS |
|-----------------|------|----|----|-------|---------|---|----|---------|
| | | | | | | GREEN-BROWN TO GRAY SILTY F/M SAND, TRACE TO LITTLE F/ GRAVEL, GLACIAL TILL | | |
| | S-10 | 25 | 40 | 40 33 | 3 9/2// | 37.0 217.1 | | |
| 4 | | | | | | END OF BORING AT 37' | | |
| | | | | | | | | |
| 40 | | | | | | | | |
| + | | | | | | | | |
| + | | | | | | | | |
| | | | | | | | | |
| 45 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 4 | | | | | | | | |
| 50 | | | | | | | | |
| \dashv | | | | | | | | |
| \dashv | | | | | | | | |
| 7 | | | | | | | | |
| 55 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 60 | | | | | | | | |
| 4 | | | | | | | | |
| \dashv | | | | | | | | |
| \dashv | | | | | | | | |
| 65 | | | | | | | | |
| 33 | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 70 | | | | | | | | |
| 4 | | | | | | | | |
| _ | | | | | | | | |
| _ | | | | | | | | |
| 75 | | | | | | | | |
| 75 | | | | | | | | |
| \dashv | | | | | | | | |



GROUNDWATER DATA

11/17

ELAPSED TIME

0HR

TRC TEST BORING LOG

PROJECT: CFS

21.5'

LOCATION: DEVENS, MA

FIRST ENCOUNTERED N/A
DEPTH HOUR DATE E

NR

BORING G.S. ELEV.

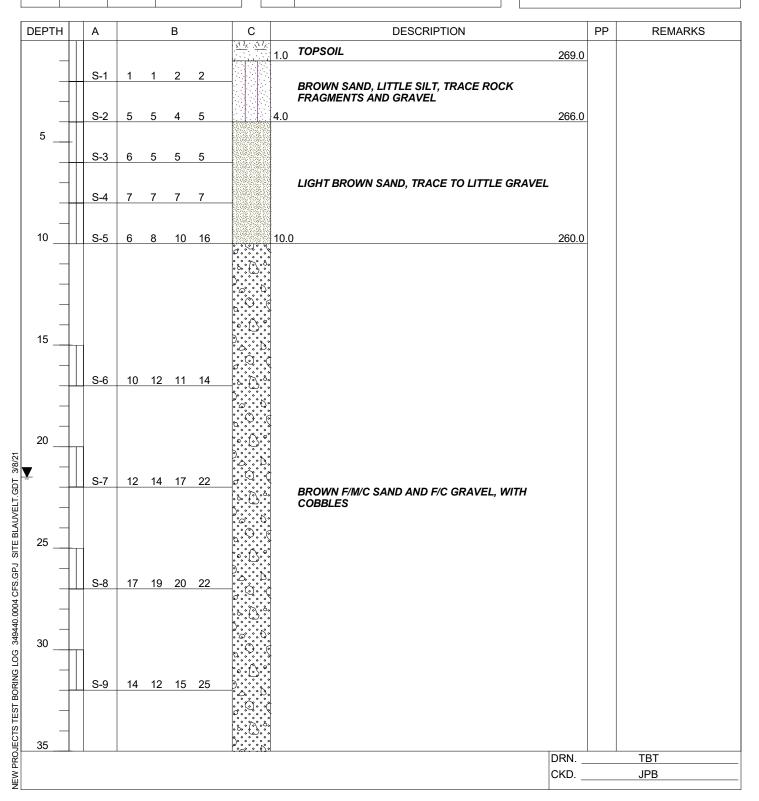
B-135 270.0

FILE

349440.0004

| | METHOD OF ADVANCING BOREHOLE | | | | | | | |
|----------|------------------------------|------|--------|----|--------|--|--|--|
| ∇ | а | FROM | 0.0 ' | TO | 10.0 ' | | | |
| _ | h | FROM | 10.0 ' | TO | 55.0 ' | | | |
| ▼ | | | | | | | | |
| - | | | | | | | | |
| 1 1 | | | | | | | | |

| DRILLER | A. PETERS |
|----------------|------------|
| HELPERC | CHERRY |
| INSPECTOR | S. PRATT |
| DATE STARTED | 11/17/2020 |
| DATE COMPLETED | 11/17/2020 |
| | |





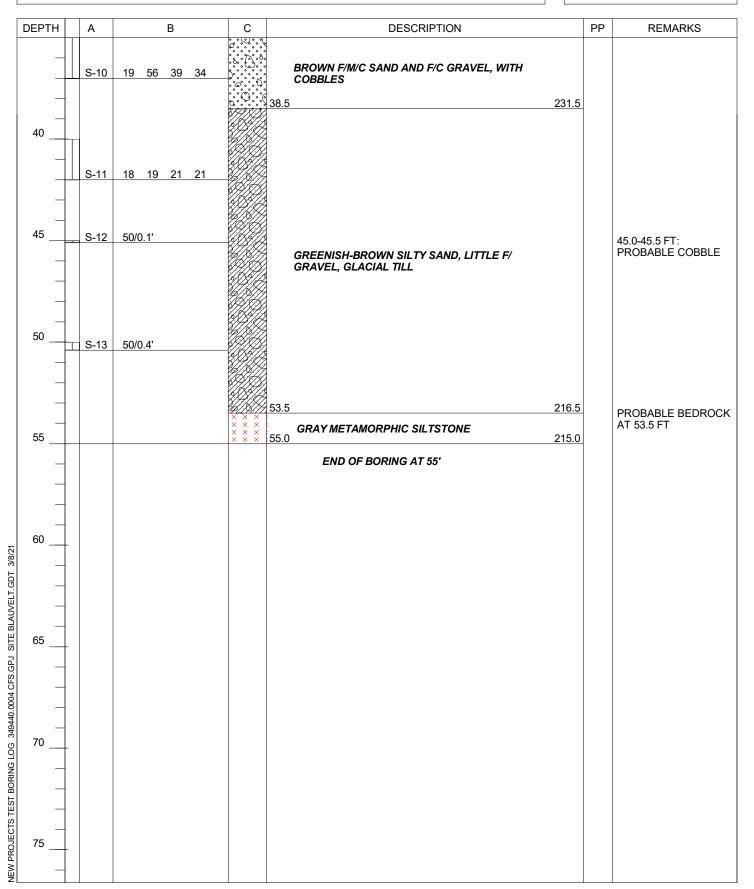
PROJECT: CFS

LOCATION: DEVENS, MA

BORING B-135 G.S. ELEV. 270.0

FILE 349440.0004

SHEET 2 OF 2





PROJECT: CFS

LOCATION: DEVENS, MA

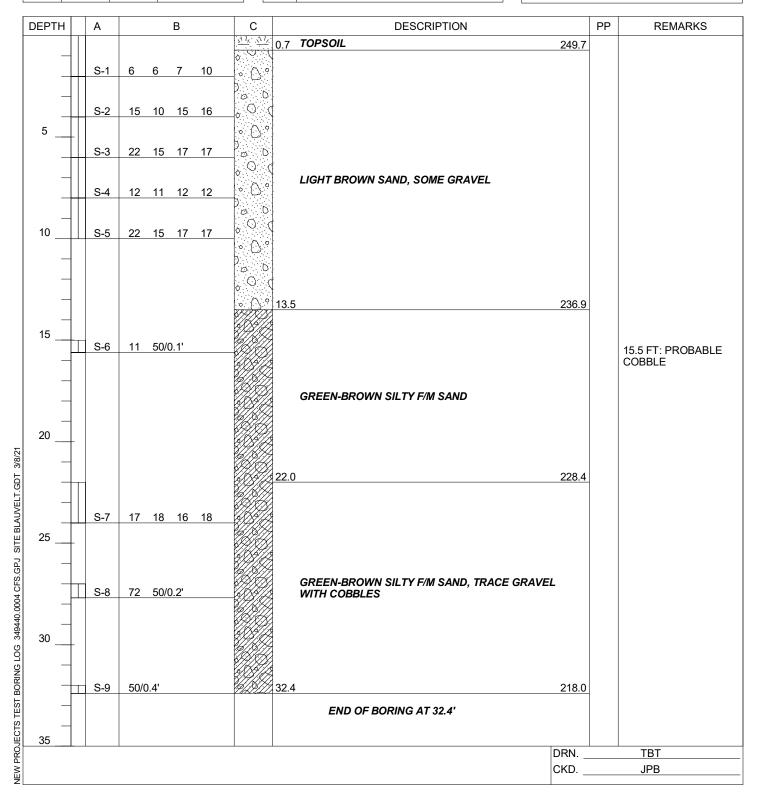
BORING B-136 G.S. ELEV. 250.4

> FILE 349440.0004

| GROUNDWATER DATA | | | | | | | | |
|------------------|-----------------------------|--|--|--|--|--|--|--|
| FIRST I | FIRST ENCOUNTERED N/A | | | | | | | |
| DEPTH | EPTH HOUR DATE ELAPSED TIME | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| M | METHOD OF ADVANCING BOREHOLE | | | | | | |
|---|------------------------------|--------|----|--------|--|--|--|
| а | FROM | 0.0 ' | TO | 10.0 ' | | | |
| h | FROM | 10.0 ' | TO | 32.4 ' | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| DRILLER | P | A. PETERS | |
|-------------|------|------------|--|
| HELPER | С | : CHERRY | |
| INSPECTOR | | S. PRATT | |
| DATE STARTI | ED | 11/17/2020 | |
| DATE COMPL | ETED | 11/17/2020 | |
| | | | |





GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX B.3

2020 TRC OBSERVATION WELL GROUNDWATER LEVEL DATA

Monitoring Well Gauging Data Commonwealth Fusion Systems (CFS) 111 Hospital Road, Devens, MA

| | Depth t | to Water (ft b | tor) |
|----------------------|-----------------------------|----------------|-------------------------|
| Well ID ¹ | 9/15 & 9/25/20 ² | 10/8/2020 | 11/11/2020 ³ |
| MW-1 | 40.40 | 41.90 | 42.00 |
| MW-2 | 26.40 | 26.61 | 26.70 |
| MW-3 | 41.45 | 40.40 | NM |
| MW-4 | 39.80 | 39.35 | 39.85 |
| MW-5 | 47.85 | 48.25 | 49.26 |
| MW-6 | 37.35 | 38.56 | 39.57 |
| MW-7 | 35.99 | 36.51 | 37.55 |
| B-45 | NM | 40.96 | NM |
| B-119 | NM | 46.57 | NM |

Ft btor – feet below top of [PVC] riser

¹ B-45 and B-119 are piezometers

² Wells MW-3, 4, 6, and 7 measured on 9/15/20 and wells MW-1 and 2 measured on 9/25/20

³ Water levels collected prior to well abandonment

Michael Ostrowski

From: Kazaniwsky, Petro W. <PKazaniwsky@trccompanies.com>

Sent: Monday, October 12, 2020 7:22 AM

To: Michael Ostrowski

Cc: Labbe, William; Martin Rodick; Brian Kennedy; Jason Bruetsch; Douglas Hartnett

(dhartnett@highpointeng.com); Brent Goldstein; Mike Toomey; treynoso; Anne

Columbia; Brett Horton

Subject: RE: [EXTERNAL] Re: Water levels in monitoring wells - CFS Devens

Categories: Green Category, Red Category

Michael, more well stickups: MW-2 had 2.40 ft. of stickup MW-5 had 2.26 ft. of stickup MW-7 had 1.75 ft. of stickup

Petro W. Kazaniwsky, P.E. Chief Geotechnical Engineer



16000 Commerce Parkway, Suite B, Mount Laurel, NJ 08054 Direct Dial: 856-780-8529 | F: 856-273-9244 | C: 609-314-6662

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Please note that our domain name and email addresses have changed

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From: Kazaniwsky, Petro W.

Sent: Thursday, October 8, 2020 10:10 AM

To: Michael Ostrowski < Michael. Ostrowski@gza.com>

Cc: Labbe, William <wlabbe@trccompanies.com>; Martin Rodick <Martin.Rodick@gza.com>; Brian Kennedy

<bkennedy@bwkennedyco.com>; Jason Bruetsch <jbruetsch@bwkennedyco.com>; Douglas Hartnett

(dhartnett@highpointeng.com) < dhartnett@highpointeng.com>; Brent Goldstein < brg@gm-se.com>; Mike Toomey

<toomey@bostonenvcorp.com>; treynoso <treynoso@ks-prop.com>; Anne Columbia

<acolumbia@columbiagrouprealty.com>; Brett Horton <bhorton@cfs.energy>

Subject: Re: [EXTERNAL] Re: Water levels in monitoring wells - CFS Devens

I have some stick ups of pipe risers but field staff will need to confirm for those that I don't have

Mw1 3ft

Mw3 2 ft

Mw4 1ft 9 in.

Mw6 2ft 6in

Sent from my iPhone P Kazaniwsky



GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX B.4

2020 H&A SUBSURFACE SUMMARY TABLES AND TEST BORING LOGS

TABLE I SUMMARY OF SUBSURFACE INFORMATION SPARC - BUILDING 2 AND MOTOR GENERATOR BUILDING



FILE NO. 134902-003

DEVENS, MASSACHUSETTS

| | GROUND | | DEPTH | ELEV. | TOPS | OIL / FORES | T MAT | | FILL | | | LOESS | | GLACI | OFLUVIAL DE | POSITS | GLACIOL | ACUSTRINE I | DEPOSITS | | GLACIAL TILI | L | BEDI | ROCK |
|--------------|--------------|-------------|-----------------|-----------------|--------|-------------|-----------|--------|----------|-----------|--------|----------|-----------|--------|-------------|-----------|---------|-------------|-----------|--------|--------------|-----------|--------|----------|
| EXPLORATION | SURFACE | DEPTH OF | TO WATER | OF WATER | DEPTH | TOP OF | | DEPTH | TOP OF | | DEPTH | TOP OF | | DEPTH | TOP OF | | DEPTH | TOP OF | | DEPTH | TOP OF | | DEPTH | TOP OF |
| DESIGNATION | ELEVATION | EXPLORATION | DURING DRILLING | DURING DRILLING | ТО ТОР | STRATUM | THICKNESS | ТО ТОР | STRATUM | THICKNESS | ТО ТОР | STRATUM | THICKNESS | ТО ТОР | STRATUM | THICKNESS | ТО ТОР | STRATUM | THICKNESS | TO TOP | STRATUM | THICKNESS | TO TOP | STRATUM |
| | (FT, NAVD88) | (FT) | (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) | (FT) | (FT) | EL. (FT) |
| B-29 | 294 | 27 | NE | NE | 0 | 294 | 0.3 | NE | NE | NE | 0.3 | 293.7 | 2.2 | 2.5 | 291.5 | 24.5 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-30 | 277 | 27 | NE | NE | 0 | 277 | 0.5 | 0.5 | 276.5 | 2 | 2.5 | 274.5 | 0.5 | 3 | 274 | 24 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-31 (MW-3) | 278 | 44 | NE | NE | NE | NE | NE | 0 | 278 | 6 | NE | NE | NE | 6 | 272 | 38 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-32 | 286 | 50.5 | 22.2 | 263.8 | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0 | 286 | 41.5 | NE | NE | NE | 41.5 | 244.5 | 9 | 50.5 | 235.5 |
| B-33 | 278 | 37 | 34.6 | 243.4 | NE | NE | NE | 0 | 278 | 9.5 | 9.5 | 268.5 | 1.5 | 11 | 267 | 23 | 34 | 244 | 3 | NE | NE | NE | NE | NE |
| B-34 | 282 | 51 | 35.1 | 246.9 | NE | NE | NE | 0 | 282 | 5 | NE | NE | NE | 5 | 277 | 28.5 | 33.5 | 248.5 | 5.5 | NE | NE | NE | 39 | 243 |
| B-35 | 291 | 50 | NE | NE | NE | NE | NE | 0 | 291 | 6 | NE | NE | NE | 6 | 285 | 16 | 22 | 269 | 16.5 | 38.5 | 252.5 | 11.5 | 50 | 241 |
| B-36 | 288 | 55 | 38.5 | 249.5 | 0 | 288 | 2 | NE | NE | NE | 0 | 288 | 2 | 2 | 286 | 39.5 | NE | NE | NE | 41.5 | 246.5 | 12.5 | 54 | 234 |
| B-37 | 295 | 54 | 22.7 | 272.3 | 0 | 295 | 3 | NE | NE | NE | 0 | 295 | 3 | 3 | 292 | 44.5 | NE | NE | NE | 47.5 | 247.5 | 6 | 53.5 | 241.5 |
| B-38 | 285 | 50 | 38.6 | 246.4 | 0 | 285 | 0.5 | NE | NE | NE | 0.5 | 284.5 | 1.5 | 2 | 283 | 36.5 | NE | NE | NE | 38.5 | 246.5 | 5.5 | 44 | 241 |
| B-39 | 282 | 45 | 16.3 | 265.7 | NE | NE | NE | 0 | 282 | 4 | NE | NE | NE | 4 | 278 | 28.5 | NE | NE | NE | 32.5 | 249.5 | 12.5 | 45 | 237 |
| B-40 | 282 | 56.2 | 37.6 | 244.4 | NE | NE | NE | NE | NE | NE | 0 | 282 | 1.5 | 1.5 | 280.5 | 31.5 | NE | NE | NE | 33 | 249 | 16.5 | 49.5 | 232.5 |
| B-41 | 274 | 37 | NE | NE | NE | NE | NE | 0 | 274 | 1 | 1 | 273 | 1.5 | 2.5 | 271.5 | 30.5 | 33 | 241 | 4 | NE | NE | NE | NE | NE |
| B-42 | 273 | 32 | NE | NE | NE | NE | NE | 0 | 273 | 9 | NE | NE | NE | 9 | 264 | 22 | 31 | 242 | 1 | NE | NE | NE | NE | NE |
| B-43 | 289 | 56.5 | 23.5 | 265.5 | NE | NE | NE | 0 | 289 | 3.5 | NE | NE | NE | 3.5 | 285.5 | 30.5 | NE | NE | NE | 34 | 255 | 15 | 49 | 240 |
| B-44 | 292 | 65 | 27.8 | 264.2 | NE | NE | NE | NE | NE | NE | 0 | 292 | 2.5 | 2.5 | 289.5 | 37 | NE | NE | NE | 39.5 | 252.5 | 13.5 | 53 | 239 |
| B-45 (OW) | 283 | 71.5 | 35.5 | 247.5 | 0 | 283 | 0.5 | NE | NE | NE | 0.5 | 282.5 | 1.5 | 2 | 281 | 21.5 | 23.5 | 259.5 | 14.5 | 38 | 245 | 6 | 44 | 239 |
| B-46 | 283 | 32 | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | NE | 0 | 283 | 32 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-47 | 275 | 57.5 | NE | NE | 0 | 275 | 1 | NE | NE | NE | 0 | 275 | 1 | 1 | 274 | 33 | 34 | 241 | 13.3 | NE | NE | NE | 47.3 | 227.7 |
| B-48 | 288 | 45 | NE | NE | NE | NE | NE | 0 | 288 | 6.5 | NE | NE | NE | 6.5 | 281.5 | 29.5 | NE | NE | NE | 36 | 252 | 6 | 42 | 246 |
| B-49 | 299 | 77 | 40.5 | 258.5 | NE | NE | NE | NE | NE | NE | 0 | 299 | 1 | 1 | 298 | 45 | NE | NE | NE | 46 | 253 | 20.5 | 66.5 | 232.5 |
| B-50 | 285 | 60 | 27.8 | 257.2 | NE | NE | NE | NE | NE | NE | 0 | 285 | 2 | 2 | 283 | 32 | NE | NE | NE | 34 | 251 | 9.7 | 43.7 | 241.3 |
| B-51 | 282 | 55 | 28.9 | 253.1 | 0 | 282 | 2.5 | NE | NE | NE | 0 | 282 | 2.5 | 2.5 | 279.5 | 32.5 | NE | NE | NE | 35 | 247 | 9 | 44 | 238 |
| B-52 | 283 | 55 | 36.2 | 246.8 | 0 | 283 | 0.5 | NE | NE | NE | NE | NE | NE | 0.5 | 282.5 | 37.5 | 38 | 245 | 5.5 | 43.5 | 239.5 | 6 | 49.5 | 233.5 |
| B-53 (OW) | 275 | 46.5 | 32.8 | 242.2 | NE | NE | NE | 0 | 275 | 5 | NE | NE | NE | 5 | 270 | 28.5 | NE | NE | NE | 33.5 | 241.5 | 10 | 43.5 | 231.5 |
| B-54 (OW) | 287 | 44 | NE | NE | NE | NE | NE | 0 | 287 | 6 | NE | NE | NE | 6 | 281 | 28 | NE | NE | NE | 34 | 253 | 1.5 | 35.5 | 251.5 |
| B-55 | 286 | 56.5 | NE | NE | 0 | 286 | 0.3 | NE | NE | NE | 0.3 | 285.7 | 1.7 | 2 | 284 | 32 | NE | NE | NE | 34 | 252 | 19.5 | 53.5 | 232.5 |
| B-56 | 281 | 55 | NE | NE | 0 | 281 | 2 | NE | NE | NE | 0 | 281 | 2 | 2 | 279 | 32 | NE | NE | NE | 34 | 247 | 9.5 | 43.5 | 237.5 |
| B-57 | 280 | 37 | NE | NE | 0 | 280 | 2 | NE | NE | NE | 0 | 280 | 2 | 2 | 278 | 35 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-74 | 299 | 79.5 | 44.1 | 254.9 | 0 | 299 | 1.5 | 1.5 | 297.5 | 2.5 | 0 | 299 | 1.5 | 4 | 295 | 30 | 34 | 265 | 14 | 48 | 251 | 20 | 68 | 231 |
| B-81 | 293 | 62 | 27 | 266 | 0 | 293 | 2 | NE | NE | NE | 0 | 293 | 2 | 2 | 291 | 42 | NE | NE | NE | 44 | 249 | 6 | 50 | 243 |
| B-82 | 280 | 27 | NE | NE | NE | NE | NE | NE | NE | NE | 0 | 280 | 2 | 2 | 278 | 25 | NE | NE | NE | NE | NE | NE | NE | NE |
| B-83 (OW) | 287 | 72 | 44 | 243 | 0 | 287 | 0.3 | 0.3 | 286.7 | 9.7 | NE | NE | NE | 10 | 277 | 33 | NE | NE | NE | 43 | 244 | 18.5 | 61.5 | 225.5 |
| B-117 | 293 | 65 | 30.4 | 262.6 | NE | NE | NE | NE | NE | NE | 0 | 293 | 2 | 2 | 291 | 41.5 | 43.5 | 249.5 | 5 | 48.5 | 244.5 | 6.5 | 55 | 238 |
| B-118 (MW-9) | 290 | 63 | 44 | 246 | 0 | 290 | 1.5 | NE | NE | NE | 1.5 | 288.5 | 2.5 | 4 | 286 | 39.5 | NE | NE | NE | 43.5 | 246.5 | 10 | 53.5 | 236.5 |
| B-119 (MW-8) | 295 | 57 | 44 | 251 | 0 | 295 | 2 | NE | NE | NE | 2 | 293 | 3 | 5 | 290 | 28.5 | 33.5 | 261.5 | 11.5 | NE | NE | NE | 45 | 250 |
| B-120 | 287 | 60 | NE | NE | 0 | 287 | 0.5 | 0.5 | 286.5 | 5.5 | NE | NE | NE | 6 | 281 | 33 | NE | NE | NE | 39 | 248 | 11 | 50 | 237 |

NOTES

- 1. ELEVATIONS ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 2. ELEVATIONS ARE BASED ON ELECTRONIC FILE "OVERALL BORING PLAN 11-11-20.DWG," PROVIDED TO HALEY & ALDRICH, INC. BY TRC ON 17 NOVEMBER 2020.
- 3. WATER LEVELS OBSERVED DURING DRILLING ARE INFLUENCED BY DRILLING OPERATIONS, THEREFORE, GROUNDWATER MAY NOT HAVE STABILIZED AND WATER LEVEL OBSERVATIONS DURING DRILLING MAY NOT BE REPRESENTATIVE OF ACTUAL GROUNDWATER CONDITIONS. REFER TO TABLE II FOR A SUMMARY OF GROUNDWATER OBSERVATIONS FROM WELLS INSTALLED IN COMPLETED BOREHOLES.

ABBREVIATIONS:

"NE": INDICATES NOT ENCOUNTERED

Page 1 of 1 Date: 2/4/2021

TABLE II SUMMARY OF GROUNDWATER OBSERVATIONS SPARC - Building 2 and Motor Generator Building Devens, Massachusetts



FILE NO. 134902-003

| OBSERVATION WELL ID | GROUND SURFACE ELEV. (FT) | DATE | DEPTH TO GROUNDWATER (FT) | ELEVATION OF GROUNDWATER (FT) |
|---------------------------|------------------------------------|------------|---------------------------------|--|
| | , , | 10/6/2020 | 38.6 | 239.4 |
| | | 10/12/2020 | 38.9 | 239.1 |
| | | 10/23/2020 | 39.2 | 238.8 |
| B-31 (MW-3) | 278 | 11/9/2020 | 39.1 | 238.9 |
| | | 11/24/2020 | 39.9 | 238.1 |
| | | 12/12/2020 | 40.1 | 237.9 |
| | | 10/6/2020 | 37.9 | 245.1 |
| | | 10/12/2020 | 38.4 | 244.6 |
| D 45 (OW) | 283 | 10/23/2020 | 38.7 | 244.3 |
| B-45 (OW) | 203 | 11/9/2020 | 39.4 | 243.6 |
| | | 11/24/2020 | 39.7 | 243.3 |
| | | 12/12/2020 | 40.3 | 242.7 |
| | | 11/9/2020 | 37.7 | 237.3 |
| B-53 (OW) | 275 | 11/24/2020 | 38.2 | 236.8 |
| | | 12/12/2020 | 38.7 | 236.3 |
| | | 10/23/2020 | 36.5 | 250.5 |
| D 54 (OM) | 007 | 11/9/2020 | 37.3 | 249.7 |
| B-54 (OW) | 287 | 11/24/2020 | 37.3 | 249.7 |
| | | 12/12/2020 | 37.6 | 249.4 |
| | | 11/9/2020 | 45.2 | 241.8 |
| B-83 (OW) | 287 | 11/24/2020 | 45.4 | 241.6 |
| | | 12/12/2020 | 45.6 | 241.5 |
| | | 10/23/2020 | 44.3 | 245.7 |
| D 449 (M)A/ () | 290 | 11/9/2020 | 44.6 | 245.4 |
| B-118 (MW-9) | 290 | 11/24/2020 | 45.0 | 245.0 |
| | | 12/12/2020 | 45.4 | 244.6 |
| | | 10/12/2020 | 45.4 | 249.6 |
| | | 10/23/2020 | 45.1 | 249.9 |
| B-119 (MW-8) | 295 | 11/9/2020 | 45.7 | 249.3 |
| | | 11/24/2020 | 45.5 | 249.5 |
| | | 12/12/2020 | 45.6 | 249.4 |

NOTES

- 1. ELEVATIONS ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 2. ELEVATIONS ARE BASED ON DRAWING, OVERALL BORING PLAN 11-11-20, DATED 24 AUGUST 2020, PROVIDED TO HALEY & ALDRICH, INC. BY TRC ON 17 NOVEMBER 2020.

Page 1 of 1 Printed: 2/4/2021

IDENTIFICATION AND DESCRIPTION OF SUBSURFACE MATERIALS

SOIL

Soil description on logs of subsurface explorations are based on Standard Penetration Test results, visual-manual examination of exposed soil and soil samples, and the results of laboratory tests on selected samples. The criteria, descriptive terms and definitions are as follows:

DENSITY OR CONSISTENCY

| Density of Cohesionless Soils | Penetration Resistance (Blows per ft.) | Consistency of Cohesive Soils | Penetration Resistance (Blows per ft.) |
|----------------------------------|--|----------------------------------|--|
| Very Loose | 0-4 | Very Soft | 0-2 |
| Loose | 5-10 | Soft | 3-4 |
| Medium | 11-30 | Medium | 5-8 |
| Dense | 31-50 | Stiff | 9-15 |
| Very Dense | over 50 | Very Stiff | 16-30 |
| - | | Hard | over 30 |

PENETRATION RESISTANCE

12"

305 mm

MAJOR DIVISIONS

Boulders

Coarse grained

more than half

is larger

than number

200 sieve

Fined-grained

soils:

more than half

smaller than

number 200

sieve

Standard Penetration Test (ASTM D-1586) - Number of blows required to drive a standard 2 in. O.D. split spoon sampler 1 ft. with a 140 lb. weight falling freely through 30 in.

3"

76 mm

Gravels

More than half

of coarse

fraction is larger

than number 4

sieve

Sands

More than half

of coarse

fraction is

smaller than

number 4 sieve

Coarse

U.S. Standard Series Seive

Fine

Gravels with

little or no fines

Gravels with

over 12% fines

Sands with little

or no fines

Sands with over

12% fines

Silts and Clays

Liquid limit 50% or less

Silts and Clays

Liquid limit greater than 50%

3/4"

Gravel

19 mm

COLOR: Basic colors and combinations: black, brown, gray, yellow-brown, etc.

Cobbles

SUPPLEMENTAL SOIL TERMINOLOGY:

Laminae - 0 to 1/16 in. thick (granular) Parting - 1/16 to 1/2 in. thick Layer - 1/2 to 12 in. thick - > 12 in. thick Stratum - Small, erratic deposit less than 12 in. size Pocket

- Lenticular deposit larger than a pocket Lens Occasional - One or less per 12 in, of thickness Frequent - More than one per 12 in, of thickness Interbedded - Alternating soil layers of differing composition - Alternating thin seams of silt and clay Varved

Mottled - Variation of color

GEOLOGIC INTERPRETATION

Sand

Medium

10

2.00 mm

Coarse

Symbol

GΡ

GM

GC

SW

SP

SM

SC

ML

CL

OL

MH

СН

ОН

РΤ

GW 🔭

4.75 mm

UNIFIED SOIL CLASSIFICATION SYSTEM

Deposit type - GLACIAL TILL, ALLUVIUM, FILL....

40

0.43 mm

Well graded gravels, gravel-sand mixtures

Poorly graded gravels, gravel-sand mixtures

Well graded sands, gravelly sands

Poorly graded sands, gravelly sands

Silty sands, poorly graded sand-silt mixtures

sands or clayey silts with slight plasticity

Inorganic clays of high plasticity, fat clays

clays, silty clays, lean clays

elastic silts

Clayey sands, poorly graded sand-clay mixtures

Organic clays and organic silty clays of low plasticity

Organic clays of medium to high plasticity, organic silts

Inorganic silts and very fine sands, rock flour, silty or clayey fine

Inorganic clays of low to medium plasticity, gravelly clays, sandy

Inorganic silty, micaceous or diatomaceous fine sandy or silty soils,

Silty gravels, poorly graded gravel-sand-silt mixtures

Clayey gravels, poorly graded gravel-sand-clay mixtures

The natural soils are identified by criteria of Unified Soil Classification System (USCS), with appropriate group symbol in parenthesis for each soil description. Fill materials may not be classified by USCS criteria.

Fine

Clear Square Sieve Openings

200

0.074 mm

TYPICAL NAMES

Silts and Clays

Rock descriptions noted on logs of subsurface explorations are based on - 0 to 1/16 in. thick (cohesive) visual-manual examination of exposed rock outcrops and core samples. The criteria, descriptive terms and definitions used are as follows:

Hard

FIELD HARDNESS: A measure of resistance to scratching. Cannot be scratched with a knife point Very Hard

or sharp pick.

Can be scratched with a knife point or sharp pick, only with difficulty.

Moderately Hard Can be readily scratched with a knife

point or pick.

Medium Hard Can be grooved or gouged 1/16 in. deep with firm pressure on a knife point or

sharp pick.

Can be grooved or gouged easily with a Soft

knife point or pick.

Very Soft Can be carved with a knife and excavated

with a pick point.

WEATHERING: The action of organic and inorganic and chemical and physical processes resulting in alteration of

color, texture and composition.

Fresh-FR No visible sign of alteration, except

perhaps slight discoloration on major

discontinuity surfaces.

Discoloration of rock material and Slight-SL discontinuity surfaces. All rock may be

discolored and/or somewhat weaker than in its fresh condition

Moderate-MOD Less than half the rock material is decomposed and/or disintegrated to a soil. Some fresh or

discolored rock is present as either a continuous

framework or as corestones.

High-HIGH More than half the rock material is

decomposed and/or disintegrated to a soil. Fresh or discolored rock is present as either a discontinuous framework or as corestones.

Complete-COMP All rock material is decomposed and/or

disintegrated to soil. The original mass

structure is largely intact.

Residual Soil All rock material is converted to soil. The mass structure and material fabric are destroyed.

> There has been a large change of volume, but the material has not been significantly

transported.

COLOR: Basic colors and combinations: gray, light gray, brown,

TEXTURE: Size, shape and arrangements of constituents.

Term Igneous Sedimentary > 5 mm > 2 mm Coarse-grained Medium-grained 0.625 - 2 mm 1 - 5 mm < 0.625 mm < 1 mm Fine-grained Aphanitic

Individual grains invisible to the unaided eye.

LITHOLOGY: Rock classification and modifiers;

accepted formation names.

ROCK

DISCONTINUITIES:

Type A natural fracture along which no Joint

Definition

displacement has occurred. May occur in parallel groups called sets.

A natural fracture along which

displacement has occurred. Surface may be slickensided or striated.

A natural fracture along which

displacement has occurred. Usually

lined with gouge and slickensides.

Zone of fractured rock and gouge Shear or Fault bordering the displacement plane.

Zone

Shear

Fault

ORIENTATION/ATTITUDE:

| Term | Angle (degrees) |
|--------------------|-----------------|
| Horizontal | 0-5 |
| Low Angle | 6-35 |
| Moderately Dipping | 36-55 |
| High Angle | 56-85 |
| Vertical | 86-100 |

SPACING:

| Discontinuity Term | Bedding Term | Inches |
|--------------------|-----------------|-----------|
| Extremely Close | Extremely Thin | < 3/4 |
| Very Close | Very Thin | 3/4 - 2.5 |
| Close | Thin | 2.5 - 8 |
| Moderate | Medium | 8 - 24 |
| Wide | Thick | 24 - 80 |
| Very Wide | Very Thick | 80 - 240 |
| Extremely Wide | Extremely Thick | > 240 |

PERSISTENCE/CONTINUITY: APERTURE/GAP:

| Torm | Foot | T | Distance |
|-----------|-------------|-----------------|-----------------|
| Term_ | <u>Feet</u> | <u>Term</u> | <u>Distance</u> |
| Very Low | 0-3 | Very Tight | < 0.1mm |
| Low | 3-10 | Tight | 0.1mm-0.25mm |
| Medium | 10-35 | Partly Open | 0.25mm-0.5mm |
| High | 35-65 | Open | 0.5mm-2.5mm |
| Very High | > 65 | Moderately Wide | 2.5mm-1cm |
| | | Wide | > 1cm |
| | | Very Wide | 1cm-10cm |
| | | Extremely Wide | 10cm-1m |

Cavernous

> 1m

POROSITY:

Type

Primary

Pre-depositional and depositional inter- and intra- granular, particle, or crystalline pores.

Secondary:

Solution features including pits, vugs, caverns, molds, and channels. Fracture features including joints, shears, faults, shrinkage and breccia fabrics.

> Micro < 0.0625 mm 0.0625-4.0 mm Meso Mega 4.0-256 mm



SUBSURFACE EXPLORATION KEY

GENERAL NOTES

1. Logs of subsurface explorations depict soil, rock and groundwater conditions only at the locations specified on the dates indicated. Subsurface conditions may vary at other locations and at other times.

Highly organic soils

2. Water levels noted on the logs were measured at the times and under the conditions indicated. During test borings, these water levels could have been affected by the introduction of water into the borehole, extraction of tools on other procedures and thus may not reflect actual groundwater level at the test boring location. Groundwater level fluctuations may also occur as a result of variations in precipitation, temperature, season, tides, adjacent construction activities and pumping of water supply wells and construction dewatering systems.

Peat and other highly organic soils

| Type Inside Diamet Hammer Weig Hammer Fall (t) Volume S | eter (iii eight (in.) | MMOI C COM (in.) (lb) | NWEAL MPANIE Casing NW 3 Spun | Samp S 1 3/4 30 | oler Barrel 8 0 | MOTOR GENERATOR BUMS Drilling Equipment Rig Make & Model: Acke Bit Type: Roller Bit Drill Mud: Polymer Casing: NW Spun 50 ft Hoist/Hammer: Automa | and Procedures | | Sh Sta Fir Dr H8 Ele | e No neet art nish iller &A F evan | No Rep | 0. 1 24 24 G. l | of I Au I Au Pee D. 27 | 2 igus igus I Wa 3.0 | st 20 st 20 arre |)20 n | |
|---|-----------------------|--------------------------------|--------------------------------------|------------------------------|--|--|--|---------|-------------------------------------|--|-----------|--------------------------|---------------------------------------|-------------------------------------|------------------------|-----------|------------|
| Hammer Weight Hammer Fall (1) OPOTO WOH/24 Sin. | eight (in.) | Sample (dl) (Depth (ft) | NW 3 Spun | S 1 3/3 140 30 loquuks | 8 0 - | Rig Make & Model: Acker Bit Type: Roller Bit Drill Mud: Polymer Casing: NW Spun 50 ft Hoist/Hammer: Automate | erXLS | | Dr H8 Ele Da | iller &A F eva | Rep | G. I | Pee D. 27 | 1 Wa 3.0 | arre | n | |
| Hammer Weight Hammer Fall (1) OPOTO WOH/24 Sin. | eight (in.) | Sample (gl) | 3 Spun | 1 3/3 140 30 loguks | 8 | Bit Type: Roller Bit Drill Mud: Polymer Casing: NW Spun 50 ft Hoist/Hammer: Automa | | | Ele Da | eva | tion | | 27 | 3.0 | | | |
| Hammer Weighammer Fall O Depth (tt) Swoll and the State of State | eight (in.) | Sample (gl) | Spun <u>£</u> | 30 logmyS | | Drill Mud: Polymer Casing: NW Spun 50 ft Hoist/Hammer: Automa | ntia Hammar | | Da | | | 1 | | | | | |
| Hammer Fall O Debth (tt) O WOH/24 S in. WOH/24 S in. Samble No. WOH/18 S in. | S2 | Sample () | · | Symbol 30 | - | Casing: NW Spun 50 ft Hoist/Hammer: Automa | otio Hammor | | | ituii | | | NI A | ٩VD | ነ ጸጸ | | |
| WOH/24 S in. 4 WOH/24 S in. 6 WOH/24 S in. 3 WOH/18 S in. 8 | S1 4 | 0.0 | Stratum Change Elev/Depth (ft) | Symbol Symbol | VISI | aa a madoi. NA | auc nammer | | Lo | cati | | S | | | | | |
| WOH/24 S in. 4 WOH/24 S in. 6 WOH/24 S in. 3 WOH/18 S in. 8 | S1 4 | 0.0 | Stratuı Chang Elev/Dept | Sy | *100 | AL-MANUAL IDENTIFICATION | N AND DESCRIPTION | t | | avel | - | San | d | | F | Ś | Test |
| WOH/24 S in. 4 WOH/24 S in. 6 WOH/24 S in. 3 WOH/18 S in. 8 | 4 S2 | 0.0 | | nscs | (Density | /consistency, color, GROUP N structure, odor, moisture, opti GEOLOGIC INTERPRE | onal descriptions | | % Coarse | % Fine | % Coarse | % Medium | % Fine | % Fines | Dilatancy | Toughness | Plasticity |
| in. 6 WOH/24 S in. 3 5 - WOH/18 S in. 8 | | | | OL/OH | Very soft brown structure, no o | n sandy ORGANIC SOIL (OL/dor, dry | OH) mps = < 1mm, no | | | | | | 40 | 60 | | | 7 |
| in. 3 WOH/18 S in. 8 | 6 | 2.0 4.0 | - | SM | Very loose tan no odor, dry | silty SAND with trace gravel (| SM) mps= 1.5 in., no stru | ıcture, | 5 | | | | 60 | 35 | | | |
| in. 8 | S3 3 | 4.0 6.0 | | SM | | re except with no gravel tory grain size analysis perfor | med on composite S1 to S | S3 by | | | | 5 | 60 | 35 | | | |
| 8 8 | S4 8 | 6.0 8.0 | _ | SM | Similar to abov | re | | | | | | | 60 | 40 | | | |
| 8 S | | | | | | -FILL- | | | | | | | | | | | |
| 9 1 | S5 10 | 8.0 10.0 | 264.0 9.0 | SM | | brown silty SAND with gravel | . , . | | 10 | 10 | 5 | 5 | 35 | 35 | | | |
| 10 | | | | | indicate boring | located within footprint of UX | O clearance trench | | | | | | | | | | |
| | | 15.0 17.0 | | ML | odor, moist | light brown sandy SILT (ML) tory grain size analysis perfon | • | e, no | | | | 1 | 43 | 56 | | | |
| | | | | | | -GLACIOFLUVIAL DE | POSITS- | | | | | | | | | | |
| 20 | Wat | iter Le | vel Data | a | | Sample ID | Well Diagram | | | | Sum | ı ma | ıry_ | | | | _ |
| Date Ti | Time . | Elap Time | (hr Bo | ttom E | Bottom Water | O - Open End Rod T - Thin Wall Tube U - Undisturbed Sample | Riser Pipe Screen Filter Sand Cuttings | Overb | Со | red | • | :) | | 32 | | | |
| | | | D.: . | | | S - Split Spoon Sample | Grout Concrete Bentonite Seal | Borir | ng | No | | S | | В | -42 | | _ |
| Field Tests: | | | Toughn | ess: L - | Rapid S - Slow Low M - Mediunetermined by direction | m H - High Dry Str | ity: N - Nonplastic L - Lov ength: N - None L - Low | | | | | | | | | | |

| Н | XLE | Y | н | | | TEST BORING REPORT | F | ile l | No. | | 349 | 02-0 | 003 | -42 | | |
|------------------|----------------------------|----------------------------|----------------------|--------------------------------------|-------------|--|----------|--------------|----------|------------|--------|---------|-----------|-----------|------------|--------------|
| | | | | - | <u></u> | | _ | shee avel | _ | o. Sand | | of | _ | iald | Tes | - |
| (#) | Blov in | e No in | ple (#) | um ige pth (f | ymb | VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION | | | , g | 트 | | | | SS | | |
| Depth (ft) | Sampler Blows per 6 in. | Sample No. & Rec. (in.) | Sample Depth (ft) | Stratum Change Elev/Depth (ft) | USCS Symbol | (Density/consistency, color, GROUP NAME, max. particle size [†] , structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION) | % Coarse | % Fine | % Coarse | % Medium | % Fine | % Fines | Dilatancy | Toughness | Plasticity | Strength |
| - 20 - - - | 16 14 19 25 | S7 15 | 20.0 22.0 | | SM | Dense light brown-gray silty SAND with gravel (SM) mps= 0.75 in., no structure, no odor, moist NOTE: Laboratory grain size analysis performed on S7 by TRC | | 21 | 12 | 24 | 28 | 15 | | | | |
| - | | | | | | -GLACIOFLUVIAL DEPOSITS- | | | | | | | | | | |
| - - 25 - - | 26 15 13 16 | S8 12 | 25.0 27.0 | | SW | Medium dense brown well graded SAND with trace gravel (SW) mps = 0.75 in., no structure, no odor, moist | | 5 | 15 | 40 | 40 | | | | | |
| - - - 30 - | 10 10 | S9 12 | 30.0 31.0 | 242.0 31.0 | SW | Medium dense brown well graded SAND (SW) mps= 0.25 in., no structure, no odor, wet | | | | 50 | | | | | | |
| | 8 | S9A 5 | 31.0 32.0 | | ML | S9A: Medium dense brown sandy SILT with trace gravel (ML) mps=0.75 in., no structure, no odor, wet | | 5 | 5 | 5 | 35 | 50 | | | | |
| - | | | 32.0 | 241.0 32.0 | | -GLACIOLACUSTRINE DEPOSITS- BOTTOM OF EXPLORATION 32 FT. | \vdash | | | | | | | | + | _ |
| | | | | | | | | | | | | | | | | |
| | NOTE: | Soil id | entifica | tion base | d on vi | sual-manual methods of the USCS as practiced by Haley & Aldrich, Inc. | В | ori | ng | No. | | | В | -42 | | _ |

| Н | | PRIC | Н | | | - | ΓEST | BORING REPOI | RT | | | | | | | B | | UV | ١ |
|--------------------|--------------------|----------------------------|----------------------|----------------|--------------------------------------|-------------------|-----------------------------|--|----------------------------|--------------------|----------|-------------|--------------|------------|----------------|-------------------|-------------|------------|---|
| Pro Clie Cor | - | CC | OMMO | ONWE | | | G 2 AND N SYSTE | MOTOR GENERATOR B MS | UILDING, DEVENS, I | МА | Sh St | | No |). 1 23 | of Oc | 2-00 2 tobe | r 202 | | |
| | | | | Casi | ng Sar | npler | Barrel | Drilling Equipmer | nt and Procedures | | | iller | | | Pete | | | - | |
| Тур | е | | | NW | / | s | | Rig Make & Model: Ack | er XLS | | Нδ | &A I | Rep |). | D. | War | ren | | |
| Insid | de Dia | meter | (in.) | 3 | 1 | 3/8 | | Bit Type: Roller Bit Drill Mud: Polymer | | | | | tior | 1 | | 5.0 | 00 | | |
| Han | nmer \ | Veight | (lb) | | 1 | 40 | - | Casing: NW Spun 46.5 | | | | atun cat | | S | | NVD Plan | 00 | | - |
| Han | nmer l | all (in | .) | | 3 | 30 | - | Hoist/Hammer: Autom PID Make & Model: NA | | | | | | | | | | | |
| £ | Blows in. | 9 °C | o € | am | Stratum Change Elev/Depth (ft) | log | VI | SUAL-MANUAL IDENTIFICAT | | 1 | Gra | avel | _ | San | d | | Fiel | | 3 |
| Depth (ft) | e Bl | ole l | mple th (f | iagr | aturr ange epth | Symbol | (Den: | sity/consistency, color, GROU | IP NAME. max. particle s | ize [†] . | arse | σ, | Coarse | dium | a) | Se | ncy ness | jį | ; |
| Dep | Sampler I per 6 | Sample No. & Rec. (in.) | Sample Denth (ff) | Well Diagram | St. | nscs | , | structure, odor, moisture, odo | optional descriptions | , | % Coarse | % Fine | % Co | % Medium | % Fine | % Fines | Dilatancy | Plasticity | 5 |
| - 0 - | <i>ග</i> 3 | 0) ∞ S1 | 0.0 | | | SM | Medium | dense tan silty SAND with gra | , | 0 | 6 | 17 | _ | - | <i>∝</i> 28 | _ | 7 | Δ. | - |
| | 7 22 | 10 | 2.0 | 7.7 | | | structure | , no odor, moist | . , . | | | | | | | | | | |
| | 10 | | | | :} | | NOTE: L | aboratory grain size analysis | penonned on 51 by TRO | , | | | | | | | | | |
| | 9 | S2 | 2.0 | F-1 F | :: | SM | | own to gray silty SAND with g | gravel (SM) mps= 1.5 in. | , no | 10 | 10 | 5 | 10 | 50 | 15 | | | |
| | 17 29 | 15 | 4.0 | | : | | structure | , no odor, moist | | | | | | | | | | | |
| | 21 | | | | | SM | Similar to | | | | 10 | 10 | 10 | 10 | 45 | 15 | | | |
| | 19 15 | S3 10 | 4.0 | 1 • 1 1 | :] | | NOTE: Land S3 b | aboratory grain size analysis y TRC | performed on composite | S2 | | | | | | | | | |
| 5 - | 10 | S3A | 5.0 5.0 | | 270.0 5.0 | SW | | -FILL- | | -15 | 15 | 15 | 20 | 20 | 30 | + | + | + | _ |
| | | 7 | 6.0 | —::1 ŀ | : | SW | in., stratif | dense brown well graded SAI ïed, no odor, dry | שווח gravei (SW) mps | 5- 1.5 | 15 | 15 | 25 | 25 | 20 | | | | |
| | 17 15 | S4 16 | 6.0 8.0 | | | SVV | Similar to | above, with cobbles | | | 15 | 15 | 25 | 25 | 20 | | | | |
| | 12 19 | | | | | | | | | | | | | | | | | | |
| | 48 | S5 | 8.0 | | | sw | Dense br | own well graded SAND with | gravel (SW) mps= 1.5 in | ., no | 10 | 10 | 20 | 25 | 35 | | | | |
| | 23 12 | 16 | 10.0 | In Tal In | | | | , no odor, moist, with cobbles aboratory grain size analysis | | S4 | | | | | | | | | |
| | 20 | | | | | | and S5 b | | pononnou on composito | | | | | | | | | | |
| - 10 – | | | | | | | | -GLACIOFLUVIAL | DEPOSITS- | | | | | | | | | | |
| | | | | | : | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 262.5 12.5 | | | | | | - | +- | +- | ┼- | \vdash | -+ | + | + | - |
| | | | | | : | | | | | | | | | | | | | | |
| | | | | | | | | -GLACIOFLUVIAL | DEPOSITS- | | | | | | | | | | |
| 15- | 4.4 | | | | | SP- | Denos t- | n poorly graded SAND with s | ilt (SD SM) mnc= 0.25 :- | | | 4 | 10 | 11 | 32 | 10 | | | |
| | 11 19 | S6 16 | 15.0 17.0 | 1 - 1 1 | | SM- | weakly st | ratified, dry | , , , | • | | 4 | 10 | 44 | 32 | 10 | | | |
| | 16 18 | | | | :] | | NOTE: L | aboratory grain size analysis | performed on S6 by TR0 | <i>;</i> | | | | | | | | | |
| | | | | | :] | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 256.5 18.5 | + | | | | | | +- | +- | ╁- | \vdash | -+ | + | + | - |
| | | | | | | | | | | | | | | | | | | | |
| 20 - | | W: | ater I | :: _evel l | :₊ Data | | | Sample ID | Well Diagram | | | | Sum | nma | ırv | | | | = |
| ח | ate | Time | Ela | apsed | Dep | th (ft) | | O - Open End Rod | Riser Pipe | Overl | our | | | | | 6.5 | | | |
| | и. С | 711110 | Tim | e (hr. | Bottom of Casing | Botton of Hole | | T - Thin Wall Tube | Screen Filter Sand | Rock | | | • | , | | | | | |
| 10/29 | 9/2020 | 1600 | | | | 44.5 | 32.8 | U - Undisturbed Sample S - Split Spoon Sample | Cuttings Grout | Samp | oles | 5 | | S | | | | | _ |
| | | Initia | al OW | readi | ng, not st | abilzed | | | Concrete Bentonite Sea | Bori | ng | No | Э. | | В | -53(| OW |) | |
| Field | d Tests | : : | | | | | S - Slow | N - None Plastic | city: N - Nonplastic L - L | ow M - N | ledi | um | H | High | ١ . | /a · | lie-t | | |
| + | 4 84- | vimum | nartic | l OU | <u>igπness:</u> (mne) ie | <u>L - LOW</u> | ıvı - Mediui ined by dir | m H - High Dry St ect observation within the lin | rength: N - None L - Lo | <u>v IVI - Med</u> | ulun | n F | <u>ı - H</u> | ıgn | v - \ | ery l | ııgn | | - |

| Н | ALE | Y | Н | | | 7 | TEST BORING REPORT | F | | No. | 1 | 349 | 02-0 | | (OV | V) | |
|------------|----------------------------|----------------------------|----------------------|--------------|--------------------------------------|--------------|--|----------|--------|----------|-----------|--------|---------|-----------|------|------------|---|
| | | | | E | £ | - | | _ | hee | _ | o. San | | of | _ | ield | Te: | _ |
| Depth (ft) | Sampler Blows per 6 in. | Sample No. & Rec. (in.) | Sample Depth (ft) | Well Diagram | Stratum Change Elev/Depth (ft) | S Symbol | VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Density/consistency, color, GROUP NAME, max. particle size [†] , structure, odor, moisture, optional descriptions | % Coarse | | % Coarse | % Medium | | % Fines | Dilatancy | SS | Plasticity | |
| | Sam | Sar & F | S | _ | | nscs | GEOLOGIC INTERPRETATION) | + | % Fine | | _ | % Fine | % F | Dilat | Tou | Plas | |
| 20 = | 23 38 39 55 | S7 15 | 20.0 22.0 | | | SW | Very dense brown well graded SAND with gravel (SW) mps= 1.5 in., no structure, no odor, dry, with cobbles | 15 | 15 | 20 | 20 | 30 | | | | | |
| 25 – | 30 27 30 46 | S8 18 | 25.0 27.0 | | | sw | Similar to above NOTE: Laboratory grain size analysis performed on composite S7 and S8 by TRC | 15 | 15 | 25 | 25 | 20 | | | | | |
| | | | | | | | -GLACIOFLUVIAL DEPOSITS- | | | | | | | | | | |
| 30 - | 12 11 20 17 | S9 18 | 30.0 32.0 | | | SW- SM | Dense brown well graded SAND with silt and gravel (SW-SM), mps=1.5 in., no structure, no odor, dry, with cobbles NOTE: Laboratory grain size analysis performed on S9 by TRC | 17 | 26 | 11 | 21 | 12 | 13 | | | | |
| 35 – | 12 12 15 21 | S10 18 | 35.0 37.0 | | 241.5 33.5 | SM | Medium dense brown silty SAND (SM) mps= 0.5 in., no structure, no odor, moist to wet Note: Laboratory grain size analysis performed on S10 by TRC | | 14 | 6 | 16 | 28 | 36 | | | | |
| | | | | | | | -GLACIAL TILL- | | | | | | | | | | |
| 40 - | 17 18 40 32 | S11 15 | 40.0 42.0 | | | ML/SM | Very dense brown sandy SILT (ML) with seams of silty SAND (SM) mps= 0.75 in., no structure, no odor, wet Note: Laboratory grain size analysis performed on S11 by TRC | 4 | 11 | 6 | 18 | 31 | 30 | | | | |
| | | | | | 231.5 43.5 | | Dril action indicates strata change at 43.5 ft. TOP OF PROBABLE BEDROCK 43.5 FT. | | | | | | | | | | _ |
| 45 - | | | | | | | -PROBABLE BEDROCK- | | | | | | | | | | |
| | 80/0in | NR | 45.0 45.0 | | 228.5 46.5 | | No Recovery, spoon refusal at 45 ft. Spun casing advancer wih button bit to 46.5 ft. Drill action indicates hard, slightly fractured bedrock. | | | | | | | | | | |
| | | | | | 40.5 | | BOTTOM OF EXPLORATION 46.5 FT. | | | | | | | | | | |
| | | | | | | | Groundwater observation well installed at 44.5 ft. upon completion. | | | | | | | | | | |
| | | | | | | | | | | | | | | | | _ | - |

| Н | ALDRICH | (| GR | OUNDWA INST <i>A</i> | | | RVATIC REPOR | | LL | Well No | D. B-53(OW) |
|---------------------------|----------------------|------------------|---------|-------------------------|-------------|--------------------|-----------------|--------------|-----------------------|------------------------|-----------------------|
| Pr | oject SPARC F | PROJEC | T BL | JLDING 2 AND N | MOTOR | GENERA | TOR BUILD | ING We | ell Diagram | File No. 13 | 4902-003 |
| Lo | cation DEVENS, | , MA | | | | | | | Riser Pipe | | ed 29 Oct 2020 |
| CI | ient COMMON | WEAL | ΓH FU | JSION SYSTEM | IS | | | | Screen Filter Sand | H&A Rep. Location S | |
| Co | ontractor TRC C | OMPAN | IIES | | | | | | Cuttings Grout | Location | |
| Dr | iller A. Pete | ers | | | | | | * * * * | Concrete | Ground El. | 275.0 |
| lı | nitial Water Level (| depth b | gs) | 32.0 f | t | | | | Bentonite Seal | Datum NA | AVD 88 |
| | SOIL/RO | CK | | WELL | _ | N O | | | | | |
| | CONDITIONS | DEPTH (ft.) | GRAPHIC | DETAILS | DEPTH (ft.) | ELEVATION (ft.) | | WELI | L CONSTRU | JCTION I | DETAILS |
| | | | | | | | Тур | e of prote | ective cover | | None |
| -0 | | | | D0000 D0000 | 0.0 | 275.0 | He | eight of N | A above ground su | rface | NA |
| - | FILL | | | | | | He | eight of to | p of riser above gr | ound surface | 2.0 ft |
| - -5 | _ | 5.0 | | | | | Тур | | ctive casing | | NA |
| ļ | | | | | | | | Length | | | - |
| ţ | | | | | | | | Inside di | ameter | | |
| 73 Dec 20 - 39 Dec 20 | | | | | | | | Depth of | bottom of NA | | |
| 29 - | | | | | | | Туре | e of riser p | pipe | Scl | hedule 40 PVC |
| 15 -15 | | | | | | | | Inside di | ameter of riser pip | е | 2.0 in |
| Ö-Ö | | | | | | | | Depth of | bottom of riser pip | pe | 34.5 ft |
| 75-001- | | | | | | | | Type of S | eals Top of S | Seal (ft) | Thickness (ft) |
| % -20 E- | | | | | | | _ | Bentonit | e28. | 0 | 4.0 |
| 902/GIN | | | | | | | _ | | | | |
| TS/134 | | | | | | | _ | | | | |
| 일-25 양- | GLACIOFLUVIAL | | | | | | _ | | | | |
| SHARE\CF\I | DEPOSITS | | | | 28.0 | 247.0 | Dia | meter of t | oorehole | | ~5.0 |
| -30 -30 | | | | | 20.0 | 040.0 | Dep | | of well screen | | 34.5 ft |
| ALDRIC | | | | | 32.0 | 243.0 | | Type of | screen | Ma <u>chir</u> | ne slotted Sch 40 PVC |
| -35 | | 33.5 | | | 34.5 | 240.5 | | | gauge or size of op | penings | 0.010 in |
| PORT-0 | | | | | | | | Diamete | r of screen | | 2.0 in. |
| NOI - | GLACIAL TILL | | | | | | | Type of | Backfill around Sci | reen | Filter Sand |
| CAN NSTALLATION REPORT-09 | | | | | | | | | bottom of well scr | reen | 44.5 ft |
| - 1 | | 43.5 | | | | 000 - | Bot | ttom of si | t trap | | |
| 975.SG -45 | BEDROCK | | | | 44.5 | 230.5 | | | tom of well | | 44.5 ft |
| 45 C | OMMENTS: | 46.5 | | I | l | | l ⊸ De | pth of bot | tom of borehole | | 46.5 ft |



GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX B.5

2024 GZA TEST BORING LOGS

BORING LOG GUIDE

BORING LOG LEGEND

GS Elev. = Ground Surface Elevation Stab. = Stabilization Time for groundwater reading

NAVD = North American Vertical Datum WOH = Weight of Hammer NR = No Recovery WOR = Weight of Rods

S.S. = Split Spoon

SOIL DESCRIPTIONS

Soil samples are described on the exploration logs by the "Modified Burmister Soil Identification System". The following provides a brief description of the Modified Burmister System.

1. Major and minor components of the soil matrix are identified as gravel, sand or fines. The relative amounts of these constituents are proportioned as:

| Component | Proportional Term | Percent by Weight of Total |
|-----------|-------------------|---|
| Major | | Greater than percentage of other components |
| Minor | And | 35-50 |
| | Some | 20-35 |
| | Little | 10-20 |
| | Trace | 1-10 |

2. The nature of "fines" is defined by using the following guidelines:

| Degree of Plasticity | Identity | Plasticity Index |
|----------------------|-------------|------------------|
| Non-plastic | SILT | 0 |
| Slight | Clayey SILT | 1-5 |
| Low | SILT & CLAY | 5-10 |
| Medium | CLAY & SILT | 10-20 |
| High | Silty CLAY | 20-40 |
| Very High | CLAY | 40 and Greater |

3. For boring logs, relative density or consistency is identified based on standard penetration resistance, using the following table.

| Non-Pla | stic Soils | Plastic Soils | | | | | |
|--------------|------------------|---------------|--------------|--|--|--|--|
| Blows/ft "N" | Relative Density | Blows/ft "N" | Consistency | | | | |
| 0-4 | Very Loose | <2 | Very Soft | | | | |
| 4-10 | Loose | 2-4 | Soft | | | | |
| 10-30 | Medium Dense | 4-8 | Medium Stiff | | | | |
| 30-50 | Dense | 8-15 | Stiff | | | | |
| >50 | Very Dense | 15-30 | Very Stiff | | | | |
| | | >30 | Hard | | | | |

BEDROCK DESCRIPTIONS

Rock samples described on the exploration logs are generally based on the International Society of Rock Mechanics (ISRM) System, as generally described on the following page. Each rock sample was generally described using the following guideline, in the order presented:

- 1. Field hardness: very hard, hard, moderately hard, medium, soft, very soft
- 2. Weathering: fresh, very slight, slight, moderate, moderately severe, severe, very severe, complete
- 3. Rock continuity (fracturing): extremely, moderately, slightly, sound
- 4. Texture: amorphous, fine, medium, coarse, very coarse
- 5. Color
- 6. Rock type
- 7. Fractures, Bedding, and Foliation, Spacing and Attitude
- 8. Rock Quality Designation (RQD)

Foreman:

GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed Development Hospital Road Devens, Massachusetts

BORING NO.: **GZ-5 (OW)** SHEET: 1 of 2 PROJECT NO: 01.0174955.20 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractor Type of Rig: ATV

Walter Hoeckele D. Walsh Logged By:

Rig Model: Mobile B-53 Drilling Method: D & W

Boring Location: See Plan Ground Surface Elev. (ft.): 281 Final Boring Depth (ft.): 64

Date Start - Finish: 10/28/2024 - 10/30/2024

H. Datum: See Plan V. Datum: NAVD88

Auger/Casing Type: HW I.D./O.D.: 4"/4.5" Hmr Weight (lb.): 140 Hmr Fall (in.): 30" Other: Automatic

Sampler Type: Split Spoon I.D./O.D (in.): 1.375/2 Sampler Hmr Wt: 140 Sampler Hmr Fall: 30 Other: Autohammer

Groundwater Depth (ft.) Date Time Water Depth Casing Stab. Time 0715 40.8 17 hrs. 10/30/24 49 11/21/24 22 days 09:30 41.7 Well

| | Casing | | : | Samp | le | | | | ¥ | Eigle | _ Stratum | Equipment Installed |
|-------------------|----------------------------------|-----|----------------|------|--------------|----------------------|--------------|---|--------|-----------------------|-------------------------------|-----------------------|
| Depth (ft) | Blows/ Core Rate Min/ft | No. | Depth (ft.) | | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description Modified Burmister | Remark | Field Test Data | Stratum Stratum Description | 4" Standpipe |
| _ | | S-1 | 0-2 | 24 | 16 | 10 19 16 21 | 35 | S-1: Dense, gray GRAVEL and fine to coarse SAND, little Silt. | 1 | ND | FILL | Concrete (0-1') |
| - | | S-2 | 2-4 | 24 | 11 | 12 11 9 11 | 20 | S-2: Medium dense, brown fine to coarse SAND and GRAVEL, little | 2 | ND | 2' 279. | <u>0</u> |
| 5 _ | | S-3 | 4-6 | 24 | 13 | 19 21 22 23 | 43 | Silt. S-3: Dense, brown, fine to coarse SAND, some Gravel, little Silt. | 4 | ND | | |
| - | | S-4 | 6-8 | 24 | 22 | 22 24 28 19 | 52 | S-4: Very dense, brown to gray, fine to coarse SAND and GRAVEL, little | | ND | | |
| 10 | | S-5 | 8-10 | 24 | 13 | 6 9 15 17 | 24 | Silt. S-5: Top 7": Brown, fine to medium SAND, little Gravel, trace Silt. Bottom 6": Brown, fine to coarse SAND and GRAVEL, little Silt. | | ND | | 2" PVC Riser (0-36') |
| 15 _ | | S-6 | 14-16 | 24 | 12 | 6 11 12 16 | 23 | S-6: Medium dense, brown, fine to coarse SAND, some Gravel, little Silt. | | ND | SAND/GRAVEL | Soil Cuttings (1-29') |
| 20 | | S-7 | 19-21 | 24 | 12 | 10 32 43 40 | 75 | S-7: Very dense, brown GRAVEL and fine to coarse SAND, little Silt. | | ND | | |
| 25 - - - | | S-8 | 24-26 | 24 | 16 | 28 63 60 60 | R | S-8: Top 7": Brown GRAVEL and fine to coarse SAND, little Silt. Middle 5": Gray, fine to coarse SAND, some Gravel, little Silt. Bottom 4": Brown GRAVEL and fine to coarse Sand, some Silt. | | ND | | |
| 30 | | S-9 | 29-31 | 24 | 10 | 16 17 | 32 | S-9: Medium dense, brown GRAVEL | | ND | | |

4. Advanced borehole to sample depths via cased drive and wash techniques from 0 to 49 feet bgs (below ground surface).

174955.20 COMM FUSIONS.GPJ; STANDARD BORING W/E W/O SMP 2PG2; 12/2/2024 REMARKS

See log key for explanation of sample descriptions and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-5 (OW)

^{1.} Ground surface elevation estimated from topography depicted on an AutoCAD .dwg file titled "CFS Composite Existing Surface - polylines," transmitted to GZA on September 16, 2024.
2. Boring offset 1.3 N and 3.5 W due to temporary building obstruction.
3. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates not detected above instrument detection limit (<0.1 ppmv).

GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed Development Hospital Road Devens, Massachusetts

BORING NO.: GZ-5 (OW) SHEET: 2 of 2 PROJECT NO: 01.0174955.20 REVIEWED BY: MJO

| epth | Casing Blows/ | | | Samp | | | | Sample Description | ar | Field | Stratum | |
|------------------|------------------------|------|----------------|--------------|----|----------------------|--------------|--|--------|--------------|-----------------------------|------------------------|
| (ft) | Core Rate Min/ft | No. | Depth (ft.) | Pen. (in) | | Blows (per 6 in.) | SPT Value | Modified Burmister | Remark | Test Data | Stratum Stratum Stratum | Equipment Installed |
| | WIIIVIC | | , , | | , | 15 26 | | and fine to coarse SAND, some Silt. | | | | Bentonite (29-31') |
| 5_ | | S-10 | 34-36 | 24 | 14 | 29 43 43 92 | 86 | S-10: Top 5": Orange GRAVEL, some fine to coarse Sand, little Silt. Bottom 9": Brown to gray, fine to coarse SAND and GRAVEL, little Silt. | | ND | | ⋖ −Sand (31-46' |
|) | | S-11 | 39-41 | 24 | 12 | 26 42 36 51 | 78 | S-11: Very dense, brown with orange staining, GRAVEL and fine to coarse SAND, some Silt. | 5 | ND | SAND/GRAVEL | 2" PVC Scre (36-46') |
| ; _ _ | | S-12 | 44-46 | 24 | 13 | 11 19 23 16 | 42 | S-12: Dense, brown fine to coarse SAND and GRAVEL, some Silt. | | ND | | |
| | | S-13 | 49-51 | 24 | 10 | 7 26 38 15 | 64 | S-13: Very dense, gray SILT, some fine to coarse Sand, some Gravel. | 6 | ND . | <u>47.5'</u> 233. <u>5'</u> | |
| - | | S-14 | 54-56 | 24 | 15 | 24 28 25 34 | 53 | S-14: Very dense, brown fine to coarse SAND, some Gravel, some Silt. | | ND | GLACIAL TILL | |
| - - - - | | S-15 | 59-61 | 24 | 15 | 25 38 51 46 | 89 | S-15: Very dense, brown, fine to coarse SAND, some Silt, little Gravel. | | ND | | |
| | | | | | | | | | | | 64' 217.0' | |
| - 1 | | | | 1 | | | 1 | Bottom of boring at 64 feet. | 7 | 1 | | |

5. A 300 pound hammer was used to advance the casing from 39 to 44 feet due to apparent increased resistance.
6. Advanced borehole to sample depths using open hole wash techniques from 49 to 64 feet bgs.
7. Upon completion, boring backfilled with drill cuttings to ground surface.

174955.20 COMM FUSIONS.GPJ; STANDARD BORING W/E W/O SMP 2PG2; 12/2/2024

REMARKS

See log key for explanation of sample descriptions and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-5 (OW)

GZA

Foreman:

Logged By:

GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed Development Hospital Road Devens, Massachusetts

BORING NO.: GZ-9 SHEET: 1 of 1 PROJECT NO: 01.0174955.20 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractor Type of Rig: ATV

Walter Hoeckele M. Ostrowski

Rig Model: Mobile B-53 Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 264 Final Boring Depth (ft.): 21

Date Start - Finish: 10/31/2024 - 10/31/2024

H. Datum: See Plan

V. Datum: NAVD88

Auger/Casing Type: HSA I.D./O.D.: 2.25/6 Hmr Weight (lb.): Hmr Fall (in.): Other:

Sampler Type: Split Spoon I.D./O.D (in.): 1.375/2 Sampler Hmr Wt: 140 Sampler Hmr Fall: 30 Other: Autohammer

Groundwater Depth (ft.) Date Time Water Depth Casing Stab. Time 1325 Dry (19') 10/31/24 5 min.

| Oute | Casing | | | C | | | | | ┵ | | | | Equipment Installed |
|-----------|--------------|---------|--------------|----------|----------|---------------------|-------------|--|-----------------|-------------------|--|------------------------|--|
| Depth | Blows/ | | | Samp | | | | Sample Description | ar | Field | € Stratum | . | Equipment installed |
| (ft) | Core Rate | No. | Depth | Pen. | | Blows | SPT | Maraiera de Dania de La constitución de la constitu | Remark | Test | Stratum Stratum Description | (#) | |
| | Min/ft | S-1 | (ft.) 0-2 | (in) | (in) | (per 6 in.) 6 17 | Value 29 | S-1: (Top 8") Brown, fine to coarse | | Data ND | | | |
| | | 3-1 | 0-2 | 24 | 16 | | 23 | , , , | 1 | IND | 0.7' FILL | 263.3' | No Equipment Installed |
| _ | 1 | | | | | 12 10 | | SAND, some Gravel, little Silt, dry. | 2 | | | | |
| - | - | S-2 | 2-4 | 24 | 16 | 16 23 | 48 | S-1: (Bottom 8") Brown, fine to | | ND | | | |
| | | 3-2 | 2-4 | 24 | 10 | | 0 | coarse SAND, some Gravel, little (-) | | IND | | | |
| | | | | | | 25 21 | | Silt, dry. | | | | | |
| - | 1 | S-3 | 4-6 | 24 | 12 | 14 18 | 34 | S-2: Dense, brown, fine to coarse | | ND | | | |
| 5 _ | 1 | | ' " | - ' | '- | 16 17 | | SAND and GRAVEL, little Silt, dry. | | | | | |
| | | | | | | 10 17 | | S-3: Dense, brown, fine to coarse | | | | | |
| - | 1 | | | | | | | SAND and GRAVEL, some Silt, dry. | | | | | |
| - | - | | | | | | | - | | | | | |
| _ | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | 1 | S-4 | 9-11 | 24 | 15 | 10 21 | 53 | S-4: Very dense, brown, fine to | | ND | | | |
| 10 _ | 1 | | | | | 32 26 | | coarse SAND, some Gravel, some | | | | | |
| |] | | | | | | | Silt, dry. | | | SAND/GRAVEL | | |
| _ | | | | | | | | , . - | | | SAND/GRAVEL | | |
| - | † | | | | | | | | | | | | |
| _ | - | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| 15 _ | | S-5 | 14-16 | 24 | 14 | 18 22 | 51 | S-5: Very dense, brown, fine to | | ND | | | |
| 13 _ | † | | | | | 29 33 | | coarse GRAVEL, some fine to | | | | | |
| _ | 1 | | | | | | | coarse Sand, little (-) Silt, dry. | | | | | |
| | | | | | | | | | | | | | |
| _ | 1 | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| _ | - | | 10.01 | | 44 | 40.00 | 40 | C C: D h f t | | ND | | | |
| 20 _ | | S-6 | 19-21 | 24 | 14 | 13 23 | 70 | S-6: Dense, brown, fine to coarse | | IND | | | |
| | | | | | | 17 16 | | SAND and GRAVEL, trace Silt. | | | 21' | 243.0' | |
| - | 1 | | | | | | | Bottom of boring at 21 feet. | 3 | | 21 | 243.0 | |
| - | - | | | | | | | G | | | | | |
| _ | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| 25 _ | - | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| _ | 1 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| 1. | | | | | | | | on an AutoCAD .dwg file titled "CFS Compos | | | | | |
| S | organic | vapor m | neter equip | ped wit | th a pho | otoionization de | etector (I | nced to a benzene standard, measured in the PID) and 10.6eV lamp. Results in parts per n | head nillion | space of by volui | t sealed soil sample j ne (ppmv). ND indica | ars usino ates noth | g a Ion Science Phocheck Tiger ning detected (<0.1 ppmv). |
| REMARK 3. | | | | | | drill cuttings to | | | | - | | | - , , , , |
| ĕ∣ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Sec la | a kov for | ovolon | ation of a | mple | doscrin | tions and id- | tification | procedures Stratification lines represent | nnra | imata h | oundaries between | oil and | Don't M |
| | | | | | | | | procedures. Stratification lines represent a ngs have been made at the times and und | | | | | Boring No.: |
| ground | dwater ma | y occur | due to oth | er facto | ors than | those present | at the ti | mes the measurements were made. | | | | | GZ-9 |

GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems **Proposed Development** Hospital Road Devens, Massachusetts

BORING NO.: GZ-15 (OW) SHEET: 1 of 2 PROJECT NO: 01.0174955.20 REVIEWED BY: MJO

Type of Rig: Drilling Co.: New England Boring Contractors

Foreman: Walter Hoeckele Logged By: D. Walsh

ATV Rig Model: Mobile B-53

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 266 Final Boring Depth (ft.): 51

Date Start - Finish: 11/5/2024 - 11/6/2024

H. Datum: See Plan V. Datum: NAVD88

Auger/Casing Type: HSA I.D./O.D.(in): 2.25/6 Hmr Weight (lb.): Hmr Fall (in.): Other:

Sampler Type: Split Spoon I.D./O.D (in.): 1.375/2 Sampler Hmr Wt (lb): 140 Sampler Hmr Fall (in): 30 Autohammer

Groundwater Depth (ft.) Date Time Water Depth Casing Stab. Time 11/6/24 0940 35 44 25 min. 11/21/24 15 days 0948 35.8 Well

| | Casing | | | Samp | le | I | | | 돈 | Field | _ Stratum | | Equipment Installed |
|---------------|----------------------------------|------------|----------------|------|-----|------------------------|--------------|--|--------|----------------------|-------------|--------|--------------------------|
| Depth (ft) | Blows/ Core Rate Min/ft | No. | Depth (ft.) | | | Blows (per 6 in.) | SPT Value | Sample Description Modified Burmister | Remark | Test | | (#) | 4" Standpipe |
| - | WIIIVIL | S-1 S-2 | 0-2 | 24 | 15 | 3 12 15 14 23 36 | 27 66 | S-1: S-1: (Top 2") Dark brown, fine to coarse SAND, some Gravel, little (+) Silt, trace (-) Roots, dry. S-1: (Bottom 13") Light brown, fine to | 1 2 | 3 ppm Q. ND 1 ppm 2. | FILL | 265.8 | Concrete (0-1') |
| - | | 0-2 | 2 1 | 24 | 10 | 30 25 | | medium SAND, some Gravel, some Silt, trace (-) Roots, dry. S-2: S-2: (Top 4") Light brown, fine to | | ND | | | |
| 5 _ | | S-3 | 4-6 | 24 | 196 | 22 20 18 22 | 38 | medium SAND, some Gravel, some Silt, trace (-) Roots. | | | | | |
| _ | | S-4 | 6-8 | 24 | 6 | 7 13 13 13 | 26 | (Bottom 12") Very dense, light brown, fine to coarse SAND and GRAVEL, little Silt, trace (-) Roots. S-3: S-3: (Top 9") Gray, fine to coarse | 3 | | CANDICDAVE | | |
| 10 | | S-5 | 8-10 | 24 | <1" | 11 13 9 11 | 22 | SAND and GRAVEL, some Silt, trace (-) Roots, trace (-) Plastic. S-3: (Bottom 10") Brown, fine to | | | SAND/GRAVEL | - | 2" PVC Riser (1-30') |
| - | | S-6 | 10-12 | 24 | 10 | 13 13 12 12 | 25 | coarse SAND and GRAVEL, trace Silt. S-4: S-4: Medium dense, brown, fine to coarse SAND, some Gravel, trace Silt. | | | | | Soil Cuttings |
| - 15 _ | | S-7 | 14-16 | 24 | 8 | 4 5 5 6 | 10 | S-5: S-5: Pieces of metal in spoon. S-6: S-6: Medium dense, brown, fine to coarse SAND and GRAVEL, little Silt. S-7: S-7: Medium dense, brown, fine to medium SAND, trace Silt. | | 13 | 3' | _253.0 | (1-22.3') |
| - | | S-8 | 16-18 | 24 | 11 | 8 7 8 7 | 15 | S-8: S-8: Medium dense, brown, fine to medium SAND, little Gravel, trace Silt, trace Steel Nails. | | | | | |
| 20 | | S-9 | 18-20 | 24 | 11 | 4 6 7 9 | 13 | S-9: S-9: Medium dense, brown, fine to medium SAND, trace Silt. | | | | | |
| - | | | | | | | | | | | SAND | | |
| 25 | | S-10 | 24-26 | 24 | 10 | 6 9 10 12 | 19 | S-10: S-10: Medium dense, brown with occasional orange, fine SAND, trace Silt. | | | | | ■—Bentonite (22.3-25.4') |
| 30 | | S-11 | 29-31 | 24 | 11 | 9 14 | 30 | S-11: S-11: Dense, brown, fine SAND, | | | | | ✓-Sand (25.4-30') |

1. Ground surface elevation estimated from topography depicted on an AutoCAD .dwg file titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024. Offset approximately 9 Ground surface elevation estimated from topography depicted on an AutoCAD. owg file titled "C-Ps Composite Existing Surface -polylines," transmitted to GZA on September 19, 2024. Unset approximately feet south due to trees at staked location.
 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmy). ND indicates nothing detected (-0.1 ppmy).
 Driller indicated that pieces of concrete and/or steel noted in wash and/or samples from 6 to 10 and 16 to 18 feet below ground surface (bgs) were from an obstruction pushed from the fill stratum above.

REMARKS

174955.20 COMM FUSIONS.GPJ; STANDARD BORING W/E W/O SMP 2PG2; 9/23/2025

See log key for explanation of sample descriptions and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made

Boring No.: GZ-15 (OW)

GZA GeoEnvironmental, Inc. Engineers and Scientists Commonwealth Fusion Systems Proposed Development Hospital Road Devens, Massachusetts

BORING NO.: GZ-15 (OW) SHEET: 2 of 2 PROJECT NO: 01.0174955.20 REVIEWED BY: MJO

| Depth | Casing Blows/ | | , | Samp | le | | | Communic Documention | ark | Field | _ Stratum | |
|----------------|------------------------|-----------|----------------|----------------|---------------|------------------|--------------|--|--------|--------------|------------------------------------|---------------------------|
| (ft) | Core Rate Min/ft | No. | Depth (ft.) | Pen. (in) | Rec. (in) | | SPT Value | | Remark | Test Data | Stratum Stratum Stratum Stratum | Equipment Installe |
| 35 | | S-12 | 34-36 | 24 | 17 | 3 23 17 17 | 40 | S-12: S-12: (Top 9") Gray, CLAY & SILT, trace fine Sand. S-12: (Bottom 8") Brown with orange staining, GRAVEL and fine to coarse | | | SAND | |
| 40 _ | | S-13 | 38-40 | 24 | 17 | 12 11 11 16 | 22 | SAND, some Silt. S-13: S-13: Medium dense, brown, fine to coarse SAND and GRAVEL, little Silt. | | | SAND/GRAVEL | 2" PVC Scree (30-45') |
| - 45 _ - | | S-14 | 44-46 | 24 | 16 | 7 9 12 13 | 21 | S-14: S-14: Medium dense, brown with occasional orange staining, fine to coarse SAND, trace Silt. | | | 42.5' | |
| 50 _ _ | | S-15 | 49-51 | 24 | 10 | 20 17 20 29 | 37 | S-15: S-15: Dense, brown with orange staining, fine to coarse SAND and GRAVEL, little (+) Silt. Bottom of boring at 51 feet. | 4 | | 47.5' 218.5' GLACIAL TILL | |
| 55 _ _ | | | | | | | | | | | | |
| 60 _ | | | | | | | | | | | | |
| 65 _ | | | | | | | | | | | | |
| REMARKS 4. | Installed | monitorin | g well in bo | l vrehole u | l Ipon coi | l mpletion. | I | | | I | | |
| ypes. A | Actual tra | ansitions | may be gr | adual. | Water | level readings l | have be | cedures. Stratification lines represent approxion made at the times and under the condition nts were made. | | | | Boring No.: GZ-15 (OW) |



GEOTECHNICAL

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WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX B.6

2025 GZA TEST PIT LOGS

| | | TEST I | PIT LOG | | | | |
|----------------------------|------------|---------------|----------------|--------------|-----|----------------|---------------|
| C.T. | Pivot | TEST PIT NO.: | TP-306 | | | | |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-3 Develop | SHEET: | 1 of 1 | | | |
| Engineers/Scientists | Ho | ospital Road | | | | PROJECT NO: | 01.0178186.00 |
| | Devens | , Massachuset | ts | | | REVIEWED BY: | MJO |
| - | | | | | | | |
| GZA Rep. Kyran Peters | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | 8/5/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 267 |
| Weather 70's, Overcast | Make | CAT | Model | 311FLRR | | Time Started | 0945 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1020 |
| | | | | | | | |
| | | • | | | | Boulders: | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | Light brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, trace Roots, dry. | GS-1 | ND | E | 0 | 1, 2 |
| 2 | (TOPSOIL - USDA LOAMY SAND) | 1 | | М | 0 | |
| 3 | Brown, fine to coarse SAND and fine to coarse Gravel, trace Silt, dry. (SAND/GRAVEL or Possible FILL - USDA LOAMY SAND) | GS-2 | ND | D | 1B | |
| 4 | | | | D | 1A | |
| 5 | | | | М | 0 | |
| 6 | | | | М | 0 | |
| 7 | | | | М | 0 | |
| 8 | | | | М | 0 | |
| 9 | Brown, fine to coarse SAND, some fine to coarse Gravel, trace (-) Silt, moist. (SAND/GRAVEL - USDA SAND) | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | | | | E | 0 | 3,4 |
| 14 | Bottom of Test Pit 13' | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 13 feet bgs due to cave ins.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thich lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | der Class | Propo | rtions Used | F = Abbreviations | | Groundwater |
|---------------------|-------------|----------------|-----------------|-------------|---------------------------------|--------------------|----------------------|
| | Letter | Size Range | | | M = Medium | | () Encountered |
| 11 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | | (X) Not Encountered |
| 4 | А | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| † | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Grav | (Hours) | |
| Volume = 11 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | loderate D - Di | fficult | YEL = Yellow | | |
| | | | | | | | |

| _ | | TEST | PIT LOG | | | |
|----------------------------|------------|---------------|----------------|---------------|--------------------|----------|
| - an | Pivot | TEST PIT NO.: | TP-307 | | | |
| GZA GeoEnvironmental, Inc. | Proposed | SHEET: | 1 of 1 | | | |
| Engineers/Scientists | Н | ospital Road | PROJECT NO: | 01.0178186.00 | | |
| | Devens | , Massachuse | REVIEWED BY: | MJO | | |
| | | | | | | - |
| GZA Rep. Kyran Peters | Contractor | Cryan Land | scaping Contra | actors, Inc. | Date | 8/6/2025 |
| ' <u>'</u> | Operator | Hassler Lop | ez | | Ground Elev. | 269 |
| Weather 70's, Overcast | Make | CAT | Model | 311FLRR | Time Started | 1310 |
| ' <u>'</u> | Capacity | 1/3 CY | Reach | 14 | ft. Time Completed | 1385 |
| | | | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 0.5 1 | Dark brown, fine to coarse SAND, some fine to coarse Gravel, little (+) Silt, trace Roots, dry. (TOPSOIL - USDA SANDY LOAM) | GS-1 | ND | E | 0 | 1, 2 |
| 2 | Light brown, fine to coarse SAND, little fine to coarse Gravel, trace (-) Silt, trace Roots, dry. (SAND - USDA SAND) | GS-2 | ND | E | 0 | |
| 3 | Brown, fine to coarse GRAVEL and fine to coarse SAND, trace (-) Silt, dry. (SAND/GRAVEL - USDA SAND) | GS-3 | ND | E | 0 | |
| 4 | | | | E | 0 | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 0 | |
| 7 | Brown, fine to coarse SAND and fine to coarse GRAVEL, trace (-) Silt, dry. (SAND/GRAVEL - USDA SAND) | | | E | 0 | |
| 8 | | GS-4 | ND | E | 0 | 3,4 |
| 9 | Bottom of Test Pit 8' | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 8 feet bgs due to cave ins.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thich lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | der Class | Prop | ortions Used | F = Abbreviations | Groundwater | | |
|--------------------|-------------|----------------|----------------|--------------|---------------------------------|--------------------|-------------------|--|
| | Letter | Size Range | | | M = Medium | (|) Encountered | |
| 11 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x |) Not Encountered | |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to | |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water | |
| | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | | |
| Volume = 7 cu. yd. | | Excav | ation Effort | | BN = Brown YEL = Yellow | | | |
| | | E - Easy M - M | loderate D - D | ifficult | TEL = TEIIOW | | | |

| | | TEST | PIT LOG | | | | |
|----------------------------|------------|---------------|----------------|---------------|--------|----------------|----------|
| G | Pivot | TEST PIT NO.: | TP-308 | | | | |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-3 Develop | | SHEET: | 1 of 1 | | |
| Engineers/Scientists | Ho | ospital Road | PROJECT NO: | 01.0178186.00 | | | |
| | Devens | , Massachuse | REVIEWED BY: | MJO | | | |
| | | | | | | | |
| GZA Rep. Kyran Peters | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | 8/5/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 268.5 |
| Weather 70's, Overcast | Make | CAT | Model | 311FLRR | | Time Started | 0845 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 0925 |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | Dark brown, fine to coarse SAND, some fine to coarse Gravel, little (+) Silt, trace Roots, moist. (TOPSOIL - USDA SANDY LOAM) | GS-1 | ND | E | 0 | 1, 2 |
| 2 | | | | E | 1A | |
| 3 | Brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt, moist. | GS-2 | ND | E | 1A | |
| 4 | (SAND/GRAVEL or Possible FILL - USDA LOAMY SAND) | | | E | 1A | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 0 | |
| 7 | | | | E | 1A | |
| 8 | | | ND | E | 0 | |
| 9 | Brown, fine to coarse SAND and fine to coarse GRAVEL, trace (-) Silt, moist. (SAND/GRAVEL - USDA SAND) | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | Brown, fine to coarse GRAVEL and medium SAND, trace (-) Silt, moist. (SAND/GRAVEL - USDA Gradation Determination: SAND) | GS-3 | ND | E | 0 | 3,4 |
| 14 | Bottom of Test Pit 13' | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 13 feet bgs due to cave in.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | | Proportions Used | F = Abbreviations | Gro | undwater |
|---------------------|-------------|----------------|--------------|------------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | () | Encountered |
| 12 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x) | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 12 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | oderate | D - Difficult | YEL = Yellow | | |

| | | TEST F | PIT LOG | | | | |
|----------------------------|------------|-----------------|----------------|--------------|-----|----------------|---------------|
| - C7A | Commonwe | ealth Fusion Sy | rstems | | | TEST PIT NO.: | TP-309 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | spital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuset | ts | | | REVIEWED BY: | MJO |
| | | | | | | | - |
| GZA Rep. Kyran Peters | Contractor | Cryan Lands | scaping Contra | actors, Inc. | | Date | 8/4/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 276 |
| Weather 80's, Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1247 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1320 |
| | | | | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | Moist, dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots, | | | E | 0 | |
| 3 | trace Wood. | | | E | 0 | |
| 4 | (TOPSOIL FILL) | GS-1 | 1 | E | 0 | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 0 | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 1A | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | Moist, brown, fine to coarse SAND and fine to coarse GRAVEL, trace Silt. | GS-2 | ND | E | 0 | |
| 14 | (SAND/GRAVEL - USDA LOAMY SAND) | | | E | 1A | 3,4 |
| 15 | Bottom of test pit 14 feet bgs | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Boulde | er Class | Propo | rtions Used | F = Abbreviations | Gro | undwater |
|-------------------|-------------------------------------|----------------|--------------|--------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | (|) Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| <i>†</i> | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = tou. yd. | | Excav | ation Effort | | BN = Brown | | |
| | E - Easy M - Moderate D - Difficult | | | YEL = Yellow | | | |

| | | TEST I | PIT LOG | | | | |
|----------------------------|------------|-----------------|----------------|--------------|-----|----------------|---------------|
| 3 271 | Commonwe | ealth Fusion Sy | rstems | | | TEST PIT NO.: | TP-310 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuset | REVIEWED BY: | MJO | | | |
| | | | | | | | |
| GZA Rep. Kyran Peters | Contractor | Cryan Land: | scaping Contra | actors, Inc. | | Date | 8/4/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 273.5 |
| Weather 80's, Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1218 |
| · | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1242 |
| | | | | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | Moist, dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, | | | E | 0 | |
| 3 | trace Roots, trace Wood. | | | E | 0 | |
| 4 | (TOPSOIL FILL) | GS-1 | 1 | E | 0 | |
| 5 | | | | Е | 0 | |
| 6 | | | | E | 0 | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 1A | |
| 12 | | | | E | 0 | |
| 13 | | | | E | 1A | |
| 14 | | GS-2 | 1 | E | 0 | 3,4 |
| 15 | Bottom of test pit 14' bgs. | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | er Class | F | Proportions Used | F = Abbreviations | Gro | undwater |
|---------------------|-------------|----------------|--------------|------------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | () | Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x) | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| ─ | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 10 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | oderate | D - Difficult | YEL = Yellow | | |

| | | TEST F | PIT LOG | | | | |
|----------------------------|------------|-----------------|---------------|--------------|-----|----------------|---------|
| | Commonwe | ealth Fusion Sy | /stems | | | TEST PIT NO.: | TP-311 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Ho | spital Road | | | | 01.0174955.30 | |
| Devens, Massachusetts | | | | | | MJO | |
| GZA Rep. Kyran Peters | Contractor | Cryan Land | scaping Contr | actors, Inc. | | Date | 8/04/25 |
| - | Operator | Hassler Lop | ez | | | Ground Elev. | 274 |
| Weather 70's, Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1146 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1215 |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | | | | Е | 0 | |
| 3 | Moist, dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots, trace Wood. | | | E | 0 | |
| 4 | (TOPSOIL FILL) | GS-1 | 1 | E | 0 | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 2A | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | | | | E | 0 | |
| 14 | | GS-2 | 1 | E | 0 | 3,4 |
| 15 | Bottom of test pit 14' bgs. | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Pro | portions Used | F = Abbreviations | Grou | undwater |
|---------------------|-------------|----------------|--------------|---------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | () | Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x) | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 10 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | oderate D - | YEL = Yellow | | | |

| | TEST | PIT LOG | | | | |
|------------------|--|--|---|--|--|--|
| Commonwe | ealth Fusion Sy | /stems | | | TEST PIT NO.: | TP-312 |
| Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| Devens | , Massachuse | REVIEWED BY: | MJO | | | |
| Control | Constant land | i Ct | | | | 0/4/2025 |
| | | 1 0 | actors, inc. | | | 8/4/2025 271.5 |
| Make Capacity | CAT 1/3 CY | Model Reach | 311FLRR 14 | ft. | Time Started Time Completed | 1115 1140 |
| | Proposed Ho Devens Contractor Operator Make | Commonwealth Fusion Sy Proposed CFS-4 Develop Hospital Road Devens, Massachuser Contractor Cryan Land Operator Hassler Lop Make CAT | Contractor Cryan Landscaping Contra Operator Hassler Lopez Make CAT Model | Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, Massachusetts Contractor Cryan Landscaping Contractors, Inc. Operator Hassler Lopez Make CAT Model 311FLRR | Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, Massachusetts Contractor Cryan Landscaping Contractors, Inc. Operator Hassler Lopez Make CAT Model 311FLRR | Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, Massachusetts Contractor Operator Hassler Lopez Make CAT Model August 11 FLRR Time Started |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | Moist, brown/dark brown, fine to coarse SAND, some fine to coarse Gravel, some | | | E | 0 | |
| 3 | Silt, trace Roots, trace Wood. | GS-1 | 1 | E | 0 | |
| 4 | (TOPSOIL FILL) | | | E | 1A | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 1A | |
| 7 | | | | E | 0 | |
| | | | | E | | |
| 8 | | | | | 1A | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | | | | E | 0 | |
| 14 | | GS-2 | ND | E | 0 | 3,4 |
| 15 | Bottom of test pit 14' bgs. | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit at extent of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | der Class | Pr | oportions Used | F = Abbreviations | Gro | undwater |
|---------------------|-------------------------------------|----------------|--------------|----------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | (|) Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 10 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | E - Easy M - Moderate D - Difficult | | | | YEL = Yellow | | |

| | | TEST | PIT LOG | | | | | |
|----------------------------|-----------------------|-----------------|----------------|--------------|--------------|----------------|---------------|----------|
| O. C. | Commonwe | ealth Fusion Sy | /stems | | | TEST PIT I | NO.: | TP-313 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | _ | SHEET: | | 1 of 1 |
| Engineers/Scientists | Ho | ospital Road | | | _ | PROJECT | 01.0174955.30 | |
| | Devens, Massachusetts | | | | | | D BY: | MJO |
| GZA Rep. Kyran Peters | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | | 8/4/2025 |
| | Operator | Hassler Lop | ez | · | Ground Elev. | | | 278 |
| Weather 70's, Sunny | Make | CAT | Model | 311FLRR | | Time Started | | 1032 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Con | npleted | 1105 |
| Denth | Soil Description | | | Sample | Field Test | Fxcav | Boulders: | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | Majet hypur fine to see see CAND come fine to see see Croud come Cit tures | GS-1 | ND | E | 0 | |
| 3 | Moist, brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots, trace Wood. | | | E | 2A | |
| 4 | (TOPSOIL FILL) | | | E | 0 | |
| 5 | | | | E | 2A | |
| 6 | | | | E | 0 | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 0 | |
| 13 | | GS-2 | ND | E | 0 | |
| 14 | | | | E | 0 | 3,4 |
| 15 | Bottom of test pit 14' bgs. | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit at extent of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Pro | oportions Used | F = Fine | Gro | undwater |
|---------------------|-------------|----------------|--------------|----------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | () | Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (x) | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | | Reading | Ground water |
| • | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 10 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | loderate D | - Difficult | YEL = Yellow | | |

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions

| | | TEST | PIT LOG | | | | |
|----------------------------|---------------------|-----------------|----------------|--------------|-----|----------------------|---------------|
| G7. | Commonwe | ealth Fusion Sy | /stems | | | TEST PIT NO.: | TP-314 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Ho | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| Devens, Massachusetts | | | | REVIEWED BY: | MJO | | |
| CZA Dam. Kuran Dators | Courtmanton | Cruan Land | scaning Contra | actors Inc | | D-4- | 8/4/2025 |
| GZA Rep. Kyran Peters | Contractor Operator | Hassler Lop | scaping Contra | actors, inc. | | Date Ground Elev. | 278 |
| Weather 80's, Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1325 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1345 |
| | | | | | | | |
| | | | | | | Boulders: | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | Moist, dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, | | | E | 0 | |
| 3 | trace Roots, trace Wood. | | | E | 0 | |
| 4 | (TOPSOIL FILL) | GS-1 | 1 | E | 0 | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 1A | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | |
| 9 | | | | E | 0 | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 1A | |
| 12 | | | | Е | 0 | |
| 13 | | | | E | 0 | |
| 14 | | GS-2 | ND | E | 0 | 3,4 |
| 15 | Bottom of test pit 14' bgs. | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 14' bgs at limit at extent of excavator reach.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | er Class | P | roportions Used | F = Fine | Gro | undwater |
|----------------------------|-------------|----------------|--------------|-----------------|-----------------------------------|--------------------|-----------------|
| | Letter | Size Range | | | M = Medium | () | Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse V = Verv | (x) | Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| → | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = <u>10</u> cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | oderate D |) - Difficult | YEL = Yellow | | |

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions

| | | TEST P | IT LOG | | | | |
|----------------------------|------------|-----------------|---------------|---------------------------------------|--------------|----------------|---------------|
| | Commonwe | ealth Fusion Sy | stems | | | TEST PIT NO.: | TP-315 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| Devens, Massachusetts | | | | | REVIEWED BY: | MJO | |
| GZA Rep. Kyran Peters | Contractor | Cryan Lands | scaping Contr | actors, Inc. | | Date | 8/6/2025 |
| • - | Operator | Hassler Lop | ez | · · · · · · · · · · · · · · · · · · · | | Ground Elev. | 272.5 |
| Weather 70's, Overcast | Make | CAT | Model | 311FLRR | | Time Started | 1352 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1410 |
| | | | _ | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | Brown/dark brown, fine to coarse SAND, some fine to coarse Gravel, little (+) Silt, trace Roots, dry. | GS-1 | ND | E | 0 | 1, 2 |
| 2 | (TOPSOIL) | | ND | E | 2A | |
| 3 | | GS-2 | | Е | 0 | |
| 4 | | | | E | 0 | |
| 5 | Brown, fine to coarse SAND and fine to coarse GRAVEL, trace (-) Silt. | | | E | 0 | |
| 6 | (SAND/GRAVEL - USDA SAND) | | | E | 0 | |
| 7 | | | | E | 0 | |
| 8 | | | | E | 0 | 3 |
| 9 | Bottom of Test Pit 8' | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| | | | | | | |
| 15 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 8 feet bgs upon reaching target depth.
- 5. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Propo | rtions Used | F = Abbreviations | Gı | roundwater |
|--------------------|-------------|----------------|-----------------|-------------|-----------------------------------|--------------------|---------------------|
| | Letter | Size Range | | | M = Medium | (|) Encountered |
| 10 | Designation | Classification | TRACE (TR.) | 0 - 10% | C = Coarse | (: | x) Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | Ground water |
| * | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 6 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | loderate D - Di | fficult | YEL = Yellow | | |

| | | TEST | PIT LOG | | | | |
|----------------------------|--------------------------------|----------------------------------|--------------------------------|--------------|-----|--------------------------------------|-------------------------|
| - ag. | Commonwe | ealth Fusion Sy | ystems | | | TEST PIT NO.: | TP-316 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuse | tts | | | REVIEWED BY: | MJO |
| | | | | | | | |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | 8/7/2025 |
| - | Operator | Hassler Lop | ez | | | Ground Elev. | 275 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 0841 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 0853 |
| | | | | | | 1 | |
| | Contractor Operator Make | Cryan Land Hassler Lop CAT | scaping Contra Dez Model | 311FLRR | | Date Ground Elev. Time Started | 8/7/2025 275 0841 |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | | | E | 0 | 1, 2 |
| 2 | | | | E | 0 | |
| 3 | Dark brown, fine to coarse SAND, some fine to coarse Gravel, some Silt, trace Roots, damp. (TOPSOIL FILL) | | | E | 1A | |
| 4 | | | | E | 0 | |
| 5 | | GS-1 | ND | E | 0 | |
| 6 | Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt, moist. (SAND/GRAVEL) | | | М | 0 | 3,4 |
| 7 | Bottom of Test Pit at 6' | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 6 feet bgs.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | F | Proportions Used | F = Fine | Grou | undwater |
|-------------------|-----------------------|-------------------------------------|-------------------|----------------------|---------------------------------------|--------------------|-----------------------------|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse | ` ' | Encountered Not Encountered |
| 4 | A | | LITTLE (LI.) | 10 - 20% | F/M = Fine to | Elapsed Time to | Depth to Ground water |
| NORTH | B C | | SOME (SO.) AND | 20 - 35% 35 - 50% | medium F/C = Fine to coarse GR = Gray | Reading (Hours) | Ground water |
| Volume =5 cu. yd. | | | ation Effort | | BN = Brown YEL = Yellow | | |
| | | E - Easy M - Moderate D - Difficult | | | | | |

| | | TEST | PIT LOG | | | | |
|----------------------------|------------|-----------------|----------------|--------------|-----|----------------|---------------|
| S CAL | Commonwe | ealth Fusion Sy | /stems | | | TEST PIT NO.: | TP-317 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Ho | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuse | tts | | | REVIEWED BY: | MJO |
| | | | | | | | |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | 8/7/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 277 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 0910 |
| · | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 0955 |
| | | | | | | | |
| | | | | | | | 1 |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | Dark brown, fine to coarse SAND, some fine to medium Gravel, some Silt, trace Roots, damp. | GS-1 | ND | E | 0 | 1, 2 |
| 2 | 1.5' (TOPSOIL FILL) | | | Е | 1A | |
| 3 | Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt (SAND/GRAVEL) | | | E | 0 | 3, 4 |
| 4 | Bottom of Test Pit at 3' | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 3 feet bgs.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | P | roportions Used | F = Fine | Grou | undwater |
|--------------------|-------------------------------------|------------------------------|-------------------|----------------------|---------------------------------------|--------------------|-----------------------------|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse | ` ' | Encountered Not Encountered |
| 4 | A | | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to Ground water |
| NORTH | B C | 18" - 36" 36" and Larger | SOME (SO.) AND | 20 - 35% 35 - 50% | medium F/C = Fine to coarse GR = Gray | Reading (Hours) | Ground water |
| Volume = 3 cu. yd. | . yd. Excavation Effort | | BN = Brown | | | | |
| | E - Easy M - Moderate D - Difficult | | | | YEL = Yellow | | |

| | | TEST | PIT LOG | | | _ |
|----------------------------|------------|-----------------|----------------|--------------|---------------------|---------------|
| - ca. | Commonwe | ealth Fusion Sy | /stems | | TEST PIT NO.: | TP-318 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | SHEET: | 1 of 1 |
| Engineers/Scientists | Н | ospital Road | | | PROJECT NO: | 01.0174955.30 |
| Devens, Massachusetts | | | | | REVIEWED BY: | MJO |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | actors, Inc. | Date | 8/7/2025 |
| | Operator | Hassler Lop | ez | | Ground Elev. | 279 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | Time Started | 1010 |
| | Capacity | 1/3 CY | Reach | 14 ft | . Time Completed | 1020 |
| <u> </u> | | | | | Pouldors | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|---|---------------|--------------------|------------------|------------------------------|----------|
| 1 | Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, damp. (TOPSOIL | GS-1 | ND | E | 0 | 1, 2 |
| 2 | FILL) | | | E | 0 | |
| 3 | Brown, fine to coarse SAND, some fine to coarse Gravel, little Silt, moist. (SAND/GRAVEL) | | | Е | 0 | 3, 4 |
| 4 | Bottom of Test Pit at 3' | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 3 feet bgs.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Proportions Used F = Alt | | Class Proport | | F = Fine | Gro | undwater |
|--------------------|-------------------------------------|------------------------------|--------------------------|------------|--------------------------------|---------|------------------------------------|-----|----------|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse | , |) Encountered) Not Encountered | | |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | 0% V = Very Elapsed Time to | | Depth to | | |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium F/C = Fine to coarse | Reading | Ground water | | |
| • | С | 36" and Larger | AND | 35 - 50% | GR = Gray | (Hours) | | | |
| Volume = 3 cu. yd. | ume = 3 cu. yd. Excavation Effort | | | BN = Brown | | | | | |
| | E - Easy M - Moderate D - Difficult | | | | YEL = Yellow | | | | |

| | | TEST I | PIT LOG | | | | |
|----------------------------|------------|-----------------|----------------|--------------|-----|----------------|---------------|
| O. C. | Commonwe | ealth Fusion Sy | /stems | | | TEST PIT NO.: | TP-319 |
| GZA GeoEnvironmental, Inc. | Proposed | CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuset | REVIEWED BY: | MJO | | | |
| | | | | | | | |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land: | scaping Contra | actors, Inc. | | Date | 8/7/2025 |
| · | Operator | Hassler Lop | ez | | | Ground Elev. | 275 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1030 |
| · | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1042 |
| | | | | | | | |
| | | | | | | Pouldors | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | GS-1 | ND | E | 0 | 1, 2 |
| 2 | | | | Е | 0 | |
| 3 | | | | E | 1A | |
| 4 | | | | Е | 0 | |
| 5 | | | | E | 0 | |
| 6 | | | | М | 0 | |
| 7 | Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, damp. (TOPSOIL FILL) | | | М | 0 | |
| 8 | (TOT SOLETIES) | | | М | 2A | |
| 9 | | | | М | 0 | |
| 10 | | | | М | 0 | |
| | | | | M | 0 | |
| 11 | | | | М | 0 | 3 |
| 12 | | | | M | 0 | 4 |
| 13 | Bottom of Test Pit at 13' | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at approximate practical reach limit of the excavator at 13 feet.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Boulder Class | | ı | Proportions Used | F = Fine | Groundwater | | |
|----------------------------|-----------------------|-------------------------------------|--------------|------------------|--------------------------------|--------------------|-----------------------------|--|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse | ` ' | Encountered Not Encountered | |
| 4 | Α | | LITTLE (LI.) | 10 - 20% | F/M = Fine to | Elapsed Time to | Depth to Ground water | |
| NORTH | В | | SOME (SO.) | 20 - 35% | medium F/C = Fine to coarse | Reading (Hours) | Ground water | |
| <u>'</u> | С | | AND | 35 - 50% | GR = Gray | - | I | |
| Volume = <u>12</u> cu. yd. | | Excav | ation Effort | | BN = Brown YEL = Yellow | | | |
| | | E - Easy M - Moderate D - Difficult | | | | | | |

| | | TEST | PIT LOG | | | |
|----------------------------|------------|-----------------|----------------|--------------|---------------------|---------------|
| | Commonwe | ealth Fusion Sy | rstems | | TEST PIT NO.: | TP-320 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | <u> </u> | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | PROJECT NO: | 01.0174955.30 |
| Devens, Massachusetts | | | | | REVIEWED BY: | MJO |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | actors, Inc. | Date | 8/7/2025 |
| | Operator | Hassler Lop | ez | | Ground Elev. | 259 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | Time Started | 1035 |
| | Capacity | 1/3 CY | Reach | 14 ft | . Time Completed | 1050 |
| | | | | ı ı | Pauldara | <u> </u> |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | GS-1 | ND | E | 0 | 1, 2 |
| 2 | Dark brown, fine to coarse SAND, some Silt, little fine to coarse Gravel, damp. (TOPSOIL FILL) | | | E | 0 | |
| 3 | | | | E | 1A | 3 |
| 4 | Brown, fine to coarse SAND and fine to coarse GRAVEL, little Silt, moist. (SAND/GRAVEL) | | | E | 0 | 4 |
| 5 | Bottom of Test Boring at 4' | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 4 feet bgs.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Pro | portions Used | F = Fine | Gro | undwater |
|--------------------|--|----------------|--------------|---------------------|-----------------------------------|--------------------|------------------------------------|
| 12 | Letter Designation | | | TRACE (TR.) 0 - 10% | | ((x |) Encountered) Not Encountered |
| 4 | Α | 6" - 17" | LITTLE (LI.) | 10 - 20% | V = Very F/M = Fine to | Elapsed Time to | Depth to Ground water |
| NORTH | В | 18" - 36" | SOME (SO.) | 20 - 35% | medium | Reading | |
| ~ | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 4 cu. yd. | = 4 cu. yd. Excavation Effort E - Easy M - Moderate D - Difficult | | | | BN = Brown | | |
| | | | | Difficult | YEL = Yellow | | |

| | | TEST | PIT LOG | | | | |
|----------------------------|--------------|-----------------|----------------|--------------|---------------------|----------------|---------------|
| OTA | Commonwe | ealth Fusion Sy | TEST PIT NO.: | TP-321 | | | |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | , Massachuse | tts | | | REVIEWED BY: | MJO | |
| | | | | - | | | |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | actors, Inc. | | Date | 8/7/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 266 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1115 |
| | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1137 |
| | | | | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | GS-1 | ND | Е | 0 | 1, 2 |
| 2 | | | | Е | 0 | |
| 3 | | | | Е | 0 | |
| 4 | | | | Е | 1A | |
| 5 | | | | E | 0 | |
| 6 | | | | E | 0 | |
| 7 | Dark brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, damp. (TOPSOIL FILL) | | | E | 0 | |
| 8 | (TOT SOLETIES) | | | М | 0 | |
| 9 | | | | М | 1A | |
| 10 | | | | М | 0 | |
| 11 | | | | М | 0 | |
| 12 | | | | М | 0 | 3 |
| 13 | | | | М | 0 | 4 |
| 15 | Bottom of Test Pit at 13 feet | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at approximate practical reach limit of the excavator at 13 feet.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Prop | ortions Used | F = Abbreviations | Groundwater | | | |
|---------------------|---------------------------------|-----------|-------------------------------------|---|--|-------------------------------------|---|--|--|
| 12 4 NORTH | Letter Designation A B | | TRACE (TR.) LITTLE (LI.) SOME (SO.) | 0 - 10% 10 - 20% 20 - 35% 35 - 50% | M = Medium C = Coarse V = Very F/M = Fine to medium F/C = Fine to coarse | (x) Elapsed Time to Reading (Hours) | Encountered Not Encountered Depth to Ground water | | |
| Volume = 12 cu. yd. | C | Excav | ation Effort | Difficult | GR = Gray BN = Brown YEL = Yellow | | | | |

| | | TEST I | PIT LOG | | | | |
|----------------------------|------------|----------------|---------------|---------------------------------------|-----|----------------|---------------|
| 3 agu | Commonwe | ealth Fusion S | ystems | | | TEST PIT NO.: | TP-322 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | spital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuse | tts | | | REVIEWED BY: | MJO |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contr | actors, Inc. | | Date | 8/7/2025 |
| - | Operator | Hassler Lop | pez | | | Ground Elev. | 253.5 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1140 |
| · | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1147 |
| 1 | | | | , , , , , , , , , , , , , , , , , , , | | 1 | 1 |
| | | | | | | | |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | GS-1 | ND | E | 0 | 1, 2 |
| 2 | | | | E | 1A | |
| 3 | | | | E | 0 | |
| 4 | Dark brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, trace Roots, damp. | | | E | 0 | |
| 5 | (TOPSOIL FILL) | | | E | 1A | |
| 6 | | | | E | 0 | |
| 7 | | | | E | 2A | |
| 8 | | | | М | 0 | |
| 9 | Brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt, moist. | | | М | 0 | |
| 10 | (SAND/GRAVEL) | | | М | 0 | 3, 4 |
| 11 | Bottom of Test Pit at 10 feet | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a lon Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at 10 feet bgs.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Prope | ortions Used | F = Abbreviations | Grou | undwater |
|--------------------|-----------------------|------------------------------|----------------------------|----------------------|-----------------------------------|-------------------------------|--------------------------------|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse V = Very | (x) | Encountered Not Encountered |
| 4NORTH | A B | | LITTLE (LI.) SOME (SO.) | 10 - 20% 20 - 35% | F/M = Fine to medium | Elapsed Time to Reading | Depth to Ground water |
| ← | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | |
| Volume = 9 cu. yd. | | Excav | ation Effort | | BN = Brown | | |
| | | E - Easy M - M | oderate D - D | ifficult | YEL = Yellow | | |

| | | TEST I | PIT LOG | | | | |
|----------------------------|------------|-----------------|----------------|--------------|-----|---|---------------|
| | Commonwe | ealth Fusion Sy | rstems | | | TEST PIT NO.: | TP-323 |
| GZA GeoEnvironmental, Inc. | Proposed (| CFS-4 Develop | ment | | | SHEET: | 1 of 1 |
| Engineers/Scientists | Но | ospital Road | | | | PROJECT NO: | 01.0174955.30 |
| | Devens | , Massachuset | ts | | | REVIEWED BY: | MJO |
| | | | | | | | |
| GZA Rep. Darragh Walsh | Contractor | Cryan Land | scaping Contra | ictors, Inc. | | Date | 8/7/2025 |
| | Operator | Hassler Lop | ez | | | Ground Elev. | 270.5 |
| Weather 70's-80's Sunny | Make | CAT | Model | 311FLRR | | Time Started | 1245 |
| · | Capacity | 1/3 CY | Reach | 14 | ft. | Time Completed | 1300 |
| | | | | | | , , , , , , , , , , , , , , , , , , , | 1 |

| Depth (ft) | Soil Description (Stratum Description-USDA Field Determination) | Sample No. | Field Test Data | Excav. Effort | Boulders: Count/ Class | Note No. |
|---------------|--|---------------|--------------------|------------------|------------------------------|----------|
| 1 | | GS-1 | ND | E | 0 | 1, 2 |
| 2 | | | | E | 0 | |
| 3 | | | | E | 0 | |
| 4 | | | | E | 0 | |
| 5 | | | | E | 3A | |
| 6 | | | | E | 0 | |
| 7 | Dark brown, fine to coarse SAND and fine to coarse GRAVEL, some Silt, trace Roots, damp. (TOPSOIL FILL) | | | E | 1A | |
| 8 | · · · | | | E | 0 | |
| 9 | | | | E | 1A | |
| 10 | | | | E | 0 | |
| 11 | | | | E | 0 | |
| 12 | | | | E | 7A | 3 |
| 13 | | | | E | 0 | 4 |
| 14 | Bottom of Test Pit at 13 feet | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |

- 1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
- 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
- 3. Test pit terminated at approximate practical reach limit of the excavator at 13 feet.
- 4. Test pit backfilled with excavated spoils placed in approximately 1-foot-thick lifts each tamped with the excavator bucket.

| Test Pit Plan | Bould | ler Class | Pro | portions Used | F = Fine | Groundwater | | | |
|----------------------------|-----------------------|------------------------------|--------------|----------------------|-------------------------------------|-------------------------------|------------------------------------|--|--|
| 12 | Letter Designation | Size Range Classification | TRACE (TR.) | 0 - 10% | M = Medium C = Coarse | ((x |) Encountered) Not Encountered | | |
| 4NORTH | A B | | | 10 - 20% 20 - 35% | V = Very F/M = Fine to medium | Elapsed Time to Reading | Depth to Ground water | | |
| | С | 36" and Larger | AND | 35 - 50% | F/C = Fine to coarse GR = Gray | (Hours) | | | |
| Volume = <u>12</u> cu. yd. | | Excav | ation Effort | | BN = Brown | | | | |
| | | E - Easy M - M | oderate D | - Difficult | YEL = Yellow | | | | |



GEOTECHNICAL

ENVIRONMENTAL

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WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX B.7

2025 GZA TEST BORING LOGS

GZA GeoEnvironmental, Inc. Engineers and Scientists

Pivotal Devens, LLC Proposed CFS-3 Development Hospital Road Devens, MA

BORING NO.: GZ-109 SHEET: 1 of 1 PROJECT NO: 01.0178186.00 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Manlea Thompson

Type of Rig: ATV

Ground Surface Elev. (ft.): 259 Rig Model: Diedrich D-70 Turbo Final Boring Depth (ft.): 17

Drilling Method: HSA Date Start - Finish: 8/28/2025 - 8/28/2025

Boring Location: See Plan

V. Datum: See Plan

H. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6-5/8 Hammer Weight (lb.): Hammer Fall (in.):

Foreman:

Logged By: Kyran Peters

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Casing Stab. Time Date Time Water Depth 8/28/25 1455 Dry (17') 15 min

| | er Fall (| (in.): | | | | | | raii (iii). 30 | | | | | | |
|---------------|--------------------------|--------|----------------|----------------------|----|----------------------|-----|--|--------|-----------|-----------------------|----------------|------------------------|-------|
| Other: | | | | | | Othe | r: | Autohammer | | | | | | |
| Depth (ft) | Casing Blows/ Core | No. | Depth (ft.) | Samp Pen. (in) | | Blows (per 6 in.) | SPT | Sample Description and Identification (Modified Burmister Procedure) | | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. |
| | Rate | S-1 | 0-2 | 24 | 12 | 2 1 | 3 | S-1: (Top 7"): Brown, fine to medium SAND, some Silt, little Gra | avel, | <u>ır</u> | | 0.6' | TOPSOIL | 258 |
| - | | | | | | 2 2 | | trace Roots, dry. (Bottom 5"): Light brown/orange, fine to medium SAND, some S | . | 1 | 24.3 | 2' | SUBSOIL | 257 |
| - | | S-2 | 2-4 | 24 | 11 | 3 2 3 5 | 5 | trace Roots, dry. S-2: Loose, light brown, fine to medium SAND, some Gravel, littl trace (-) Roots, dry. | | 2 | 1.1 | 4.5' | SAND | 254 |
| 5_ | | S-3 | 5-7 | 24 | 11 | 12 13 12 9 | 25 | S-3: Medium dense, gray to light brown, GRAVEL and fine to co SAND, trace Silt, dry. | arse | | ND | | SAND/GRAVE | |
| | | | | | | | | | | | | 8.5' | | 250 |
| 0 _ | | S-4 | 10-12 | 24 | 16 | 6 7 8 10 | 15 | S-4: Medium dense, light brown, fine to medium SAND, trace Grace Silt, damp. | ravel, | | ND | | | |
| - - | | | | | | | | | | | | | SAND | |
| 15 _ | | S-5 | 15-17 | 24 | 17 | 7 10 11 12 | 21 | S-5: Medium dense, light brown, fine to medium SAND, trace Si damp. | lt, | | ND | 17' | | 24 |
| 1 | | | | | | | | Bottom of boring at 17 feet. | | 3 | | | | |
| 20 _ | | | | | | | | | | | | | | |
| 25 _ - | | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
 Boring terminated at 17 feet below ground surface (bgs). Upon completion, the borehole was backfilled with soil cuttings.

REMARKS

178186.00 PIVOTAL DEVENS, LLC - PROP CFS-3 DEV. GPJ; STRATUM ONLY NORWOOD; 9/11/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Pivotal Devens, LLC Proposed CFS-3 Development Hospital Road Devens, MA

BORING NO.: GZ-110 SHEET: 1 of 1 PROJECT NO: 01.0178186.00 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV

Manlea Thompson Rig Model: Diedrich D-70 Turbo

Logged By: Kyran Peters Drilling Method: HSA Boring Location: See Plan Ground Surface Elev. (ft.): 271 Final Boring Depth (ft.): 26

Date Start - Finish: 8/27/2025 - 8/27/2025 H. Datum: See Plan

V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6-5/8 Hammer Weight (lb.): Hammer Fall (in.):

Foreman:

Other:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Casing Stab. Time Date Time Water Depth 8/27/25 1140 Dry (26') 24 15 min

Groundwater Depth (ft.)

| Other | Casing | | | Samp | اما | | | | ¥ | Ciald | - | | |
|---------------|------------------------|------|----------------|------|--------------|----------------------|--------------|--|--------|-----------------------|-------------------------|------------------------|-------------------------------|
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | _ | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. (ft.) |
| - | rvate | S-1 | 0-2 | 24 | 9 | 5 5 6 5 | 11 | S-1: Medium dense, dark brown, fine to coarse SAND, some Gravel, little Silt, trace Wood, damp. | 1 | 4.4 | | TOPSOIL | |
| - | - | S-2 | 2-4 | 24 | 11 | 4 3 3 65 | 6 | S-2: (Top 4"): Loose, brown, fine to coarse SAND and GRAVEL, little Silt, trace Roots, damp. | 2 | 5.5 | 2' 2.3' 2.9BURIED | FILL ASPHALT PAVE | 269.0' 268.7' ME&\$6.1' |
| 5 _ | _ | S-3 | 4-6 | 24 | 19 | 29 29 24 24 | 53 | (Bottom 7"): Bituminous ASPHALT pavement. S-3: Very dense, brown to gray, GRAVEL and fine to coarse SAND, trace Silt, dry. | | 5.5 | | FILL | |
| - | | S-4 | 6-8 | 24 | 21 | 19 19 18 15 | 37 | S-4: (Top 11"): Dense, light brown to gray, GRAVEL and fine to coarse SAND, trace Silt, dry. | | 5.4 | 6.9' | | 264.1' |
| 10 _ | _ | S-5 | 8-10 | 24 | 15 | 6 7 9 9 | 16 | (Bottom (10"): Dense, light brown, fine to coarse SAND, trace Gravel, trace Silt, damp. S-5: Medium dense, light brown, fine to coarse SAND, some Gravel, trace Silt, Iron oxide staining 9 to 10 inches from top of recovery, dry. | | 2.8 | Ş | SAND/GRAVEL | |
| - | | | | | | | | | | | 11.5' | | 259.5' |
| - | | S-6 | 13-15 | 24 | 17 | 4 4 5 5 | 9 | S-6: Loose, light brown, fine to medium SAND, trace Silt, damp. | | 0.1 | | | |
| 15 _ | | S-7 | 15-17 | 24 | 9 | 5 6 7 8 | 13 | S-7: Medium dense, light brown, fine to medium SAND, trace Silt. | | ND | | | |
| - | _ | S-8 | 18-20 | 24 | 14 | 3 6 11 13 | 17 | S-8: Medium dense, light brown, fine to medium SAND, trace (-) Silt. (USDA Field Determination: SAND) | | 1.1 | | SAND | |
| 20 _ | - | S-9 | 20-22 | 24 | 22 | 8 8 8 9 | 16 | S-9: Medium dense, light brown, fine SAND, trace (+) Silt, Iron oxide coloring bottom 9 inches, moist. (USDA Gradation Determination: | | 1.3 | | | |
| - | _ | S-10 | 22-24 | 24 | 24 | 12 13 13 14 | 26 | SAND) S-10: Medium dense, light brown, fine SAND, some Silt, Iron oxide staining 6-10 inches, 13 to 15 inches from top of recovery, damp. | | 4.0 | | | |
| 25 _ | | S-11 | 24-26 | 24 | 21 | 10 11 13 13 | 24 | Occasional 1/2- to 3-inch-thick silt seam. (USDA Gradation Determination: LOAMY SAND) | | 3.8 | | | |
| - 30 | _ | | | | | | | S-11: Medium dense, light brown to gray, fine to medium SAND, trace Silt, iron oxide staining observed top 11 inches of recovery. Occasional 1/2- to 1-inch-thick silt seam within top 11-inches of recovery. (USDA Field Determination: LOAMY SAND) Bottom of boring at 26 feet. | 4 | | 26' | | 245.0' |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Water added into augers prior to sampling S-7 and S-8.

4. Boring terminated at 26 feet below ground surface after reaching target depth. Upon completion, the borehole was backfilled with soil cuttings to the ground surface.

REMARKS

178186.00 PIVOTAL DEVENS, LLC - PROP CFS-3 DEV. GPJ; STRATUM ONLY NORWOOD; 9/22/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Manlea Thompson

Pivotal Devens, LLC Proposed CFS-3 Development Hospital Road Devens, MA

BORING NO.: **GZ-110A** SHEET: 1 of 1 PROJECT NO: 01.0178186.00 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV

Rig Model:

Boring Location: See Plan Ground Surface Elev. (ft.): 271 Final Boring Depth (ft.): 15

H. Datum: See Plan

Logged By: Kyran Peters

Foreman:

Other:

Drilling Method: HSA

Date Start - Finish: 8/27/2025 - 8/27/2025 V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6-5/8 Hammer Weight (lb.): Hammer Fall (in.):

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Other: Autohammer

Diedrich D-70 Turbo

Casing Stab. Time Date Time Water Depth 8/27/25 1215 Dry (15') 15 min

Groundwater Depth (ft.)

| Othici | | | | | | | - | | | | |
|---------------|--------------------------|-----|----------------|------|-------|----------------------|-------|--|--------|-----------------------|--------------------------|
| Depth (ft) | Casing Blows/ Core | No. | Depth (ft.) | Pen. | Rec. | Blows (per 6 in.) | SPT | Sample Description and Identification (Modified Burmister Procedure) | Remark | Field Test Data | Stratum |
| | Rate | | (10.) | () | (111) | (per o iii.) | value | | | Data | |
| - | | | | | | | | | 1 2 | | |
| - | | | | | | | | | | | |
| 5 _ | | | | | | | | | | | |
| - | | | | | | | | | | | |
| - | | | | | | | | | | | REFER TO GZ-110 FOR STRA |
| _ | | | | | | | | | | | |
| 10 _ | | | | | | | | | | | |
| - | | | | | | | | | | | |
| - | | S-1 | 13-15 | 24 | 13 | 5 6 | 14 | S-1: Medium dense, light brown, fine to medium SAND, trace Silt, | 3 | 3.6 | |
| - 15 _ | | | | | | 8 8 | | wet. | 4 | | 15' 2 |
| _ | | | | | | | | Bottom of boring at 15 feet. | 5 | | |
| - | | | | | | | | | | | |
| - | | | | | | | | | | | |
| 20 _ | | | | | | | | | | | |
| - | | | | | | | | | | | |
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| - 25 _ | | | | | | | | | | | |
| 25 _ - | | | | | | | | | | | |
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| - RO | | | | | | | | | | | |

Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024. Offset approximately 4 feet East of GZ-110.
 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic

vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv). Boring advanced to 13 feet below ground surface (bgs) with augers prior to sampling.

Water added to augers prior to sampling S-1.

Boring terminated at 15 feet bgs after reaching target depth. Upon completion, the borehole was backfilled with soil cuttings.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-110A

178186.00 PIVOTAL DEVENS, LLC - PROP CFS-3 DEV.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS



Pivotal Devens, LLC Proposed CFS-3 Development Hospital Road Devens, MA

BORING NO.: GZ-111 SHEET: 1 of 1 PROJECT NO: 01.0178186.00

REVIEWED BY: MJO

Time

1100

Drilling Co.: New England Boring Contractors

HSA

3.25/6-5/8

Manlea Thompson

Rig Model: Diedrich D-70 Turbo Boring Location: See Plan Ground Surface Elev. (ft.): 269 Final Boring Depth (ft.): 11

H. Datum: See Plan V. Datum: See Plan

Logged By: Kyran Peters Auger/Casing Type:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs

Date Start - Finish: 8/26/2025 - 8/26/2025

Date

8/26/25

Groundwater Depth (ft.) Casing Stab. Time Water Depth Dry (11') 15 min

Other:

I.D/O.D.(in):

Hammer Weight (lb.):

Hammer Fall (in.):

Foreman:

Sampler Hmr Fall (in): 30" Autohammer

Type of Rig: ATV

Drilling Method: HSA

| Otner | | | | | | Other | | Adolamilo | | | | | |
|---------------|------------------------|-----|----------------|------|----|----------------------|--------------|--|--------|-------|----------------|-------------|----------------|
| | Casing | | - 5 | Samp | le | | | 0 1 5 11 17 11 | Ϋ́ | Field | | Stratum | |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test | Depth (ft.) | Description | Elev. (ft.) |
| | rato | S-1 | 0-2 | 24 | 22 | 10 16 | 49 | S-1: (Top 15"): Dense, light brown, fine to coarse SAND, some | | 3.6 | | | |
| - | | | | | | 33 34 | | Gravel, some Silt, trace Roots. | ١, | 3.6 | | | |
| | | | | | | | | (Bottom 7"): Light brown, GRAVEL and fine to coarse SAND, little | 1 | 27 | | | |
| - | | S-2 | 2-4 | 24 | 17 | 27 22 | 50 | Silt. | 2 | 3.7 | | FILL | |
| - | 4 | | | | | 28 34 | | | | | | | |
| | | | | | | | | S-2: (Top 13"): Very dense, light brown, GRAVEL and fine to coarse | | 2.3 | | | |
| | | S-3 | 4-6 | 24 | 19 | 9 11 | 22 | SAND, little Silt, dry. | | 2.3 | 4.4' | | 264.6' |
| 5 _ | - | | | | | 11 10 | | (Bottom 4"): Brown, GRAVEL and fine to coarse SAND, trace Silt, | | | | | |
| | | | | | | | | dry. | | | | | |
| _ | | | | | | | | S-3: (Top 5"): Brown, fine to coarse SAND and GRAVEL, little Silt, | | | | | |
| - | | | | | | | | damp. | | | | | |
| _ | | | | | | | | (Bottom 14"): Medium dense, light brown, fine to coarse SAND, some | | | | SAND/GRAVEL | |
| | | | | | | | | Gravel, trace Silt, damp. | | | | | |
| - | 1 | S-4 | 9-11 | 24 | 7 | 8 8 | 17 | S-4: Medium dense, light brown, fine to coarse SAND, little Gravel, | | ND | | | |
| 10 _ | <u> </u> | | | | | 9 10 | | trace Silt. | | | | | |
| | | | | | | 3 10 | | trace ont. | | | 11' | | 258.0' |
| - | | | | | | | | Bottom of boring at 11 feet. | 3 | | | | |
| - | - | | | | | | | - | | | | | |
| | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
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| 20 | | | | | | | | | | | | | |
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| _ | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | |
| 20 - | 1 | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 1 - | 1 | | | 1 | 1 | | 1 | | | | | | |

Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024. Offset approximately 4 feet East of GZ-110.
 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic

vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Boring terminated at 11 feet bgs after reaching target depth. Upon completion, the borehole was backfilled with soil cuttings.

178186.00 PIVOTAL DEVENS, LLC - PROP CFS-3 DEV.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Pivotal Devens, LLC Proposed CFS-3 Development Hospital Road Devens, MA

BORING NO.: GZ-113 SHEET: 1 of 1 PROJECT NO: 01.0178186.00

REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Manlea Thompson

Rig Model: Diedrich D-70 Turbo Boring Location: See Plan Ground Surface Elev. (ft.): 283.5 Final Boring Depth (ft.): 18

H. Datum: See Plan V. Datum: See Plan

Logged By: Kyran Peters

Foreman:

Other:

Drilling Method: HSA

Type of Rig: ATV

Date Start - Finish: 9/3/2025 - 9/5/2025

Groundwater Depth (ft.)

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6-5/8 Hammer Weight (lb.):

Hammer Fall (in.):

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Stab. Time Casing Date Time Water Depth 9/5/25 0945 Dry (18') 15 min

| | Casing | | , | Samp | ole | ' | | | 돗 | Field | _ | Stratum | |
|---------------|------------------------|------|----------------|------|------|----------------------|--------------|---|--------|--------------|----------------|------------------------|--------|
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. | Rec. | Blows (per 6 in.) | SPT Value | | Remark | Test Data | Deptl (ft.) | Stratum Description | Elev. |
| | | GS-1 | 0-1 | | | | | GS-1: (1'): Light brown, fine to coarse SAND and GRAVEL, trace Silt, | | 1.5 | | | |
| - | - | GS-2 | 1-3 | | | | | dry. | 1 | 1.7 | | | |
| - | | | | | | | | GS-2: (3'): Light brown, fine to coarse SAND, some Gravel, little Silt. | 2 | | | | |
| - | | GS-3 | 3-5 | | | | | GS-3: (5'): Light brown, fine to coarse SAND, trace Silt. | 3 | 4.8 | | | |
| 5_ | | S-1 | 5-7 | 24 | 10 | 3 2 2 4 | 4 | S-1: Loose, gray to light brown, GRAVEL and fine to coarse SAND, trace Silt, dry. | | 4.4 | | | |
| - | | S-2 | 7-9 | 24 | 14 | 3 2 4 4 | 6 | S-2: Loose, gray, GRAVEL and fine to coarse SAND, trace Silt, dry. | | 4.3 | | FILL | |
| - | | S-3 | 9-10 | 13 | 8 | 6 27 | R | S-3: Light brown, fine to coarse SAND, some Gravel, trace Silt, damp. | | 4.6 | | | |
| 10 _ | <u> </u> | S-4 | 10-12 | 24 | 7 | 3/1" | 58 | S-4: Very dense, light brown, GRAVEL and fine to coarse SAND, little | 4 | 5.3 | | | |
| - | | 0-4 | 10-12 | 24 | , | 28 25 33 25 | | Silt, damp. | 4 | | | | |
| - | | S-5 | 12-14 | 24 | 3 | 39 46 | 71 | S-5: Very dense, light brown, GRAVEL and fine to coarse SAND, little | | 5.3 | | | |
| - | - | | | | | 25 21 | | Silt, dry. | | | | | |
| _ | <u> </u> | S-6 | 14-16 | 24 | 15 | 11 15 | 30 | S-6: Dense, light brown, fine to coarse SAND, some Gravel, trace Silt, | | 5.5 | 14' | | 269.5' |
| 15 _ | | | | | | 15 19 | | dry. | | | | | |
| - | | S-7 | 16-18 | 24 | 16 | 19 22 21 20 | 43 | S-7: Dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, | | 5.9 | | SAND/GRAVEL | |
| | | | | | | 21 20 | | dry. | | | 18' | | 265.5' |
| - | | | | | | | | Bottom of boring at 18 feet. | 5 | | | | |
| - | | | | | | | | | | | | | |
| 20 _ | - | | | | | | | | | | | | |
| _ | _ | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | |
| 25 _ | | | | | | | | | | | | | |
| - | - | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | |

Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024. Offset approximately 4 feet East of GZ-110.
 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic

vapor meter equipped with a photoionization detector (PID) and 10.6eV

Boring pre-excavated to 5 feet below ground surface (bgs) with VacMasters System 4600 VacTruck on 9/3/25, Borehole was backdilled with spoils.
Sample S-3 stopped at 10 feet due to ringing, gravel piece observed in tip of spoon, advanced augers to 10 feet before obtaining sample S-4.
Boring terminated at 18 feet bgs. Upon completion, borehole was backfilled with soil cuttings to the ground surface.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-113

178186.00 PIVOTAL DEVENS, LLC - PROP CFS-3 DEV.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS

GZA GeoEnvironmental, Inc. Engineers and Scientists

Drilling Co.: New England Boring Contractors

Manlea Thompson

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-114 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

8/19/2025 - 8/19/2025

Boring Location: See Plan

Date Start - Finish:

Ground Surface Elev. (ft.): 273 Final Boring Depth (ft.): 29

Date

8/19/25

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 4.25/8 Hammer Weight (lb.): Hammer Fall (in.):

Logged By: Kyran Peters

Foreman:

Other:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Type of Rig: ATV

Drilling Method: HSA

Rig Model: D-70 Turbo

Groundwater Depth (ft.) Stab. Time Casing Time Water Depth 1200 Dry (29') 27 5 min

| | Casing | | 9 | Samp | le | <u>'</u> | | | Į | Field | _ | Stratum | |
|---------------|------------------------|------|----------------|--------------|--------------|----------------------|--------------|---|--------|-------|----------------|-------------|--------|
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test | Depth (ft.) | Description | Elev. |
| | rate | S-1 | 0-2 | 24 | 0 | 7 8 | 17 | S-1: No recovery. | | | | | |
| - | | | | | | 9 10 | | | 1 | | | | |
| - | | S-2 | 2-4 | 24 | 2 | 8 7 | 15 | S-2: Medium dense, brown, GRAVEL, some fine to medium Sand, | 2 | ND | | | |
| _ | | 0-2 | 2-4 | | - | 8 7 | | little Silt, dry. | _ | | | | |
| | | | | | | | | inde on, dry. | | | | | |
| 5 | | | | | | | | | | | | | |
| "- | | S-3 | 5-7 | 24 | 16 | 9 7 | 13 | S-3: Medium dense, dark brown, fine to coarse SAND, some Gravel, | | 3.6 | | | |
| - | | | | | | 6 11 | | little Silt, trace Plant Matter, damp. | | | | | |
| - | | S-4 | 7-9 | 24 | 8 | 3 12 | 30 | S-4: Dense, dark brown to brown, fine to coarse SAND, some Gravel, | | 6.7 | | | |
| - | | | | | | 18 18 | | little Silt, trace Roots, moist. | | | | | |
| _ | | | | | | | | | | | | | |
| 10 | | | | | | | | | | 9.2 | | TOPSOIL | |
| | | S-5 | 10-12 | 24 | 15 | 5 9 | 18 | S-5: Medium dense, dark brown, fine to coarse SAND, some Gravel, | | 0.2 | | | |
| _ | | | | | | 9 10 | | little Silt, trace Wood fragments, moist. | | | | | |
| - | - | S-6 | 12-14 | 24 | 11 | 6 8 | 20 | S-6: Medium dense, dark brown, fine to coarse SAND and GRAVEL, | | 7.2 | | | |
| - | | | | | | 12 15 | | some Silt, trace Wood, moist. | | | | | |
| - | | | | | | | | | | | | | |
| 15 _ | . | S-7 | 15-17 | 24 | 22 | 14 15 | 26 | C.7. Madium dance dayl, brown to brown fine to coarse CAND come | | 5.9 | | | |
| _ | | 5-7 | 10-17 | 24 | 22 | 11 11 | | S-7: Medium dense, dark brown to brown, fine to coarse SAND, some Gravel, some Silt, moist. | | | | | |
| | | | | | | | | Cravos, como cine, moioc. | | 6.3 | | | |
| | | S-8 | 17-19 | 24 | 20 | 13 14 | 30 | S-8: Dense, dark brown, fine to coarse SAND, some Silt, little Gravel, | | 0.0 | | | |
| - | | | | | | 16 17 | | trace Wood fragments, moist. | | | | | |
| - | | | | | | | | | 3 | | 19.5' | | 253.5' |
| 20 _ | | S-9 | 20-22 | 24 | 20 | 10 6 | 12 | S-9: Medium dense, brown, fine to coarse SAND, some Gravel, trace | | 3.3 | | | |
| - | | | | | | 6 4 | | Silt, slighty damp. | | | | | |
| _ | | 0.40 | 00.04 | 0.4 | 44 | 40.40 | 24 | 0.40 M / 10 M / 1 | | 3.1 | | FILL | |
| _ | | S-10 | 22-24 | 24 | 14 | 10 13 11 9 | 24 | S-10: Medium dense, brown, fine to coarse SAND and GRAVEL, trace Silt, dry. | | | | | |
| | | | | | | 11.9 | | trace ont, dry. | | | | | |
| 25 | 1 | | | | | | | | | | 24.5' | | 248.5' |
| 20 - | | S-11 | 25-27 | 24 | 20 | 7 7 | 16 | S-11: Medium dense, brown, fine to coarse SAND, trace Gravel, trace | | 3.1 | | | |
| - | | | | | | 9 9 | | (-) Silt, dry. | | | | | |
| - | | S-12 | 27-29 | 24 | 18 | 10 10 | 23 | S-12: Medium dense, brown, fine to coarse SAND, trace Gravel, trace | | | | SAND | |
| - | | | | | | 13 15 | | (-) Silt, dry. | | | | | |
| _ | | | | | | | | | | | 29' | | 244.0' |
| 30 | | | | | | | | Bottom of boring at 29 feet. | 4 | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3 Driller indicated augers advanced with decreased resistance at 19.5 feet below ground surface (bgs).

4 Borling terminated at 29 feet bgs. Upon completion the borehole was backfilled with drilling spoils.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-115 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

8/22/2025 - 8/22/2025

Drilling Co.: **New England Boring Contractors**

Type of Rig: ATV Manlea Thompson Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 279 Final Boring Depth (ft.): 26

Date Start - Finish:

S-3: Medium dense, dark brown, fine to coarse SAND, some Gravel,

S-4: Medium dense, dark brown, fine to coarse SAND, some Gravel,

H. Datum: See Plan V. Datum: See Plan

Logged By: Jessica Abbazia

S-3

S-4

10-12

12-14

24 15

24 22

Foreman:

Stab. Time sing

6.0

6.2

10 min

Elev (ft.)

Stratum

Description

TOPSOIL

| Auge | r/Casing | Type: | HSA | | | Samo | ler Typ | e: Split Spoon | ! | | Groundy | vater D | epth (f | t.) |
|---------------|------------------------|----------|-------------------|--------------|--------------|----------------------|---------|--|-----------------------------------|---------------|-------------------|---------|--------------|----------------|
| _ | .D.(in): | | 3.25/6.62 | | | | D. (in. | | | Date | Time | Wate | r Depth | Casi |
| Hamr | ner Weig | ht (lb.) |): ₁₄₀ | | | Samp | ler Hm | r Wt (lb): 140 lbs | | 8/22/25 | 0950 | Dr | y (26') | 24 |
| Hamr | ner Fall | (in.): | 30 | | | Samp | ler Hm | r Fall (in): 30" | | | | | | |
| Other | r: A | utoham | nmer | | | Othe | r: | Autohammer | | | | | | |
| | Casing | | , | Samp | ole | <u>'</u> | | | | | • | 그루 | Field | |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. (in) | Blows (per 6 in.) | | (Mod | Description an ified Burmister | | on | Remark | Test Data | Depth (ft.) |
| | | S-1 | 0-2 | 24 | 15 | 7 8 | 14 | S-1: Medium dense, da | ark brown, fine to | coarse SAND, | some Silt, little | ; | 5.4 | |
| - | 1 | | | | | 6 4 | | Gravel, trace Roots/W | ood, moist. | | | 1 | 0.4 | |
| - | 1 | | | | | | | | | | | 2 | | |
| - | 1 | | | | | | | | | | | 3 | | |
| 5_ | | S-2 | 5-7 | 24 | 15 | 3 1 2 2 | 3 | S-2: Loose, dark brown Silt, trace Roots/Wood | • | SAND, some Gr | ravel, some | | 4.9 | |
| 10 _ | | | | | | | 26 | | | | | | 6.0 | |

26

29

8 13

13 11

17 16

13 24

| ON SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 | 30 | | | | | | | | | | | |
|---|---------|-----|-------|----|----|----------------|----|--|---|-----|------|--------|
| J; ST | | | | | | | | Bottom of boring at 26 feet. | 4 | | | |
| RATU | | | | | | 9 10 | | | | | 26' | 253.0' |
| M ONLY | - 25 | S-9 | 24-26 | 24 | 17 | 7 8 | 17 | S-9: Medium dense, brown, fine to coarse SAND, trace (-) Silt, dry. | | 0.0 | SAND | |
| NORW | - | S-8 | 22-24 | 24 | 17 | 10 12 10 10 | 22 | S-8: Medium dense, brown, fine to coarse SAND, trace (-) Silt, dry. | | 0.0 | 22' | 257.0 |
| OOD; 9/11/20 | 20 _ | S-7 | 20-22 | 24 | 23 | 9 9 8 8 | 17 | S-7: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots/Wood, moist. | | 2.9 | 001 | 257.0' |
| 125 | - | S-6 | 17-19 | 24 | 22 | 10 15 14 16 | 29 | S-6: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots/Wood, moist. | | 4.9 | | |
| | - | S-5 | 15-17 | 24 | 20 | 4 9 12 10 | 21 | S-5: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots/Wood, moist. | | 3.7 | | |

some Silt, trace Roots/Wood, moist.

some Silt, trace Roots/Wood, moist.

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Borehole advanced using hollow stem auger techniques from 0-24 feet below ground surface (bgs).

4. Borehole terminated at 26 feet bgs. Upon completion, the borehole was backfilled with soil cuttings.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made

Boring No.: GZ-115

174955.30 COMMONWEALTH FUSIC

REMARKS



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-116 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors Type of Rig: ATV

Foreman: Manlea Thompson Logged By: Jessica Abbazia

Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 274 Final Boring Depth (ft.): 29

Date Start - Finish: 8/22/2025 - 8/22/2025

H. Datum: See Plan

V. Datum: See Plan

Groundwater Depth (ft.) Auger/Casing Type: Sampler Type: Split Spoon HSA Casing Stab. Time I.D/O.D.(in): 3.25/6.625 I.D./O.D. (in.): 1.375/2 Date Time Water Depth Hammer Weight (lb.): Sampler Hmr Wt (lb): 140 lbs 8/22/25 1255 140 Dry (29') 27 10 min Hammer Fall (in.): Sampler Hmr Fall (in): 30" 30 Other: Autohammer

| Other: | | utoham | mer | | | Other | : | Autohammer | | | | | |
|---------------|--------------------------|--------|--------------|--------------|------------|-----------------------------|-------------|---|-----|---------------|----------------|------------------------|----------------|
| Depth (ft) | Casing Blows/ Core | No. | Depth | Samp Pen. | Rec. | Blows | SPT | Sample Description and Identification (Modified Burmister Procedure) | ۱ä۱ | Field Test | Jepth (ft.) | Stratum Description | Elev. (ft.) |
| - | Rate | S-1 | (ft.) 0-2 | (in) 24 | (in) 24 | (per 6 in.) 5 8 10 11 | Value 18 | S-1: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | 1 | Data 3.4 | | | |
| 5 | | | | | | | | | 3 | 0.0 | | | |
| - | | S-2 | 5-7 | 24 | 16 | 9 11 10 9 | 21 | S-2: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| 10 _ | | S-3 | 10-12 | 24 | 18 | 5 6 8 9 | 14 | S-3: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| | | S-4 | 12-14 | 24 | 22 | 9 9 8 8 | 17 | S-4: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | TOPSOIL | |
| 15 _ | | S-5 | 15-17 | 24 | 21 | 5 7 8 9 | 15 | S-5: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| - | | S-6 | 17-19 | 24 | 15 | 15 17 15 23 | 32 | S-6: Dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| 20 _ | | S-7 | 20-22 | 24 | 22 | 7 6 9 9 | 15 | S-7: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| - | | S-8 | 22-24 | 24 | 17 | 10 9 18 16 | 27 | S-8: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| 25 _ | | S-9 | 25-27 | 24 | 24 | 10 28 28 28 | 56 | S-9: (Top 12"): Dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | 26' | | 248.0 |
| - | | S-10 | 27-29 | 24 | 18 | 23 29 37 35 | 66 | (Bottom 12"): Light brown, fine to coarse SAND, little (+) Silt, dry. S-10: Very dense, light brown, fine to coarse SAND, little (+) Silt, trace Gravel, dry. | | 0.0 | 29' | SAND | 245.0 |
| 30 | | | | | | | | Bottom of boring at 29 feet. | 4 | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Ion Science Phocheck Tiger organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Borehole advanced using hollow stem auger techniques from 0-29 feet below ground surface (bgs).

4. Borehole terminated at 29 feet bgs. Upon completion, borehole backfilled with soil cuttings.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-116

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS



Manlea Thompson

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-118 SHEET: 1 of 2 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV

Boring Location: See Plan Ground Surface Elev. (ft.): 272.5 Final Boring Depth (ft.): 37

H. Datum: See Plan V. Datum: See Plan

Logged By: Jessica Abbazia

Foreman:

Rig Model: D-70 Turbo Drilling Method: HSA

Date Start - Finish: 8/22/2025 - 8/22/2025

Groundwater Depth (ft.)

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Casing Stab. Time Date Time Water Depth 8/22/25 0315 Dry (37') 10 min

| Other | · Aı | ,. utoham | mer | | | Other | | Autohammer | | | | | |
|---------------|------------------------|--------------|----------------|--------------|--------------|----------------------|--------------|---|--------|--------------|----------------|-----------------------|---------------|
| | Casing | | | Şamp | le | | | Comple Description and Identification | ark | Field | - - | Stratum | · - |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test Data | Dept (ft.) | Stratum escription | Elev (ft.) |
| 1 | | S-1 | 0-2 | 24 | 18 | 6 8 9 9 | 17 | S-1: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | 1 | 0.0 | | | |
| _ | | | | | | | | | 2 | | | | |
| 5 _ | | S-2 | 5-7 | 24 | 17 | 9 7 | 13 | S-2: Medium dense, dark brown, fine to coarse SAND, some Gravel, | 3 | 0.0 | | | |
| - | | 02 | | | | 6 6 | | some Silt, trace Roots, moist. | | | | | |
| 10 _ | | S-3 | 10-12 | 24 | 19 | 6 5 6 2 | 11 | S-3: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | TOPSOIL | |
| - | | S-4 | 12-14 | 24 | 24 | 9 11 11 10 | 22 | S-4: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| 15 <u> </u> | | S-5 | 15-17 | 24 | 24 | 3 7 8 9 | 15 | S-5: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| - | | S-6 | 17-19 | 24 | 24 | 17 12 13 14 | 25 | S-6: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, moist. | | 0.0 | | | |
| 20 _ | | S-7 | 20-22 | 24 | 20 | 8 7 8 7 | 15 | S-7: Medium dense, light brown, fine to coarse SAND, some Gravel, trace Silt, dry. | | 0.0 | 19.5' | | 253. |
| _ | | S-8 | 22-24 | 24 | 22 | 16 20 20 15 | 40 | S-8: Dense, light brown, fine to coarse SAND, some Gravel, trace Silt, \ensuremath{dry} . | | 0.0 | | | |
| 25 _ - | | S-9 | 25-27 | 24 | 22 | 11 18 32 26 | 50 | S-9: Very dense, light brown, fine to coarse SAND, some Gravel, trace Silt, dry. | | 0.0 | SA | ND/GRAVEL | |
| 30 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2.024.
2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Borehole advanced using hollow stem auger techniques from 0-35 feet below ground surface (bgs).

REMARKS

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA BORING NO.: GZ-118 SHEET: 2 of 2 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

| | | | | Samp | مام | | | | <u> </u> | F:-1-1 | | | |
|------------------|------------------|-----------|--------------|----------|--------|------------------|----------|---|----------|-----------------------|----------------|------------------------|-------|
| Depth (ft) | Casing Blows/ | | Depth | Don | Rec | Blows | SPT | Sample Description and Identification (Modified Burmister Procedure) | nar | Test | £. | Stratum Description | Elev. |
| (ft) | Core Rate | No. | (ft.) | (in) | (in) | (per 6 in.) | Value | (Modified Burmister Procedure) | Remark | Field Test Data | 9 . | Description | ⊞ # |
| | Nate | S-10 | 30-32 | 24 | 22 | 6 10 | 30 | S-10: Dense, light brown, fine to coarse SAND, some Gravel, trace | +- | 0.0 | | | |
| _ | | | | | | 20 27 | | Silt, dry. | | 0.0 | | | |
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| | | | | | | | | | | | | SAND/GRAVEL | |
| 25 | | | | | | | | | | | | | |
| 35 _ | - | S-11 | 35-37 | 24 | 21 | 13 13 | 31 | S-11: Dense, light brown, fine to coarse SAND, some Gravel, trace | | 0.0 | | | |
| _ | | 0-11 | 00-07 | | | 18 13 | | Silt, dry. | | | | | |
| | | | | | | 10 13 | | Siit, dry. | | | 37' | | 23 |
| - | | | | | | | | Bottom of boring at 37 feet. | 4 | | 31 | | 23 |
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| | . Borehole | e termina | ated at 37 f | feet bgs | . Upor | n completion, bo | rehole b | packfilled with soil cuttings. | | | | | |
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See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-118

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025



Manlea Thompson

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-119 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV

Boring Location: See Plan Ground Surface Elev. (ft.): 270 Final Boring Depth (ft.): 21

H. Datum: See Plan V. Datum: See Plan

Logged By: Kyran Peters

Foreman:

Rig Model: D-70 Turbo Drilling Method: HSA

Date Start - Finish: 8/25/2025 - 8/25/2025

Groundwater Depth (ft.)

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Other: Autohammer

Casing Stab. Time Date Time Water Depth 8/25/25 1325 Dry (21') 15 min

| Other: | | utoham | | | | Other | r: | Autonammer | | | | | |
|--------------------------------|----------------------------------|-------------------|-------------------|----------------------|----|--|--------------|--|--------|-----------------------|----------------|------------------------|------------------|
| Depth (ft) | Casing Blows/ Core Rate | No. | Depth (ft.) | Samp Pen. (in) | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. (ft.) |
| 5_ | | S-1 S-2 S-3 | 0-2 2-4 4-6 | 24 24 24 | 15 | 2 1 2 2 3 1 2 2 8 8 11 11 | 3 3 19 | S-1: (Top 9"): Brown, fine to medium SAND, some Silt, trace Roots, dry. (Bottom 13"): Very loose, light brown, fine to medium SAND, little Silt, trace Roots, dry. S-2: Very loose, light brown, fine to medium SAND, trace Silt, trace Roots, dry. S-3: Medium dense, light brown, fine to coarse SAND and GRAVEL, little Silt, dry. | 1 | 2.5 4.5 4.7 | 4' | TOPSOIL SAND | 269.2' 266.0' |
| - - 10 _ - | | S-4 | 9-11 | 24 | 11 | 8 8 15 10 | 23 | S-4: Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. | | 4.5 | | SAND/GRAVEL | |
| - 15 _ - | | S-5 | 14-16 | 24 | 22 | 7 11 12 11 | 23 | S-5: Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. Soils appeared layered. | | 4.5 | | | |
| - 20 _ - - | | S-6 | 19-21 | 24 | 18 | 13 12 12 12 | 24 | S-6: (Top 11"): Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. (Bottom 7"): Light brown to gray, fine to medium SAND, some Silt, little Silty Clay, moist. Bottom of boring at 21 feet. | 3 | 4.2 | 19.9' | SILTY SAND | 250.1° 249.0° |
| 25 _ - - - - 30 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv). Upon completion, borehole was backfilled with drill cuttings to ground surface level.

REMARKS

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-120 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/25/2025 - 8/25/2025

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson

Logged By: Kyran Peters

Other:

Type of Rig: ATV Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 277.5 Final Boring Depth (ft.): 12

Date Start - Finish:

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Autohammer

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Casing Stab. Time Date Time Water Depth 8/25/25 1450 Dry (12") 15 min

Groundwater Depth (ft.)

| Othici | | aro.ia | | | _ | | | | | | | | |
|---------------|----------------|--------|-------|------|-----|----------------------|--------------|--|--------------|-------|----------------|-------------|--------|
| | Casing | | | Samp | ole | | | 0 1 0 1 0 111 00 0 | | Field | ے | Stratum | |
| Depth (ft) | Blows/ Core | No. | | Pen. | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test | Depth (ft.) | Description | Elev. |
| | Rate | 0.4 | ` ' | (in) | 18 | | 20 | | <u> </u> | | 0.4' | TOPSOIL | 277.1' |
| | | S-1 | 0-2 | 24 | 10 | 6 10 | 20 | S-1: (Top 5"): Brown, fine to coarse SAND and GRAVEL, little Silt, | | 4.6 | 0.4 | TOTOGIL | 2//.1 |
| - | 1 | | | | | 10 7 | | trace Roots, dry. | 1 | | | | |
| _ |] | | | | | | | (Bottom 13"): Medium dense, light brown, fine to coarse SAND and | | 4.9 | | | |
| | | S-2 | 2-4 | 24 | 17 | 5 6 | 13 | GRAVEL, little Silt, trace Roots, dry. | 2 | 1.0 | | | |
| - | | | | | | 7 7 | | S-2: Medium dense, light brown, fine to coarse SAND, little Gravel, | | | | | |
| | | | | | | | | | | | | | |
| | 1 | | | | | | | trace Silt, trace Roots, dry. | | | | | |
| 5 _ | | | | ١ | | | 15 | | | 5.1 | | | |
| | | S-3 | 5-7 | 24 | 18 | 9 7 | 15 | S-3: Medium dense, light brown, fine to coarse SAND and GRAVEL, | | | | | |
| - | 1 | | | | | 8 13 | | little Silt, dry. | | | | SAND/GRAVEL | |
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| 10 | | | | | | | | | | 4.3 | | | |
| | 1 | S-4 | 10-12 | 24 | 16 | 8 8 | 20 | S-4: Medium dense, light brown, fine to coarse SAND and GRAVEL, | | 4.3 | | | |
| - | | | | | | 12 12 | | little Silt, dry. | | | | | |
| | | | | | | | | | | | 12' | | 265.5' |
| - | 1 | | | | | | | Bottom of boring at 12 feet. | 3 | | | | 200.0 |
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1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv). 3. Upon completion, borehole was backfilled with drill cuttings to ground surface level.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-121 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Type of Rig: ATV Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 269 Final Boring Depth (ft.): 22 Date Start - Finish: 9/4/2025 - 9/4/2025

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Autohammer

Logged By: Kyran Peters

Other:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Stab. Time Casing Date Time Water Depth 9/4/25 0945 Dry (22') 15 min

| otner: / | Autonan | IIIICI | | | Other | | 7 de l'allimoi | | | | | |
|-----------------------------------|---------|----------------|--------------|-----|----------------------|--------------|---|--------|--------------|----------------|------------------|----------------|
| Casing | | , | Samp | ole | | | | ž | Field | _ | Stratum | |
| Oepth Blows/ (ft) Core Rate | No. | Depth (ft.) | Pen. (in) | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test Data | Depth (ft.) | Description | Elev. |
| 1 1010 | S-1 | 0-2 | 24 | 18 | 3 3 | 11 | S-1: (Top 6"): Brown, fine to medium SAND, little Silt, little Gravel, | | 2.3 | 0.8' | TOPSOIL | 268.2' |
| - | S-2 | 2-4 | 24 | 5 | 8 6 5 4 5 7 | 9 | trace Roots, dry. (Bottom 12"): Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. S-2: Loose, light brown, fine to coarse SAND, some Gravel, little Silt, | 1 2 | 1.7 | | FILL | |
| 5 | S-3 | 4-6 | 24 | 15 | 6 5 | 9 | dry. | | 2.8 | 4' | | 265.0' |
| - | S-4 | 6-8 | 24 | 9 | 4 5 7 9 9 15 | 18 | S-3: Loose, light brown, fine to coarse SAND, some Gravel, trace Silt, dry. S-4: Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. | | 1.8 | | | |
| 0 | S-5 | 10-12 | 24 | 16 | 7 7 8 9 | 15 | S-5: Medium dense, light brown, fine to coarse SAND, some Gravel, trace Silt, damp. | | 1.5 | | SAND/GRAVEL | |
| - 5 _ - - | S-6 | 15-17 | 24 | 22 | 7 9 14 27 | 23 | S-6: (Top 20"): Medium dense, light brown, fine to medium SAND and Clayey SILT, damp. Stratified deposit. (Bottom 2"): Light brown to gray, GRAVEL, some Clayey Silt, some fine to medium Sand, damp. | 3 | 3.5 | 13.5' | SAND/CLAYEY SILT | 255.5 252.0 |
| 0 _ | S-7 | 20-22 | 24 | 19 | 8 9 12 14 | 21 | S-7: Medium dense, light brown, fine to coarse SAND, some Gravel, little Silt, damp. | | 3.6 | 22' | SAND/GRAVEL | 247.0 |
| | | | | | | | Bottom of boring at 22 feet. | 4 | | | | |
| _ 25 _ - | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 1. Ground surface elevation estimated morn opography depicted on a control of 2024, 25' East of staked location.
2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
3. Rig chatter while advancing augers from 17 feet to 18 feet below ground surface (bgs) possible indicating a stratum change.
4. Borehole terminated at 22 feet bgs after reaching target depth. Upon completion the borehole was backfilled with soil cuttings to ground surface.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-122 SHEET: 1 of 2 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Logged By: Kyran Peters

Type of Rig: ATV Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 270 Final Boring Depth (ft.): 53.8 Date Start - Finish: 8/27/2025 - 8/27/2025

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30"

Stab. Time Casing Date Time Water Depth 8/28/25 1030 31.9 50 15 min 33.8 8/28/25 1045 50 30 min

Groundwater Depth (ft.)

| | ^. | | JU mor | | | Other | | Autohammer | 0/20/25 | 1045 | | 7.2 | 30 | 301 | |
|----------------|------------------------|--------|----------------|----------------------|----|----------------------|--------------|---|-------------------|------------------|--------|-----------------------|----------------------|----------------------|------------------------------|
| Other | Casing | utoham | | Camp | Ja | Other | | Autoriammer | 8/28/25 | 1120 | | | 45 | 65 r | กเท |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Samp Pen. (in) | | Blows (per 6 in.) | SPT Value | Sample Description an (Modified Burmister | | on | Remark | Field Test Data | De (ff.) | Stratum scription | Elev. (ft.) |
| - | Tato | S-1 | 0-2 | 24 | 13 | 4 28 6 7 | 34 | S-1: Dense, dark brown, fine to coarse so Silt, trace Roots, damp. | SAND, some G | ravel, some | 1 | 6.2 | 7 | TOPSOIL | |
| - | | S-2 | 2-4 | 24 | 11 | 8 6 5 53 | 11 | S-2: (Top 5"): Dark brown, GRAVEL, so Silt, trace Roots, damp. | me fine to coar | se Sand, some | 2 | 5.3 | 2.4' 2.9BURIED AS | PHALT PAVE | 267.6' EME 267 .1' |
| 5_ | | S-3 | 4-6 | 24 | 19 | 20 26 23 19 | 49 | (Bottom 6"): Bituminous ASPHALT pav S-3: Dense, light brown, GRAVEL and fi dry. | | AND, trace Silt, | | 5.0 | | | |
| - | _ | S-4 | 6-8 | 24 | 16 | 12 15 14 9 | 29 | S-4: Medium dense, light brown, fine to little Silt, dry. | coarse SAND, | some Gravel, | | 5.3 | | FILL | |
| - | - | S-5 | 8-10 | 24 | 16 | 4 3 5 8 | 8 | S-5: (Top 11"): Loose, light brown, fine Gravel, little Silt, trace Roots, dry. | to coarse SANI | D, some | | 5.9 | 8.9' | | 261.1' |
| 10 _ | | S-6 | 10-12 | 24 | 14 | 7 7 12 13 | 19 | (Bottom 5"): Light brown, fine to coarse damp. S-6: (Top 5") Light brown, fine to coarse | | | | 5.7 | 10.4' | SSIBLE FILL | 259.6' |
| - - 15 _ | | | | | | | | Silt, damp. (Bottom 9"): Medium dense, light brown GRAVEL, trace Silt, damp. | n, fine to coarse | SAND and | | 6.1 | 13.5' | ND/GRAVEL | 256.5' |
| - | | S-7 | 15-17 | 24 | 21 | 5 7 7 7 | 14 | S-7: Medium dense, light brown, fine to | medium SAND | , trace Silt. | | S | | | |
| 20 | | S-8 | 20-22 | 24 | 18 | 6 6 6 7 | 12 | S-8: Medium dense, light brown, fine to damp. | medium SAND | , trace Silt, | | 6.2 | | SAND | |
| 25 _ | | S-9 | 25-27 | 24 | 22 | 5 4 7 17 | 11 | S-9: (Top 9"): Light brown, fine to media (Middle 7"): Light brown, Clayey SILT, s moist. (Bottom 6"): Light brown, fine to mediar little Gravel, damp. | some fine to me | edium Sand, | | 3.7 | 20.1 | AYEY SILT | 244.2' 243.6' |
| 30_ | | | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

GZA GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-122 SHEET: 2 of 2 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

| | Casing | | 5 | Samp | le | | | 0 1 5 1 11 115 11 | Ĭ | Field | . Stratum |
|---------------------|------------------------|------|----------------|------|----|----------------------|--------------|---|----------|-------|---|
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test | O Stratum S Stratum S S S S S S S S S S S S S S S S S S S |
| - | rtate | S-10 | 30-32 | 24 | 22 | 8 10 29 34 | 39 | S-10: Dense, light brown, fine to coarse SAND and GRAVEL, little Silt, damp. | <u> </u> | 7.2 | |
| - 35 _ - - | | S-11 | 35-37 | 24 | 18 | 13 16 19 22 | 35 | S-11: Dense, light brown, fine to coarse SAND and GRAVEL, little Silt, damp. | | 6.7 | SAND/GRAVEL |
| 40 _ - - | | S-12 | 40-42 | 24 | 15 | 5 7 7 7 | 14 | S-12: Medium dense, light brown, fine to coarse SAND, some Gravel, little Silt, wet. | | 7.1 | |
| - 45 _ - - | | S-13 | 45-47 | 24 | 15 | 5 8 13 19 | 21 | S-13: Medium dense, olive brown, GRAVEL, some fine to medium Sand, some Clayey Silt, wet. | 3 | 5.2 | 43.5' |
| - 50 _ | | S-14 | 50-52 | 24 | 8 | 4 4 5 5 | 9 | S-14: Loose, olive brown, fine to medium SAND, some Gravel, little Clayey Silt, wet. | | 7.4 | GLACIAL TILL |
| - | | S-15 | 52- 53.8 | 22 | 22 | 10 11 16 50/4 | 27 | S-15: Very dense, olive brown, fine to medium SAND, some Gravel, little Clayey Silt. | 4 | 7.4 | 53.8' 21 |
| - 55 _ - | | | | | | | | Bottom of boring at 53.8 feet. | 5 | | 33.0 |
| - | | | | | | | | | | | |
| 60 _ - - | | | | | | | | | | | |
| - - 65 _ | | | | | | | | | | | |

A positive head of water was not added and maintained within the augers prior to obtaining samples S-13 and S-14.
 A positive head of water was added and maintained within the augers prior to obtaining sample S-15.
 Boring terminated at 53.8 feet below ground surface (bgs) after reaching target depth. Upon completion, the borehole was backfilled with soil cuttings to the ground surface.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-122

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-124 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/25/2025 - 8/25/2025

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson

Logged By: Kyran Peters

Other:

Type of Rig: ATV Rig Model: D-70 Turbo

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 268.5 Final Boring Depth (ft.): 22

Date Start - Finish:

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Autohammer

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (Ib): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Stab. Time Casing Date Time Water Depth 8/25/25 1038 Dry (22') 20 20 min

| Other | | atonan | | | | Otilo | | | | | | | |
|---------------------|----------------|--------|----------------|------|-----|----------------------|--------------|--|--------|-------|----------------|-------------|--------|
| | Casing | | | Samp | ole | | | | 논 | Field | ٠ ـ | Stratum | |
| Depth (ft) | Blows/ Core | No. | Depth (ft.) | | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test | Depth (ft.) | Description | Elev. |
| | Rate | S-1 | 0-2 | 24 | 17 | 2 1 | 2 | S-1: (Top 2"): Brown, fine to medium SAND, some Silt, trace Roots, | IĽ. | | 0.2' | TOPSOIL | 268.3' |
| _ | | • | "- | | | 1 2 | | dry. | | 5.4 | | | |
| - | | S-2 | 2-4 | 24 | 15 | 3 3 5 7 | 8 | (Bottom 15"): Very loose, light brown, fine to coarse SAND, some Silt, trace (-) Roots, dry. | 2 | 5.3 | | SAND | |
| | | | | | | | | S-2: Loose, light brown, fine to coarse SAND, some Silt, dry. | 3 | | | | |
| 5 <u> </u> | | S-3 | 5-7 | 24 | 17 | 25 20 31 27 | 51 | S-3: Very dense, light brown, GRAVEL and fine to coarse SAND, some Silt, dry. | | 2.3 | 4.5' | | 264.0' |
| - - 10 _ - | | S-4 | 10-12 | 24 | 20 | 12 12 11 13 | 23 | S-4: Medium dense, light brown, fine to coarse SAND and GRAVEL, little Silt, dry. | | 5.2 | | SAND/GRAVEL | |
| - | | | | | | | | | | | 13.5' | | 255.0' |
| - 15 _ - | | S-5 | 15-17 | 24 | 24 | 9 12 12 12 | 24 | S-5: Medium dense, light brown, fine to coarse SAND, trace Silt, moist. | | 5.3 | 10.0 | SAND | 255.0 |
| - | | | | | | | | | | | 18.5' | · | 250.0' |
| 20 _ | | S-6 | 20-22 | 24 | 18 | 13 17 15 16 | 32 | S-6: Dense, light brown, GRAVEL and fine to coarse SAND, trace Silt, moist. | | 5.4 | | SAND/GRAVEL | |
| _ | | | | | | | | | | | 22' | | 246.5' |
| - 25 _ | | | | | | | | Bottom of boring at 22 feet. | 4 | | | | |
| - - - | | | | | | | | | | | | | |
| 30 | | | | | | 1 | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024. As drilled location 9 feet west of stake.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Intense rig chatter advancing augers from 9 to 10 feet below ground surface (bgs), possibly indicating the presence of cobbles and boulders.

4. Boring terminated at 22 feet bgs. Upon completion, borehole was backfilled with soil cutting to the ground surface.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-124

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-125 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV Rig Model: D-70 Turbo Boring Location: See Plan Ground Surface Elev. (ft.): 269 Final Boring Depth (ft.): 21

H. Datum: See Plan V. Datum: See Plan

Manlea Thompson Logged By: Kyran Peters

Foreman:

Other:

Drilling Method: HSA

Date Start - Finish: 8/26/2025 - 8/26/2025

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Autohammer

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Casing Stab. Time Date Time Water Depth 8/26/25 1455 Dry (21') 15 min

Groundwater Depth (ft.)

| Other | | ululiali | | | | Other | | Adolamilo | | | | | |
|----------------|------------------------|------------|-------|--------------|----|----------------------------------|--------------|---|--------|--------------|----------------|-----------------|--------|
| | Casing | | , | Samp | le | | | | ırk | Field | | Stratum | |
| Depth (ft) | Blows/ Core Rate | No. | | Pen. (in) | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test Data | Depth (ft.) | Description | Elev. |
| - | - | S-1 S-2 | 0-2 | 24 | 12 | 10 18 25 27 24 18 17 23 | 43 35 | S-1: (Top 2"): Brown, fine to coarse SAND, little Silt, trace Roots, dry. (Bottom 19"): Dense, light brown, fine to coarse SAND, some Gravel, little Silt, dry S-2: Dense, light brown, fine to coarse SAND, some Gravel, some Silt, dry. | 1 2 | ND ND | 0.2' | TOPSOIL FILL | 268.8' |
| 5 _ - - | - | S-3 | 4-6 | 24 | 17 | 7 6 6 7 | 12 | S-3: Medium dense, light brown, fine to coarse SAND, trace Gravel, trace (-) Silt, damp. | | ND · | 4 | | 203.0 |
| - 10 _ - | - | S-4 | 9-11 | 24 | 19 | 10 7 10 10 | 17 | S-4: Medium dense, light brown, fine to coarse SAND, little Gravel, little Silt, damp. Silt seam at approximately 15- to 17-inches from the top of recovery. | | ND | | SAND | |
| - - 15 _ | - | S-5 | 14-16 | 24 | 16 | 7 14 19 17 | 33 | S-5: Dense, light brown, fine to coarse SAND, some Gravel, trace Silt, damp. | | ND | 12.5' | | 256.5' |
| 20 _ | | S-6 | 19-21 | 24 | 17 | 7 10 12 11 | 22 | S-6: Medium dense, light brown, fine to coarse SAND, some Gravel, trace Silt, damp. | | ND | 21' | SAND/GRAVEL | 248.0' |
| - - 25 | - | | | | | | | Bottom of boring at 21 feet. | 3 | | | | |
| | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
 Boring terminated at 21 feet below ground surface (bgs) after reaching target depth. Upon completion, borehole was backfilled with soil cuttings to the ground surface.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



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Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-126 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Logged By: Kyran Peters

Type of Rig: ATV Rig Model: D-70 Turbo

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 269 Final Boring Depth (ft.): 22 Date Start - Finish: 8/26/2025 - 8/26/2025

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140

Autohammer

Hammer Fall (in.):

Other:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Casing Stab. Time Date Time Water Depth 8/26/25 1310 Dry (22") 20 15 min

| Other | Cacin | | | _ | _ | | | | | | | | |
|-------|------------------|-----|----------------|------|------|----------------------|--------------|--|--------|--------------|----------------|-------------|------------------|
| Depth | Casing Blows/ | | | Samp | | Diama | ODT | Sample Description and Identification | ıar | Field | ÷ Şt | Stratum | š. (. |
| (ft) | Core Rate | No. | Depth (ft.) | Pen. | (in) | Blows (per 6 in.) | SPT Value | (Modified Burmister Procedure) | Remark | Test Data | Depth (ft.) | Description | Elev. (ft.) |
| | Rate | S-1 | 0-2 | 24 | 19 | 6 10 | 21 | S-1: (Top 6"): Brown, fine to coarse SAND, some Gravel, little silt, | ш. | ND | 0.6' | TOPSOIL | 268.4' |
| - | - | | | | | 11 8 | | trace Roots, dry. | 1 | IND | | FILL | |
| _ | 1 | | | ١ | ١ | | 15 | (Bottom 13"): Medium dense, light brown, fine to coarse SAND and | | ND | 2' | | 267.0' |
| | | S-2 | 2-4 | 24 | 14 | 8 8 | 15 | GRAVEL, little Silt, dry. | 2 | | | | |
| _ | 1 | | | | | 7 21 | | S-2: Medium dense, light brown, fine to coarse SAND, some Gravel, | | | | | |
| - | 1 | | | | | | | little Silt, dry. | | | | | |
| 5 _ | 1 | S-3 | 5-7 | 24 | 14 | 7 7 | 16 | S 2: Modium dones light brown fine to cooree SAND and CDAVE | | ND | | | |
| | | 3-3 | 5-7 | 24 | 14 | 9 9 | | S-3: Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. | | | | | |
| | | | | | | 9 9 | | trace Siit, dry. | | | | | |
| - | 1 | | | | | | | | | | | | |
| - | - | | | | | | | | | | | SAND/GRAVEL | |
| _ | _ | | | | | | | | | | | | |
| 10 | | | | | | | | | | ND | | | |
| | 1 | S-4 | 10-12 | 24 | 16 | 8 16 | 33 | S-4: Dense, light brown, fine to coarse SAND, some Gravel, trace Silt, | | טאו | | | |
| - | 1 | | | | | 17 13 | | damp. | | | | | |
| - | 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 13.5' | | 255.5' |
| 45 | 1 | | | | | | | | | | | CLAYEY SILT | |
| 15 _ | 1 | S-5 | 15-17 | 24 | 18 | 7 18 | 38 | S-5: (Top 6"): Gray, Clayey SILT, some fine to medium Sand, moist. | | ND | 15.5' | | 253.5' |
| - | | | | | | 20 15 | | (Bottom 12"): Dense, light brown, fine to coarse SAND and GRAVEL, | | | | | |
| _ | | | | | | | | little Silt , damp. | | | | | |
| | | | | | | | | · | | | | | |
| - | 1 | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | SAND/GRAVEL | |
| 20 _ | 1 | | | | 40 | | 32 | 0.00 | | ND | | | |
| | | S-6 | 20-22 | 24 | 18 | 14 15 17 16 | 02 | S-6: Dense, light brown, fine to coarse SAND and GRAVEL, little Silt, | | | | | |
| | | | | | | 17 16 | | moist. | | | 22' | | 247.0' |
| - | | | | | | | | Bottom of boring at 22 feet. | 3 | | | | 211.0 |
| - | - | | | | | | | | | | | | |
| _ | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | |
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| 30 | 1 | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024.
Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000 meter

equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Boring terminated at 22 feet below ground surface (bgs). Upon completion, the borehole was backfilled with soil cuttings to ground surface.

REMARKS

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-127 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Type of Rig: ATV Foreman: Manlea Thompson Rig Model: D-70 Turbo

Ground Surface Elev. (ft.): 269 Final Boring Depth (ft.): 22

Boring Location: See Plan

H. Datum: See Plan V. Datum: See Plan

Logged By: Kyran Peters

Drilling Method: HSA

Date Start - Finish: 9/2/2025 - 9/2/2025

Groundwater Depth (ft.)

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Stab. Time Casing Date Time Water Depth 9/2/25 1145 Dry (22') 20 min

| Other: | ιιαιι (Δι | utoham | omer | | | Othe | | Autohammer | | | | + | |
|-------------|------------------------|------------|----------------|------|-----|----------------------|--------------|--|----------------|-----------------------|----------------|------------------------|-------|
| | Casing | atoriari | | Samp | مام | Othe | | | × | T: - I-I | | | |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | | | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. |
| - | rato | S-1 | 0-1.8 | 21 | 15 | 5 12 19 50/3" | 31 | S-1: (Top 3"): Brown, fine to medium SAND, some Silt, trace Roots, dry. | 1 | 5.2 | 1.8' | TOPSOIL FILL | 268. |
| - - - | | S-2 | 3-5 | 24 | 16 | 6 6 8 8 | 14 | (Bottom 12"): Very dense, light brown, fine to medium SAND, some Silt, little Gravel, dry. S-2: (Top 8"): Medium dense, light brown, fine to medium SAND and GRAVEL, little Silt, dry. | 3 | 0.1 | | FILL SAND/GRAVEL | |
| 5 _ | | S-3 | 5-7 | 24 | 17 | 5 6 7 8 | 13 | (Bottom 8"): Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. S-3: Medium dense, light brown, fine to medium SAND, trace (-) Silt, dry. | | 4.1 | 5' | SAND/GRAVEL | 264 |
| 10 _ | | S-4 | 10-12 | 24 | 19 | 5 5 7 7 | 12 | S-4: Medium dense, light brown, fine to medium SAND, trace (-) Silt, dry. | | 0.7 | | SAND | |
| 15 _ | | S-5 | 15-17 | 24 | 21 | 5 6 6 7 | 12 | S-5: Medium dense, light brown, fine to medium SAND, trace (-) Silt, damp. Observed iron oxide staining 13 inches from top of recovery. | | ND | | | |
| 20 _ | | S-6 | 20-22 | 24 | 24 | 3 3 4 4 | 7 | S-6: Medium stiff, light brown, Clayey SILT, some fine to medium Sand, damp. | | ND | 18.5' | CLAYEY SILT | |
| | | | | | | | | Bottom of boring at 22 feet. | 4 | | | | |
| 5 _ | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.

2 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3 Possible boulder from 1.8 feet to 3 feet below ground surface (bgs). Advanced with auger to 3 feet bgs.

4. Boring terminated at 22 feet bgs after reaching target depth. Upon completion, the borehole was backfilled with soil cuttings to the ground surface.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-128 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/20/2025 - 8/20/2025

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Logged By: Kyran Peters

Type of Rig: ATV Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 279.5 Final Boring Depth (ft.): 16

Date Start - Finish:

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Stab. Time Casing Date Time Water Depth 8/20/25 0915 Dry (16') 5 min

| Hamn | ner Fall (| in.): | 30 | | | Samp | ler Hmr | Fall (in): 30" | | | | | | | |
|---------------|------------------------|--------|----------------|--------------|--------------|----------------------|--------------|--|--------------------------------|-------------------|--------|--------------|----------------|-------------|----------------|
| Other | | utoham | mer | | | Othe | r: | Autohammer | | | | | | | |
| | Casing | | | Samp | le | | | 0 | -1 1 -1 41 - 1 41 | | ark | Field | ٦. | Stratum | |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description an (Modified Burmister | d Identification Procedure) | on | Remark | Test Data | Depth (ft.) | Description | Elev. (ft.) |
| | rtato | S-1 | 0-2 | 24 | 6 | 9 25 | 38 | S-1: Medium dense, light brown, fine to | coarse SAND, | some Silt, little | _ | 7.0 | | | |
| - | | | | | | 13 9 | | Gravel, moist. | | | 1 | '.0 | | | |
| | | | | | | | | | | | | 6.1 | | | |
| | | S-2 | 2-4 | 24 | 5 | 8 9 | 19 | S-2: Medium dense, brown, fine to coar | se SAND, some | e Silt, little | 2 | 0.1 | | TOPSOIL | |
| - | | | | | | 10 10 | | Gravel, trace Roots, moist. | | | | | | | |
| _ | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | 4.5' | | 275.0' |
| - | | S-3 | 5-7 | 24 | 7 | 3 2 | 4 | S-3: Loose, brown to light brown, fine to | coarse SAND, | some Gravel, | | 5.2 | | | |
| - | | | | | | 2 2 | | little Silt, moist. | | | | | | | |
| _ | | | | | | | | | | | | 5.7 | | | |
| | | S-4 | 7-9 | 24 | 7 | 5 4 | 9 | S-4: Loose, light brown, fine to coarse S | SAND and GRA | VEL, little Silt, | | 0 | | | |
| - | | | | | | 5 6 | | moist. | | | | | | | |
| _ | | | | | | | | | | | | | | FILL | |
| 10 | | | | | | | | | | | | 5.4 | | I ILL | |
| | | S-5 | 10-12 | 24 | 13 | 5 5 | 13 | S-5: Medium dense, light brown, fine to | coarse SAND a | and GRAVEL, | | 3.4 | | | |
| - | | | | | | 8 12 | | trace Silt, moist. | | | | | | | |
| _ | | | | | | | 07 | | | | | 5.7 | | | |
| | | S-6 | 12-14 | 24 | 16 | 13 13 | 27 | S-6: Medium dense, light brown, fine to | coarse SAND a | and GRAVEL, | | | | | |
| - | | | | | | 14 14 | | trace Silt, moist. | | | | | | | |
| - | | S-7 | 14-16 | 24 | 18 | 14 12 | 24 | S-7: Medium dense, light brown, fine to | medium SAND | trace (-) Silt | | 5.5 | 14' | | 265.5' |
| 15 _ | | 0-1 | 14-10 | | 10 | 12 12 | | dry. | medium oAND | , trace (-) Ont, | | | | SAND | |
| | | | | | | 12 12 | | ury. | | | | | 16' | | 263.5' |
| - | | | | | | | | Bottom of boring a | t 16 feet. | | | | | | |
| - | | | | | | | | | | | | | | | |
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1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.
 Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
 Borehole terminated at 16 feet below ground surface (bgs). Upon completion, the borehole was backfilled with soil cuttings.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

Split Spoon

BORING NO.: GZ-129 SHEET: 1 of 1 PROJECT NO: 01.0174955.30 REVIEWED BY: MJO

Dry (22')

Drilling Co.: New England Boring Contractors

Type of Rig: ATV Manlea Thompson Rig Model: D-70 Turbo Boring Location: See Plan Ground Surface Elev. (ft.): 281 Final Boring Depth (ft.): 22

H. Datum: See Plan V. Datum: See Plan

Logged By: Kvran Peters

Foreman:

Drilling Method: HSA Sampler Type:

Date Start - Finish: 8/20/2025 - 8/20/2025

Date

8/20/25

Time

1310

Groundwater Depth (ft.) Casing Stab. Time Water Depth

20 min

Auger/Casing Type: **HSA** I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Autohammer Other

I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (Ib): 140 lbs Sampler Hmr Fall (in): 30" Other: Autohammer

Casing Sample Field Stratum Remar Blows Sample Description and Identification Depth Depth Pen. Rec. **Blows** SPT Test \equiv Description Core No. (Modified Burmister Procedure) (ft.) (in) (in) (per 6 in.) Value Data Rate S-1: (Top 1"): Dark brown, fine to coarse SAND, some Silt, trace S-1 0-2 24 6 14 19 3.1 Roots, dry. 16 15 1 (Bottom 18"): Dense, light brown to brown, fine to coarse SAND, 2.6 35 2 24 17 19 17 S-2 2-4 some Gravel, little Silt, dry. 18 21 S-2: Dense, light brown to brown, fine to coarse SAND and GRAVEL, little Silt, moist. 5 5.6 9 S-3: Dense, light brown, fine to coarse SAND and GRAVEL, little Silt, FILL S-3 5-7 24 9 14 19 22 moist. 10 5.6 10.5' S-4 10-12 24 10 4 2 S-4: (Top 6"): Loose, light brown, fine to coarse SAND, some Gravel, 270.5 4 5 (Bottom 4"): Loose, dark brown fine to coarse SAND, some Gravel, 7.2 S-5 12-14 24 20 5 7 some Silt. moist 9 10 BURIED TOPSOIL S-5: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt. moist. 15 8.8 37 S-6 15-17 24 19 10 20 S-6: (Top 9"): Dark brown, fine to coarse SAND, some Gravel, some 15.8 265.2 17 17 Silt. moist (Bottom 10"): Light brown, fine to coarse SAND, little Gravel, trace 5.9 29 17-19 24 14 17 14 Silt. drv 15 15 S-7: Medium dense, light brown, fine to coarse SAND and GRAVEL, SAND/GRAVEL trace Silt, dry. 20 5.8 18 24 16 S-8 20-22 10 8 S-8: Medium dense, light brown, fine to coarse SAND and GRAVEL, trace Silt, dry. 10 14 3 259.0 Bottom of boring at 22 feet. 25 30

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Borehole terminated at 22 feet below ground surface (bgs). Upon completion, the borehole was backfilled with soil cuttings.

REMARKS

74955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-130 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/20/2025 - 8/21/2025

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Logged By: Kyran Peters

Type of Rig: ATV Rig Model: D-70 Turbo

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 270 Final Boring Depth (ft.): 19

Date Start - Finish:

V. Datum: See Plan

H. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Casing Stab. Time Date Time Water Depth 8/21/25 0855 Dry (19') 30 min

| Other: | : A | ııı.). utohan | nmer | | | Other | | Autohammer | | | + | | |
|-------------|--------------------------|------------------|-------|--------------|------|----------------------|--------------|--|--------|-----------------------|----------------|------------------------|------------------|
| | Casing Blows/ Core | No. | | Samp Pen. | Rec. | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. (ft.) |
| - - - | Rate | | (11.) | () | () | (por 0 iii.) | Value | | 1 2 | Bata | | | |
| 5 _ - | | S-1 | 5-7 | 24 | 19 | 6 5 4 7 | 9 | S-1: Loose, dark brown, fine to coarse SAND, some Silt, little Gravel, trace Wood, moist. | | 7.3 | | | |
| - | | S-2 | 7-9 | 24 | 20 | 10 10 9 7 | 19 | S-2: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 5.8 | | TOPSOIL | |
| 10 _ | | S-3 | 10-12 | 24 | 24 | 9 10 10 13 | 20 | S-3: Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 5.5 | | | |
| - | | S-4 | 12-14 | 24 | 22 | 17 20 23 20 | 43 | S-4: Dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 5.8 | | | |
| 15 _ | | S-5 | 15-17 | 24 | 18 | 9 12 16 20 | 28 | S-5: (Top 15"): Medium dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 5.4 | 16.3' | | 253.7" |
| - | | S-6 | 17-19 | 24 | 17 | 22 24 28 28 | 52 | (Bottom 3"): Light brown, fine to coarse SAND, some Gravel, trace Silt, dry. S-6: (Top 11"): Very dense, brown, fine to coarse SAND and | | 5.0 | 18' | FILL SAND/GRAVEL | 252.0° 251.0° |
| 20 _ | | | | | | | | GRAVEL, little Silt, damp. (Bottom 6"): Brown, fine to coarse SAND and GRAVEL, little Silt, dry. Bottom of boring at 19 feet. | 3 | | | | |
| 25 _ | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024.
 2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).
 3. Borehole terminated at 19 feet below ground surface (bgs). Upon completion, the borehole was backfilled with soil cuttings.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



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Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-131 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/21/2025 - 8/21/2025

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Kyran Peters

Type of Rig: ATV Rig Model: D-70 Turbo

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 272 Final Boring Depth (ft.): 19

Date Start - Finish:

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140

Autohammer

Logged By:

Hammer Fall (in.):

Other:

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Autohammer

Groundwater Depth (ft.) Stab. Time Casing Date Time Water Depth 8/21/25 1133 Dry (19') 20 min

| Other | | utonan | IIIICI | | | Other | | Adolamilo | | | | | |
|---------------|------------------------|--------|----------------|------|--------------|----------------------|--------------|--|--------|--------------|----------------|---------------|------------------|
| | Casing | | | Samp | le | | | | 꽃 | Field | ے ا | Stratum | |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description and Identification (Modified Burmister Procedure) | Remark | Test Data | Depth (ft.) | Description | Elev (ff.) |
| - | | | | | | 7 | | | 1 2 3 | | | | |
| 5 _ - | - | S-1 | 5-7 | 24 | 19 | 9 11 13 11 | 24 | S-1: Medium dense, dark brown to light brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 6.2 | | | |
| - - - | | S-2 | 7-9 | 24 | 19 | 19 22 19 14 | 41 | S-2: Dense, dark brown, fine to coarse SAND, some Gravel, some Silt, trace Wood, damp. | | 4.4 | | TOPSOIL | |
| 10 _ | - | S-3 | 10-12 | 24 | 17 | 12 10 9 9 | 19 | S-3: Medium dense, dark brown, fine to coarse SAND and GRAVEL, some Silt, trace Wood, damp. | | 5.6 | | | |
| - - - | | S-4 | 12-14 | 24 | 20 | 14 21 15 8 | 36 | S-4: Dense, dark brown, fine to coarse SAND and GRAVEL, some Silt. | | 6.0 | | | |
| 15 _ - | | S-5 | 15-17 | 24 | 22 | 8 9 12 13 | 21 | S-5: (Top 14"): Medium dense, dark brown, fine to coarse SAND and GRAVEL, some Silt, trace Wood, damp. | | 3.3 | 16.25' | | 255.8' |
| - | | S-6 | 17-19 | 24 | 21 | 15 12 12 11 | 24 | (Bottom 8"): Light brown, fine to coarse SAND, little Gravel, trace Silt, damp. S-6: (Top 13"): Medium dense, light brown, fine to coarse SAND and | | 4.7 | 18.25' | POSSIBLE FILL | 253.8' 253.0' |
| 20 _ | | | | | | | | GRAVEL, little Silt, trace (-) Roots, damp. (Bottom 8"): Light brown, fine to coarse SAND, trace Gravel, trace (-) Silt, dry. | 4 | | 10 | | 200.0 |
| - | | | | | | | | Bottom of boring at 19 feet. | | | | | |
| 25 _ | - | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024. As drilled location 9 feet west of stake.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Advanced boring to 5 feet below ground surface (bgs) with auger prior to sampling.

4. Boring terminated at 19 feet below ground surface (bgs) after reaching target depth. Upon completion, borehole was backfilled with soil cuttings to the ground surface.

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025 REMARKS

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.



Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-132 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

8/21/2025 - 8/21/2025

Time

1340

Drilling Co.: New England Boring Contractors

3.25/6.625

140

30

Foreman: Manlea Thompson Type of Rig: ATV Rig Model: D-70 Turbo

Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 268.5 Final Boring Depth (ft.): 19

Date

8/21/25

Date Start - Finish:

V. Datum: See Plan

Dry (16')

H. Datum: See Plan

Logged By: Kyran Peters Auger/Casing Type: HSA

Hammer Weight (lb.):

Hammer Fall (in.):

I.D/O.D.(in):

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30"

Groundwater Depth (ft.) Casing Stab. Time Water Depth

30 min

| Other | : A | utoham | mer | | | Other | : | Autohammer | | | | | | | |
|---------------|----------------------------------|--------|----------------|--------------|------|----------------------|--------------|---|--------------------------------|-------------|--------|-----------------------|----------------|------------------------|----------------|
| Depth (ft) | Casing Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. | Blows (per 6 in.) | SPT Value | Sample Description and (Modified Burmister | d Identification Procedure) | 1 | Remark | Field Test Data | Depth (ft.) | Stratum Description | Elev. (ft.) |
| - | | | | | | | | | | | 1 2 3 | | | | |
| 5 | | S-1 | 5-7 | 24 | 17 | 2 2 4 8 | 6 | S-1: Loose, dark brown, fine to coarse S Silt, trace Wood, damp. | SAND, some Grav | /el, some | | 7.3 | | | |
| - | | S-2 | 7-9 | 24 | 15 | 14 16 30 22 | 46 | S-2: Dense, dark brown, fine to coarse S Silt, trace Wood, damp. | SAND and GRAV | EL, some | | 7.4 | | TOPSOIL | |
| 10 | | S-3 | 10-12 | 24 | 19 | 10 11 11 9 | 22 | S-3: Medium dense, dark brown, fine to some Silt, trace Wood, damp. | coarse SAND and | d GRAVEL, | | 5.7 | | | |
| - | | S-4 | 12-14 | 24 | 19 | 15 33 20 16 | 53 | S-4: Very dense, dark brown, fine to coa some Silt, trace Wood, damp. | irse SAND and G | RAVEL, | | 6.8 | 14.5' | | 254.0' |
| 15 | | S-5 | 15-17 | 24 | 20 | 7 10 10 9 | 20 | S-5: Medium dense, light brown, fine to trace Silt, dry. | coarse SAND, so | ome Gravel, | | 5.7 | 14.5 | SAND/GRAVEL | 254.0 |
| - | | S-6 | 17-19 | 24 | 14 | 9 12 11 10 | 23 | S-6: Medium dense. light brown, fine to trace (-) Silt, dry. | | ile Gravel, | | 5.5 | 19' | SAND/GRAVEL | 249.5' |
| 20 | | | | | | | | Bottom of boring at | i 19 feet. | | 4 | | | | |
| 25 | | | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16,

2024. As drilled location 9 feet west of stake.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic vapor meter equipped with a photoionization detector (PID) and 10.6eV lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv).

3. Advanced boring to 5 feet below ground surface (bgs) with auger prior to sampling.

4. Boring terminated at 19 feet below ground surface (bgs) after reaching target depth. Upon completion, borehole was backfilled with soil cuttings to the ground surface.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-132

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

30

REMARKS

GZA GeoEnvironmental, Inc. Engineers and Scientists

Commonwealth Fusion Systems Proposed CFS-4 Development Hospital Road Devens, MA

BORING NO.: GZ-133 SHEET: 1 of 1 PROJECT NO: 01.0174955.30

REVIEWED BY: MJO

Drilling Co.: New England Boring Contractors

Foreman: Manlea Thompson Type of Rig: ATV Rig Model: D-70 Turbo Drilling Method: HSA

Boring Location: See Plan Ground Surface Elev. (ft.): 266 Final Boring Depth (ft.): 12 Date Start - Finish: 8/21/2025 - 8/21/2025

Date

8/21/25

H. Datum: See Plan V. Datum: See Plan

Auger/Casing Type: HSA I.D/O.D.(in): 3.25/6.625 Hammer Weight (lb.): 140 Hammer Fall (in.): 30

Logged By: Kyran Peters

Sampler Type: Split Spoon I.D./O.D. (in.): 1.375/2 Sampler Hmr Wt (lb): 140 lbs Sampler Hmr Fall (in): 30" Δutohammer

Groundwater Depth (ft.) Stab. Time Casing Time Water Depth 1500 Dry (12') 10 min

| Other: | Α | utohan | | | | Other | : | Autohammer | | | | | | | |
|---------------|------------------------|--------|----------------|--------------|--------------|----------------------|--------------|---|----------------|--------------|--------|--------------|---------------|------------------------|----------------|
| | Casing | | | Şamp | le | | | Cample Description on | d Idontificati | | ark | Field | ₽. | Stratum | ٠ |
| Depth (ft) | Blows/ Core Rate | No. | Depth (ft.) | Pen. (in) | Rec. (in) | Blows (per 6 in.) | SPT Value | Sample Description an (Modified Burmister | Procedure) | OH | Remark | Test Data | Depi (ft.) | Stratum Description | Elev. (ft.) |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | | | | |
| | | | | | | | | | | | 2 | | | | |
| | | | | | | | | | | | 3 | | | FILL | |
| 5 _ | | | | | | | | | | | 4 | 4.0 | | | |
| | | S-1 | 5-7 | 24 | 13 | 2 4 6 8 | 10 | S-1: Medium dense, light brown, fine to little Silt, dry. | coarse SAND a | and GRAVEL, | | 1.0 | | | |
| | | | | | | 0.8 | | iitue Siit, dry. | | | | | 7' | | 259.0 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 10 _ | | | | | | | • | | | | | 4.9 | | SAND | |
| | | S-2 | 10-12 | 24 | 18 | 3 4 5 5 | 9 | S-2: Loose, light brown, fine to medium | SAND, trace (- |) Silt, dry. | | 1.0 | | | |
| | | | | | | 3 3 | | | | | | | 12' | | 254.0 |
| | | | | | | | | Bottom of boring a | t 12 feet. | | | | | | |
| | | | | | | | | | | | | | | | |
| 15 _ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 20 _ | | | | | | | | | | | 5 | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 25 _ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | |

1. Ground surface elevation estimated from topography depicted on an AutoCAD file prepared by VHB titled "CFS Composite Existing Surface -polylines," transmitted to GZA on September 16, 2024. As drilled location 9 feet west of stake.

2. Field testing results represent total organic vapor levels, referenced to a benzene standard, measured in the headspace of sealed soil sample jars using a Honeywell MiniRAE3000+ organic

vapor meter equipped with a photoionization detector (PID) and 10.66V lamp. Results in parts per million by volume (ppmv). ND indicates nothing detected (<0.1 ppmv). Advanced boring to 5 feet below ground surface (bgs) with auger prior to sampling. Driller noted lower resistance advancing augers 7 to 10 feet below ground surface, possible indicating a change in stratum. Boring terminated at 12 feet below ground surface (bgs) after reaching target depth. Upon completion, borehole was backfilled with soil cuttings to the ground surface.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Boring No.: GZ-133

174955.30 COMMONWEALTH FUSION SYSTEMS.GPJ; STRATUM ONLY NORWOOD; 9/11/2025

REMARKS



GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX C

RELEVANT PREVIOUS (2020 & 2024) AND RECENT (2025)

LABORATORY TEST RESULTS



GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION MANAGEMENT

249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX C.1

2020 TRC GEOTECHNICAL LABORATORY TEST RESULTS



Project Name: CFS – Building #2

Client Name: **Commonwealth Fusion Systems**

TRC Project #: 349440.0004

| SAI | MPLE IDENTIFIC | CATION | MBOL) | t (%) | GRAIN | SIZE DI | STRIBUT | ION | | PLAS | STICITY | | insity | ē | CALIFO BEAF CAPA | RING | (%) |
|----------|----------------|------------|---------------------|----------------------|------------|----------|----------|----------|------------------|-------------------|----------------------|------------------------|------------------------------|---------------------------------|---------------------------|---------------------|---------------------|
| Boring # | Sample # | Depth (ft) | USCS (GROUP SYMBOL) | Moisture Content (%) | Gravel (%) | Sand (%) | Silt (%) | Clay (%) | Liquid Limit (%) | Plastic Limit (%) | Plasticity Index (%) | Liquidity Index (%) | Maximum Dry Density (pcf) | Optimum Moisture Content (%) | Percent Compaction (%) | CBR (%) at 0.10 in. | Organic Content (%) |
| B-41 | S-6 to S-7 | 15.0-27.0 | SM | 9.1 | 24.4 | 65.0 | 10 | .6 | - | ı | - | ı | ı | - | - | - | - |
| B-42 | S-1 to S-3 | 0.0-6.0 | SM | 3.0 | 18.9 | 68.3 | 4.5 | 8.3 | - | - | - | 1 | - | - | - | - | - |
| B-42 | S-6 | 15.0-17.0 | ML | 20.5 | 0.0 | 44.4 | 55 | .6 | - | - | - | - | - | - | - | - | - |
| B-42 | S-7 | 20.0-22.0 | SM | 8.8 | 21.0 | 64.0 | 15 | .0 | - | - | - | - | - | - | - | - | - |
| B-43 | S-1 to S-4 | 0.8-0.0 | SM | 3.4 | 30.5 | 50.9 | 14.8 | 3.8 | - | - | - | - | - | - | - | - | - |
| B-43 | S-5 | 8.0-10.0 | SM | 10.3 | 2.0 | 55.9 | 38.2 | 3.9 | NP | NP | NP | - | - | - | - | - | - |
| B-43 | S-6 to S-9 | 15.0-32.0 | SP-SM | 14.8 | 7.4 | 82.5 | 10 | .1 | - | - | - | - | - | - | - | - | - |
| B-44 | S-1 to S-3 | 0.0-6.0 | SM | 2.8 | 21.7 | 59.8 | 10.2 | 8.3 | - | - | - | - | - | - | - | - | - |
| B-44 | S-4 | 6.0-8.0 | SW-SM | 3.7 | 21.1 | 70.1 | 8. | 8 | - | 1 | - | 1 | - | - | - | - | - |

DRAWN BY: TBT 04/01/21 CHECKED BY: JPB 04/01/21



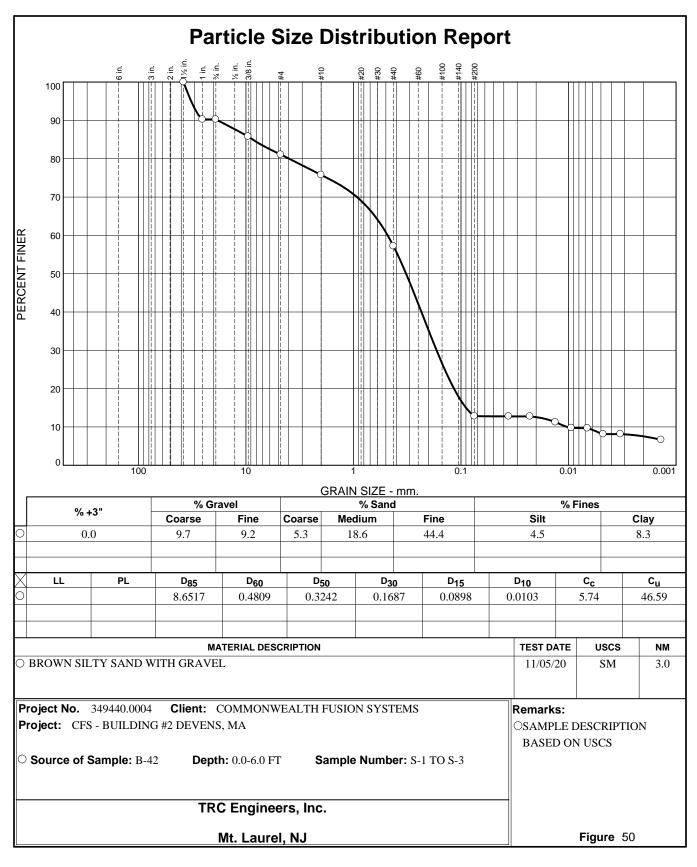
Project Name: CFS – Building #2

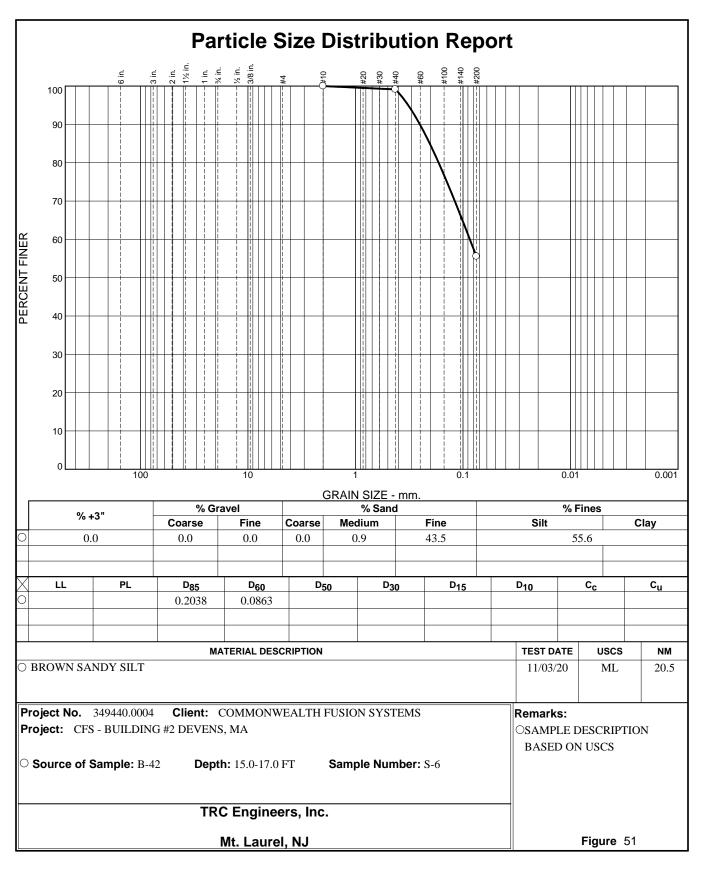
Client Name: **Commonwealth Fusion Systems**

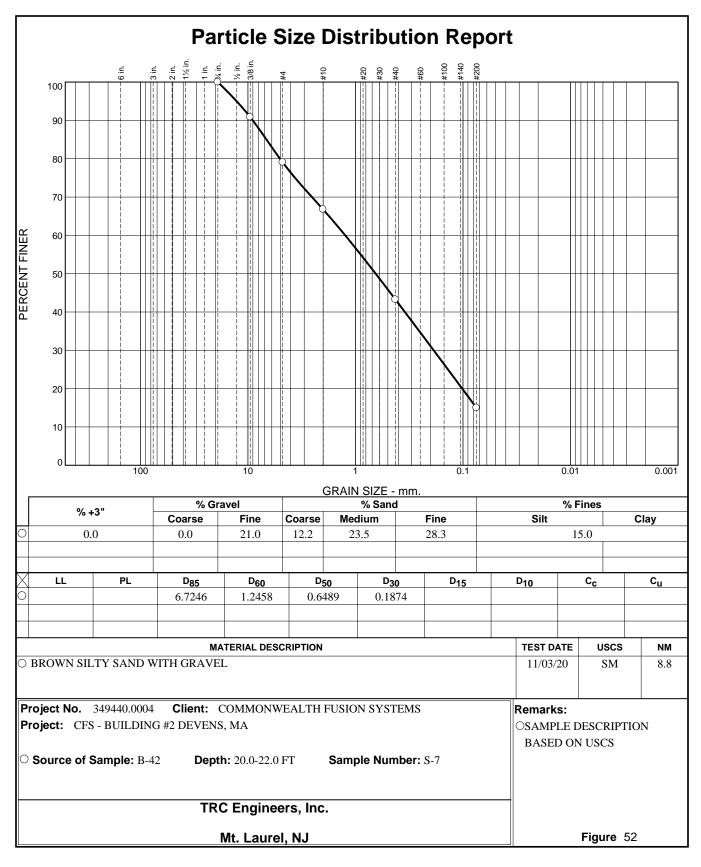
TRC Project #: 349440.0004

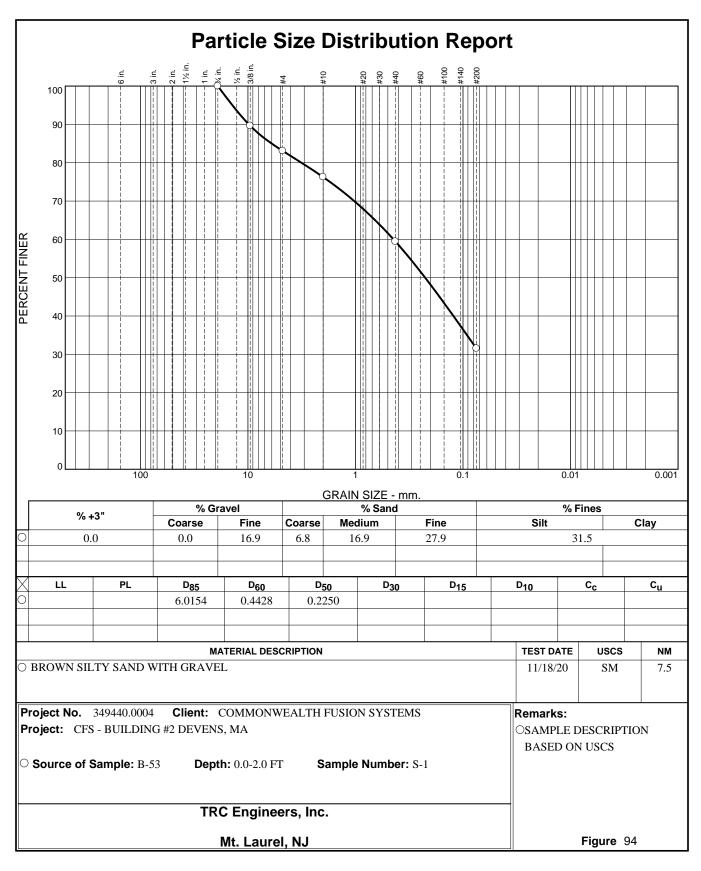
| SAI | MPLE IDENTIFIC | CATION | MBOL) | t (%) | GRAIN | SIZE DI | STRIBUT | ION | | PLAS | STICITY | | insity | อ | CALIFO BEAF CAPA | RING | (%) |
|----------|----------------|------------|---------------------|----------------------|------------|----------|----------|----------|------------------|-------------------|-------------------------|------------------------|------------------------------|---------------------------------|---------------------------|---------------------|---------------------|
| Boring # | Sample # | Depth (ft) | USCS (GROUP SYMBOL) | Moisture Content (%) | Gravel (%) | Sand (%) | Silt (%) | Clay (%) | Liquid Limit (%) | Plastic Limit (%) | Plasticity Index (%) | Liquidity Index (%) | Maximum Dry Density (pcf) | Optimum Moisture Content (%) | Percent Compaction (%) | CBR (%) at 0.10 in. | Organic Content (%) |
| B-53 | S-1 | 0.0-2.0 | SM | 7.5 | 16.9 | 51.6 | 31 | .5 | ı | - | - | - | - | - | - | - | - |
| B-53 | S-2 & S-3 | 2.0-6.0 | SM | 6.4 | 40.9 | 45.6 | 13 | .5 | 1 | - | - | - | - | - | - | - | - |
| B-53 | S-4 & S-5 | 6.0-10.0 | SW-SM | 3.9 | 33.9 | 57.9 | 8. | 2 | - | - | - | - | - | - | - | - | - |
| B-53 | S-6 | 15.0-17.0 | SP-SM | 6.6 | 3.8 | 85.9 | 10 | .3 | - | - | - | - | - | - | - | - | - |
| B-53 | S-7 & S-8 | 20.0-27.0 | SW-SM | 7.9 | 42.1 | 47.3 | 10 | .6 | - | - | - | - | - | - | - | - | - |
| B-53 | S-9 | 30.0-32.0 | SM | 10.2 | 42.2 | 44.6 | 13 | .2 | - | - | - | - | - | - | - | - | - |
| B-53 | S-10 | 35.0-37.0 | SM | 11.5 | 14.4 | 50.0 | 35 | .6 | - | - | - | - | - | - | - | - | - |
| B-53 | S-11 | 40.0-42.0 | SM | 11.3 | 15.0 | 55.1 | 29 | .9 | - | - | - | - | - | - | - | - | - |
| B-54 | S-1 | 0.0-2.0 | SM | 7.5 | 23.5 | 62.0 | 14 | .5 | - | - | - | - | - | - | - | - | - |

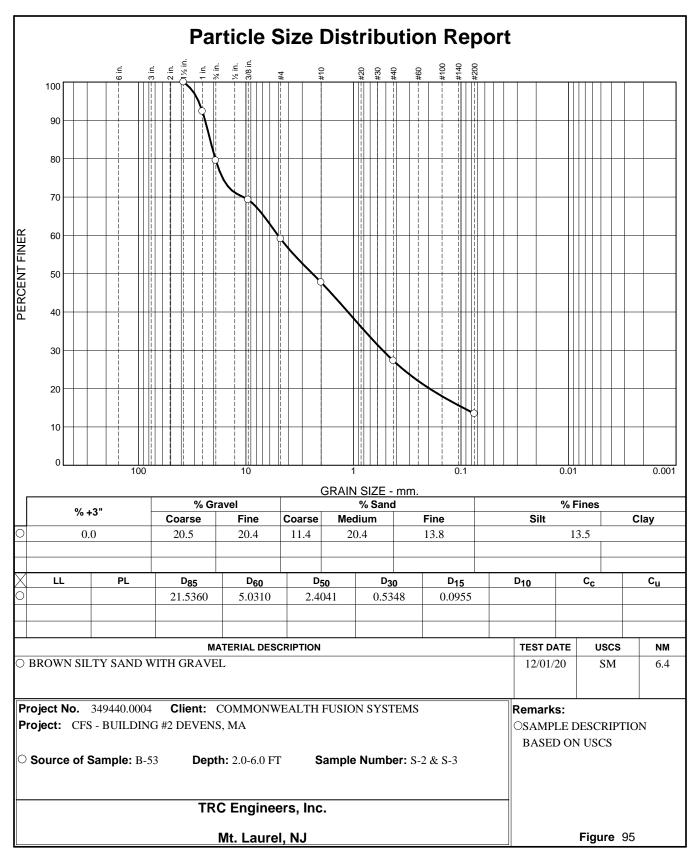
DRAWN BY: TBT 04/01/21 CHECKED BY: JPB 04/01/21

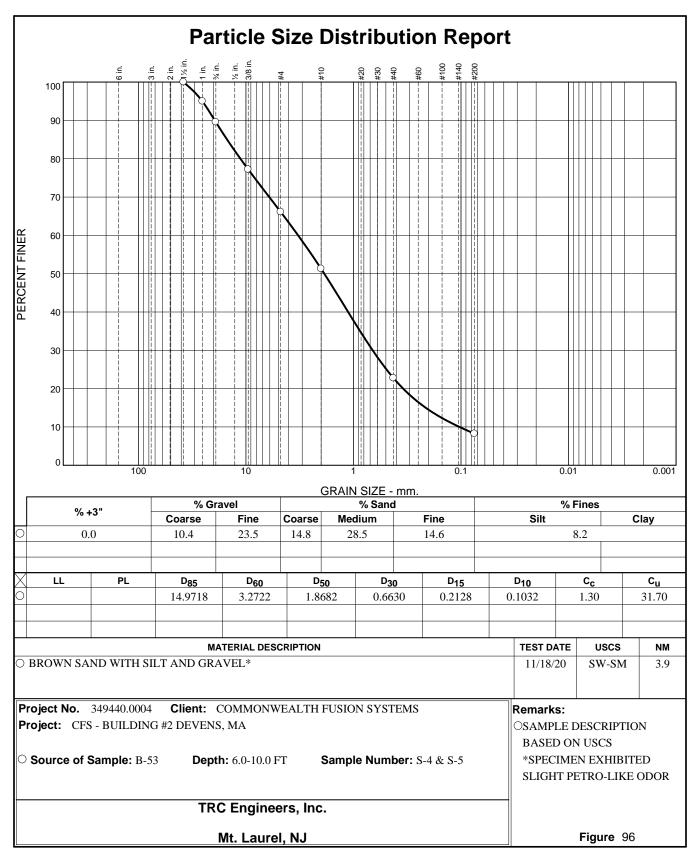


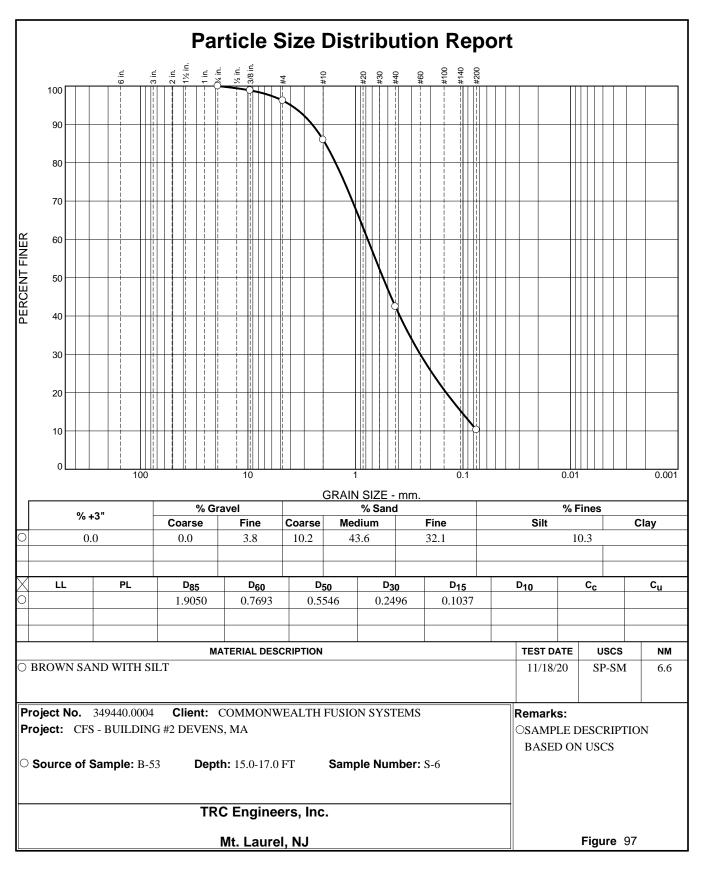


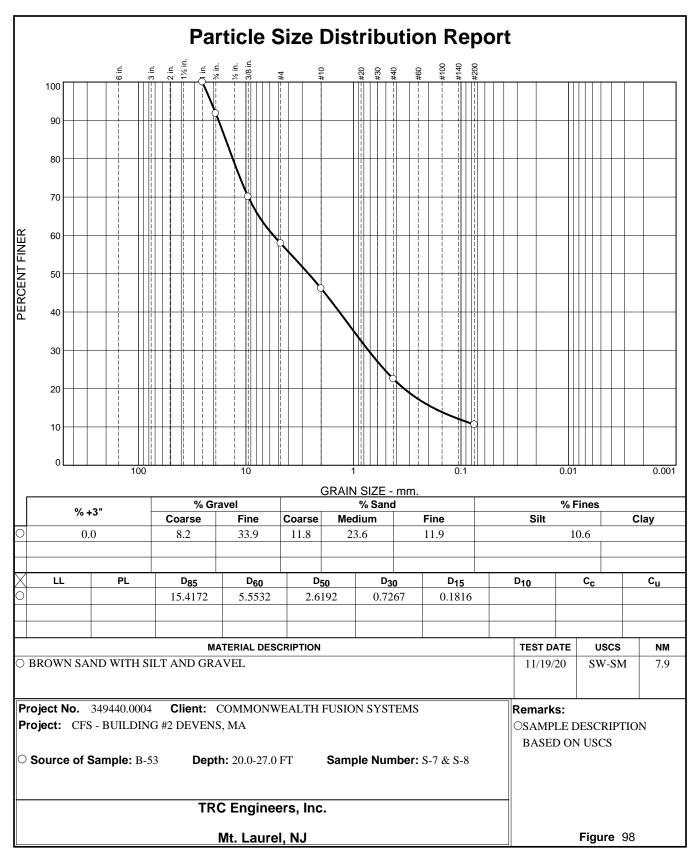


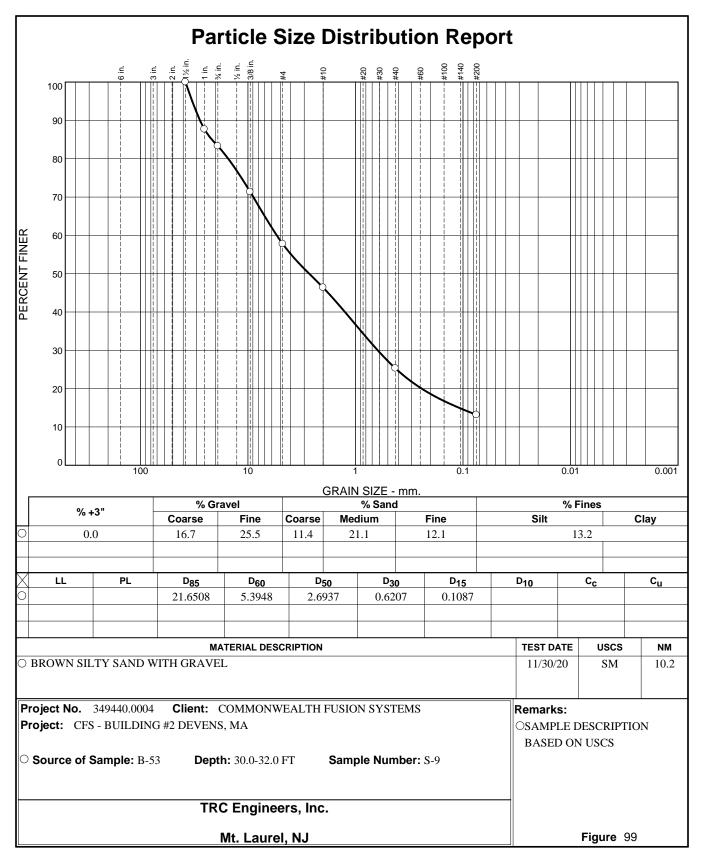


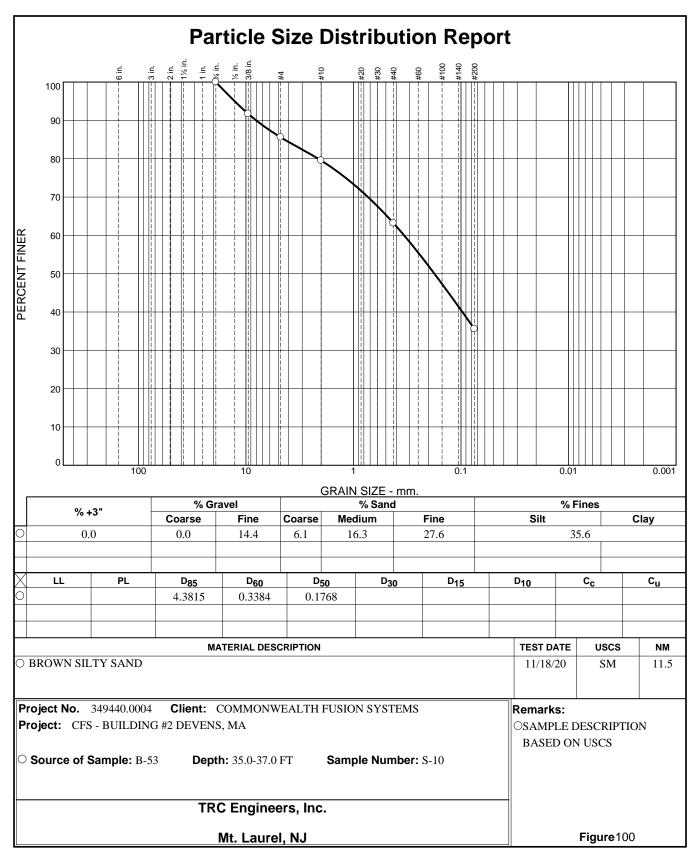


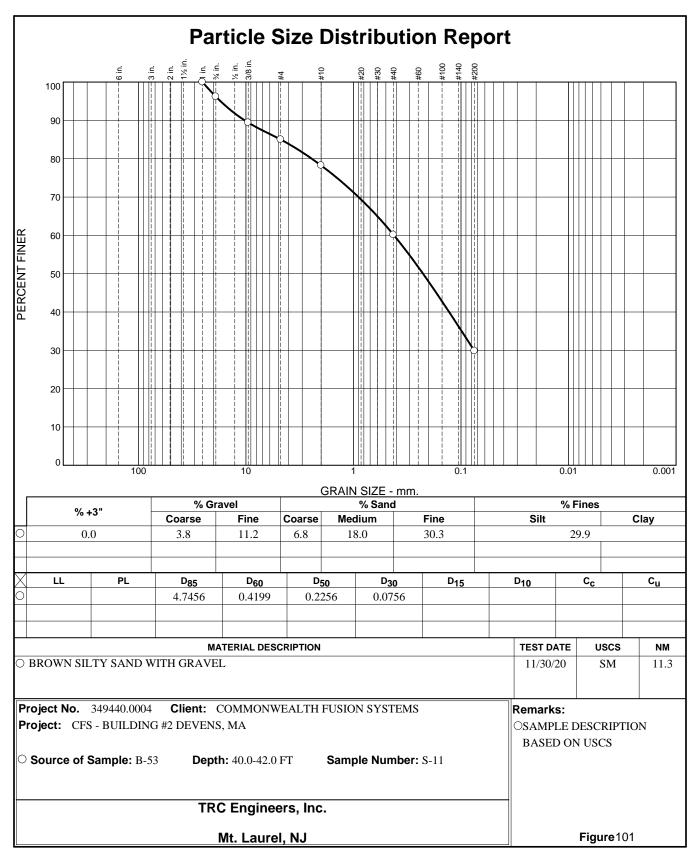














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249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com

APPENDIX C.2

2024 GEOTECHNICAL LABORATORY TEST RESULTS



195 Frances Avenue Cranston RI, 02910 Phone: (401)-467-6454 Fax: (401)-467-2398 cts.thielsch.com Let's Build a Solid Foundation

Client Information: GZA GeoEnvironmental Norwood, MA 781-603-5934

Project Contact: Collected By:

Michael Ostrowski

GZA

CFS-3 and Parking Lot 105 to 117 Hospital Road, Devens MA 01.0174955.20

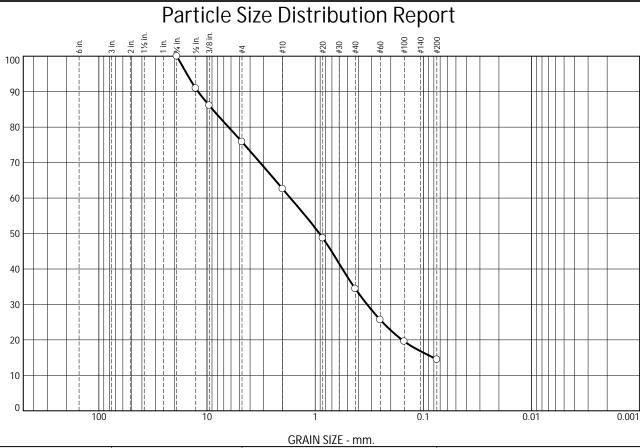
Project Information:

Project Number: Summary Page: 1 of 1 Report Date: 26-Nov

LABORATORY TESTING DATA SHEET, Report No.: 7424-L-B025

| | | | | Identification Tests Corrosivity Tests | | | | | | | | | | | | | | | |
|--------------------|--------------|---------------|-------------------|--|---------|---------|-------------|-----------|------------|-----------|---------------------------|---------------------|-----|-----|----------------------------|-----|--|--|--|
| Material Source | Sample ID | Depth (ft) | Laboratory No. | As Rcvd Moisture Content % | LL % | PL % | Gravel % | Sand % | Fines % | Org. % | Resistivity (Mohms-cm) | Chloride (mg/kg) | | | Redox Potential (mv) | рН | Electrical Resist. As Rcvd Ohm-cm @ 60°F | Electrical Resist. Saturated Ohm-cm @ 60°F | Laboratory Log and Soil Description |
| | | | | D2216 | D4 | 318 | | D6913 | | D2974 | EPA | D43 | 327 | EPA | G200 | G51 | G | 187 | |
| TP-212 | S-5 | 5.5 | 24-S-B1674 | | | | 36.9 | 58.7 | 4.4 | | | | | | | | | | Brown f-c SAND and f-c GRAVEL, trace Silt |
| TP-213 | S-1 | 5.1 | 24-S-B1675 | | | | 43.4 | 50.2 | 6.4 | | | | | | | | | | Brown f-c SAND and f-c GRAVEL, trace Silt |
| TP-204 | S-3 | 2.5-4 | 24-S-B1676 | | | | 15.4 | 74.0 | 10.6 | | | | | | | | | | Brown f-c SAND, little fine Gravel, little Silt |
| GZ-3 | S-3 | 4-6 | 24-S-B1677 | | | | 33.0 | 55.3 | 11.7 | | | | | | | | | | Brown f-c SAND, some fine Gravel, little Silt |
| GZ-5 | S-4 | 6-8 | 24-S-B1678 | | | | 24.2 | 61.4 | 14.4 | | | | | | | | | | Brown f-c SAND, some fine Gravel, little Silt |
| GZ-8 | S-2 | 2-4 | 24-S-B1679 | | | | 4.4 | 88.8 | 6.8 | | | | | | | | | | Brown f-m SAND, trace Silt, trace fine Gravel |
| GZ-13 | S-2 | 2-4 | 24-S-B1680 | | | | 42.2 | 51.0 | 6.8 | | | | | | | | | | Brown f-c SAND and f-c GRAVEL, trace Silt |
| | | | | | | | | | | | | | | | | | | | |
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| Date Received: | 11/20/2024 | Reviewed By: | Romble Le Blace | Date Reviewed: | 11/26/2024 |
|----------------|------------|--------------|-----------------|----------------|------------|
| | | | | • | |



| 0/ .2" | % GI | avei | | % Sand | | % FINES | | |
|--------|--------|------|--------|--------|------|---------|------|--|
| % +3" | Coarse | Fine | Coarse | Medium | Fine | Silt | Clay | |
| 0.0 | 0.0 | 24.2 | 13.2 | 28.2 | 20.0 | 14.4 | | |
| | | | | | | | | |

| SIEVE SIZE | PERCENT | SPEC.* | PASS? |
|--------------|--------------|---------|--------|
| OR DIAMETER | FINER | PERCENT | (X=NO) |
| 3/4" | 100.0 | | |
| 1/2" | 90.9 | | |
| 3/8" | 86.1 | | |
| #4 | 75.8 | | |
| #10 | 62.6 | | |
| #20 | 48.7 | | |
| #40 | 34.4 | | |
| #60 #100 | 25.6 19.6 | | |
| #100 #200 | 14.4 | | |
| π200 | 14.4 | | |
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| | Soil Description | |
|--|---|--|
| Brown f-c SAND, | some fine Gravel, little | e Silt |
| | | |
| | | |
| DI | Atterberg Limits | D |
| PL= NP | LL= NŸ | PI= NP |
| | <u>Coefficients</u> | |
| D ₉₀ = 12.0867 | $D_{85} = 8.8780$ | D ₆₀ = 1.6959 |
| D ₉₀ = 12.0867 D ₅₀ = 0.9141 D ₁₀ = | D ₈₅ = 8.8780 D ₃₀ = 0.3314 C ₁₁ = | D ₆₀ = 1.6959 D ₁₅ = 0.0811 C _C = |
| 510- | 4 | oc_ |
| USCS= SM | Classification AASHTO= | A 1 L |
| USCS= SM | AASHTU= | A-1-0 |
| | <u>Remarks</u> | |
| | | |
| | | |
| | | |

Date: 11/25/2024

Client: GZA GeoEnvironmental Project: CFS-3 and Parking Lot

105 to 117 Hospital Road, Devens, MA

Cranston, RI 01.0174955.20 Figure 24-S-B1678 Project No:



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APPENDIX C.3

2025 GEOTECHNICAL LABORATORY TEST RESULTS



195 Frances Avenue Cranston RI, 02910 Phone: (401)-467-6454 Fax: (401)-467-2398 cts.thielsch.com Let's Build a Solid Foundation Client Information:
GZA GeoEnvironmental, Inc.
Norwood, MA
(781) 278-3700

Project Contact: Michael Ostrowski
Collected By: Kyran Peters

Project Information:
Proposed CFS-3
Devens, MA

Project Number: 01.0178186.00 Summary Page: 1 of 1 Report Date: 08.13.25

LABORATORY TESTING DATA SHEET, Report No.: 7425-H-B029

| Identification Tests Proctor / CBR / Permeability Tests | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---------------|-------------------|-------------------------------------|---------|---------|----------|-------------|-----------|------------|-----------|-----------|---|---|--------------------------|-------------------------------|--|------------------|------------------|------------------------|---|
| Boring No. | Sample ID | Depth (ft) | Laboratory No. | As Rcvd Moisture Content % | LL % | PL % | OD LL | Gravel % | Sand % | Fines % | Org. % | рН | g _d <u>MAX (pcf)</u> W _{opt} (%) | g _d MAX (pcf) W _{opt} (%) (Corr.) | Dry unit wt. (pcf) | Test Moisture Content % | Target Test Setup as % of Proctor | CBR @ 0.1" | CBR @ 0.2" | Permeability cm/sec | Laboratory Log and Soil Description |
| | | | | D2216 | D4: | 318 | | | D6913 | | D2974 | D4792 | D1: | 557 | | | | | | | |
| TP-302 | GS-4 | 5.5-6 | 25-S-B1665 | 11.1 | | | | | | | 5.1 | | | | | | | | | | Organic Content Only |
| TP-310 | GS-1 | 4 | 25-S-B1666 | 13.0 | | | | | | | 2.9 | | | | | | | | | | Organic Content Only |
| TP-314 | GS-2 | 14 | 25-S-B1667 | 16.3 | | | | | | | 4.9 | | | | | | | | | | Organic Content Only |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | 1 | ı | | l. | | | C | rganic C | Content t | ested by MA | 08.12.25. | 1 | l | | | I | 1 | |
| | No Con Varons | | | | | | | | | | | | | | | | | | | | |

| Date Received: | 08.08.25 | Reviewed By: | Date Reviewed: | 08.13.25 |
|----------------|----------|--------------|----------------|----------|
| | | | | |



Date Received:

8/8/2025

195 Frances Avenue Cranston RI, 02910 Phone: (401)-467-6454 Fax: (401)-467-2398 cts.thielsch.com Let's Build a Solid Foundation

Client Information: GZA GeoEnvironmental, Inc. Norwood, MA (781) 278-3700

Project Contact: Michael Ostrowski Collected By: Kyran Peters Project Information:
Proposed CFS-3
Devens, MA

 Project Number:
 01.0178186.00

 Summary Page:
 1 of 1

 Report Date:
 08.13.25

Date Reviewed:

08.13.25

LABORATORY TESTING DATA SHEET, Report No.: 7425-H-B025

| | | | | | Identification Tests Proctor / CBR / Permeability Tests | | | | | | | | | | | | | | | | |
|-------------|--------------|---------------|-------------------|-------------------------------------|---|---------|----------|-------------|-----------|------------|-----------|-------|--|---|--------------------------|-------------------------------|-----------------------------------|------------------|------------------|------------------------|---|
| Boring No. | Sample ID | Depth (ft) | Laboratory No. | As Rcvd Moisture Content % | LL % | PL % | OD LL | Gravel % | Sand % | Fines % | Org. % | рН | g _d MAX (pcf) W _{opt} (%) | g _d MAX (pcf) W _{opt} (%) (Corr.) | Dry unit wt. (pcf) | Test Moisture Content % | Target Test Setup as % of Proctor | CBR @ 0.1" | CBR @ 0.2" | Permeability cm/sec | Laboratory Log and Soil Description |
| | | | | D2216 | D43 | 318 | | | D6913 | | D2974 | D4792 | D1 | 557 | | II. | | I | 1 | | |
| TP-301 | GS-3 | 6-7 | 25-S-B1656 | | | | | 40.5 | 56.9 | 2.6 | | | | | | | | | | | Brown poorly graded sand with gravel |
| TP-302 | GS-5 | 7 | 25-S-B1657 | | | | | 0.0 | 89.5 | 10.5 | | | | | | | | | | | Brown poorly graded sand with silt |
| TP-308 | GS-3 | 13 | 25-S-B1658 | | | | | 60.5 | 38.7 | 0.8 | | | | | | | | | | | Brown poorly graded gravel with sand |
| TP-305 | GS-4 | 8 | 25-S-B1659 | | | | | 0.0 | 98.6 | 1.4 | | | | | | | | | | | Brown poorly graded sand |
| | | | | | | | | | | | | | | | | | | | | | |
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Reviewed By:

Thielsch Engineering Inc.

Client: GZA GeoEnvironmental, Inc. Project: Proposed CFS-3

Cranston, RI

Project No: 01.0178186.00 Figure 25-S-B1656

Project No:

01.0178186.00

Figure 25-S-B1657

Figure 25-S-B1658

Project No:

01.0178186.00

Cranston, RI



195 Frances Avenue Cranston RI, 02910 Phone: (401)-467-6454 Fax: (401)-467-2398 cts.thielsch.com Let's Build a Solid Foundation

Client Information: GZA GoEnvironmental, Inc. Norwood, MA 781-278-3700

Project Contact: Michael Ostrowski Collected By: Kyran Peters Project Information:
Proposed CFS-3
Devens, MA

 Project Number:
 1.0178186.000

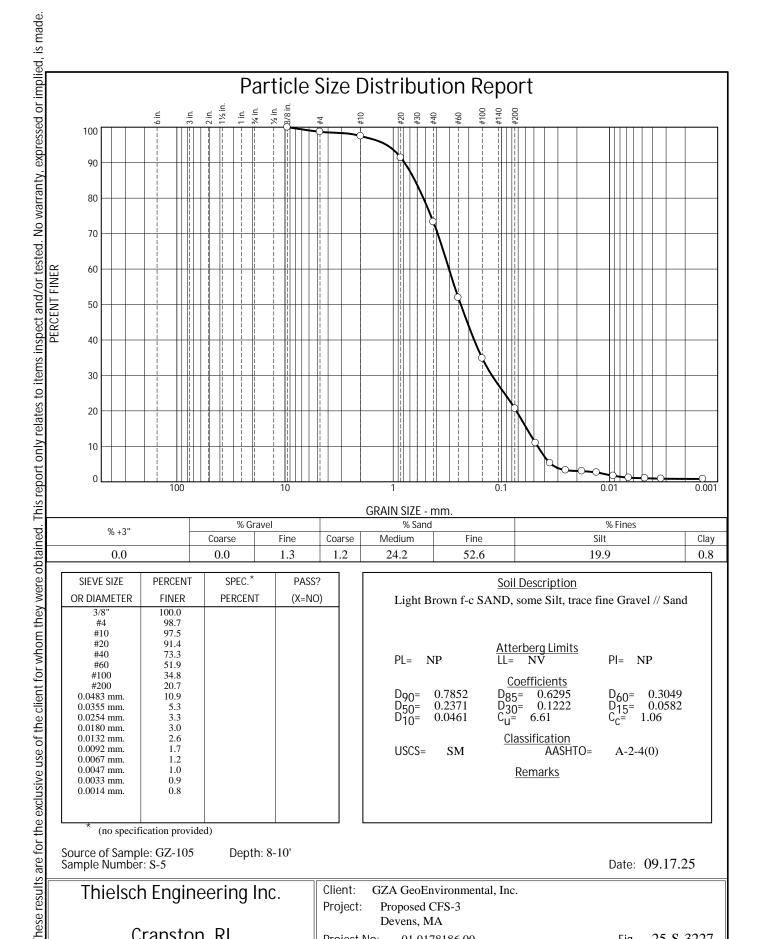
 Summary Page:
 1 of 1

 Report Date:
 9/17/2025

LABORATORY TESTING DATA SHEET, Report No.: 7425-J-153, Rev 1

| Identification Tests Proctor / CBR / Permeability Tests | | | | | | | | | | | | | | | | | | | | | |
|---|--------------|---------------|-------------------|-------------------------------------|-----|----------|----------|-------------|-------|------------|-----------|----------|--|---|--------------------------|-------------------------------|-----------------------------------|------------------|------------------|------------------------|---|
| Material Source | Sample ID | Depth (ft) | Laboratory No. | As Rcvd Moisture Content % | % | % | OD LL | Gravel % | % | Fines % | Org. % | рН | g _d MAX (pcf) W _{opt} (%) | g _d MAX (pcf) W _{opt} (%) (Corr.) | Dry unit wt. (pcf) | Test Moisture Content % | Target Test Setup as % of Proctor | CBR @ 0.1" | CBR @ 0.2" | Permeability cm/sec | Laboratory Log and Soil Description |
| | | | | D2216 | D4. | 318 | | | D6913 | | D2974 | D4792 | D1 | 557 | | | | | | | |
| GZ-105 | S-5 | 8-10 | 25-S-3227 | | | | | 1.3 | 78.0 | 20.7 | | | | | | | | | | | Light Brown f-c SAND, some Silt, trace fine Gravel // Sand |
| GZ-110 | S-9 | 20-22 | 25-S-3228 | | | | | 0.0 | 90.3 | 9.7 | | | | | | | | | | | Light Brown fine SAND, trace Silt // Sand |
| GZ-110 | S-10 | 22-24 | 25-S-3229 | | | | | 0.0 | 67.7 | 32.3 | | | | | | | | | | | Light Brown fine SAND, some Silt // Loamy sand |
| | | | | | | | | | | | | | | | | | | | | | 2, 22, 22 |
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| | | l | | | l | <u> </u> | | | Re | port rev | ised 09- | 19-25 to | include USD | I A classificatio | n. KR | 1 | l | | | | |
| <u> </u> | | | | | | | | | | | | | | | | | | | | | |

| Date necessed. 3/12/2023 Newcord by. | Date Received: | 9/12/2025 | Reviewed By: | Date Reviewed: | 9/17/2025 |
|--------------------------------------|----------------|-----------|--------------|----------------|-----------|
|--------------------------------------|----------------|-----------|--------------|----------------|-----------|



Devens, MA

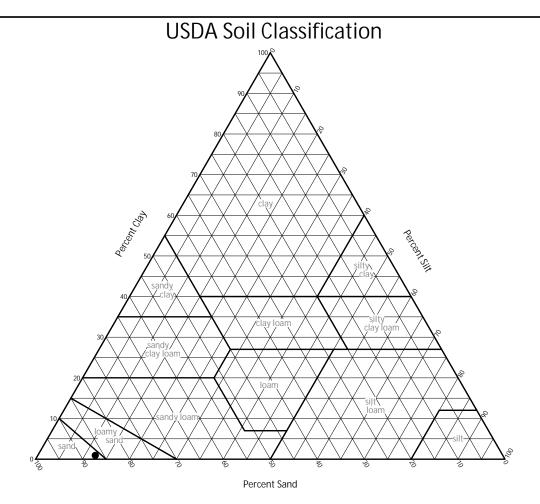
01.0178186.00

Project No:

25-S-3227

Tested By: AB/TG Checked By: Becca Blake

Cranston, RI



| | SOIL DATA | | | | | | | | | | | | |
|----------|-----------|--------|-------|------|----------------------|------|----------------|--|--|--|--|--|--|
| | Source | Sample | Depth | | From Material Passin | | Classification | | | | | | |
| | Jource | No. | | Sand | Silt | Clay | olassification | | | | | | |
| | GZ-105 | S-5 | 8-10' | 86.8 | 12.4 | 0.8 | Sand | | | | | | |
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Thielsch Engineering Inc.

| Client: GZA GeoEnvironmental, Inc. |
| Project: Proposed CFS-3 |
| Devens, MA |
| Cranston, RI |
| Project No.: 01.0178186.00 |
| Fig. 25-US-3227

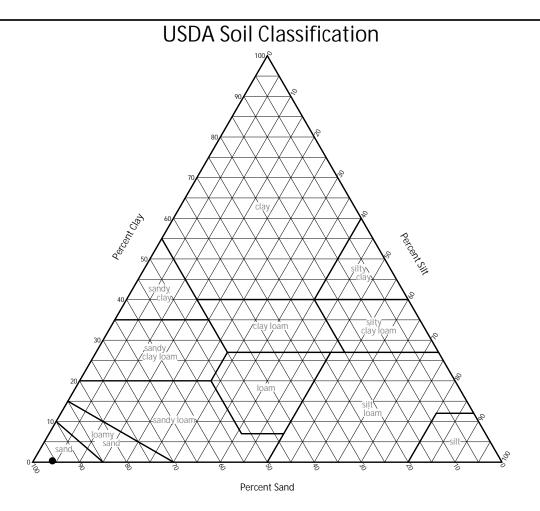
Thielsch Engineering Inc.

Project: Proposed CFS-3 Devens, MA

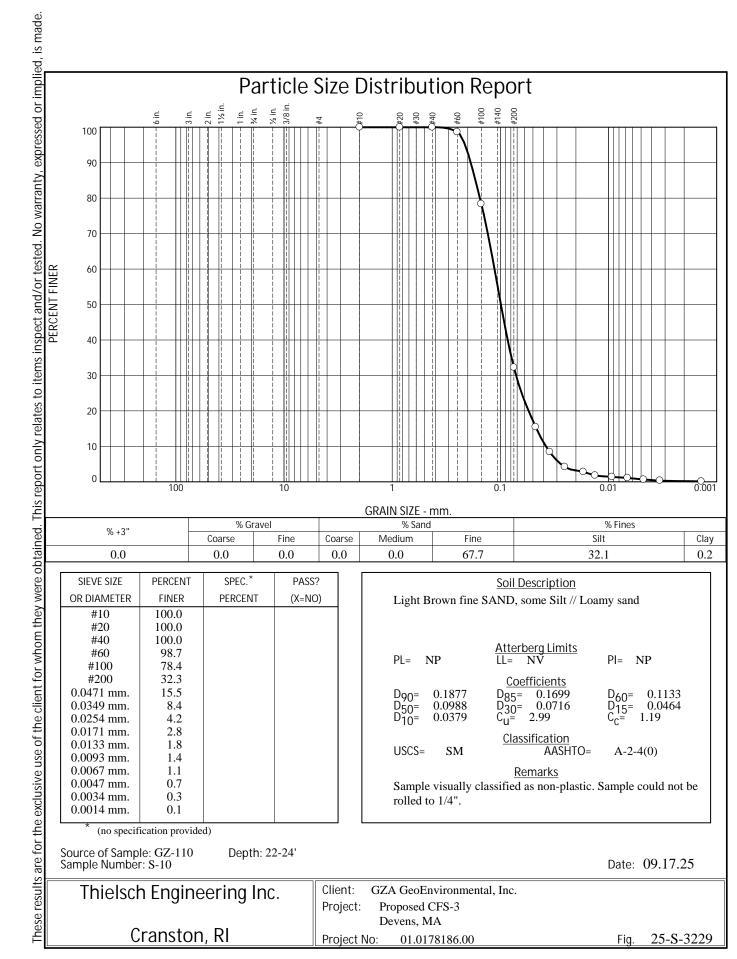
25-S-3228

Cranston, RI Project No: 01.0178186.00

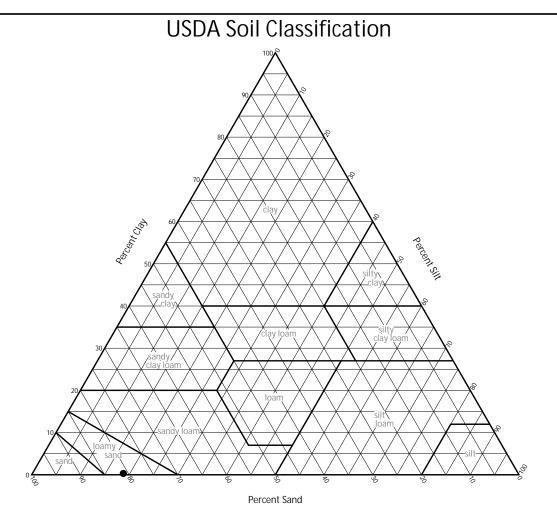
Checked By: Becca Blake Tested By: AB/TG



| | SOIL DATA | | | | | | | | | | | | |
|---|-----------|---------------|--------|---------------------|------------------------------|-----------------------|----------------|--|--|--|--|--|--|
| | Source | Sample No. | Depth | Percentages Sand | From Material Passin Silt | g a #10 Sieve Clay | Classification | | | | | | |
| • | GZ-110 | S-9 | 20-22' | 95.6 | 4.2 | 0.2 | Sand | | | | | | |
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Tested By: AB/TG Checked By: Becca Blake



| | | | | SOIL DA | ΛTA | | |
|---|--------|--------|--------|---------|----------------------|------|----------------|
| | Source | Sample | Depth | | From Material Passir | | Classification |
| - | | No. | | Sand | Silt | Clay | |
| | GZ-110 | S-10 | 22-24' | 81.0 | 18.8 | 0.2 | Loamy sand |
| | | | | | | | |
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Thielsch Engineering Inc.

Client: GZA GeoEnvironmental, Inc.

Project: Proposed CFS-3

Cranston, RI

Devens, MA

Project No.: 01.0178186.00

Fig. 25-US-3229



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APPENDIX D

SLOPE/W EVALUATION RESULTS



Global Stability Analysis - CFS-4

Project No: 01.0174955.30

Project: Proposed CFS-4 Development

Location: Devens, MA

 Calculated By:
 KCP/MJO
 Date:
 11/12/2025

 Checked By:
 MAR/MJO
 Date:
 11/13/2025

Objective: Evaluate the global stability of the proposed critical slope, identified in Figure 2 of this report as Section A-A', at the western portion of the proposed CFS-4 development, which is in close proximity to a Slope Resource Area (SRA, as defined in Massachusetts State Regulation No. 974 CMR 3.06).

The critical slope section A-A' alignment extends from east to west through the proposed CFS-4 building and part of the south equipment pad area, an asphalt-paved roadway, the aforementioned retaining wall, and an existing slope leading into the SRA.

References: 1) Subsurface conditions are based on borings borings GZ-118, GZ-124, and GZ-130. Refer to Appendix B of this report for the boring logs.

- 2) Figure 2 of this report, which identifies the critical slope section.
- 3) A draft version of Level Two Permit drawings for the CFS-4 development project, prepared by VHB and transmitted to GZA on September 17, 2025.

Geometry & Based on information provided by VHB, the proposed critical slope passes through a proposed site retaining wall at the **Subsurface** existing/proposed western portion of the CFS-4 development. The proposed site retaining wall

Conditions: located in the western portion of the critical slope is assumed to be a modular block retaining wall resting at El. 261.0. The wall geometry is assumed based on a previous site retaining wall constructed at the CFS-2 development area.

Based on the relevant borings, and assuming existing unsuitable bearing soils (topsoil, buried topsoil, topsoil fill and fill) are removed and replaced with compacted granular fill, subsurface conditions are anticipated to generally consist of compacted fill over natural granular soils overlying glacial till and bedrock. The retaining wall is assumed to bear on natural granular materials.

Assumptions: 1) Soil strata and groundwater levels were interpreted from the above referenced borings.

- 2) Assume groundwater at approximate elevation 230 feet.
- 3) The global stability analysis was evaluated assuming static loading for proposed slope conditions using the computer program Slope/W from GeoStudio, using the Spencer solution for the method of slices.
- 4) Failure surfaces that pass through the limits of the proposed retaining wall have been excluded.
- 6) The minimum factor of safety is assumed to be 1.5 for static loading.
- 7) Loads from roadways and building located within the zone of influence were considered and modeled as surcharge loads "250 PSF" for roadway, "6,000 PSF" in assumed building footing areas, and "730 PSF" in assumed building slab areas in SLOPE/W. Building area surcharge loads are applied at the bottom of proposed fill, and the weight of new fill is included in the surcharge loadings.

Rev. 0



Global Stability Analysis - CFS-4

Project No: 01.0174955.30

Project: Proposed CFS-4 Development

Location: Devens, MA

 Calculated By:
 KCP/MJO
 Date:
 11/12/2025

 Checked By:
 MAR/MJO
 Date:
 11/13/2025

Table 1: Material Properties for Global Stability Model:

| | Total Unit | Effective Strength | | | |
|---------------------------|---------------------------------|-----------------------|----------------------------|---------|--|
| Slope/W Soil Type | Weight, γ _t (pcf) | Cohesion, c' (psf) | Friction Angle, Φ'(Degree) | Notes | |
| Existing Subsurface Soils | | | | | |
| Natural Granular Soil | 125 | 0 | 34 | (1),(2) | |
| Glacial Till | 135 | | 37 | (1),(2) | |
| Construction Materials | | | | | |
| New Fill | 125 | 0 | 36 | (1),(2) | |
| Retaining Wall | 120 | | | | |

¹⁾ The friction angles (ϕ) are based on empirical correlation to N₁₍₆₀₎, for recently performed borings, by Peck, Hanson, & Thornburn (1974) as mentioned by Kulhawy & Mayne (1990).

Table 2: Summary of Global Stability Results

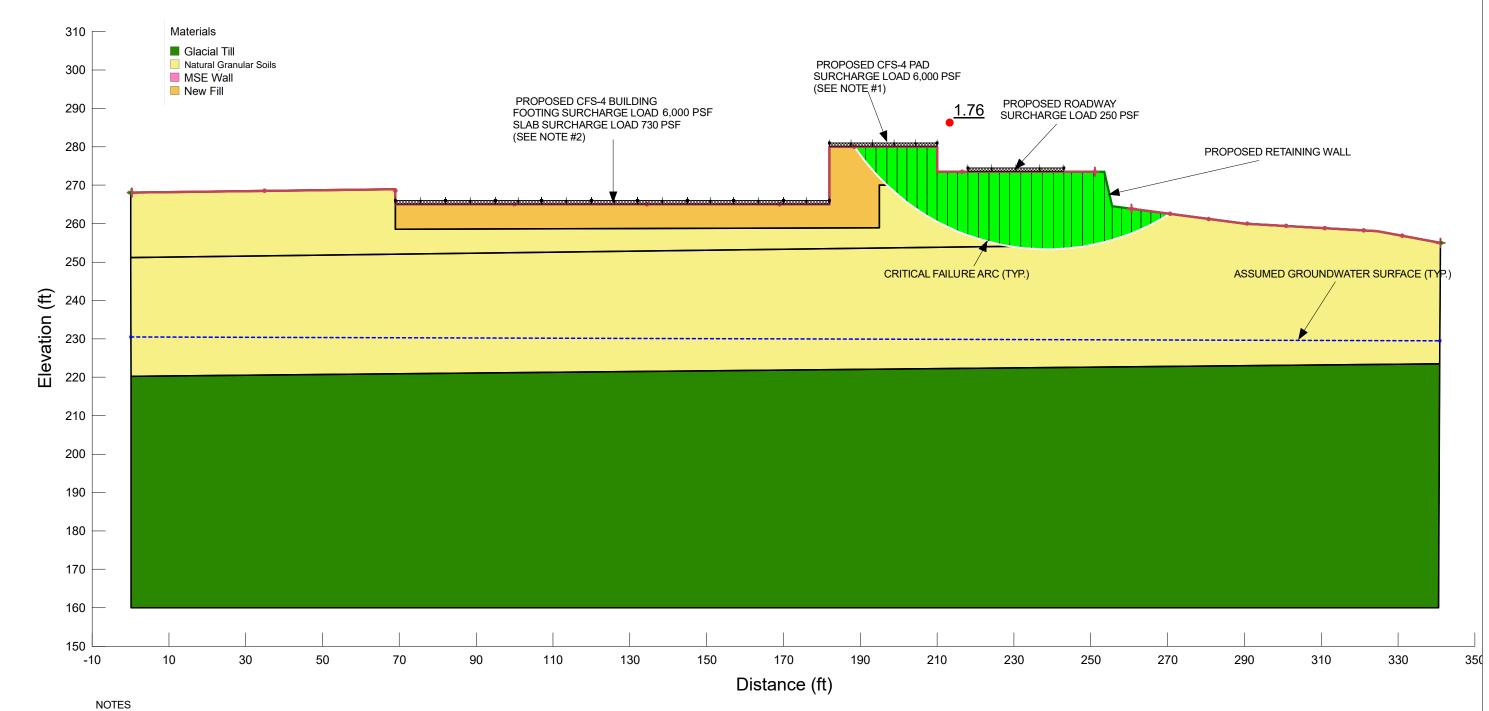
| Analysis | Analysis Method | Resultant Factor of Safety |
|----------------|-----------------|----------------------------|
| A-A' Alignment | Spencer | 1.76 |

The results of the stability analysis indicate a factor of safety for global slope stability of approximately 1.76 indicating adequate resistance to slope failure with static loading for the proposed critical slope section A-A' of the CFS-4 development based on our understanding of the subsurface conditions.

Attachments: Stability Model Input Summary, Stability Model Output

Rev. 0

²⁾ The unit weights are based on prior experience with similar soils on other projects.



NOTES
1) To model the loading condition at the CFS-4 equipment pad, an assumed pad loading was applied as a 6,000 psf surcharge load at elevation (EI.) 281 feet.
2) To model the loading condition for the CFS-4 building, the slab loading, footing loading, and new fill loading up to EI. 269 were applied as surcharge loads at elevation 265. The slab surcharge includes 250 psf of assumed surcharge on top of the floor slab and 480 psf surcharge for the 4 feet of proposed new fill from EI. 265 to 269 feet. The footing surcharge includes 6,000 psf of assumed footing loading and 480 psf of surcharge for 4 feet of new fill from EI. 265 to 269 feet.

| Color | Name | Slope Stability Material Model | Unit Weight (pcf) | Effective Cohesion (psf) | Effective Friction Angle (°) | Phi-B (°) | Piezometric Surface |
|-------|---------------------------|-----------------------------------|-------------------------|--------------------------------|------------------------------------|--------------|------------------------|
| | Glacial Till | Mohr-Coulomb | 135 | 0 | 37 | 0 | 1 |
| | Natural Granular Soils | Mohr-Coulomb | 125 | 0 | 34 | 0 | 1 |
| | MSE Wall | High Strength | 120 | | | | 1 |
| | New Fill | Mohr-Coulomb | 125 | 0 | 36 | 0 | 1 |

CFS-4 SLOPE STABILITY ANALYSIS A - A' ALIGNMENT

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| PREPARED BY: | | | | |
|--------------|----------------------------|--|--|--|
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| L | PROJ MGR: MJO | REVIEWED BY: MAR | FIGURE |
|---|---------------------|-----------------------------------|--------|
| | CALCULATED BY: K | 2 | |
| | DATE: 11/12/2025 | PROJECT NO.: 01.0174955.30 | ၁ |