



**REPORT OF GEOTECHNICAL EXPLORATION
PROPOSED WEST JACKSON HIGH-MIDDLE SCHOOL
JEFFERSON, GEORGIA**

FOR

JACKSON COUNTY SCHOOLS

AUGUST 28, 2018

ECS PROJECT NO. 10:9918



August 28, 2018

Mr. Ted Gilbert
Jackson County Schools
1660 Winder Highway
Jefferson, Georgia 30549

Reference: Report of Geotechnical Exploration
Proposed West Jackson High-Middle School
1630 Skelton Road
Jefferson, Georgia

ECS Project No. 10:9918

Dear Mr. Gilbert:

ECS Southeast, LLP (ECS) is pleased to submit our report of geotechnical exploration for the above referenced project. The attached report presents an introduction to the proposed project, results of our exploration, subsurface conditions, and our recommendations. The work was completed in general accordance with ECS Proposal No. 10:13713 as authorized by you on July 16, 2018.


We appreciate the opportunity of working with you on this project and look forward to our continued association. Should you have questions regarding our findings or need additional consultations, please do not hesitate to contact our office at (770) 590-1971.

Respectfully,

ECS SOUTHEAST, LLP represented by:


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INTRODUCTION

General

This report presents the results of a geotechnical exploration for the proposed West Jackson High-Middle School in Jefferson, Georgia. Work was performed in general accordance with ECS Proposal No. 10:13713 as authorized by you on July 9, 2018.

Project Information

This section is based on information provided and our site reconnaissance. The site is located on Skelton Road in Jefferson, Georgia. A Site Location Diagram is included in the Appendix as Figure 1.

The attached Boring and Traverse Location Plans (Figures 2 and 3) present the site development concept at the time of this report. We understand the project consists of the construction of a separate 2-story high and middle school buildings with associated play fields, parking and drives.

At the time of this study, no structural loading information was available. We assume the maximum column loads will not exceed 200 kips and the maximum strip loads will not exceed 4 kips per linear foot.

According to the provided information, the surface elevations range from 818 to 966 feet across the site. We understand the proposed finished floor elevation (FFE) for the proposed High School will be 926 feet and the attached gymnasium will be 912 feet. The FEE for the proposed Middle School will be 928 feet. Based on the provided information maximum cuts and fills on order of 53 and 21 feet, respectively, will be required across the site. Maximum cuts on the order of 37 feet will be required in the proposed High and Middle School buildings, and the deepest cuts of over 50 feet will be within the proposed football field.

At the time of drilling, the site consisted primarily of wooded undeveloped land. An existing abandoned residence was located in the central portion of the site just north of the proposed High School building followed by a small pond to the northeast in a proposed parking area (near Boring B-28 as shown on Figure 3). A larger pond was located just west of the proposed development area as shown on Figure 2. The site is bounded to the south by Skelton Road, to the west by Highway 332, and to the north and east by wooded land.

If any of the information presented is incorrect or has changed, please advise ECS so that we may reevaluate our recommendations in the light of changes in the present project concept.

Purposes of Exploration

The purposes of this exploration were to explore the soil and groundwater conditions at the site and to develop engineering recommendations to guide design and construction of the proposed project.

We accomplished the purposes of the study by:

1. Reviewing the available publications concerning local geology of the site and performing a general site reconnaissance.
2. Drilling borings to explore the subsurface soil and groundwater conditions.
3. Performing laboratory tests on selected representative soil samples from the borings to evaluate pertinent engineering properties.
4. Evaluating the field and laboratory data to develop appropriate engineering recommendations.

FIELD EXPLORATION AND LABORATORY TESTING

Subsurface Exploration

To explore the subsurface conditions at this site, a total of 66 soil test borings were performed in the proposed development area to depths of 10 to 65 feet below existing grade.

Boring locations were determined in the field by our representative who used a handheld GPS device. As these methods are not precise, the boring locations shown on the attached Boring and Traverse Location Plans (Figures 2 and 3) should be considered approximate. Dozer clearing was used to access some boring locations.

The soil test borings were performed with an ATV mounted drill rig, which utilized hollow stem augers to advance the boreholes. No water or drilling fluid was introduced during the process. Representative soil samples were obtained by means of the split-barrel sampling procedure in general accordance with ASTM Specification D-1586 with an automatic drive hammer. In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer falling 30 inches.

The number of blows required to drive the sampler through a 12-inch interval is termed the Standard Penetration Test (SPT) N-value and is indicated for each sample on the boring logs. This value can be used as a qualitative indication of the in-place relative density of cohesionless soils. In a less reliable way, it also indicates the consistency of cohesive soils.

The drill crew prepared a field log of the soils encountered in the borings. After recovery, each sample was removed from the sampler and visually classified by the field crew. Representative portions of each sample were then sealed and brought to our laboratory in Marietta, Georgia for further visual examination and laboratory testing by ECS.

Laboratory Testing Program

Representative soil samples were selected and tested in our laboratory to check visual classifications and to determine pertinent engineering properties. The laboratory testing program included visual classifications of soil samples as well as gradation analysis, Atterberg limits, and natural moisture content testing on selected soil samples.

A geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the Unified Soil Classification System. The group symbols for each soil type are indicated in parentheses followed by the soil descriptions on the boring logs. The geotechnical engineer grouped the various soil types into the major zones noted on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs and profiles are approximate; in-situ, the transitions may be gradual.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposition.

Shear Wave Velocity Testing

To assess the site specific shear wave velocity, 2 ReMi traverses were performed within the proposed high school building and 2 in the proposed middle school building footprint (total of 4 traverses, designated T-1 to T-4). The ReMi traverse location was determined in the field by our representatives who measured distances and estimated right angles from existing site features. As these methods are not precise, the location of the ReMi traverse shown on the attached Boring and Traverse Location Plans (Figures 2 and 3) should be considered approximate.

For the ReMi fieldwork, a cable (traverse) is laid out on the ground surface. Geophones are typically placed at evenly spaced intervals and connected to the cable that is connected to a Seistronix™ 24-channel Exploration Seismograph. For this study, 24 channels were used. Ambient vibrations, or microtremors, were recorded at each traverse location. The field data recorded was processed using SeisOpt® ReMi™ software to reveal a one-dimensional average shear-wave (S-wave) velocity image for each traverse. The average shear wave velocity of materials from the ground surface to a depth of 100 feet is used to determine the Seismic Site Class.

SUBSURFACE CONDITIONS

Regional Geology

The site is located in the Piedmont Region of Georgia. According to the Geology of Georgia (1976) the geology underlying the site consists of granitic gneiss undifferentiated. The natural soils at the site consist primarily of residual materials formed from the in-place physical and chemical weathering of the underlying parent bedrock. The relative density of the residual soils is primarily dependent upon the degree of weathering, surface disturbance, groundwater action, and residual mineral bonding. The shear strength of residual soils is anisotropic and exhibits great variations from point to point. Soils with the flaky minerals oriented parallel to the potential shear plane and the slickenside surfaces have lower shear strengths.

The boundary between soil and rock is not clearly defined. A transitional zone called partially weathered rock (PWR) is normally found above the parent rock. PWR is defined for engineering purposes, as residual material with standard penetration resistances in excess of 100 blows per foot. Weathering is facilitated by fractures, joints, and the presence of less resistant rock types. Consequently, PWR and hard rock profiles are irregular and zones of PWR or rock may occur within the soil mantle well above the general bedrock level. In some cases, boulders can be found in the upper soil matrix.

Groundwater levels are irregular in the Piedmont Region. The surface of the groundwater table is largely dependent on the topography and is generally parallel to the ground surface. It can exhibit some distortions due to differences in vertical and horizontal permeability. The groundwater table can fluctuate several feet with seasonal rainfall.

Based on the online Soil Survey of Jackson County, Georgia, as prepared by the US Department of Agriculture Soil Conservation Service, a summary of the predominant soil types (within the upper 5 feet below original grade) at the site and their characteristics is included in the following table:

Soil Type	Constituents	Parent Material	Internal Drainage	Seasonal High Water Table (inches)
Cecil sandy clay loam (CfC2)	Sands, Silts, Clays	Residuum	Well drained	80+
Pacolet Soils (PuD2)	Sands, Silts, Clays	Residuum	Well drained	80+

Soil Conditions

Data from the soil test borings is included in the Summary of Subsurface Conditions and Boring Logs in the Appendix. The subsurface conditions discussed in the following paragraphs and those shown on the boring logs represent an estimate of the subsurface conditions based on interpretation of the boring data using normally accepted geotechnical engineering judgments. We note that the transition between different soil strata is usually less distinct than those shown on the boring logs.

Topsoil

Topsoil is a dark-colored surficial material with a high organic content and is generally unsuitable for structural support. Approximately 2 to 10 inches of topsoil was observed in the borings. Some variation in thicknesses should be expected across the site.

Fill Materials

Fill may be any material that has been transported and deposited by man. Undocumented fill is considered any man placed materials with no moisture-density records from the time it was originally placed. While not observed in the soil samples recovered, fill or unsuitable materials may be present in unexplored areas of the site, beyond the widely spaced borings performed for this study.

Residual Soils

Residual soil, formed by in-place weathering of the parent rock, was encountered in the borings below the ground surface. The residual soil was generally described as medium soft to very stiff sandy Silt (ML) and/or very loose to dense silty Sand (SM). Standard Penetration resistances (N-Values) ranged from 4 to 57 blows per foot (bpf).

Partially Weathered Rock

Partially weathered rock (PWR) is a transitional material between soil and rock, which retains the relic structure of the rock and exhibits Standard Penetration resistances greater than 100, but still can be penetrated by the power auger. PWR was first encountered beneath the residual soil in numerous borings at depths ranging from 5 to 32 feet below existing grade (corresponding elevations of 884 to 955 feet). The PWR was typically described as silty Sand.

Auger Refusal Materials

Refusal is a designation applied to any material which cannot be further penetrated by the power auger and is normally indicative of a very hard or very dense material, such as boulders, rock lenses, or the upper surface of bedrock. Auger refusal was reported

in numerous borings at depths ranging from 28 to 47 feet below existing grade (corresponding elevations of 904 to 929 feet).

Groundwater Conditions

No groundwater seepage was observed in the open bore holes during our fieldwork activities. Observations for groundwater were made during sampling and upon completion of the drilling operations at each boring location. In auger drilling operations, the groundwater position can often be determined by observing water flowing into or out of the boreholes. Furthermore, visual observation of the soil samples retrieved during the auger drilling exploration can often be used in evaluating the groundwater conditions.

ANALYSIS AND RECOMMENDATIONS

Waiting Period

Deep fills (greater than 15 feet) are required near Borings B-22, B-26 and B-27 (proposed parking area north of high school) and Borings B-40 and B-41 (future playfield area). Due to the depth of the fill, excessive total and differential settlements could occur in response to new structural loads, the weight of the new fill, and the on-going process of volume change occurring in the fill. Due to the addition of deep structural fill (greater than 15 feet), we suggest the deeper fill areas be monitored with settlement monuments/pins placed as soon as possible after fill placement is completed. We recommend that at least 8 to 10 settlement pins be installed at select locations in the deepest fill portions of these areas. A Settlement Pin Detail (Figure 4) is provided in the Appendix.

The settlement pins should be placed in areas away from the construction traffic and clearly marked with stakes/flagging and barricades so that they are not disturbed. At a minimum, readings should be surveyed to the nearest 0.01 foot twice per week. Building, pavement, and utility construction in the deep fill areas should begin only after settlement has reached negligible levels as interpreted by an ECS geotechnical engineer.

For planning purposes, we suggest that a period of 30 to 60 days be allowed for the settlement-monitoring period. We note that this time is estimated, and more or less time may be needed depending on the actual settlement behavior. Since many factors can influence the accuracy of the settlement data, we recommend considering the following when obtaining the settlement pin survey data:

- Place the benchmark in an area where no previous filling operations have taken place to help assure the benchmark does not move.
- Protect the monuments from damage/disturbance due to construction activity. If possible, place manhole risers around/over the settlement pin locations to help reduce the chance of disturbance.

- A license surveyor using the same equipment and personnel should obtain the readings during each visit.
- Obtain the readings during the same time of day to help reduce thermal differentials

In an effort to reduce the wait period, you may elect to increase the compaction requirement from 95% to 98% of the Standard Proctor maximum dry density value as indicated in the Fill Placement section of this report.

Foundation Design

After the site has been prepared as described in the "Subgrade Preparation" section of this report, and the subsurface conditions are confirmed to be similar to those found in the borings (no significant inclusions of unsuitable material), shallow spread foundations on the natural soils or new structural fill soils may be designed for a net allowable soil bearing pressure of 3,000 psf.

To minimize difficulties during the foundation installation phase, it is critical that ECS be retained to observe the foundation bearing surfaces (confirm the recommended bearing pressures and lack of unsuitable material during construction). Foundation testing should be performed prior to the installation of steel reinforcement and the placement of concrete.

Any unsuitable materials will have to be over-excavated if found during construction. Any over-excavation should extend laterally down and away from the actual footing dimensions at a 1H:1V slope so that the suitable structural backfill is within the footing's zone-of-influence. Close quality assurance observation by ECS is required for this alternative.

To reduce the risk of foundation bearing failure and excessive settlement due to local shear or "punching" action, we recommend that continuous footings have a minimum width of 1.5 feet and that isolated column footings have a minimum lateral dimension of 3 feet. In addition, footings should be placed at a depth to provide adequate bearing capacity. For this site, we recommend footing bottoms be placed at a minimum depth of 1.5 feet below finished grade.

Foundation Settlement

Settlement of individual footings, designed in accordance with recommendations presented in this report, is expected to be within tolerable limits for new construction. For footings placed on engineered fill or residual soils constructed in accordance with the requirements outlined in this report, maximum total settlement is expected to be less than 1 inch. Maximum differential settlement between adjacent columns or load bearing walls is expected to be half the total settlement.

The above settlement values are based on our engineering experience with similar soil conditions and the anticipated structural loading, and are to guide the structural engineer with his design.

Design Implications of Shallow PWR and Auger Refusal Material

PWR and auger refusal materials were encountered above proposed grades in the proposed High and Middle School building footprints. Guidelines for difficult excavations are included in the next section of this report. We do not recommend supporting foundations on dissimilar materials like rock and soil. To that end, we recommend grades be established so a minimum “cushion” of 12 inches of soil or crushed stone is present beneath slabs on grade and footing bottoms. Some blasting may be needed to ensure this “cushion” is present.

Ground Floor Slab Design

Whenever practical we recommend that the floor slab be isolated from the foundation footings so differential settlement of the structure will not induce shear stresses on the floor slab. Also, to minimize the crack width of any shrinkage cracks that may develop near the surface of the slab, we recommend welded wire mesh reinforcement or fibermesh be included in the design of the floor slab. Alternatively, cracking and crack widths can be minimized by using a slightly thicker slab, tighter joint spacing, early saw cutting and/or other detailing to minimize restraints.

We also recommend the slabs-on-grade be underlain by a minimum of 6 inches of granular material such as GAB or crusher run having a maximum aggregate size of 1.5 inches and no more than 10 percent of fines. This granular layer will facilitate the fine grading of the subgrade and help minimize the rise of moisture vapor through the floor slab. Prior to placing the granular material, the floor subgrade soil should be properly compacted, proofrolled, and free of standing water, mud, and frozen soil.

Before the placement of concrete, a vapor barrier may be placed on top of the granular material to provide additional moisture protection. However, special attention should be given to the surface curing of the slab in order to minimize uneven drying of the slab and associated cracking. A modulus of subgrade reaction (K) of 130 pci may be used for slabs assuming the section meets the above requirements and the compaction requirements provided in the sections below are met.

The above should be considered general guidance to assist the Owner and design team. Project specific designs, plan details or other input from the Structural Engineer of Record should control.

Seismic Site Class

The IBC 2012 Seismic Site Class was determined from Table 20.3-1 of ASCE 7. The seismic site classification was based on the calculated average shear wave velocities of the overburden to a depth of 100 feet below proposed grade. Based on the data and the proposed site development plans, it is our opinion that the site should be classified as a Seismic Site Class “C”. Based on the site specific information obtained, it is our opinion that the potential for liquefaction of the native soils at the site due to earthquake activity is relatively low.

As an additional service ECS can perform a Probabilistic Seismic Hazard Analysis (PSHA) to determine the effective peak acceleration and velocity related acceleration for your site. From our experience, this very specific information from our assessment can many times reduce code imposed default requirements and associated costs for seismic detailing. If this potential cost saving option is desirable, please contact us.

Below Grade Walls

The following paragraphs offer comments on retaining walls constructed on or retaining soil materials. Compound slopes or walls designed to bear on lower rock slopes or cut faces will require an evaluation of global stability. Wall stability, including global stability analysis, is the responsibility of the Wall Designer.

Cast In-Place Walls: Below grade walls or retaining walls should be designed to withstand the lateral earth pressures exerted upon them. We recommend that the “At Rest” soil condition be used in the designs if the top of the walls are restrained and not allowed to move. Retaining walls that are free to rotate at the top should be designed for an active earth pressure coefficient using a triangular load distribution.

The increased lateral pressures generated by surcharge loads (from building foundations or vehicles) should be considered in the design. Compacted moist unit weight for soil backfill of 120 pcf is considered compatible with on site or similar off site borrow soils. Please note a sloping backfill behind a wall greatly increases the lateral load on the wall. The appropriate design approach must be used if the backfill of the wall is sloping.

Soil Design Parameters: Advanced soil laboratory testing was not performed for this project. However, based on local experience and the site specific borings, the following soil parameters have been estimated for sandy or silty soils (SM, ML) for use in the design of footings and/or below grade walls:

- Coefficient of Earth Pressure “At Rest” (K_0) = 0.53
- Coefficient of Active Earth Pressure (K_a) = 0.36
- Coefficient of Passive Earth Pressure (K_p) = 2.77
- Moist Unit Weight of Soil = 120 pcf
- Angle of Internal Friction (ϕ) = 28 degrees
- Sliding Resistance Friction Factor (concrete on soil), $\tan \delta = 0.36$

Wall Drainage: Drainage behind below grade walls is considered essential to relieve hydrostatic pressures. Drainage can be established by providing a perimeter drainage system (foundation drain) located just above the below grade wall footings which discharges by gravity flow to a suitable outfall. This system should consist of perforated pipe or other geosynthetic drainage layer. Drain lines should be surrounded by a minimum 6 inches of free-draining, granular filter material (such as #57 stone) having a gradation compatible with the size of the

openings utilized in the perforated pipe and the surrounding soils to be drained, or be gravel wrapped in filter fabric. Above the foundation drain and tied into it, a wall drainage system (such as a stone "chimney" drain, geotextile drainage mat, etc.) will be needed if the wall is not designed to withstand hydrostatic forces.

Where retained soils are not covered by concrete or pavement and are exposed to weather, the top 18 inches of backfill should consist of less permeable silt or clay. This less permeable soil will help to minimize water infiltration behind the wall.

Wall Foundation or Base Bearing Pressure: Retaining wall footings supported on residual soil or documented structural fill may be designed for an allowable bearing capacity of 3,000 psf. Settlement of retaining wall footings will be dependent on the type of wall, depth of fill under the wall, and the height of the retained fill. Where design wall base or foundation pressures exceed 3,000 psf, ECS should be notified by the Wall Designer. Ground improvement (i.e. undercut with gravel fill or aggregate piers) may be required below the wall base or foundation to increase the bearing capacity of the supporting soils and to reduce wall settlements.

MSE Walls: We note that the above recommended cast in-place retaining wall design parameters may not be appropriate for mechanically stabilized earth (MSE) walls. The wall designer should independently estimate/determine the soil parameters incorporated in their design.

Wet Subgrade Preparation

Construction of the new parking area will extend over the existing pond near Boring B-28 as shown on Figure 3 in the Appendix. As such, wet subgrade conditions should be anticipated, and stabilization of the subgrade soils may be required to properly support the proposed pavements. Conceptually, this involves removing the surface vegetation, topsoil, and soft soils to a firm subgrade. Standing water should be removed using pumps and ditches. Once the subgrade is de-watered and stripped, the bottom of the excavation should be stabilized with a filter fabric layer, covered with geogrid and #57 stone fill to provide a working platform to allow proper soil fill placement.

The geogrid should consist of Tensar TX 160 or equivalent. Suitable filter fabric should consist of non-woven fabric such as Contech C-60NW or equivalent. As necessary, approximately 12 to 18 inches of #57 stone will be needed on top of the geogrid/filter fabric layer to provide a firm working surface and minimize pumping in the excavation. If used, the stone should be spread across the geogrid and densified with lightweight tracked equipment. Care should be taken to avoid contact of the tracked equipment with the geogrid. An additional layer of geotextile filter fabric should be placed over the stone prior to filling with soil fill. The excavation can then be backfilled with engineered fill placed in maximum 8-inch thick lifts.

Slopes

Our exploration did not include an analysis of slope stability for any temporary or permanent condition. However, within construction areas, we recommend temporary cut slopes without seepage be constructed no steeper than 1.5H:1V.

Permanent fill or cut slopes in the existing site soils without seepage should be designed no steeper than 2H:1V for slopes heights of 20 feet or less. Slopes exceeding 20 feet in height or subject to seepage should be evaluated in more detail. In building and pavement areas, minimum top of slope setbacks of 10 feet and 5 feet are recommended, respectively.

During construction, slopes should be regularly evaluated for signs of movement, seepage, or an unsafe condition. Soil slopes should be covered for protection from rain, and surface runoff condition. Stormwater runoff should be diverted away from the slopes. For erosion protection, a protective cover of grass or other vegetation should be established on permanent soil slopes as soon as possible.

Pavement Design

Based on information provided, a typical minimum pavement section is shown below. We understand the following:

1. California Bearing Ratio (CBR) tests were not performed for the proposed subgrade soils at these sites. Our pavement design analyses are based on local experience and assumed CBR values.
2. Our pavement design analysis is based on assumed traffic information.
3. We assume that the top 12 inches of the proposed roadway subgrade will be firm and unyielding and be compacted to at least 98 percent of maximum dry density in accordance with ASTM-D-698, Standard Proctor Method, as needed.
4. We assume that criteria from our sections entitled "Subgrade Preparation" and "Fill Placement" will be followed.
5. We assume a minimum separation of 24 inches between the base course material and the groundwater table.

Minimum Flexible Pavement Section

Material Type	Light Duty Parking Stalls and Driveways	Heavy Duty Truck Driveways
AC Surface Course HMA Superpave – 9.5mm or 12.5 mm	2.0 inches	1.5 inch
AC Base Course HMA Superpave – 19mm	-	2.0 inches
Graded Aggregate Base (GAB)	6.0 inches	8.0 inches

Aggregate material used as base course must comply with the gradation requirements established by the GDOT. Aggregate material should be compacted to at least 98 percent of the maximum dry density obtained in accordance with ASTM D-1557, Modified Proctor Method.

The flexible pavement specifications used in roadways and parking stalls may not be adequate for a trash compactor/dumpster pick-up area, truck dock, or heavily trafficked service related drop off and pickup lanes due to the heavy or repetitive loads and tire scuffing anticipated. We recommend that a rigid concrete pavement section be provided for those areas.

The concrete section should be at least 6 inches thick and should consist of concrete having a minimum 28-day compressive strength of 4,500 pounds per square inch (psi). A minimum of 6 inches of compacted graded aggregate base should be placed beneath rigid concrete pavements. For dumpster storage areas, the concrete slab area should be large enough to support both the dumpster and the truck used to unload the dumpster.

Subgrade soil materials defined as those complying with ASTM D2487 soil classification group lean clay (CL), lean silt (ML), or clayey sand (SC) may be require undercutting due to the natural moisture content, consistency, or fines content of the material. This will be determined at the time of construction.

An important consideration with the design and construction of pavements is surface and subsurface drainage. Where standing water develops, either on the pavement surface or within the base course layer, softening of the subgrade and other problems related to the deterioration of the pavement can be expected. Furthermore, good drainage should minimize the risk of the subgrade materials becoming saturated over a long period of time.

CONSTRUCTION RECOMMENDATIONS

Subgrade Preparation

The subgrade preparation should consist of stripping the surface materials, (i.e. vegetation, rootmat, topsoil, asphalt, demolition debris, and any other soft or unsuitable material) from the building area and any proposed pavement areas. We recommend the earthwork clearing be extended to a minimum of 10 feet beyond the building and pavement limits wherever practical. Stripping limits should be extended laterally an additional 1 foot for each foot of fill required at any location.

After stripping to the desired grade, and prior to fill placement, it is critical the stripped surface be evaluated by an engineer from ECS. Proofrolling using a loaded dump truck, having an axle weight of at least 20 tons should be performed at that time to aid in identifying localized soft or unsuitable material which must be removed.

As needed, supplemental backhoe test pits or hand augers with Dynamic Cone Penetrometer (DCP) testing can be used to delineate any unsuitable material found during proofrolling. **Where unacceptable materials are encountered, they must be evaluated by ECS and may require remedial measures. Remedial options include: undercutting and replacement with soil/aggregate fill material; stabilization with geogrid and aggregate fill; and/or scarification, aeration and recompaction.**

Depending upon the soil and weather conditions prior to construction, subgrades in cuts or excavations may have areas of near surface wet soils. These areas may require remedial measures such as those mentioned above.

Removal of Structures and Utilities

At the time of our field work, an abandoned residence was located just north of the proposed high school building within the proposed parking area. An asphalt driveway leads from Highway 332 to the residence. The re-development of the project site will require the demolition and removal of the existing residence, pavements, and utilities. This should include the complete removal of all floor slabs, foundations, walls, under slab utilities, sidewalks, etc.

Existing utilities that will no longer be in service should be completely removed from the new development area. Active utilities should be re-routed around the building, wherever possible, and the abandoned section of utility completely removed from the proposed building area. In the event that active utilities are to remain within the building footprint, these utilities should be reviewed by the project structural engineer for conflicts and clearly identified on the construction plans. Special foundation construction procedures may be required to support the new building foundations over utilities.

Excavations resulting from the removal of the above items and associated loose fill should be backfilled with new structural fill as discussed in the following section of this report. This should be observed on a full-time basis by a representative of ECS to document that the unsuitable materials have been removed and that the subgrade is suitable for support of the proposed construction and/or fills.

Any below ground construction/utilities in the vicinity of the proposed building should be removed prior to the initiation of new construction. We suggest that available information regarding the existing utilities at the site be reviewed prior to construction.

Fill Placement

The preparation of fill subgrades as well as proposed building subgrades should be observed on a full-time basis by a representative of ECS to document that any unsuitable materials have been removed and that the subgrade is suitable for support of the proposed construction and/or fills.

Fill materials should consist of an approved material free of organic matter and debris, with rocks less than 6 inches and a Liquid Limit less than 40 and a Plasticity Index less than 20. Unacceptable fill materials include topsoil, organic materials, lightweight material with a maximum dry density less than 95 pcf, and highly plastic silts and clays. Unsuitable materials removed during grading operations should be either stockpiled for later use in landscaped areas, or placed in approved disposal areas either on site or off site.

The expanded footprint of the proposed building and/or pavement areas should be well defined including the limits of the fill zones at the time of fill placement. Grade control should be maintained throughout the fill placement operations. Fill operations should be observed on a full-time basis by a qualified soil technician from ECS to determine that minimum compaction requirements are being met. A minimum of one compaction test per 2,500 square foot area should be tested in every one foot compacted lift placed. In trenches, compaction testing should be performed on each lift installed at an interval of every 50 linear feet. The elevation and location of the tests should be clearly identified and recorded at the time of fill placement.

Fill materials should be placed in lifts not exceeding one (1) foot in loose thickness and moisture conditioned to within +/- 3 percent of the optimum moisture content to facilitate proper compaction. Controlled fill soils should be compacted to a minimum of 95 percent of the maximum dry density obtained in accordance with ASTM Specification D-698, Standard Proctor Method.

The upper one foot of soil supporting structures, pavements, slabs-on-grade, sidewalks, should be "firm and unyielding" and any new fill compacted to a minimum of 98 percent of the maximum dry density obtained in accordance with ASTM Specification D-698, Standard Proctor Method.

Suitability of On-Site Soils for Reuse as Fill

Soil types encountered in the borings/test pits performed for this project consisted of SM and ML. In general, the existing fill materials and residual soils appear generally suitable for re-use as structural fill if they are free from deleterious materials, such as organics and debris, and within the moisture range for proper compaction. The on-site soils should be tested by ECS prior to use as structural fill.

Laboratory testing on the selected soils indicates that the natural moisture content of the soils ranged from 13.5 to 38.2 percent. These soil moistures are at or above optimum for proper compaction and may require moisture adjustment at the time of re-use. The site soils contain moderate to moderately high percentages of fine-grained soils, ranging from 19.2 to 53.4 percent in the samples tested. These types of soils are moisture sensitive and may be difficult to use as structural fill if the material becomes too wet. Depending on the rainfall conditions at the time of construction, the fine grained soils at the site could become unworkable.

Temporary Excavation Support

All temporary excavations must be configured to conform to OSHA 29 CFR Part 1926, Occupational Safety and Health Standards – Excavations. Localized temporary excavations that cannot be safely configured in strict conformance with the unsupported slope or benching requirements of OSHA will require temporary earth retention systems (TERS). Depending upon the configuration of the excavation, systems such as trench boxes, shoring, sheeting, soil nails, or other suitable systems may be feasible. Regardless, the TERS shall consider site specific geotechnical conditions, the excavation configuration, and surrounding infrastructure. All TERS systems should be designed by a qualified professional engineer and installed by a specialty contractor having sufficient experience with the chosen system. Site safety shall be the sole responsibility of the Contractor and his Subcontractors.

Difficult Excavation

Depending on the finish grade, difficult excavation techniques may be needed in areas of deep cut or utility excavations. Some removal of PWR and possibly auger refusal material should be anticipated within the proposed High and Middle School building footprints, as well as isolated portions of the proposed parking areas and play fields. Isolated boulders in the soil matrix or erratic rock conditions can sometimes remain undetected during geotechnical exploration. Refer to the Summary of Subsurface Conditions and Boring Logs in the Appendix for further information.

In mass excavation for general site work, dense soils (soils with standard penetration resistances of 30 to 50 blows per foot) can usually be removed by ripping with a single-tooth ripper attached to a large crawler tractor or by breaking it out with a large front-end loader. In confined excavations such as foundations, utility trenches, elevator pits, etc., removal of PWR may require use of large backhoes, hydraulic hammers, or light blasting.

Rock materials will normally require blasting for removal in all types of excavations. Any blasting in foundation excavations must be done carefully to minimize damage to the bearing materials and nearby buildings or roadways/utilities. In addition, vibration monitoring and pre-blast condition surveys are prudent for any buildings within 100 to 200 feet of blasting activity. The gradation of the material removed by ripping or blasting will be erratic. As such, its usability as fill may be limited without processing (i.e. crushing) to provide a suitable gradation for proper placement and compaction.

We recommend the following rock excavation definitions:

General Excavation

Rip Rock: Any material that cannot be removed by scrapers, loaders, pans, dozers, or graders; and requires the use of a single-tooth ripper mounted on a crawler tractor having a minimum draw bar pull rated at not less than 56,000 pounds.

Blast Rock: Any material which cannot be excavated with a single-tooth ripper mounted on a crawler tractor having a minimum draw bar pull rated at not less than 56,000 pounds (Caterpillar D-8K or equivalent) or by a Caterpillar 977 front-end loader or equivalent; and occupying an original volume of at least one cubic yard.

Trench Excavation

Blast Rock: Any material which cannot be excavated with a backhoe having a bucket curling force rated at not less than 25,700 pounds (Caterpillar Model 225 or equivalent), and occupying an original volume of at least one-half cubic yard.

Blasting should only be conducted where ripping cannot excavate materials. We recommend that excavatable soils be removed first with conventional grading equipment (scrapers and loaders). We do not recommend leaving soil overburden in place during blasting because determination of blast rock quantities becomes very difficult and costs are generally greater. In addition, residual soil overburden will increase the confining pressure of the rock and reduce the effectiveness of blast charges. Loose fill or blasting mats can be placed over the blast area to control fly-rock. Removal of rock by blasting is very expensive. Hence, control of quantities is important. If requested, ECS can provide assistance estimating or qualifying the blast rock quantities.

As noted in the Geology section of this report the weathering process in the Piedmont can be erratic and significant variations of the depths of the more dense materials can occur in relatively short distances. In some cases, isolated boulders or thin rock seams may be present in the soil matrix and remain undetected by the borings performed.

Additional Considerations

Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation concrete should be placed the same day that excavations are dug. If surface water intrusion or exposure softens the bearing soils, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, we recommend that the foundations be covered or otherwise protected.

Positive site drainage should be maintained during earthwork operations, which should help maintain the integrity of the soil. Placement of fill on the near surface soils, which have become saturated, could be very difficult. When wet, these soils will degrade quickly with disturbance from contractor operations and will be extremely difficult to stabilize for fill placement.

The surface of the site should be kept properly graded in order to enhance drainage of the surface water away from the proposed structure areas during the construction phase. We recommend that an attempt be made to enhance the natural drainage without interrupting its pattern.

The surficial soils contain fines, which are considered moderately erodible. Erosion and sedimentation shall be controlled in accordance with Best Management Practices and current County and State NPDES requirements. At the appropriate time, we would be pleased to provide a proposal for conducting construction materials testing and NPDES services.

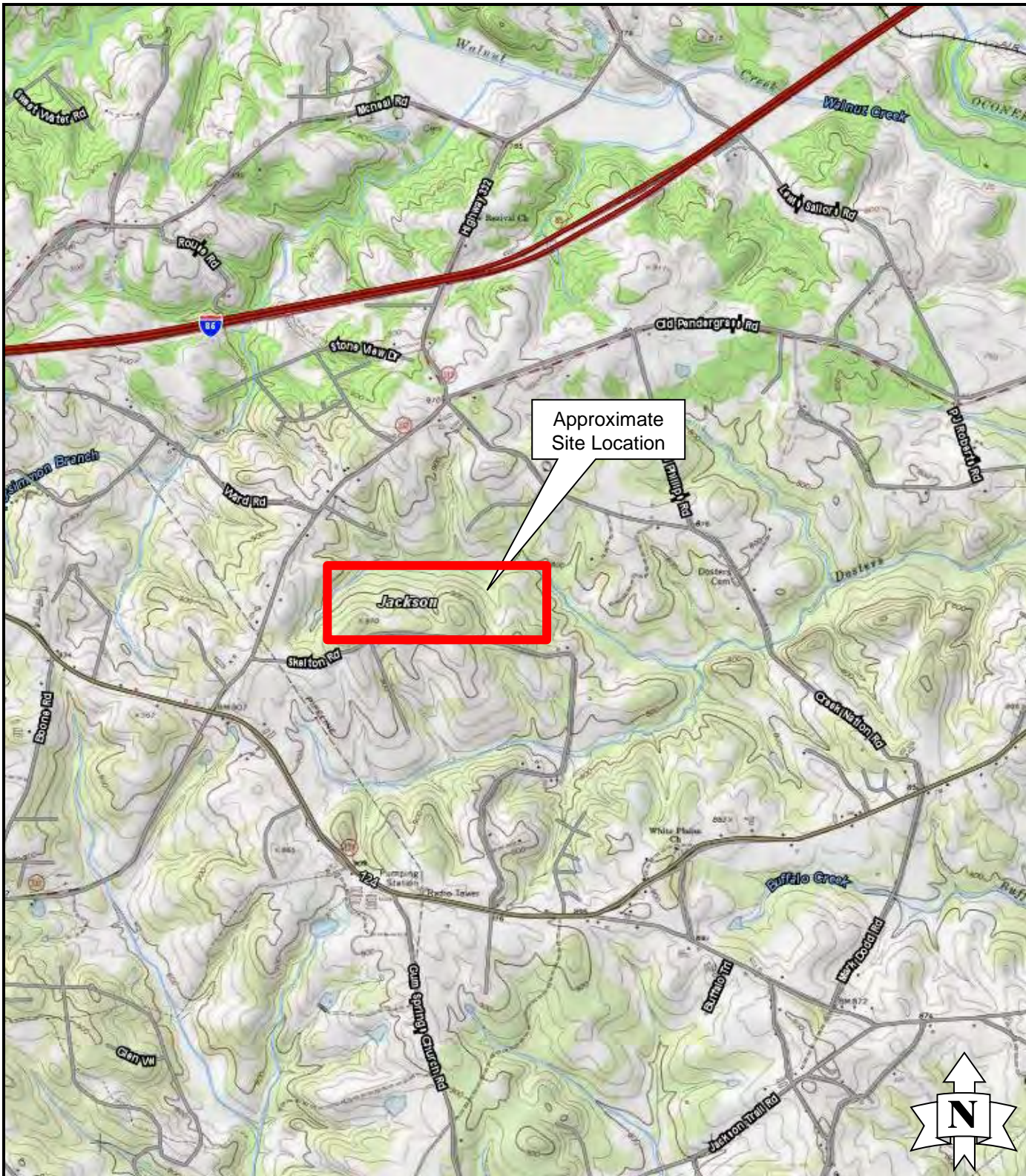
CLOSING

This report has been prepared in accordance with generally accepted geotechnical engineering practice. No warranty is expressed or implied. The evaluations and recommendations presented in this report are based on the available project information, as well as on the results of the exploration. ECS should be given the opportunity to review the final drawings and site plans for this project to determine if changes to the recommendations outlined in this report are needed.

We recommend that the construction activities be monitored by ECS to provide the necessary overview and to check the suitability of the subgrade soils for supporting the footings. If ECS is not retained for this extension of the field exploration, we can not be responsible for the performance of the foundations or site improvements. We would be pleased to provide an estimated cost for these services at the appropriate time.

This report is provided for the exclusive use of Jackson County Schools and their project specific design team. This report is not intended to be used or relied upon in connection with other projects or by other third parties. ECS disclaims liability for any such third party use or reliance without express written permission.

Appendix I



SITE LOCATION DIAGRAM

REPORT OF GEOTECHNICAL EXPLORATION

**West Jackson High-Middle School
Jefferson, Georgia**

Reference: USGS Quadrangle

Project No.:
10:9918

Not To Scale

Date: 7/2018

Figure No.:

1





LEGEND

Approximate Boring Location

B-# Boring Designation

Approximate Shear Wave Traverse Location
T-# Shear Wave Traverse Designation

Approximate Cutline Location



PROJECT: West Jackson High - Middle School
Jackson, GA

PREPARED FOR: Jackson County Schools

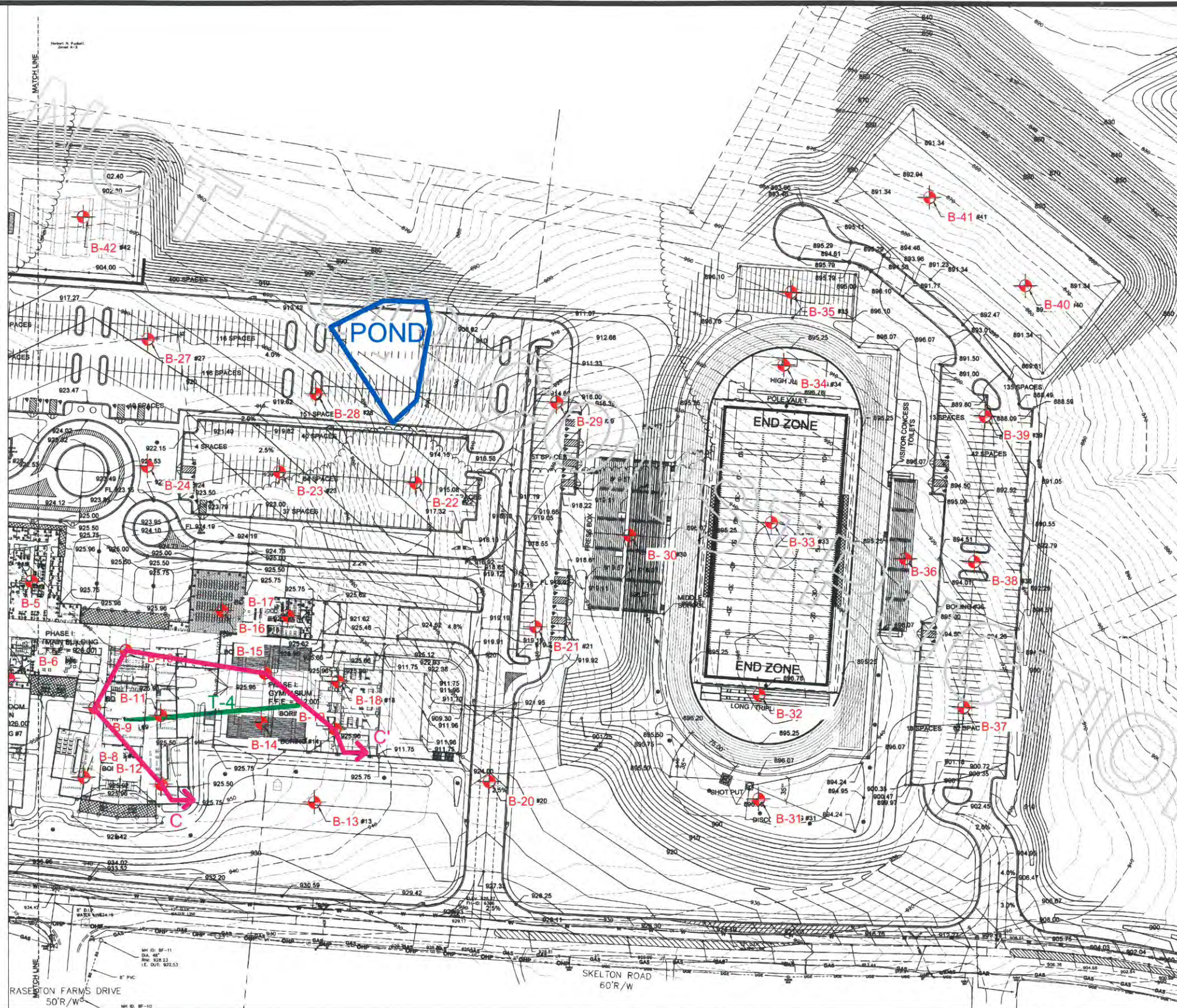
FIGURE NAME: BORING AND TRAVERSE LOCATION PLAN

REFERENCE: Staking Plan - C102
Southern A&E LLC
5/22/2018

REVISIONS	

JOB NO.	10:9918
SCALE	1"=150'
DRAWN	CFS 8/2018
APPR.	KJH 8/2018

Figure No.: **2**



PROJECT: West Jackson High - Middle School
Jackson, GA

PREPARED FOR: Jackson County Schools

FIGURE NAME: BORING AND TRAVERSE LOCATION PLAN

REFERENCE: Staking Plan - C103
Southern A&E LLC
5/22/2018

REVISIONS	

JOB NO. 10:9918
SCALE 1"=150'
DRAWN CFS 8/2018
APPR. KJH 8/2018

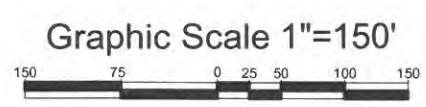
Figure No.:
3

LEGEND

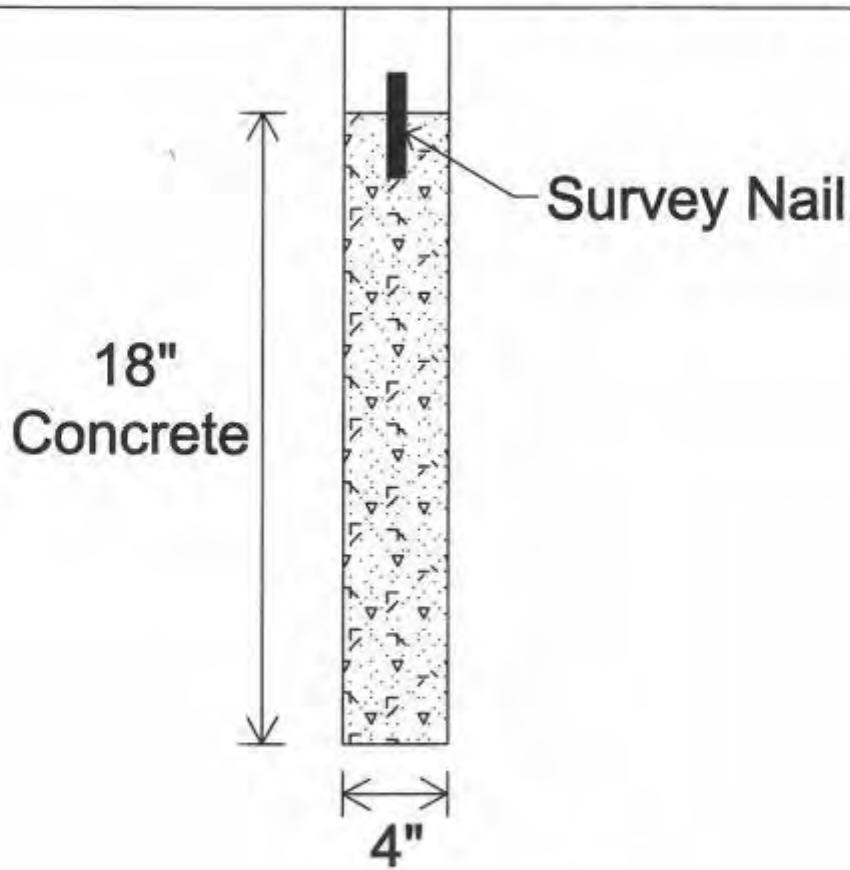
Approximate Boring Location
B-# Boring Designation

Approximate Shear Wave Traverse Location
T-# Shear Wave Traverse Designation

Approximate Cutline Location



Finished Subgrade



Settlement Pin Detail

REPORT OF GEOTECHNICAL EXPLORATION

Project No.:
10:9918

West Jackson High-Middle School
Jefferson, Georgia

Not to Scale

Date: 8/18

Figure
No.:

4



Appendix II



REFERENCE NOTES FOR BORING LOGS

MATERIAL ^{1,2}	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	FILL³ MAN-PLACED SOILS
	GW WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GP POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GM SILTY GRAVEL gravel-sand-silt mixtures
	GC CLAYEY GRAVEL gravel-sand-clay mixtures
	SW WELL-GRADED SAND gravelly sand, little or no fines
	SP POORLY-GRADED SAND gravelly sand, little or no fines
	SM SILTY SAND sand-silt mixtures
	SC CLAYEY SAND sand-clay mixtures
	ML SILT non-plastic to medium plasticity
	MH ELASTIC SILT high plasticity
	CL LEAN CLAY low to medium plasticity
	CH FAT CLAY high plasticity
	OL ORGANIC SILT or CLAY non-plastic to low plasticity
	OH ORGANIC SILT or CLAY high plasticity
	PT PEAT highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION	
DESIGNATION	PARTICLE SIZES
Boulders	12 inches (300 mm) or larger
Cobbles	3 inches to 12 inches (75 mm to 300 mm)
Gravel: Coarse	¾ inch to 3 inches (19 mm to 75 mm)
Gravel: Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand: Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
Sand: Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
Sand: Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")	<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, Q_p ⁴	SPT ⁵ (BPF)	CONSISTENCY ⁷ (COHESIVE)
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT ⁷	COARSE GRAINED (%) ⁸	FINE GRAINED (%) ⁸
Trace	≤5	≤5
Dual Symbol (ex: SW-SM)	10	10
With	15 - 20	15 - 25
Adjective (ex: "Silty")	≥25	≥30

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT ⁵	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS ⁶		
	WL	Water Level (WS)(WD) (WS) While Sampling (WD) While Drilling
	SHW	Seasonal High WT
	ACR	After Casing Removal
	SWT	Stabilized Water Table
	DCI	Dry Cave-In
	WCI	Wet Cave-In

¹Classifications and symbols per ASTM D 2488-09 (Visual-Manual Procedure) unless noted otherwise.

²To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

³Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

⁴Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

⁵Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf).

⁶The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

⁷Minor deviation from ASTM D 2488-09 Note 16.

⁸Percentages are estimated to the nearest 5% per ASTM D 2488-09.

Summary of Subsurface Conditions

**West Jackson High-Middle School
ECS Project No. 10:9918**

Boring	Proposed Structure Type	Approximate Existing Elevation (ft)	Proposed Final Grade (ft)	Approximate PWR Elevation (ft)	Approximate Auger Refusal Elevation (ft)	Approximate Groundwater Elevation (ft)
B-1	HS Building	945	926	NE	NE	NE
B-2	HS Building	947	926	NE	NE	NE
B-3	HS Building	951	926	NE	NE	NE
B-4	HS Building	948	926	NE	NE	NE
B-5	HS Building	942	926	NE	NE	NE
B-6	HS Building	952	926	NE	NE	NE
B-7	HS Building	949	926	NE	NE	NE
B-8	HS Building	947	926	NE	NE	NE
B-9	HS Building	946	926	919	NE	NE
B-10	HS Building	940	926	NE	NE	NE
B-11	HS Building	947	926	NE	NE	NE
B-12	HS Building	949	926	927	918	NE
B-13	HS Building	946	926	NE	NE	NE
B-14	HS Gym	948	912	NE	NE	NE
B-15	HS Gym	945	912	928 - 923*, 918	906	NE
B-16	HS Building	936	926	NE	NE	NE
B-17	HS Building	937	926	NE	NE	NE
B-18	HS Gym	940	912	908	906	NE
B-19	HS Gym	945	912	923 - 918*	NE	NE
B-20	Entrance	931	924	926 - 919*	NE	NE
B-21	Parking	920	919	NE	NE	NE
B-22	Parking	896	915	884	NE	NE
B-23	Parking	920	921	NE	NE	NE
B-24	Parking	916	923	NE	NE	NE
B-25	Parking	938	924	NE	NE	NE
B-26	Parking	920	918	NE	NE	NE
B-27	Parking	902	919	NE	NE	NE
B-28	Parking	902	917	NE	NE	NE
B-29	Parking	923	915	NE	NE	NE
B-30	Parking	940	918	908	904	NE

NE – Not Encountered
AR – Auger Refusal
*Lens of PWR

Summary of Subsurface Conditions

**West Jackson High-Middle School
ECS Project No. 10:9918**

Boring	Proposed Structure Type	Approximate Existing Elevation (ft)	Proposed Final Grade (ft)	Approximate PWR Elevation (ft)	Approximate Auger Refusal Elevation (ft)	Approximate Groundwater Elevation (ft)
B-31	Football Field	942	896	NE	NE	NE
B-32	Football Field	950	897	NE	NE	NE
B-33	Football Field	939	897	NE	NE	NE
B-34	Football Field	912	895	NE	NE	NE
B-35	Field	899	896	NE	NE	NE
B-36	Football Stands	926	895	NE	NE	NE
B-37	Parking	929	929	NE	NE	NE
B-38	Parking	918	918	910 - 906*	NE	NE
B-39	Parking	901	901	NE	NE	NE
B-40	Future Expansion	876	893	NE	NE	NE
B-41	Future Expansion	872	893	NE	NE	NE
B-42	Tennis Court	889	903	NE	NE	NE
B-43	Tennis Court	899	903	NE	NE	NE
B-44	Parking	906	904	NE	NE	NE
B-45	Baseball Field	909	903	NE	NE	NE
B-46	Baseball Field	892	905	NE	NE	NE
B-47	Baseball Field	902	904	NE	NE	NE
B-48	Band Field	944	927	NE	NE	NE
B-49	Band Field	947	927	NE	NE	NE
B-50	HS Building	951	926	NE	NE	NE
B-51	Parking	955	922	NE	917	NE
B-52	Parking	962	924	930	926	NE
B-53	Parking	958	924	NE	NE	NE
B-54	Parking	960	922	NE	NE	NE
B-55	Parking	950	924	923	918	NE
B-56	MS Building	960	928	955 - 952*, 918	913	NE
B-57	MS Building	965	928	933	929	NE
B-58	MS Building	963	928	931	927	NE
B-59	MS Building	961	928	NE	NE	NE
B-60	MS Building	964	928	NE	909	NE

NE – Not Encountered
AR – Auger Refusal
*Lens of PWR

Summary of Subsurface Conditions

West Jackson High-Middle School

ECS Project No. 10:9918

Boring	Proposed Structure Type	Approximate Existing Elevation (ft)	Proposed Final Grade (ft)	Approximate PWR Elevation (ft)	Approximate Auger Refusal Elevation (ft)	Approximate Groundwater Elevation (ft)
B-61	MS Building	962	928	932	920	NE
B-62	MS Building	955	928	NE	NE	NE
B-63	MS Building	946	928	NE	918	NE
B-64	Parking	930	924	NE	NE	NE
B-65	Parking	940	924	NE	NE	NE
B-66	Parking	942	924	NE	NE	NE

NE – Not Encountered

AR – Auger Refusal

*Lens of PWR

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL

GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT

ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND

RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY

PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
FILL
POSSIBLE FILL
PROBABLE FILL

SURFACE MATERIALS

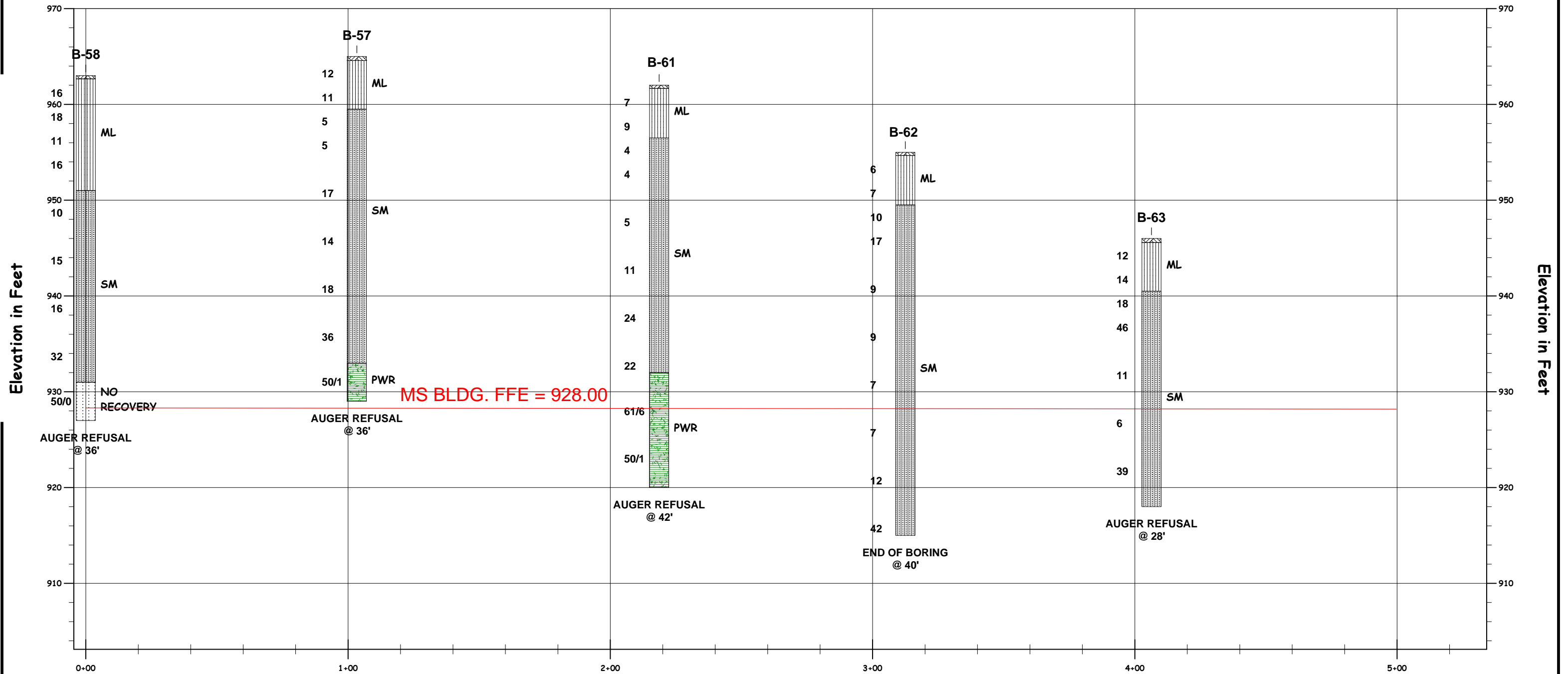
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

▽ WATER LEVEL - DURING DRILLING/SAMPLING
▽ WATER LEVEL - SEASONAL, HIGH WATER
▽ WATER LEVEL - AFTER CASING REMOVAL
▽ WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT% WATER CONTENT% % PASSING #200 SIEVE [BB%] LIQUID LIMIT%
X ●



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).



Cutline A-A' - Middle School Building

**West Jackson High-Middle School
Jackson County Schools
Jefferson, Jackson County, GA**

PROJECT NO : 9918 | DATE: 8/27/2018 | VERTICAL SCALE: 1"=10'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL

GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT

ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND

RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY

PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
FILL
POSSIBLE FILL
PROBABLE FILL

SURFACE MATERIALS

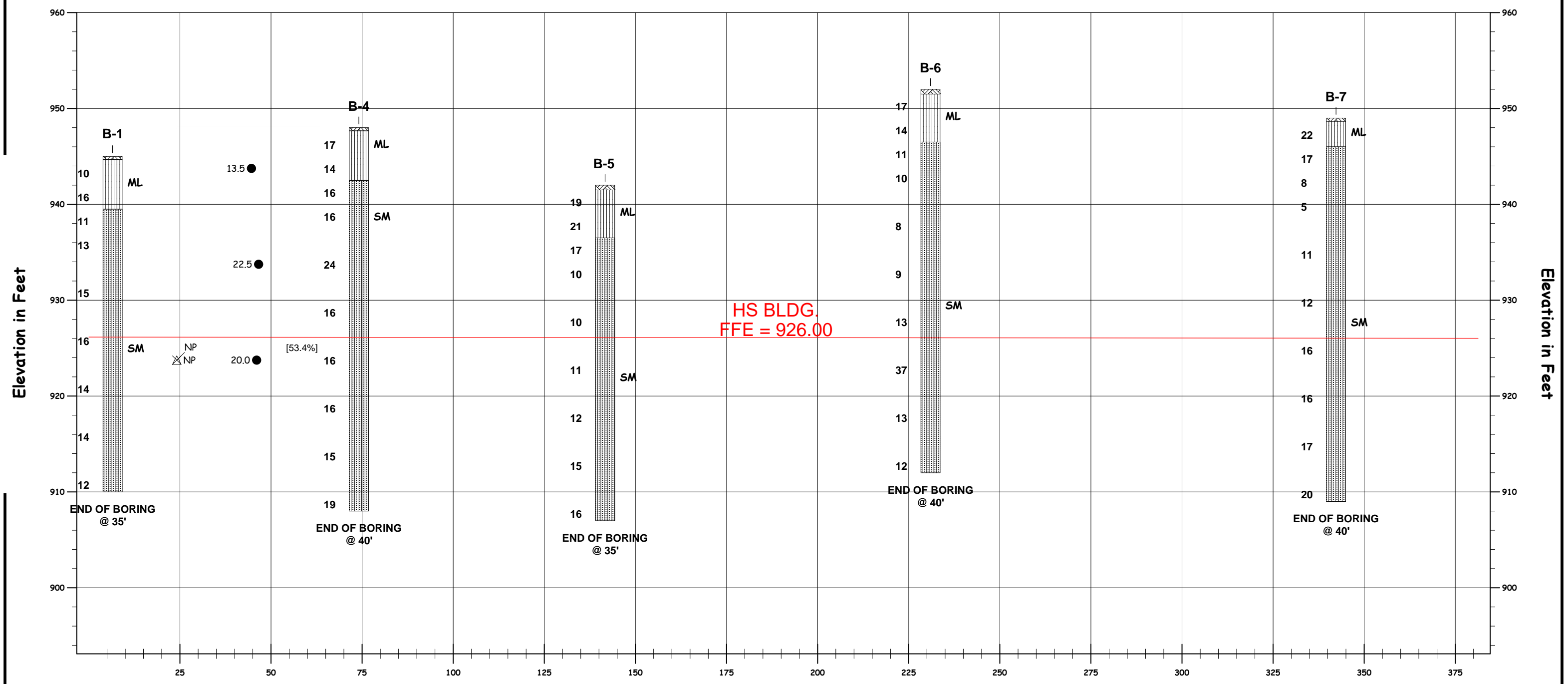
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT%
WATER CONTENT%
% PASSING #200 SIEVE [B8%]
LIQUID LIMIT%



NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).



Cutline B-B' - High School Building

**West Jackson High-Middle School
Jackson County Schools
Jefferson, Jackson County, GA**

PROJECT NO.: 9918 DATE: 8/27/2018 VERTICAL SCALE: 1"=10'

SOIL CLASSIFICATION LEGEND

GW - WELL GRADED GRAVEL
GM - SILTY GRAVEL
GP - POORLY GRADED GRAVEL

GC - CLAYEY GRAVEL
SW - WELL GRADED SAND
ML - LOW PLASTICITY SILT

ST - SHELBY TUBE
CL - LOW PLASTICITY CLAY
MH - HIGH PLASTICITY SILT
SM - SILTY SAND

RC - ROCK CORE
SP - POORLY GRADED SAND
SC - CLAYEY SAND
CH - HIGH PLASTICITY CLAY

PM - PRESSURE METER
OH - HIGH PLASTICITY ORGANIC SILTS AND CLAYS
OL - LOW PLASTICITY ORGANIC SILTS AND CLAY
PT - PEAT

NOTE: NUMBERS IMMEDIATELY TO THE LEFT OF THE BORING PROFILE ARE SPT-N VALUES.

WR - WEATHERED ROCK
PWR - PARTIALLY WEATHERED ROCK
FILL
POSSIBLE FILL
PROBABLE FILL

SURFACE MATERIALS

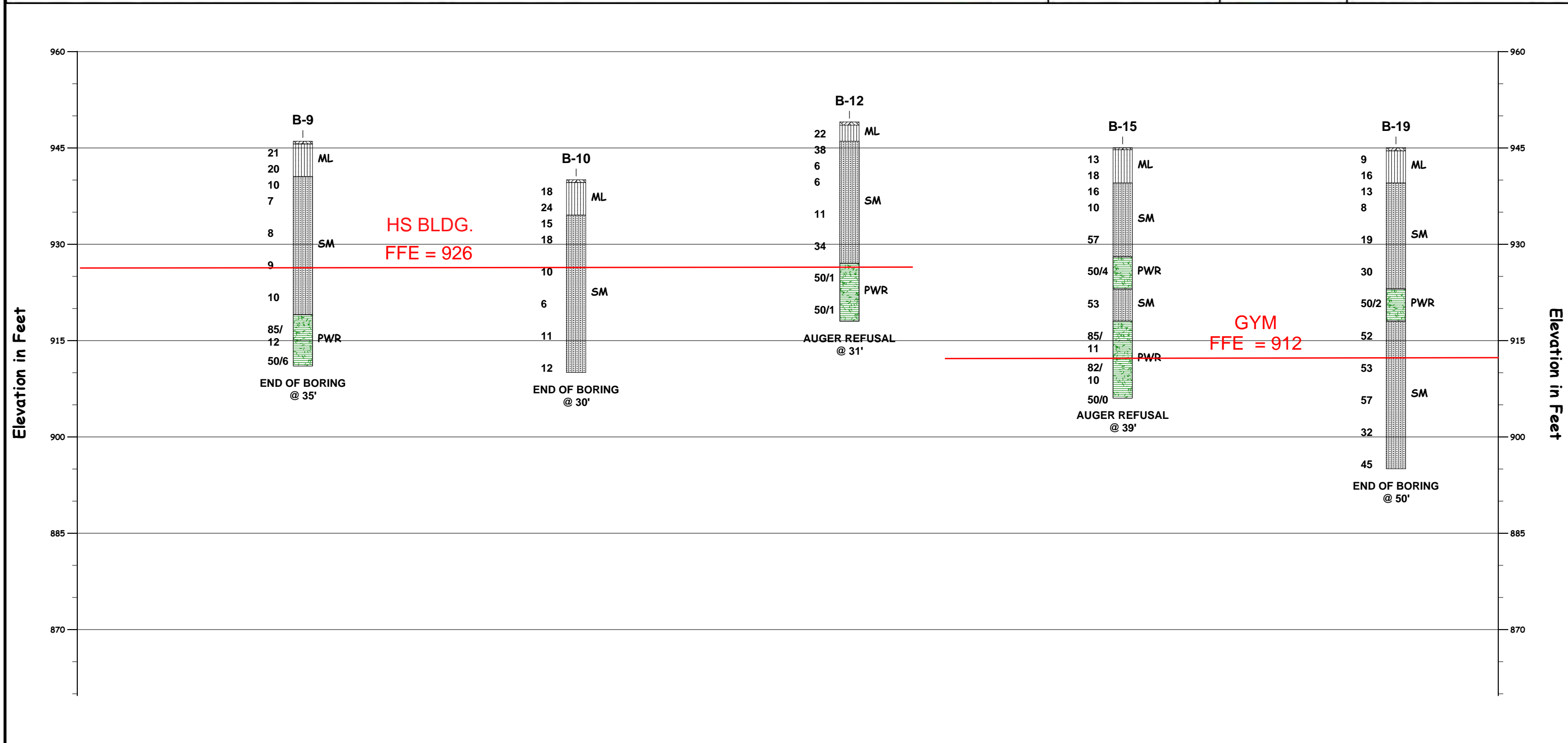
TOPSOIL
ASPHALT
GRAVEL
CONCRETE
VOID

ROCK TYPES

IGNEOUS
METAMORPHIC
SEDIMENTARY

SYMBOL LEGEND

WATER LEVEL - DURING DRILLING/SAMPLING
WATER LEVEL - SEASONAL, HIGH WATER
WATER LEVEL - AFTER CASING REMOVAL
WATER LEVEL - AFTER 24 HOURS
PLASTIC LIMIT%
WATER CONTENT%
% PASSING #200 SIEVE [88%]
LIQUID LIMIT%




NOTES:
1 SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
2 PENETRATION TEST RESISTANCE IN BLOWS PER FOOT (ASTM D1586).



Cutline C-C' High School Building and Gym



**West Jackson High-Middle School
Jackson County Schools
Jefferson, Jackson County, GA**

PROJECT NO.: 9918 | DATE: 8/27/2018 | VERTICAL SCALE: 1"=15'

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-1	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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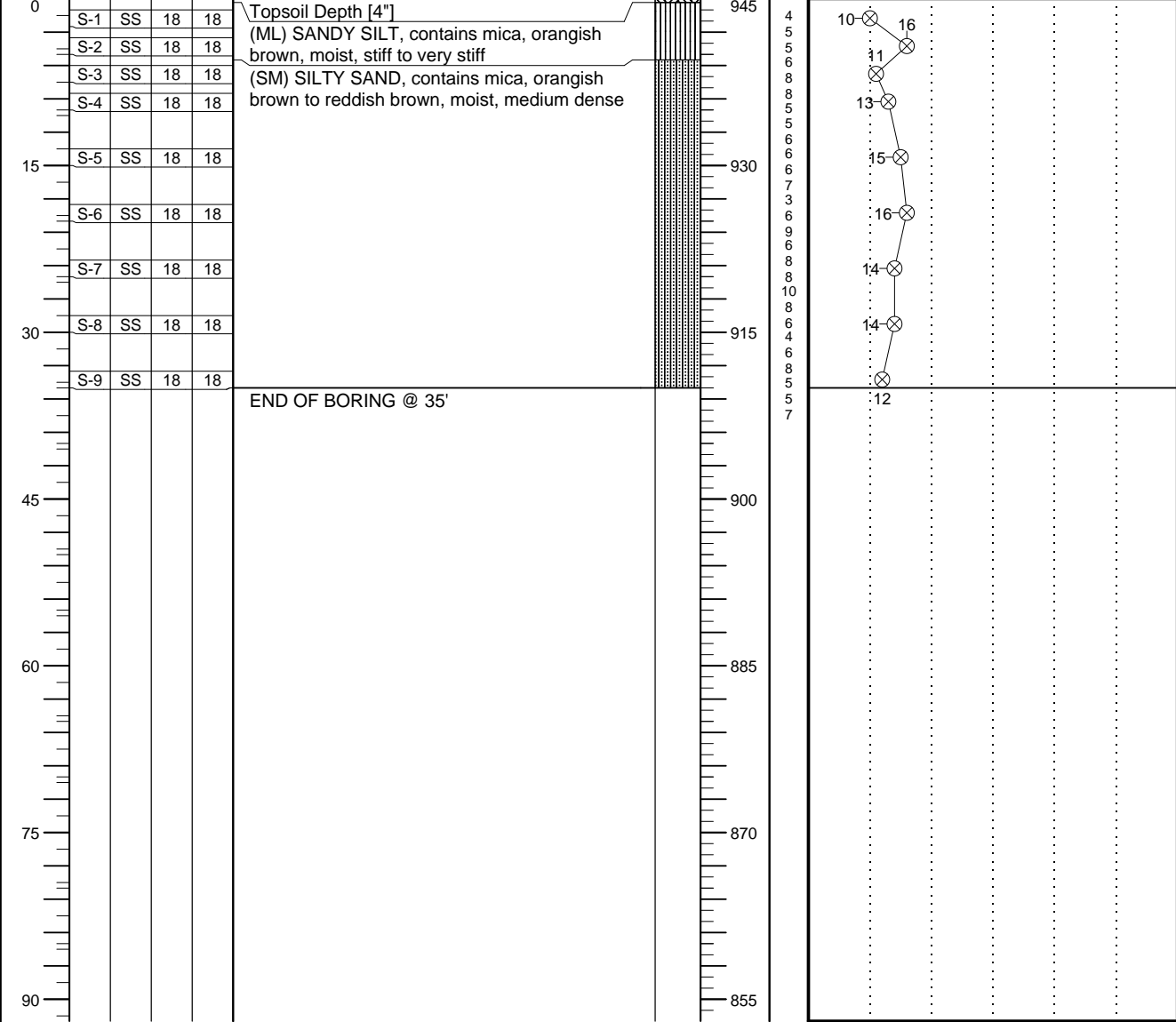
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 945			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

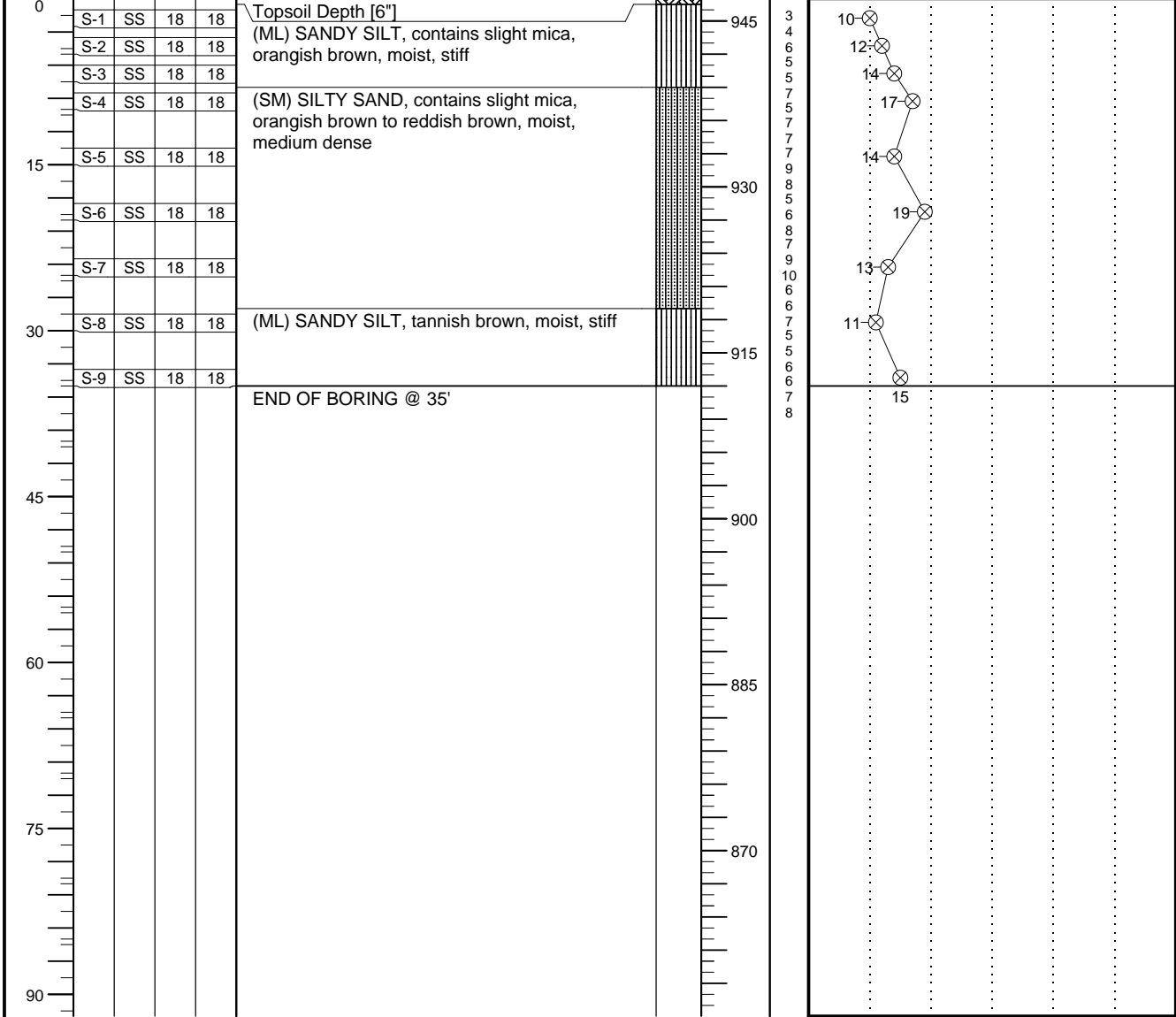
WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-2	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		



○ CALIBRATED PENETROMETER TONS/FT²


ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

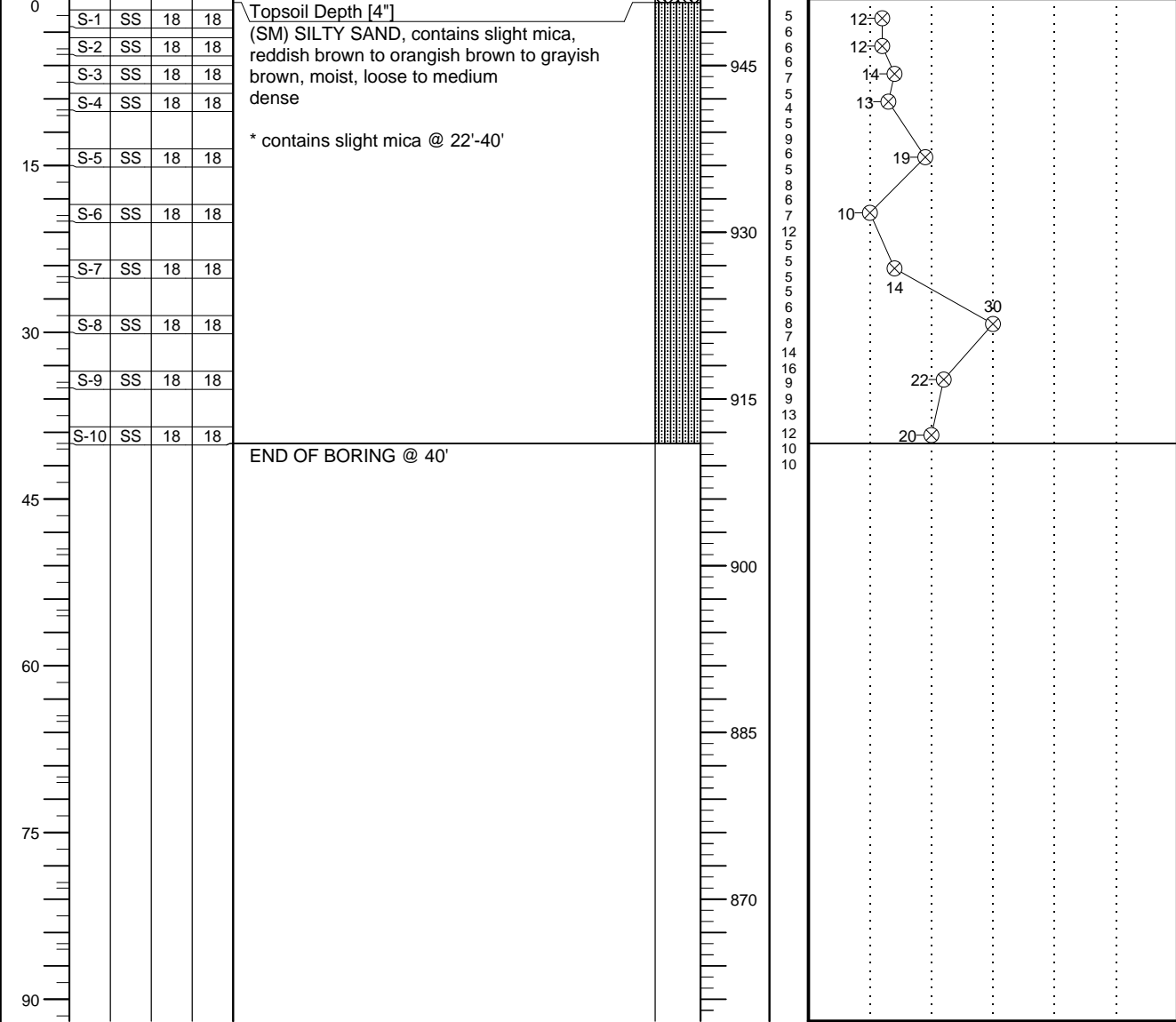
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-3	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School		ARCHITECT-ENGINEER		

SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL ENGLISH UNITS BOTTOM OF CASING LOSS OF CIRCULATION SURFACE ELEVATION 951	WATER LEVELS ELEVATION (FT)	BLOWS/6'
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CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

STANDARD PENETRATION BLOWS/FT

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL		RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-4	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION

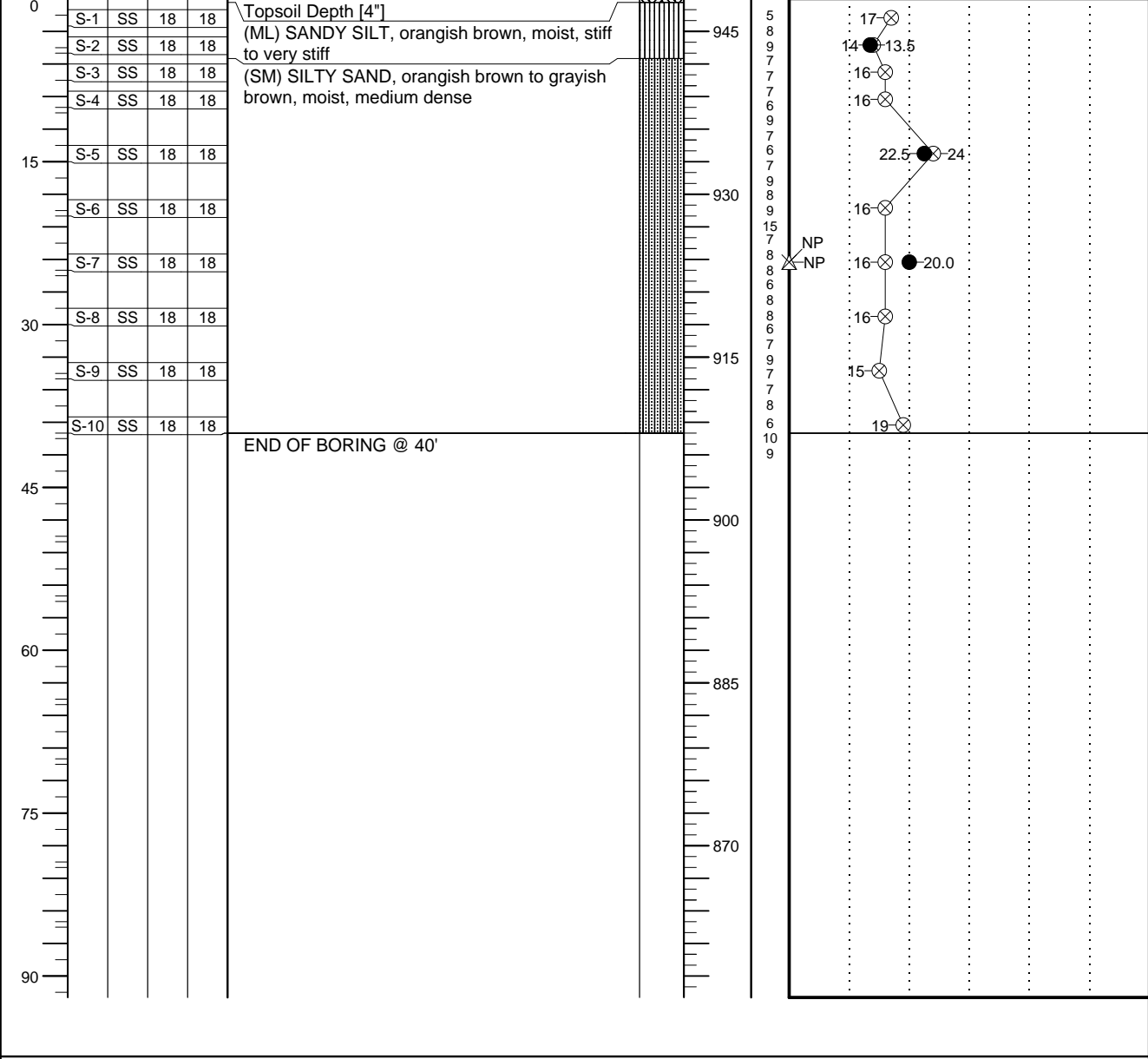
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	948		

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED	07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-5	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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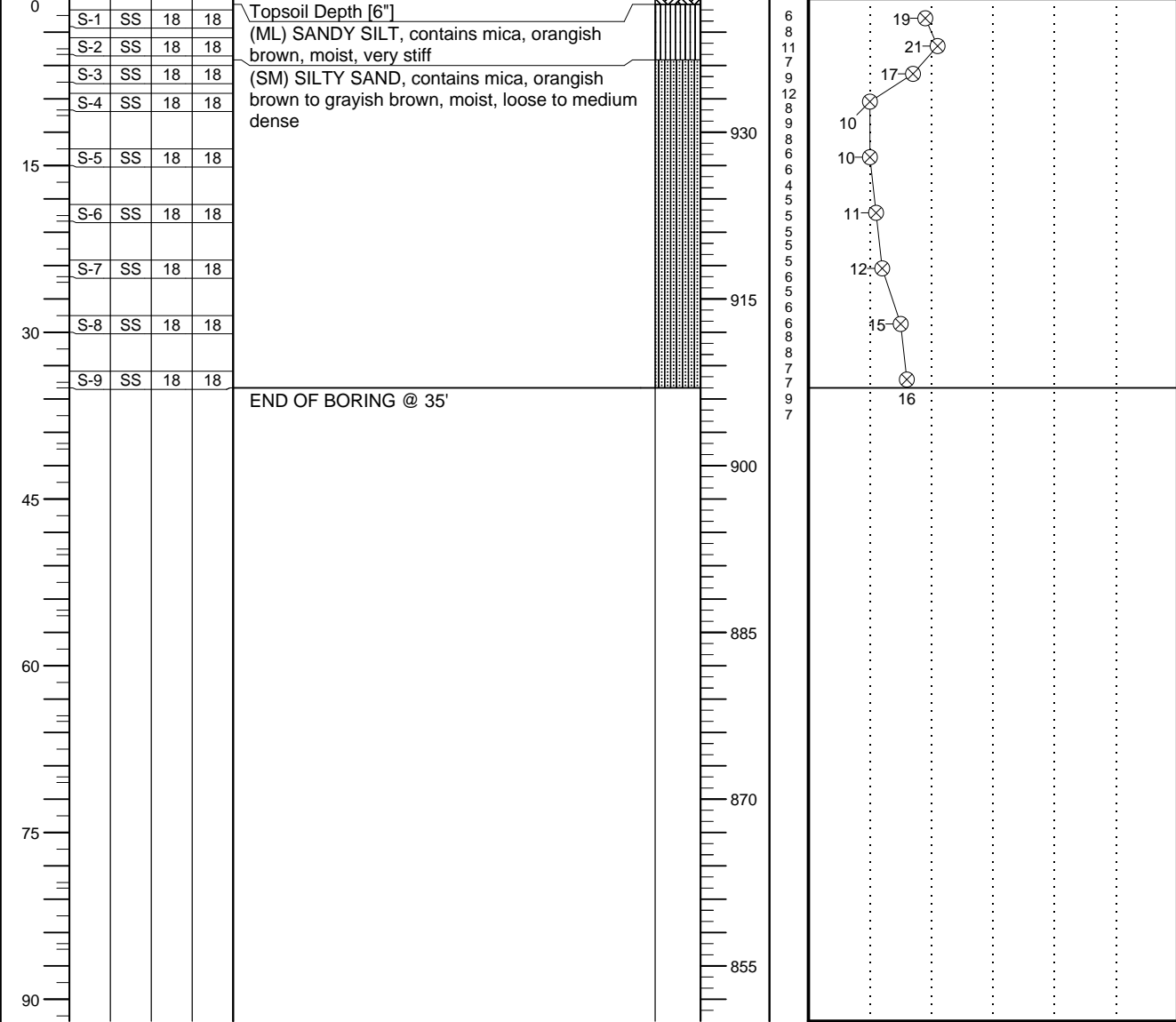
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 942			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



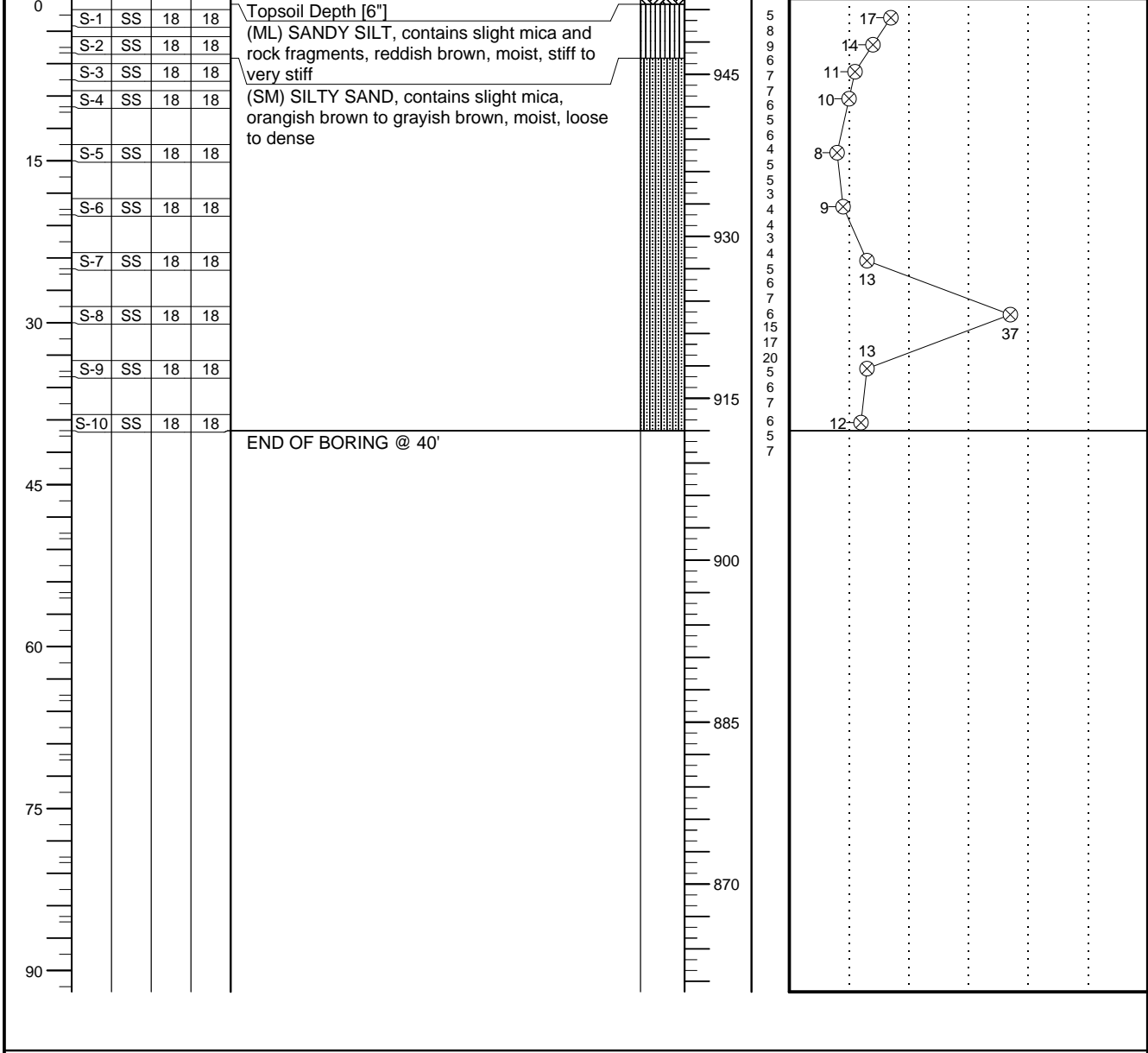
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/23/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-6	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			


SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL ENGLISH UNITS BOTTOM OF CASING LOSS OF CIRCULATION SURFACE ELEVATION 952	WATER LEVELS ELEVATION (FT)	BLOWS/6'
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
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-7	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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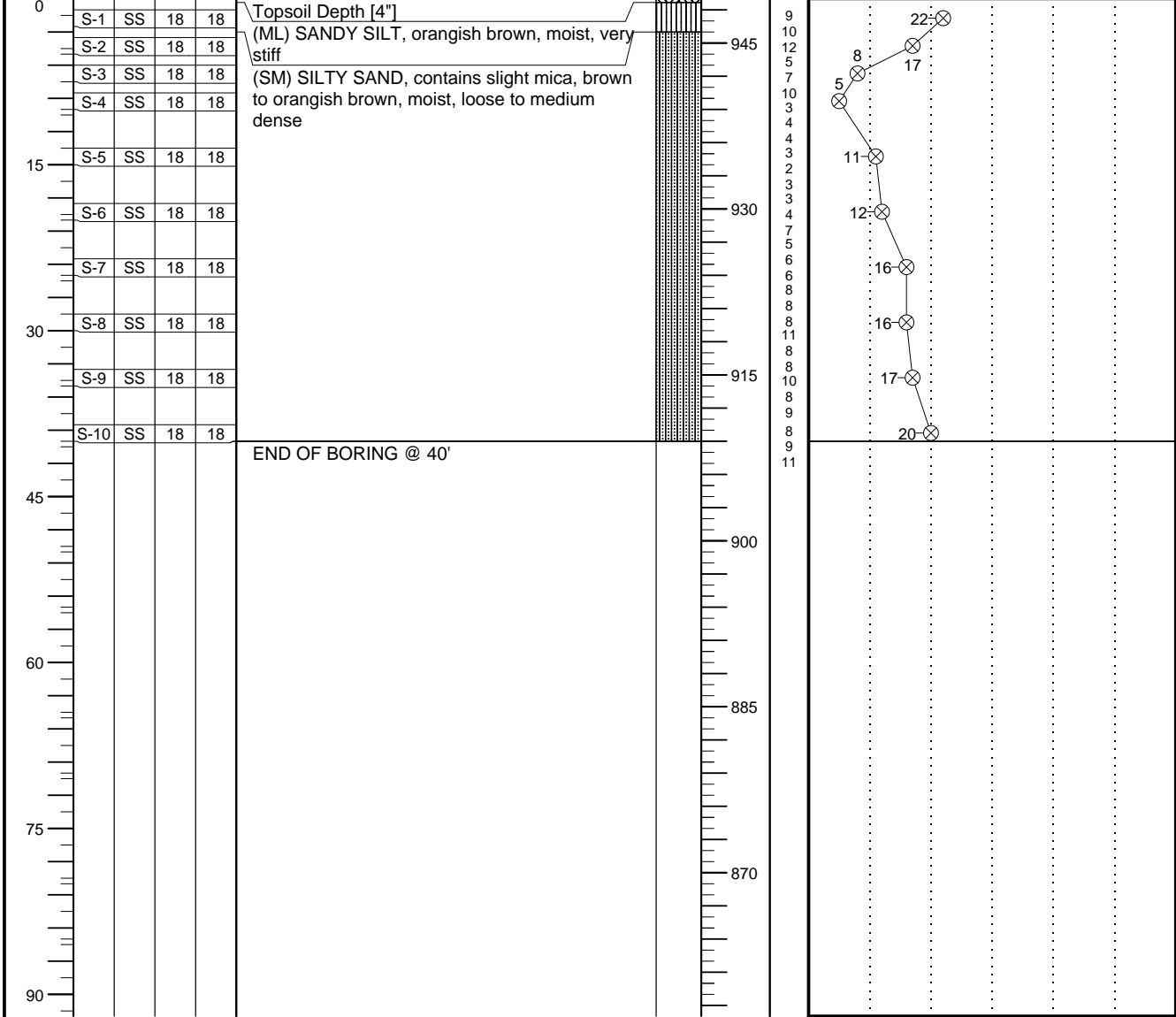
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 949			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-8	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION

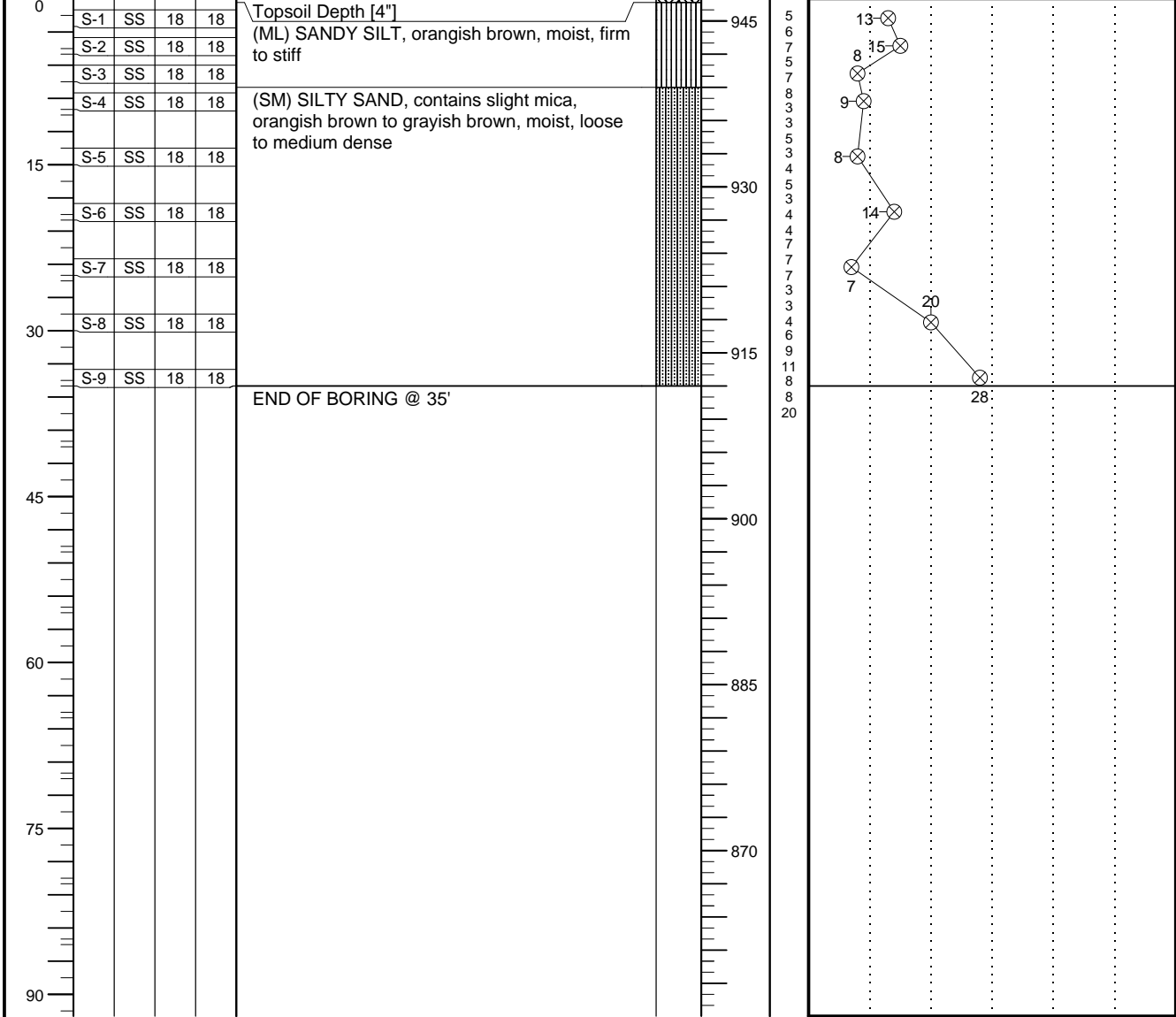
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 947			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

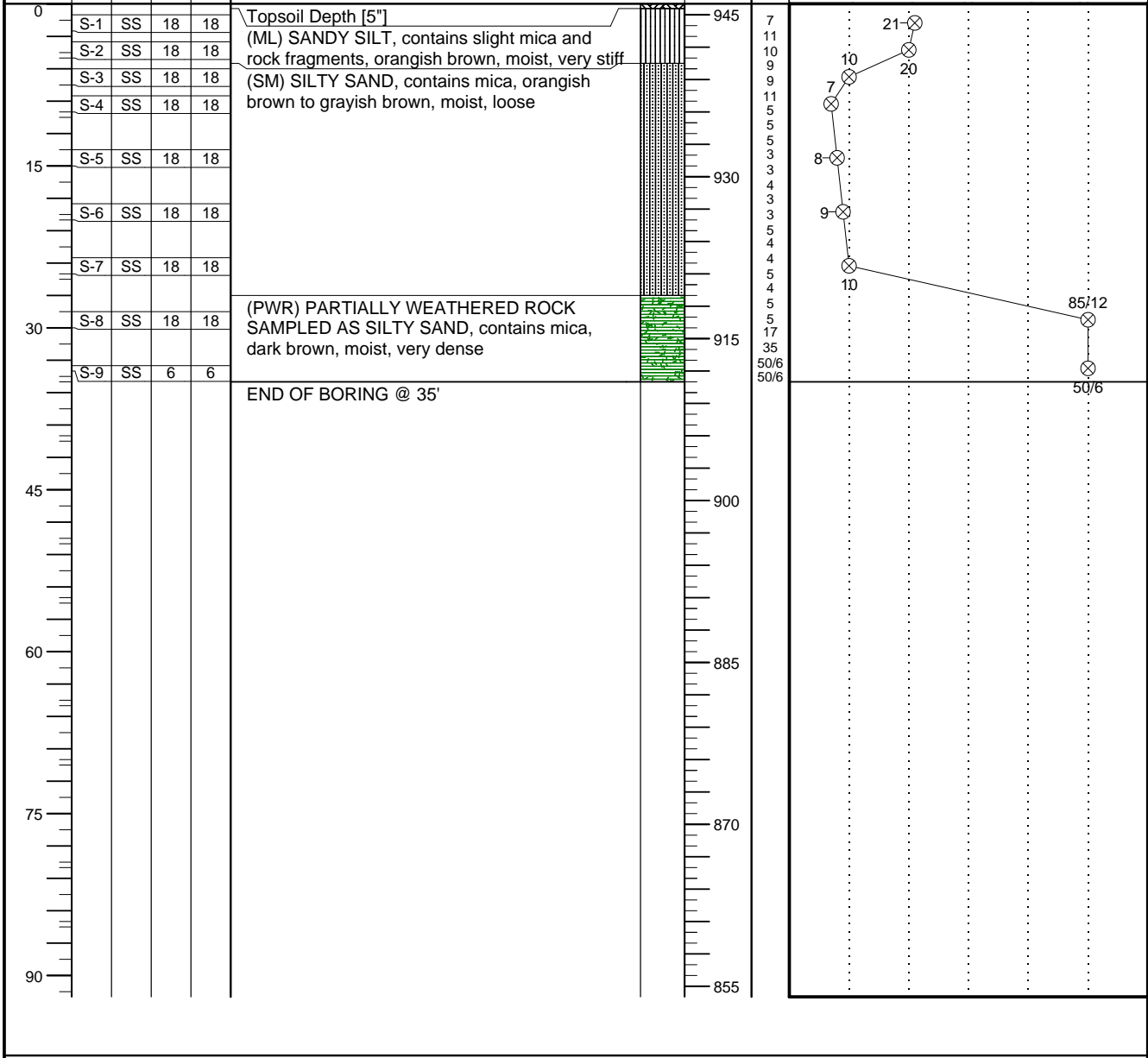
WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/23/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/23/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-9	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION 101+00
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 946			





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-10	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION 103+00
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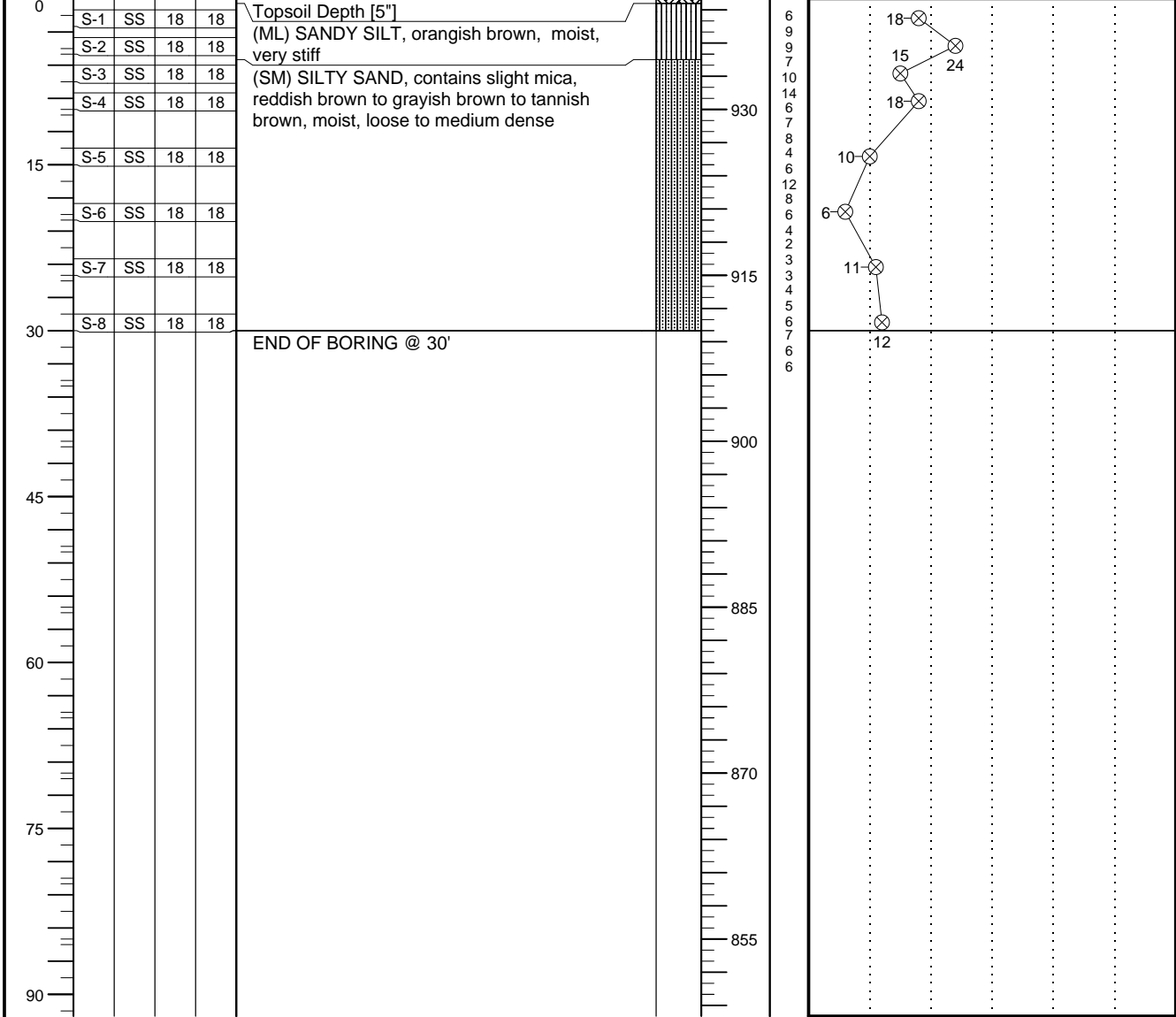
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 940			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-11	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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○ CALIBRATED PENETROMETER TONS/FT²

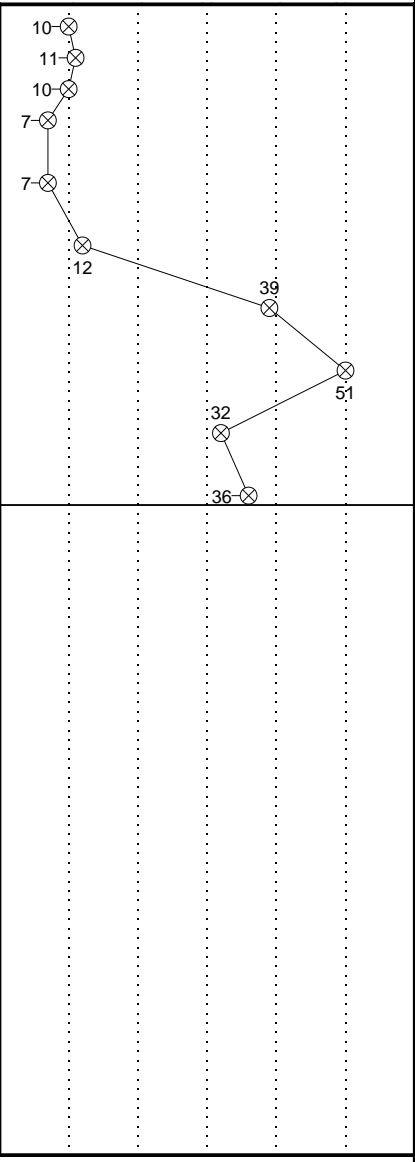
ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	947		

0	S-1	SS	18	18	Topsoil Depth [5"] (SM) SILTY SAND, orangish brown to grayish brown, moist, loose to dense * Contains rock fragments 1'-8' & 28.5'- 32'		945	3	
	S-2	SS	18	18				5	5
	S-3	SS	18	18				5	5
	S-4	SS	18	18				6	10
15	S-5	SS	18	18	(SM) SILTY SAND, contains slight mica, orangish brown to grayish brown, moist, very dense		930	4	
	S-6	SS	18	18				4	7
	S-7	SS	18	18				5	12
30	S-8	SS	18	18	(SM) SILTY SAND, contains slight mica, orangish brown to grayish brown, moist, dense		915	6	
	S-9	SS	18	18				13	39
	S-10	SS	18	18				22	51
45					END OF BORING @ 40'		900	17	
60							885	36	
75							870		
90									



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
WL <input checked="" type="checkbox"/>	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-12	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING _____ EASTING _____ STATION **100+00**

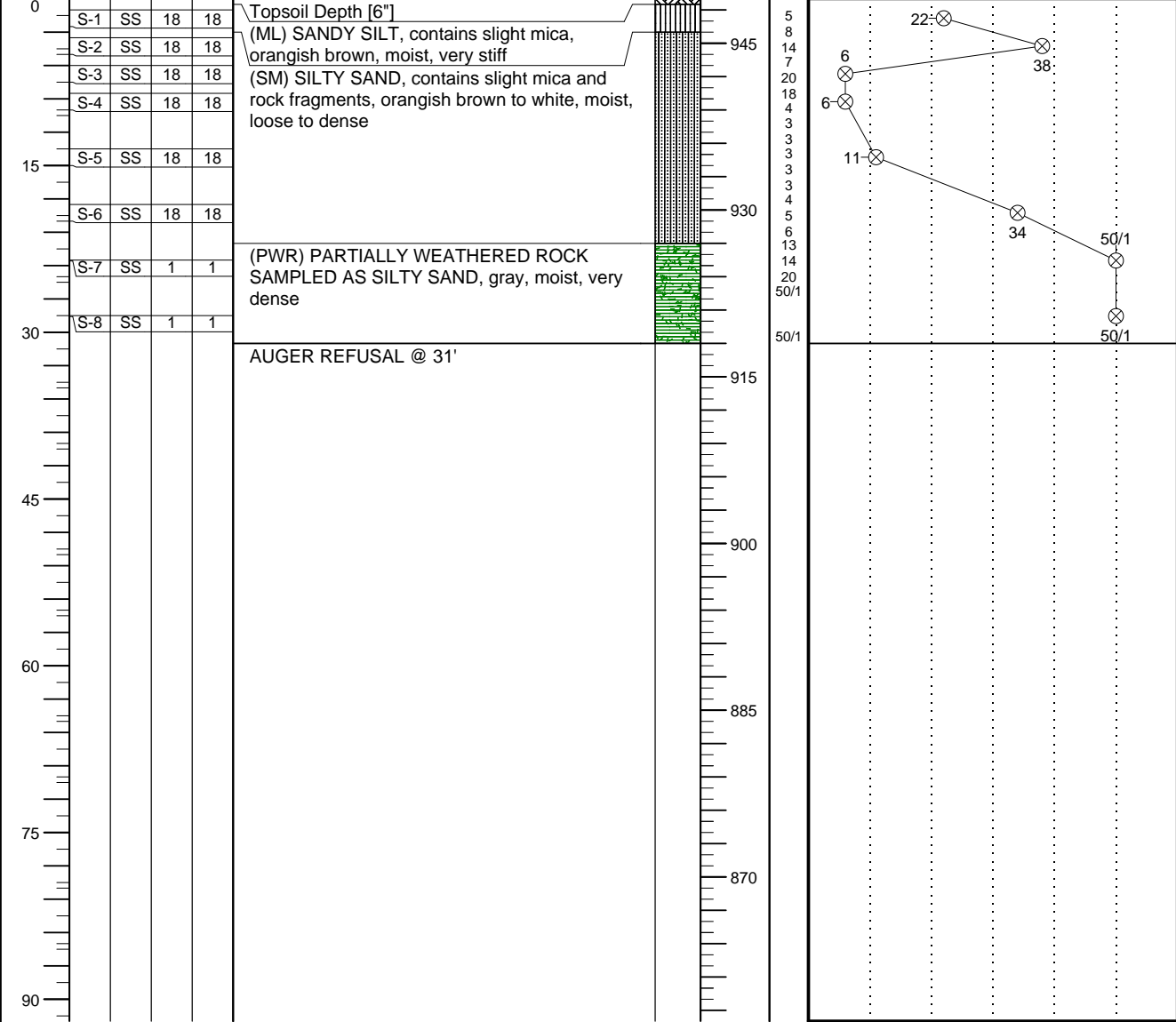
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 949			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
WL	RIG D-50 ATV FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-13	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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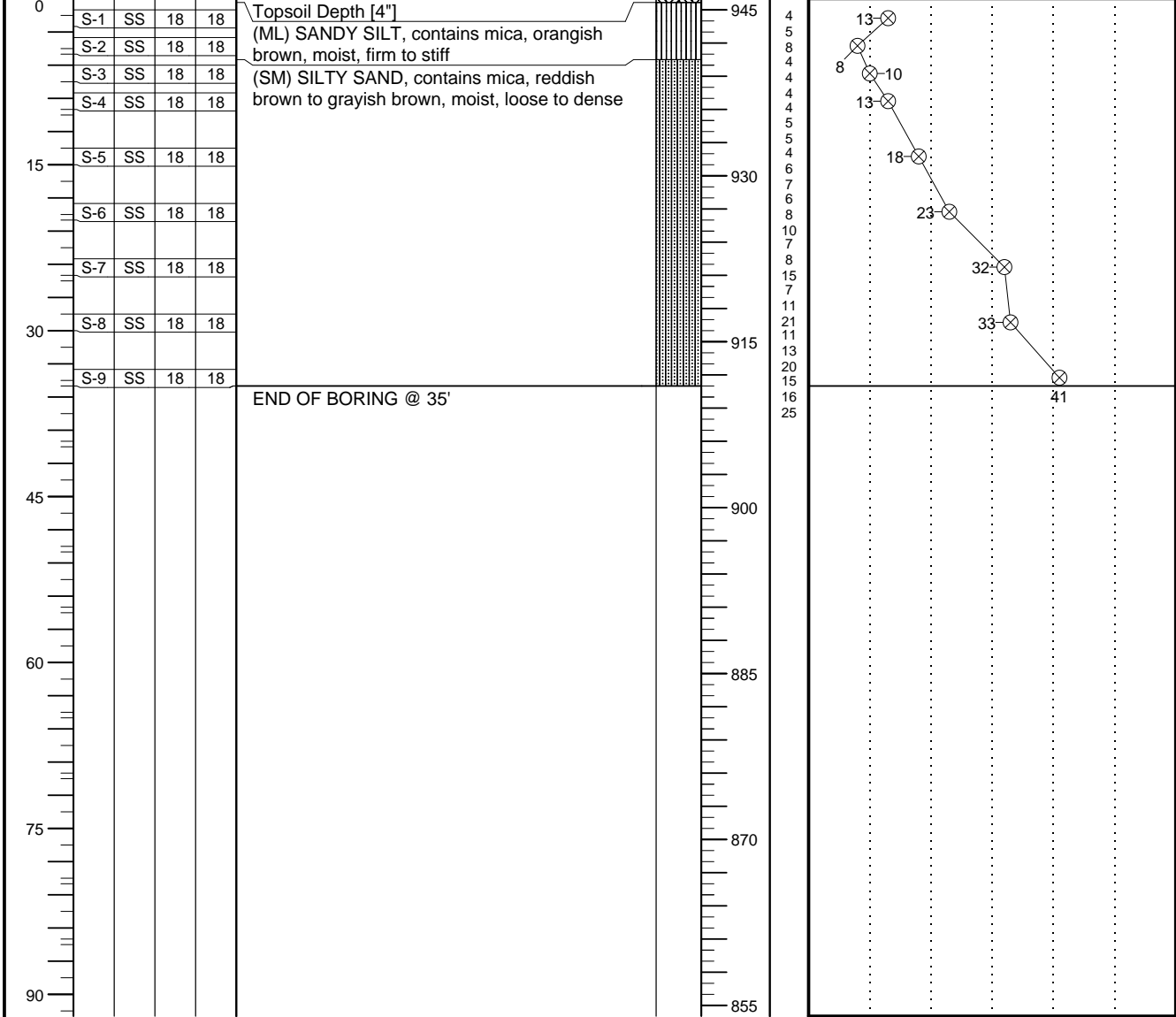
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 946			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-14	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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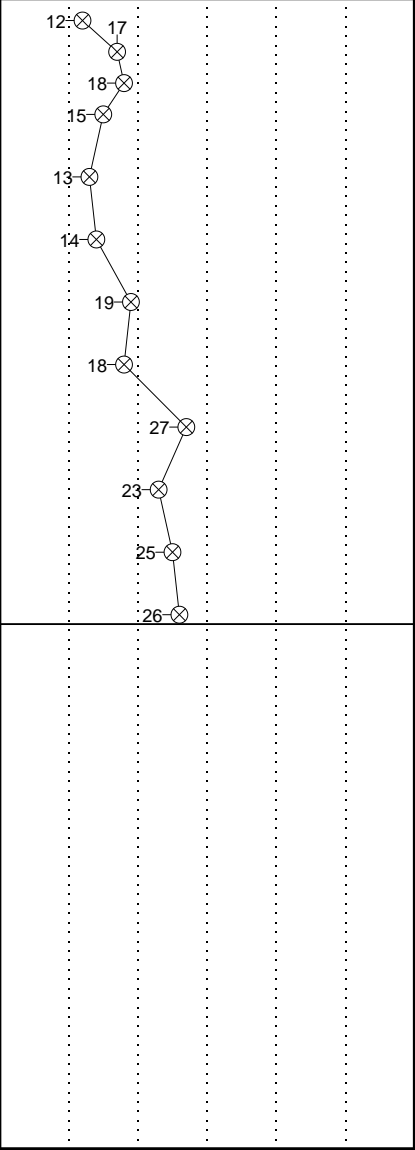
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
0					Topsoil Depth [4"] (ML) SANDY SILT, orangish brown, moist, stiff to very stiff		945	
	S-1	SS	18	18	(SM) SILTY SAND, contains mica, brown to orangish brown to tannish brown, moist, medium dense		945	4
	S-2	SS	18	18		6		
	S-3	SS	18	18		3		
	S-4	SS	18	18		6		
15	S-5	SS	18	18		11		
	S-6	SS	18	18		8		
	S-7	SS	18	18		6		
30	S-8	SS	18	18		4		
	S-9	SS	18	18		7		
	S-10	SS	18	18		5		
45	S-11	SS	18	18		7		
	S-12	SS	18	18		7		
					END OF BORING @ 50'		900	11
60							885	14
75							870	13
90								6

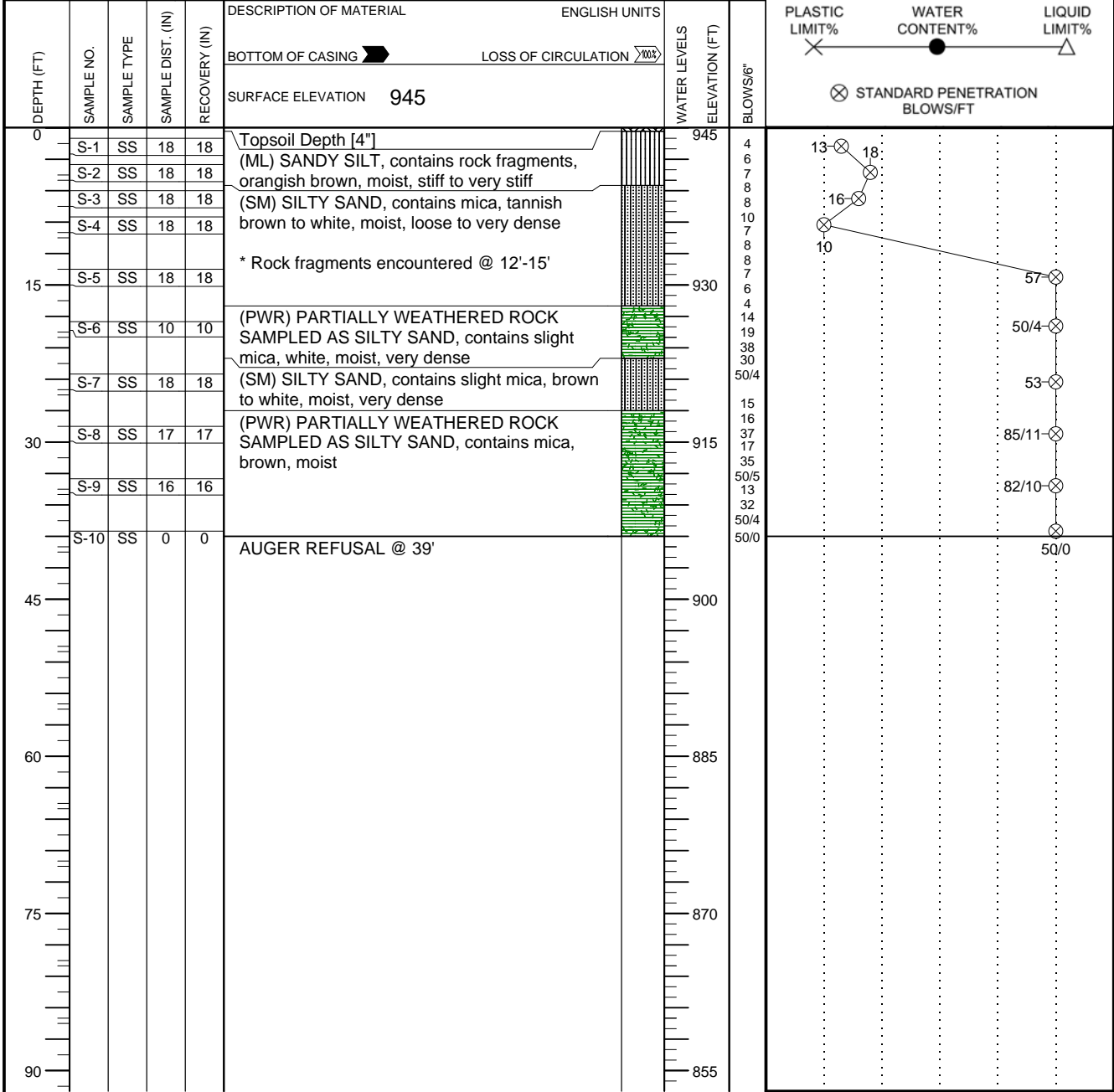


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA


CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-15	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION 104+00	

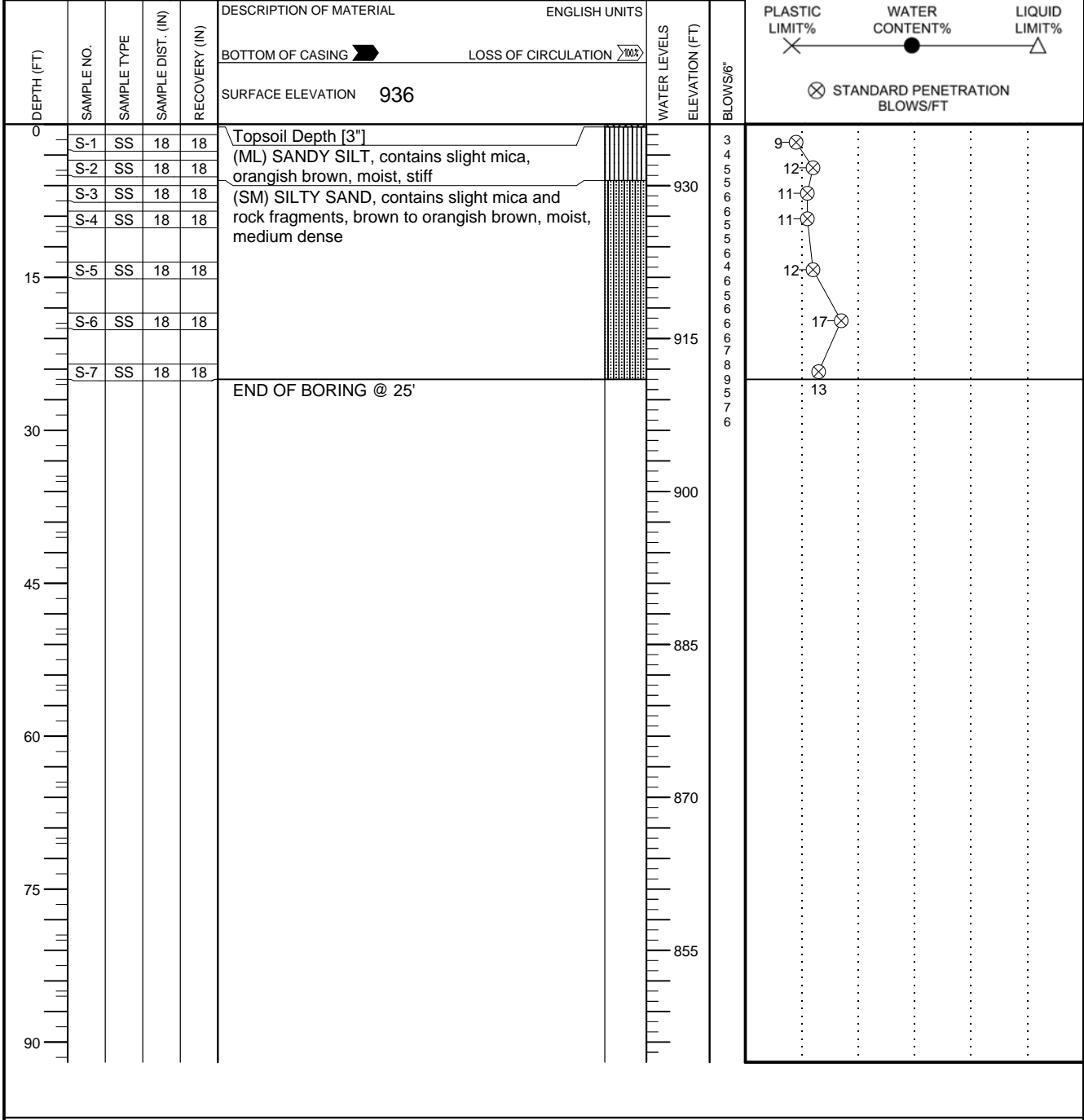


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED	07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/22/18	HAMMER TYPE Manual
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-16	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— Δ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-17	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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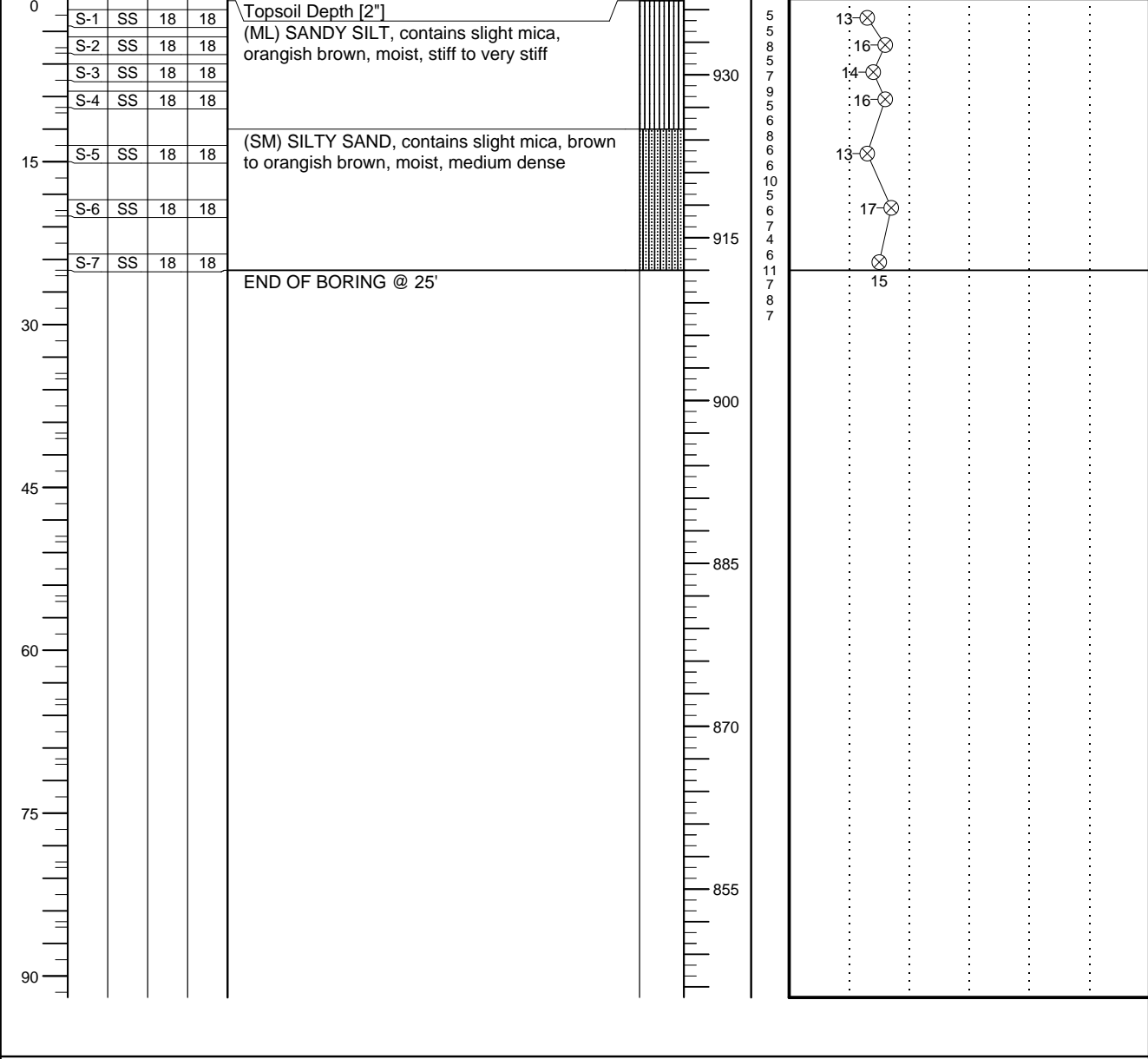
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 937			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/23/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-18	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School		ARCHITECT-ENGINEER		

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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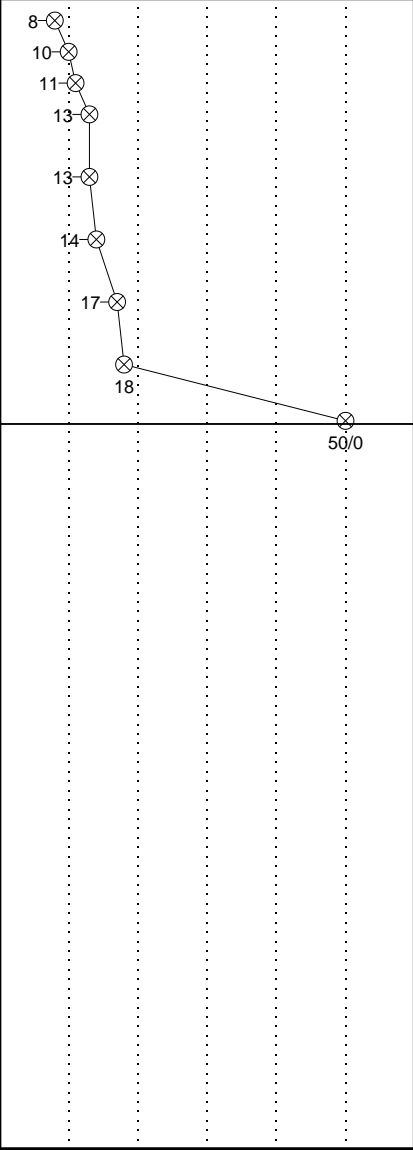
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
0					Topsoil Depth [8"] (SM) SILTY SAND, contains mica, orangish brown to tannish brown, moist, loose to medium dense			
	S-1	SS	18	18			930	3
	S-2	SS	18	18				4
	S-3	SS	18	18				4
	S-4	SS	18	18				4
15	S-5	SS	18	18			915	4
	S-6	SS	18	18				4
	S-7	SS	18	18				4
30	S-8	SS	18	18				6
	S-9	SS	6	6	(PWR) PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND, contains slight mica, white to brown, moist AUGER REFUSAL @ 34'		900	7
45							885	7
60							870	7
75							855	9
90								18



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED 07/22/18	HAMMER TYPE Auto
WL			RIG D-50 ATV FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-19	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION 105+00
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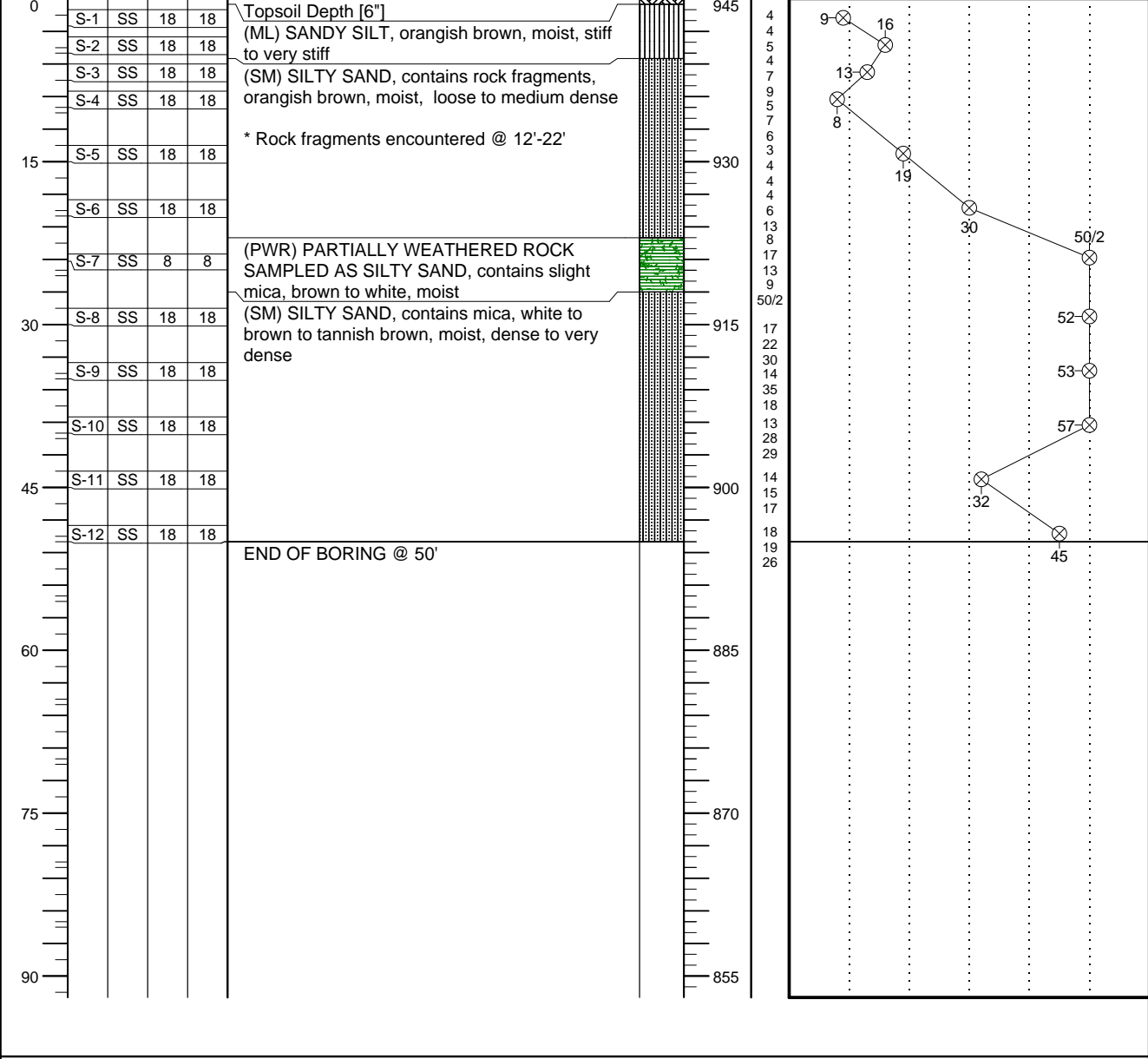
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 945			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/23/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/23/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-20	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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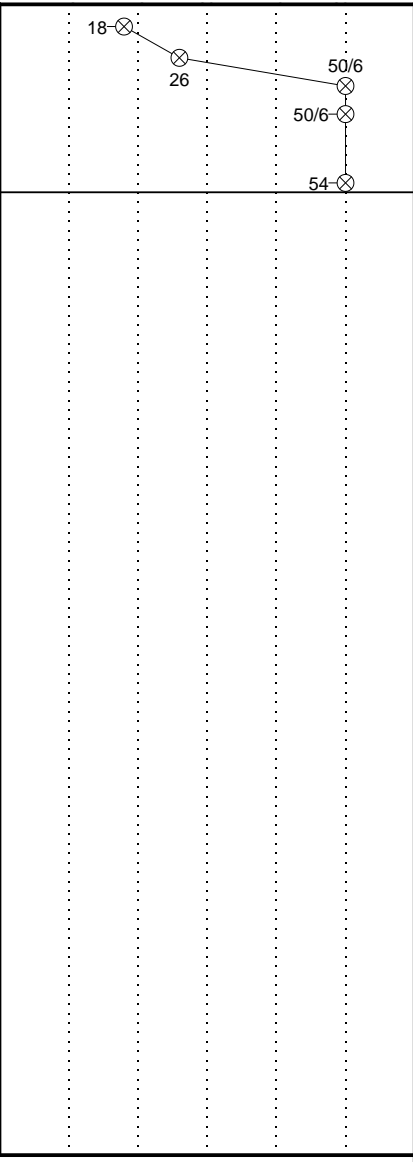
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% --- REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
0					Topsoil Depth [3"]		930	6
	S-1	SS	18	18	(SM) SILTY SAND, contains mica, orangish brown, moist, medium dense			8
	S-2	SS	18	18	(PWR) PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND, contains mica, brown, moist			10
	S-3	SS	12	12	(SM) SILTY SAND, contains slight mica and rock fragments, orangish brown to white, moist, very dense			9
	S-4	SS	6	6				12
								14
								23
15	S-5	SS	18	18	END OF BORING @ 15'		915	50/6
								30
								22
								32
30							900	
45							885	
60							870	
75							855	
90							840	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

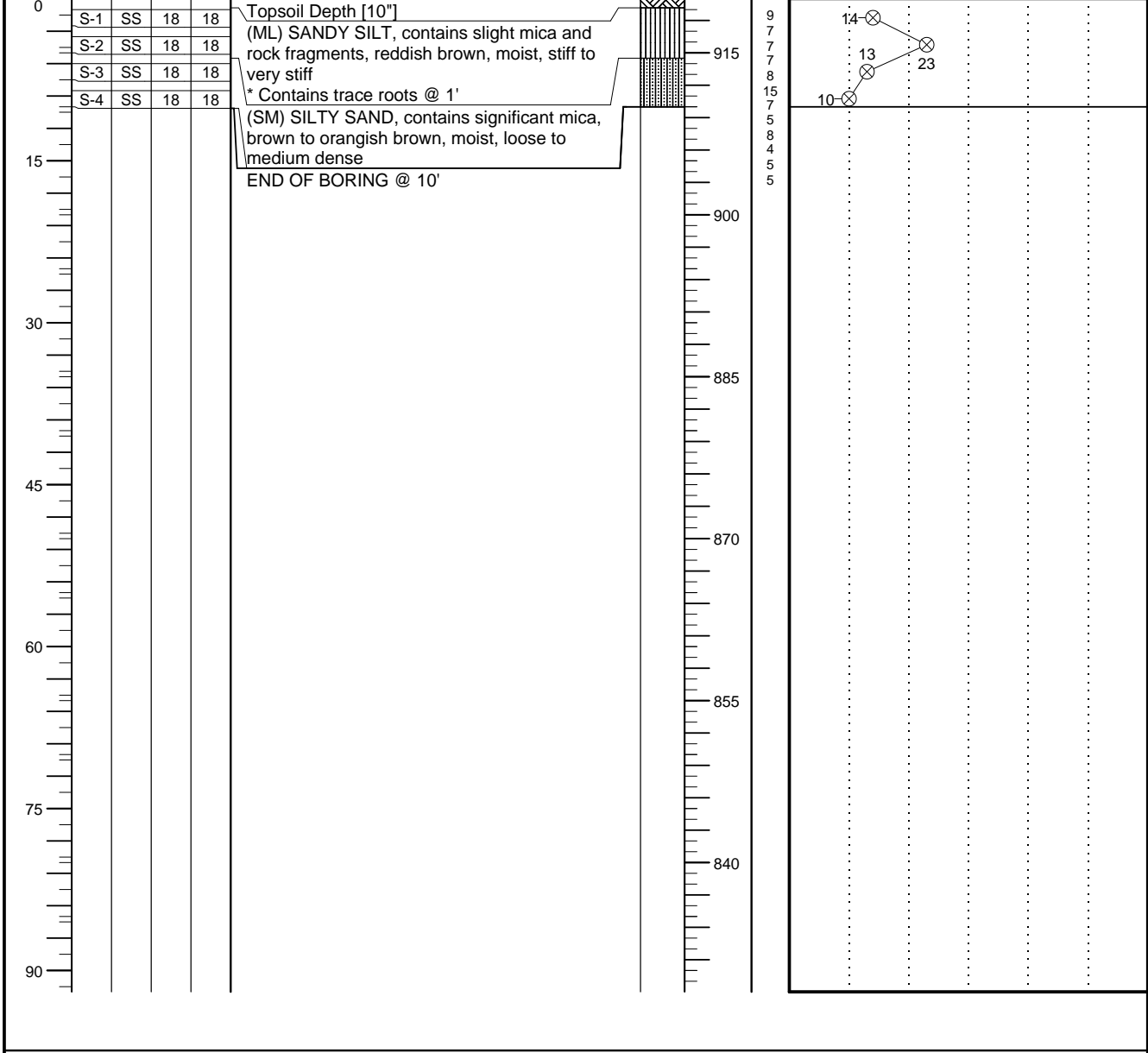
WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/23/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/23/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-21	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"	ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● ▲ ⊗ STANDARD PENETRATION BLOWS/FT
					BOTTOM OF CASING LOSS OF CIRCULATION			
					SURFACE ELEVATION 920			



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW)	WL(ACR) <input checked="" type="checkbox"/>		BORING COMPLETED 07/22/18	HAMMER TYPE Manual
WL			RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-22	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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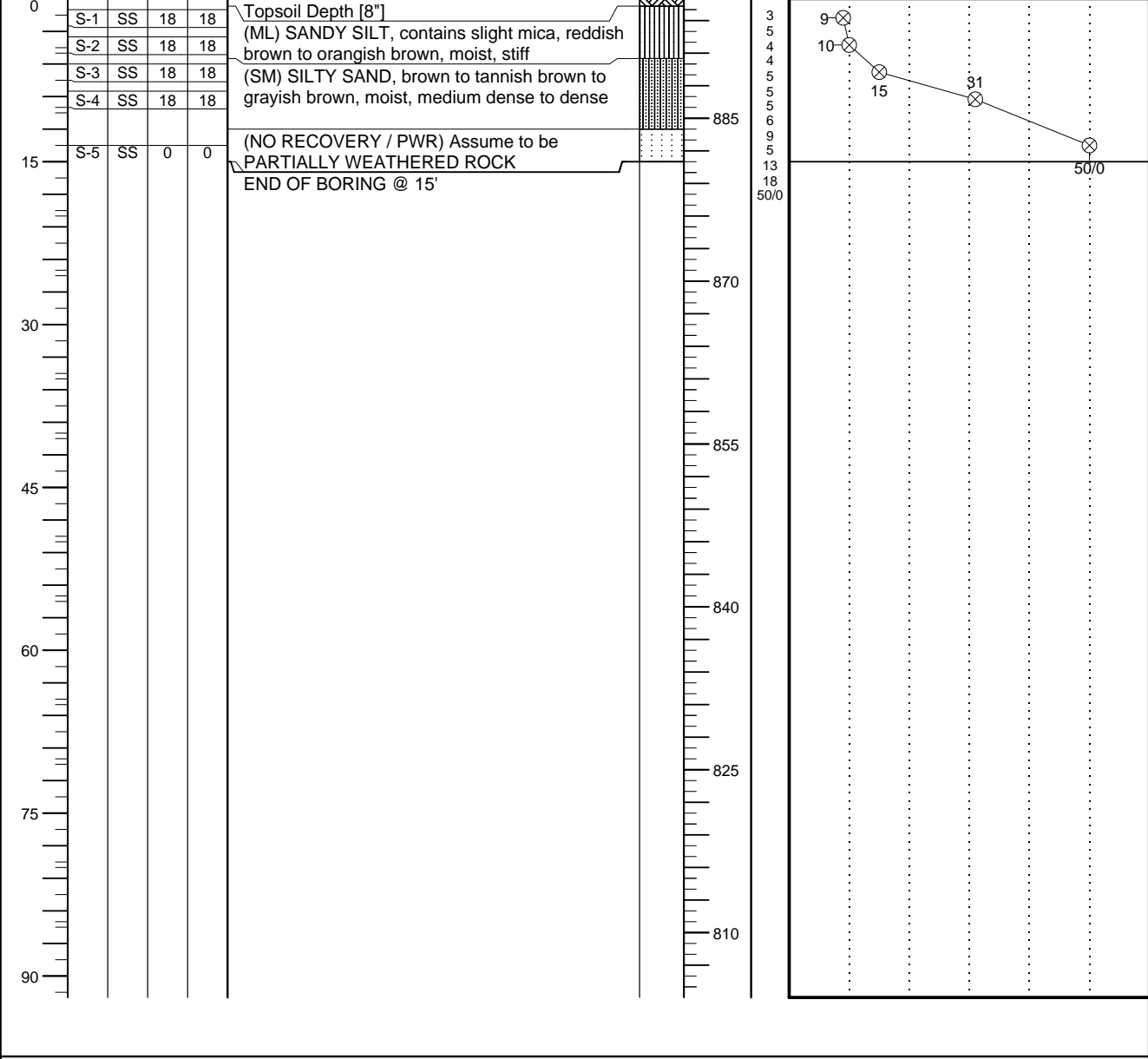
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 896			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/20/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/20/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT	Job #:	BORING #	SHEET	
Jackson County Schools	10:9918	B-23	1 OF 1	
PROJECT NAME	ARCHITECT-ENGINEER			

West Jackson High-Middle School

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		

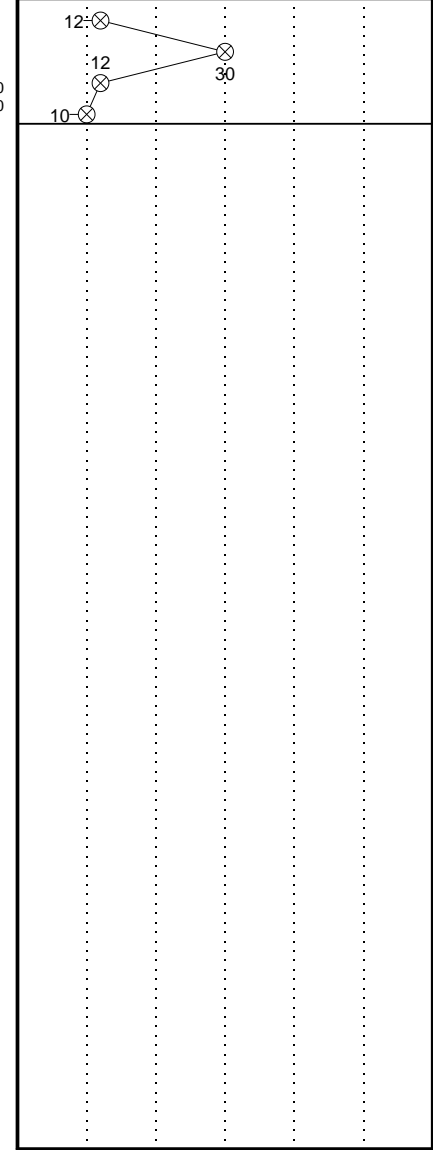
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% --- REC% ---

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

✕ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
0					Topsoil Depth [2"]			
2	S-1	SS	18	18	(SM) SILTY SAND, contains slight rock fragments, brown, moist, loose to medium dense * Contains trace roots @ 1' END OF BORING @ 10'		915	6
4	S-2	SS	18	18		7		
6	S-3	SS	18	18		8		
8	S-4	SS	18	18		10		
10								5
15								5
20								5
25								5
30								5
35								6
40								4
45								
50								
55								
60								
65								
70								
75								
80								
85								
90								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

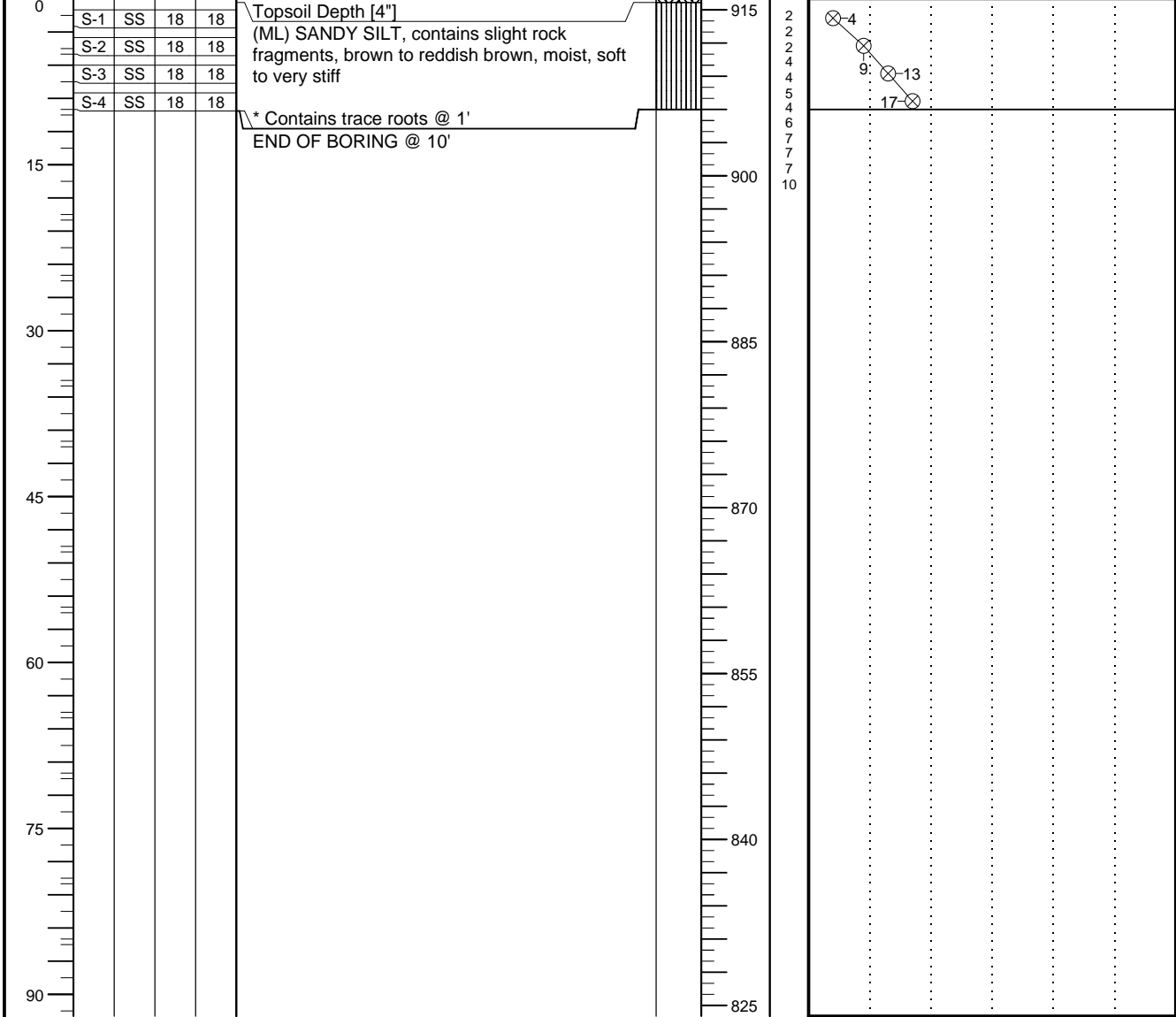
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WL(SHW)	WL(ACR) <input checked="" type="checkbox"/>		BORING COMPLETED	07/20/18	HAMMER TYPE Auto
WL			RIG ATV	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-24	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		

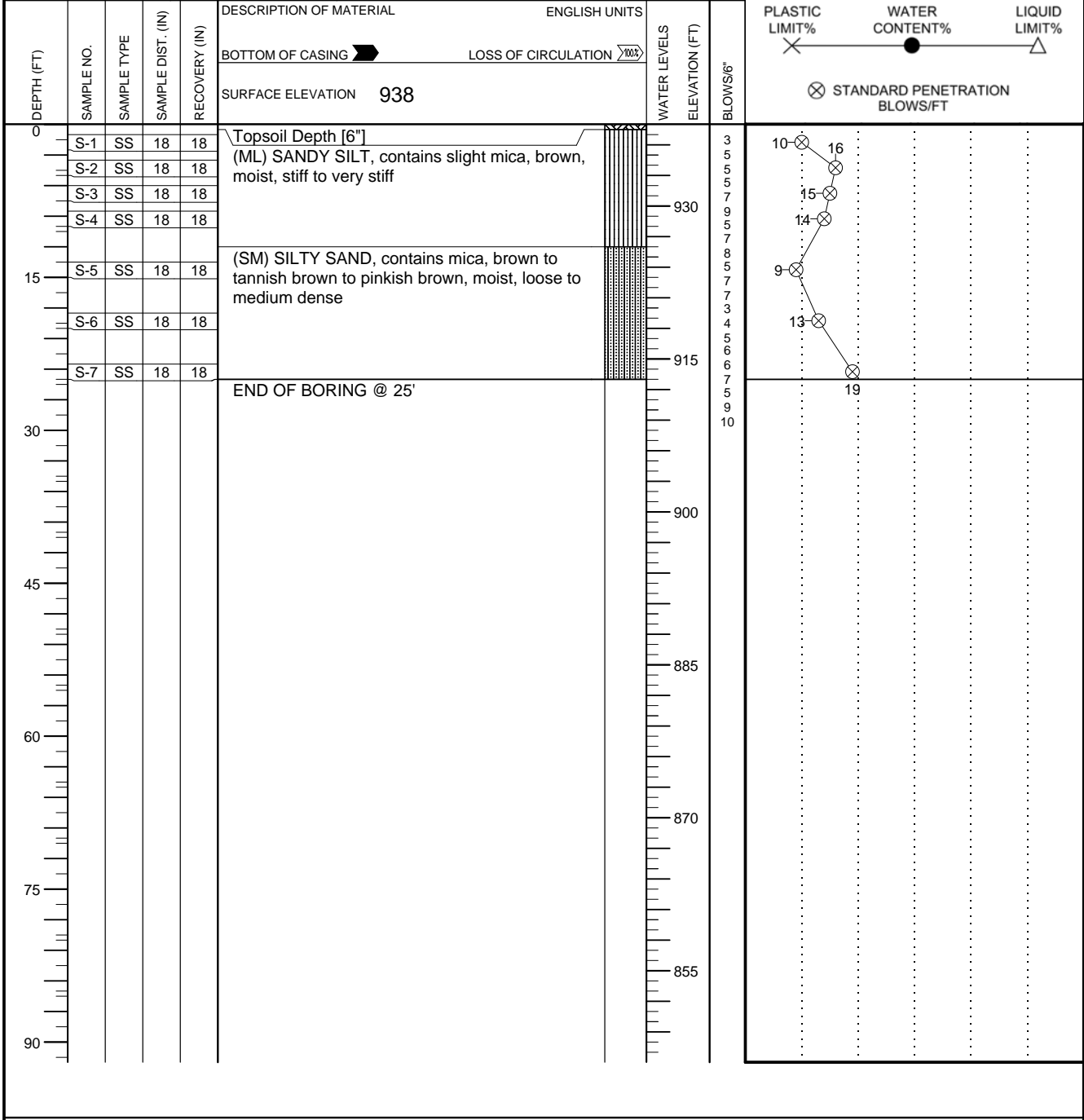


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA


CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-25	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED	07/20/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/20/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-26	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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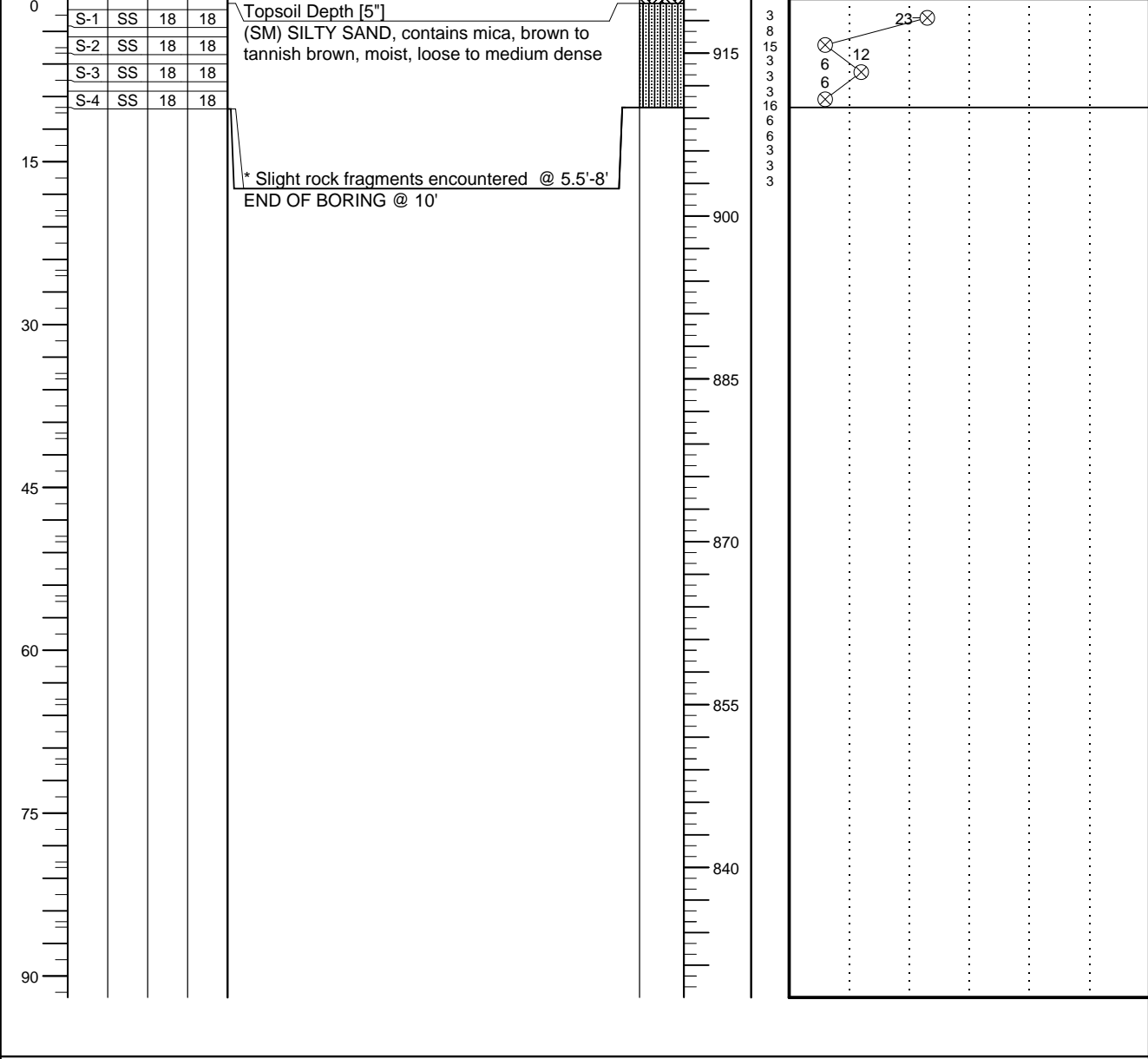
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 920			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/20/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/20/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-27	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School		ARCHITECT-ENGINEER		

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'	
					BOTTOM OF CASING 	LOSS OF CIRCULATION 			
					SURFACE ELEVATION	902			

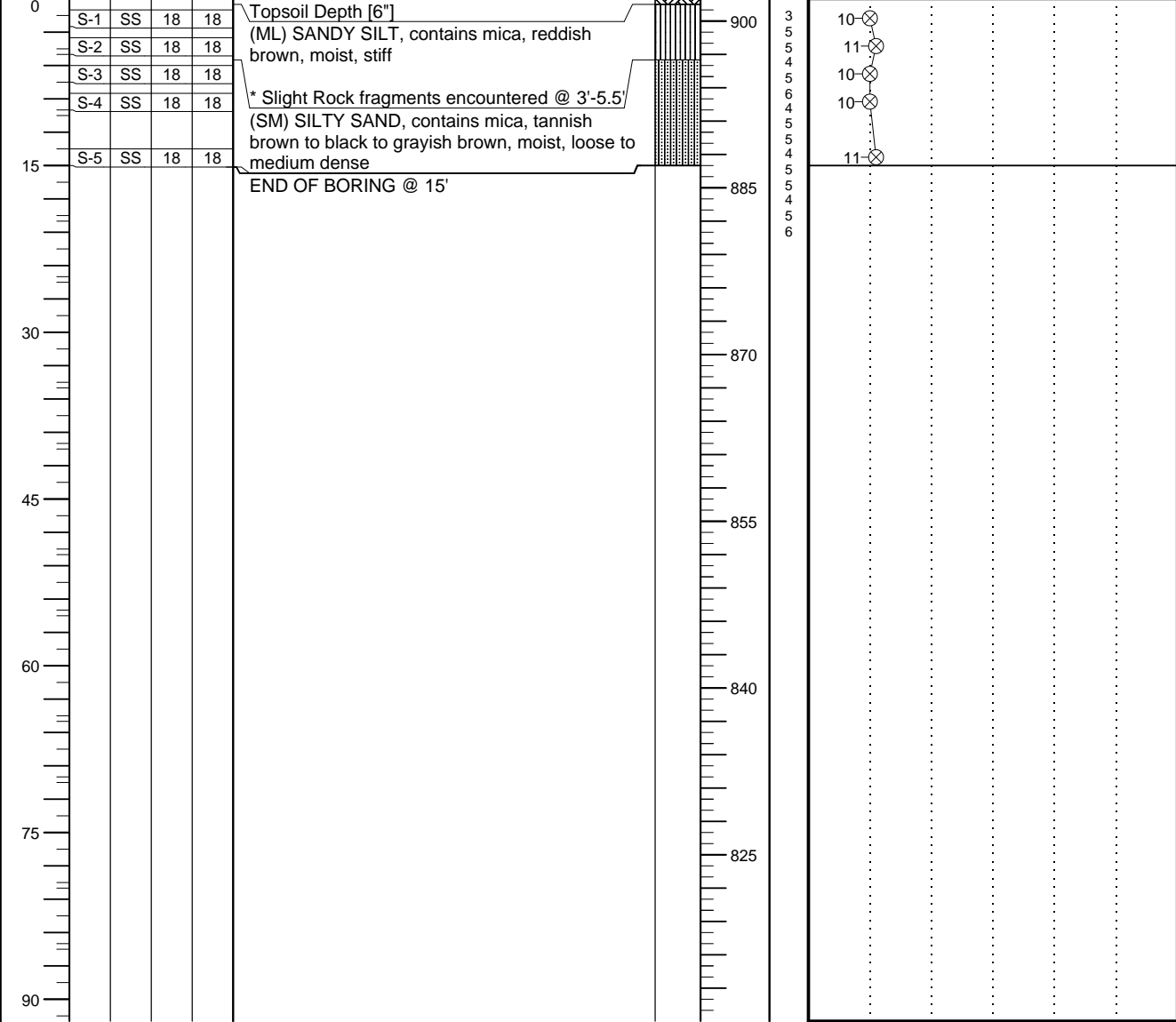
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


✕ ● △

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry <input type="checkbox"/>	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW) <input checked="" type="checkbox"/>	WL(ACR) <input type="checkbox"/>		BORING COMPLETED 07/22/18	HAMMER TYPE Manual
WL <input checked="" type="checkbox"/>			RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-28	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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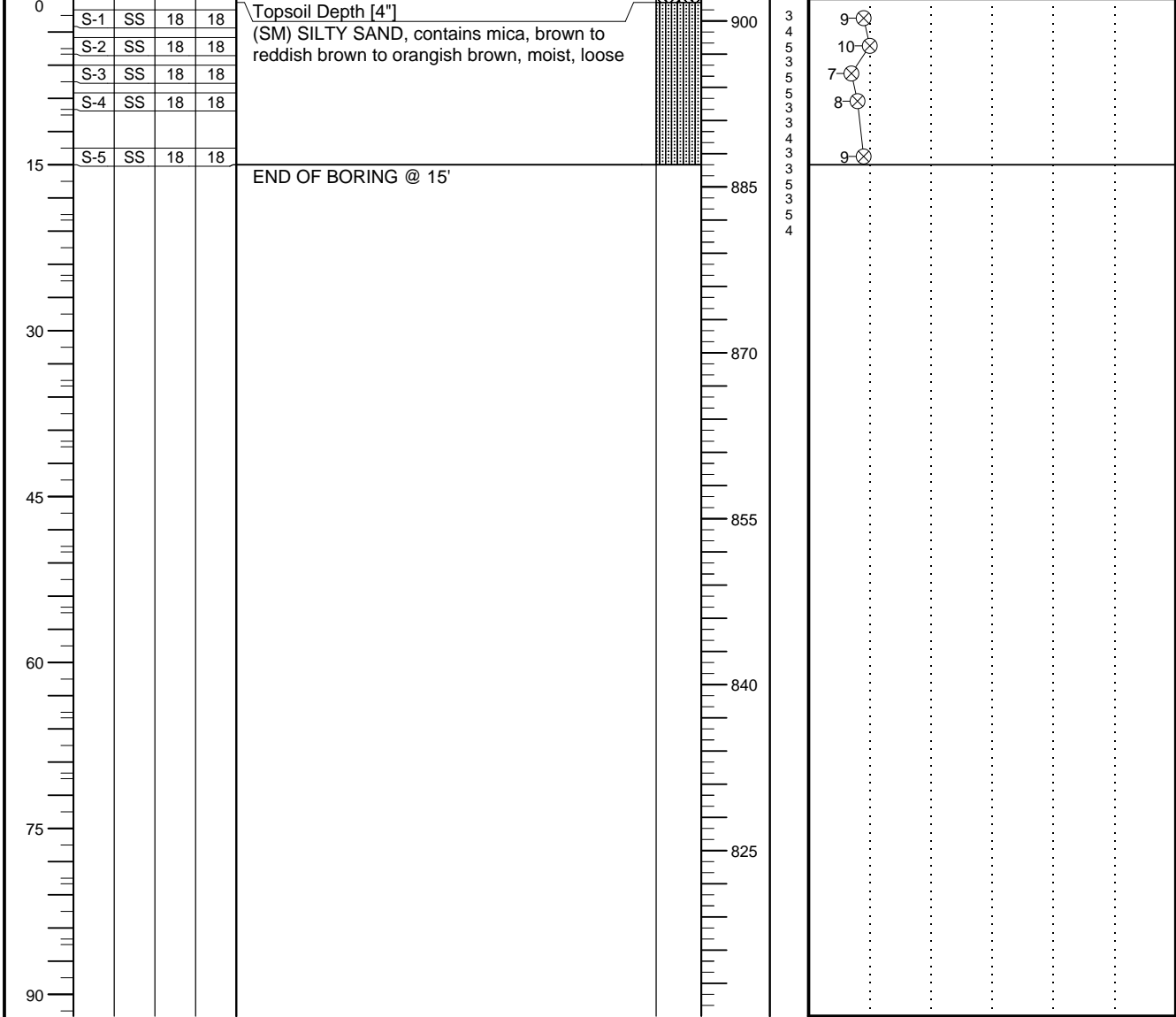
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS(6")
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 902			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/22/18	HAMMER TYPE Manual
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-29	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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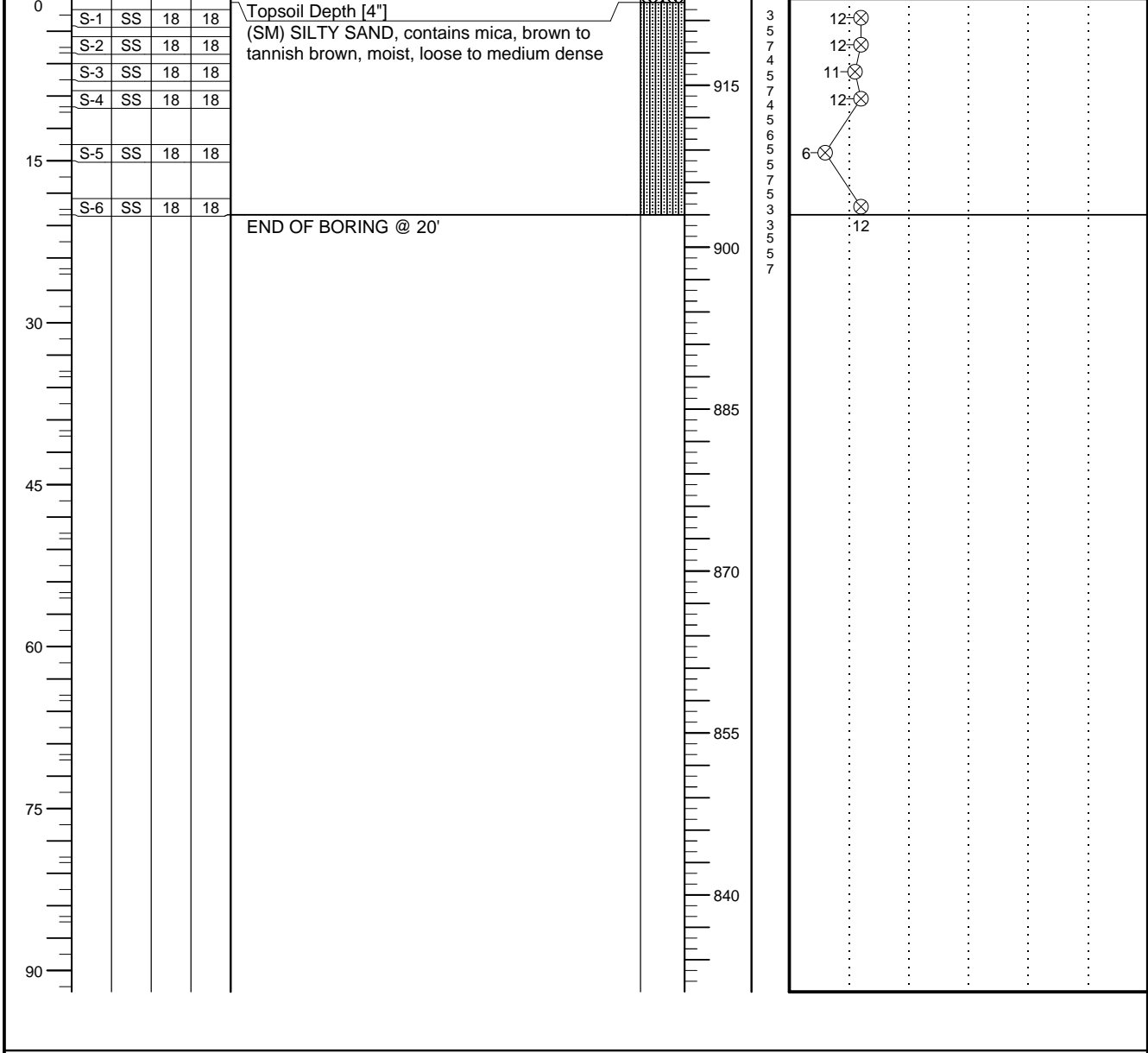
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 923			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

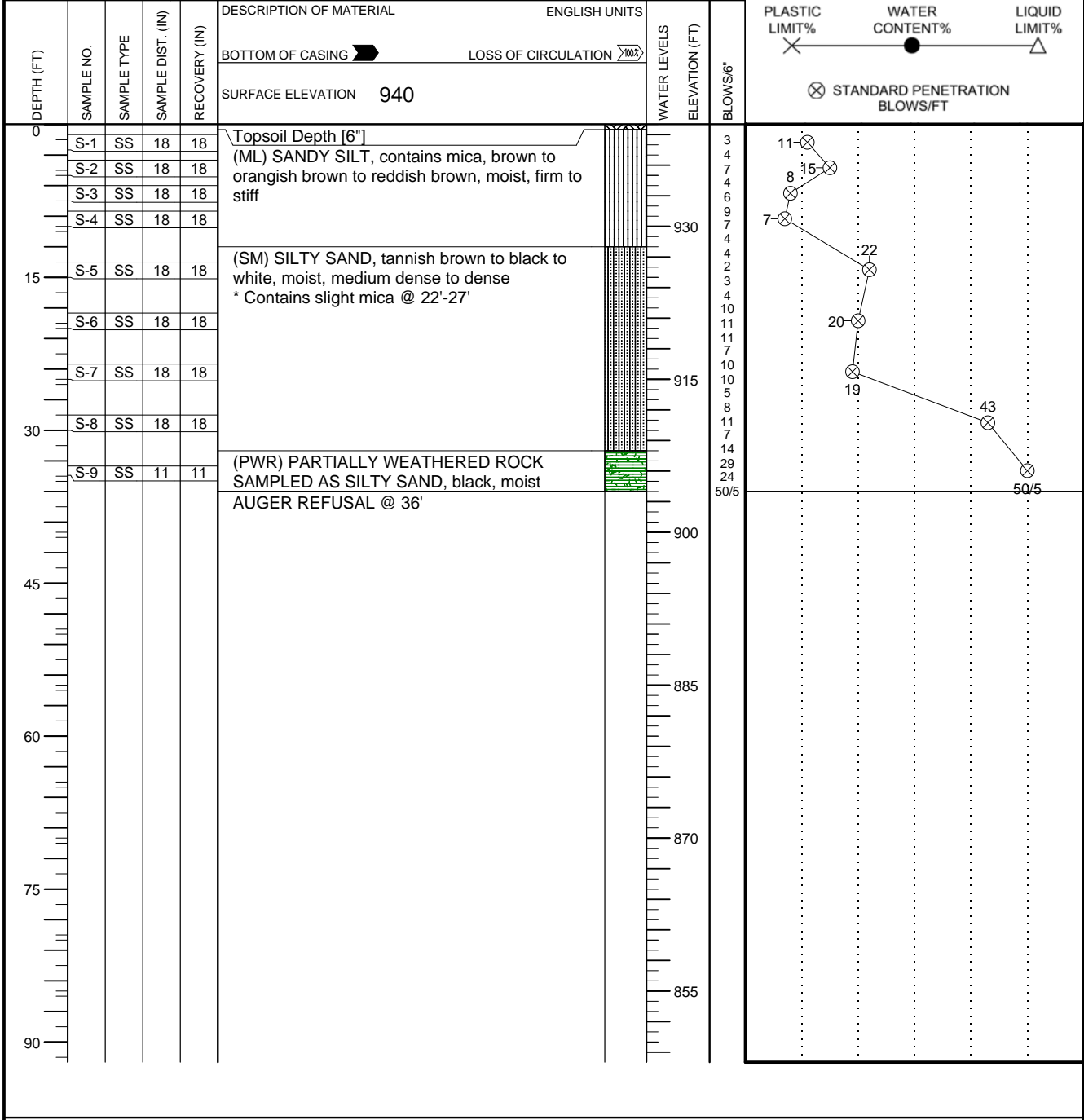


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/20/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/20/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-30	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	



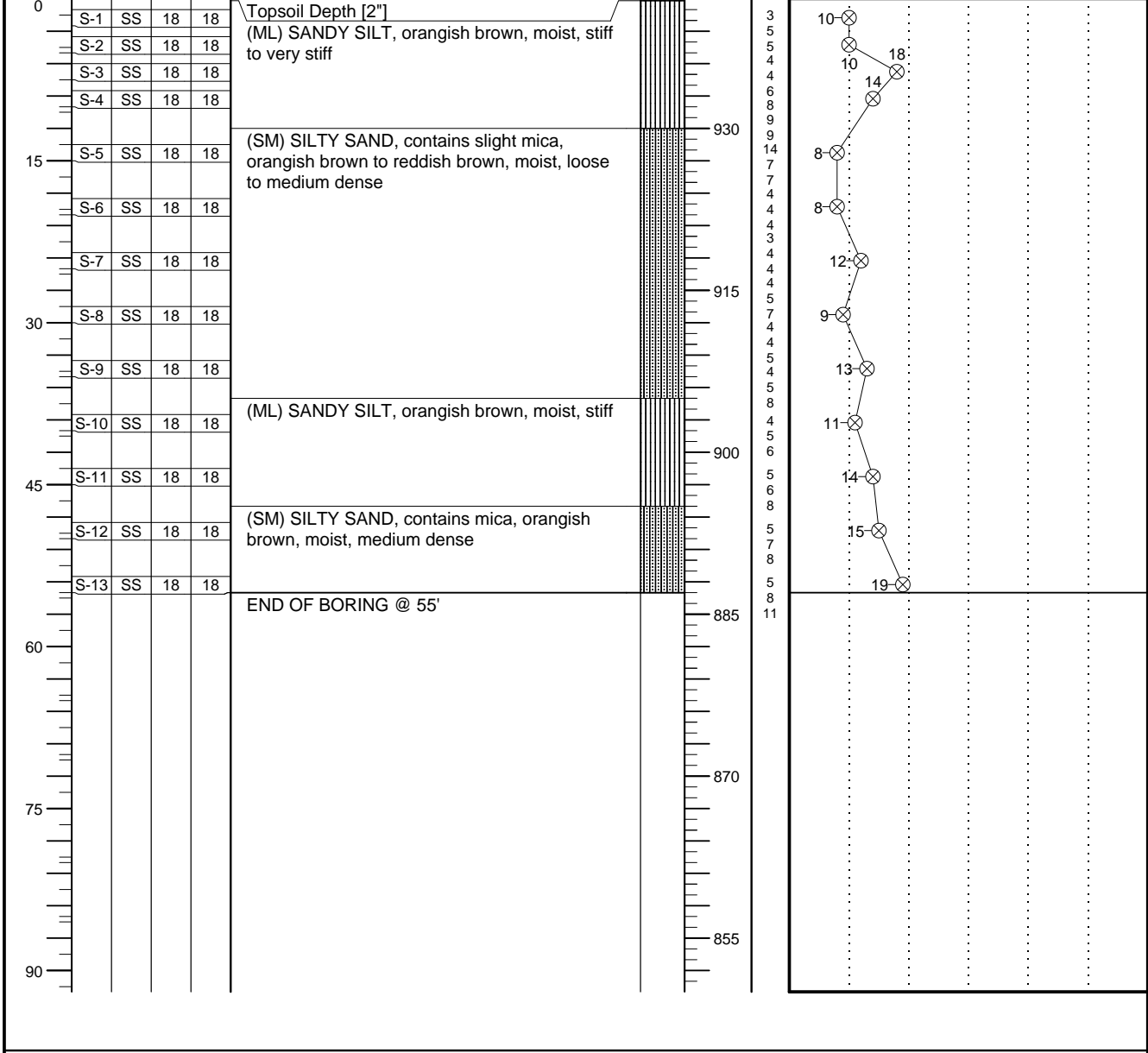
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL <input checked="" type="checkbox"/>	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-31	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL ENGLISH UNITS BOTTOM OF CASING LOSS OF CIRCULATION	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					SURFACE ELEVATION 942		



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

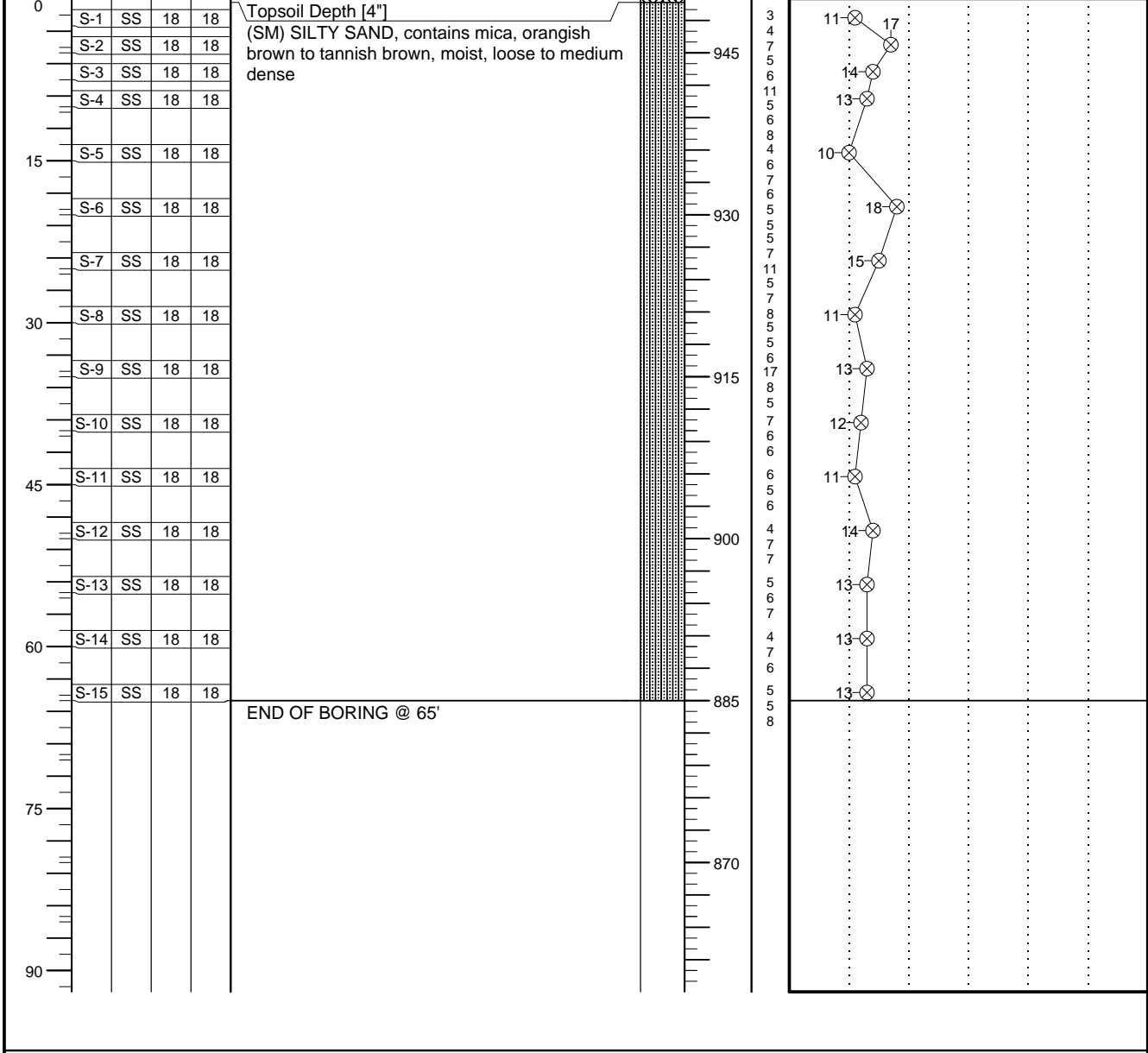
WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-32	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 950			



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-33	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School		ARCHITECT-ENGINEER		

SITE LOCATION
Jefferson, Jackson County, GA

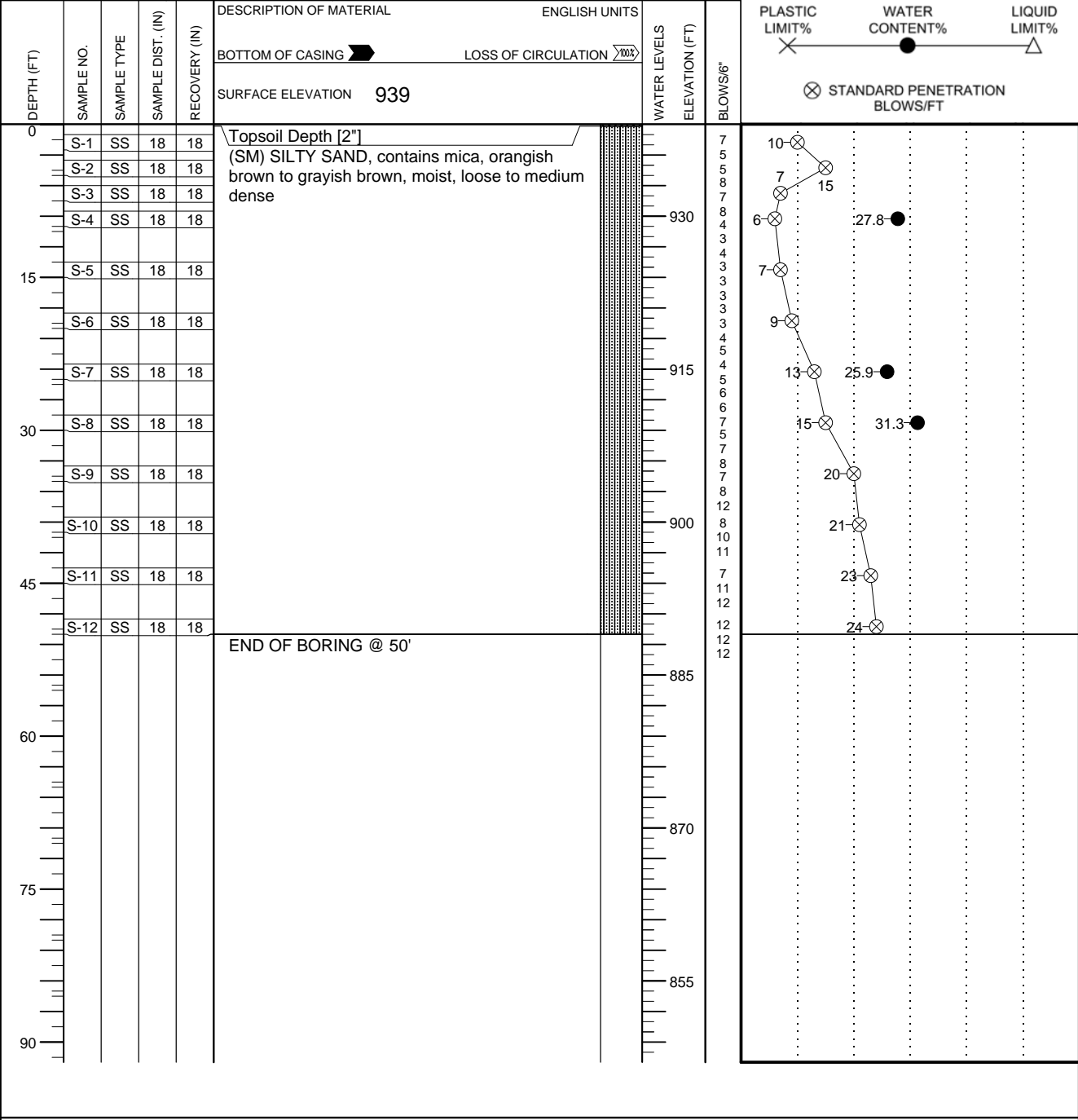
NORTHING	EASTING	STATION
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○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% --- REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/22/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-34	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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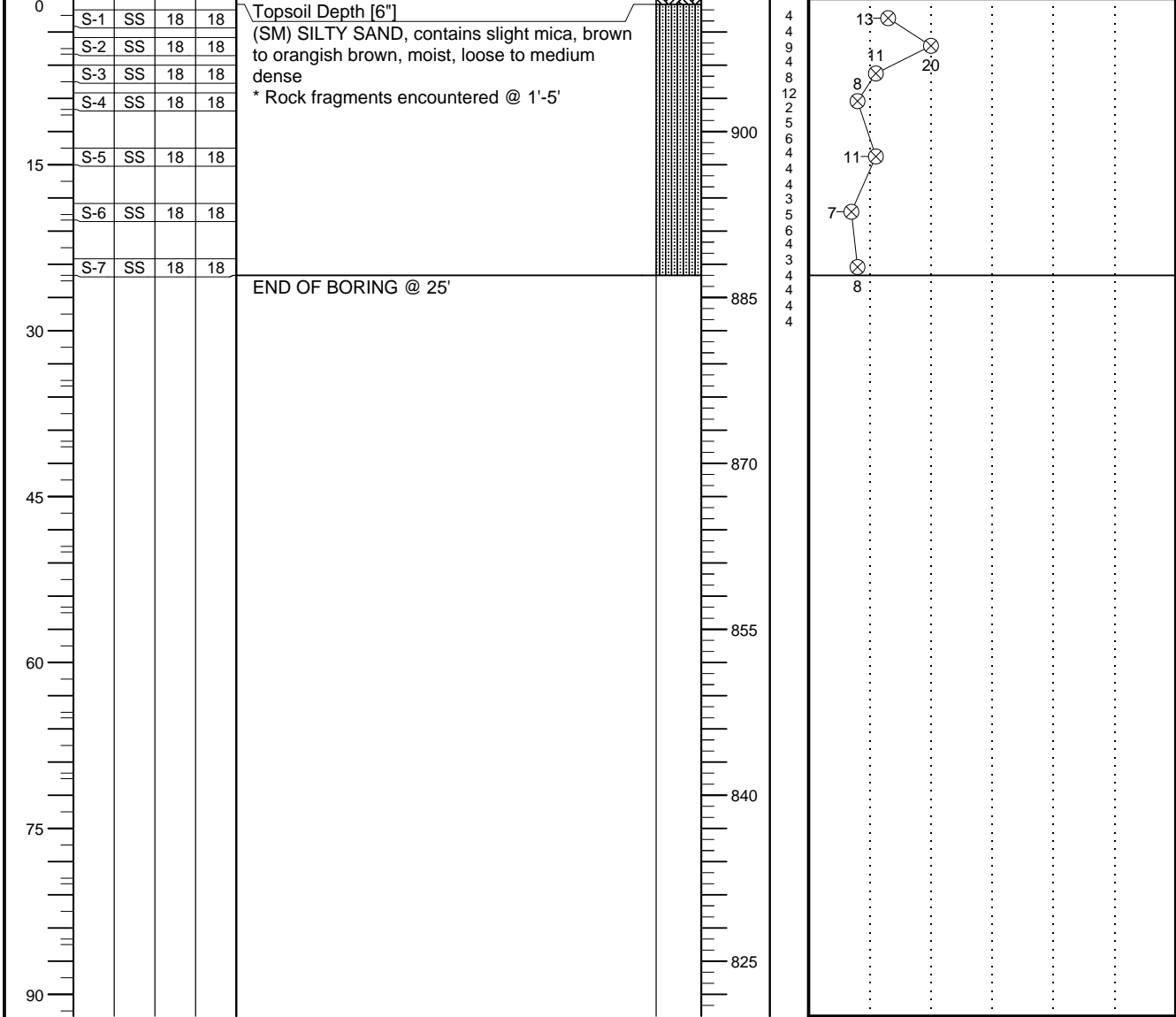
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 912			

○ CALIBRATED PENETROMETER TONS/FT²





ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

 WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
 WL(SHW)  WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
 WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-35	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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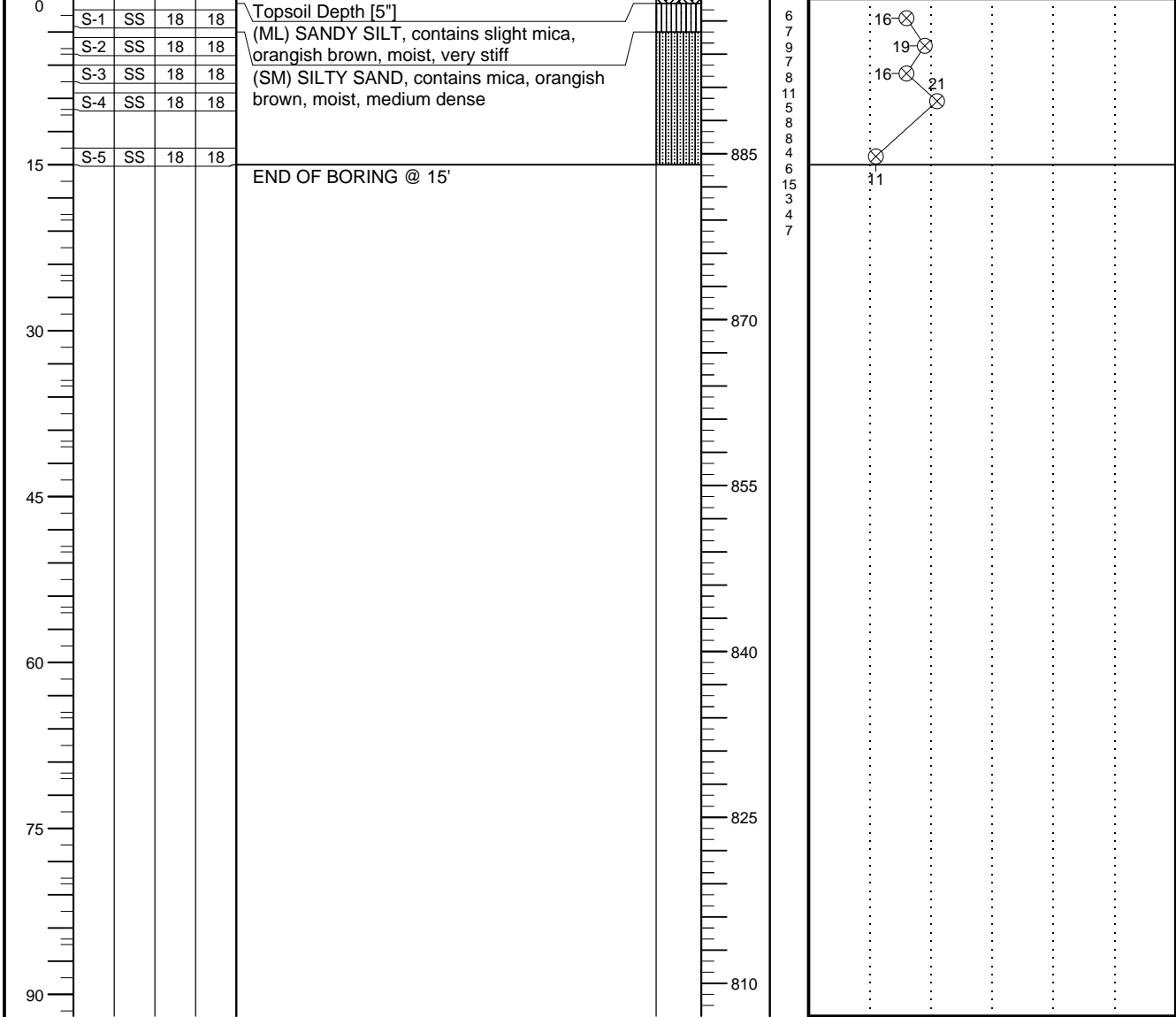
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 899			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

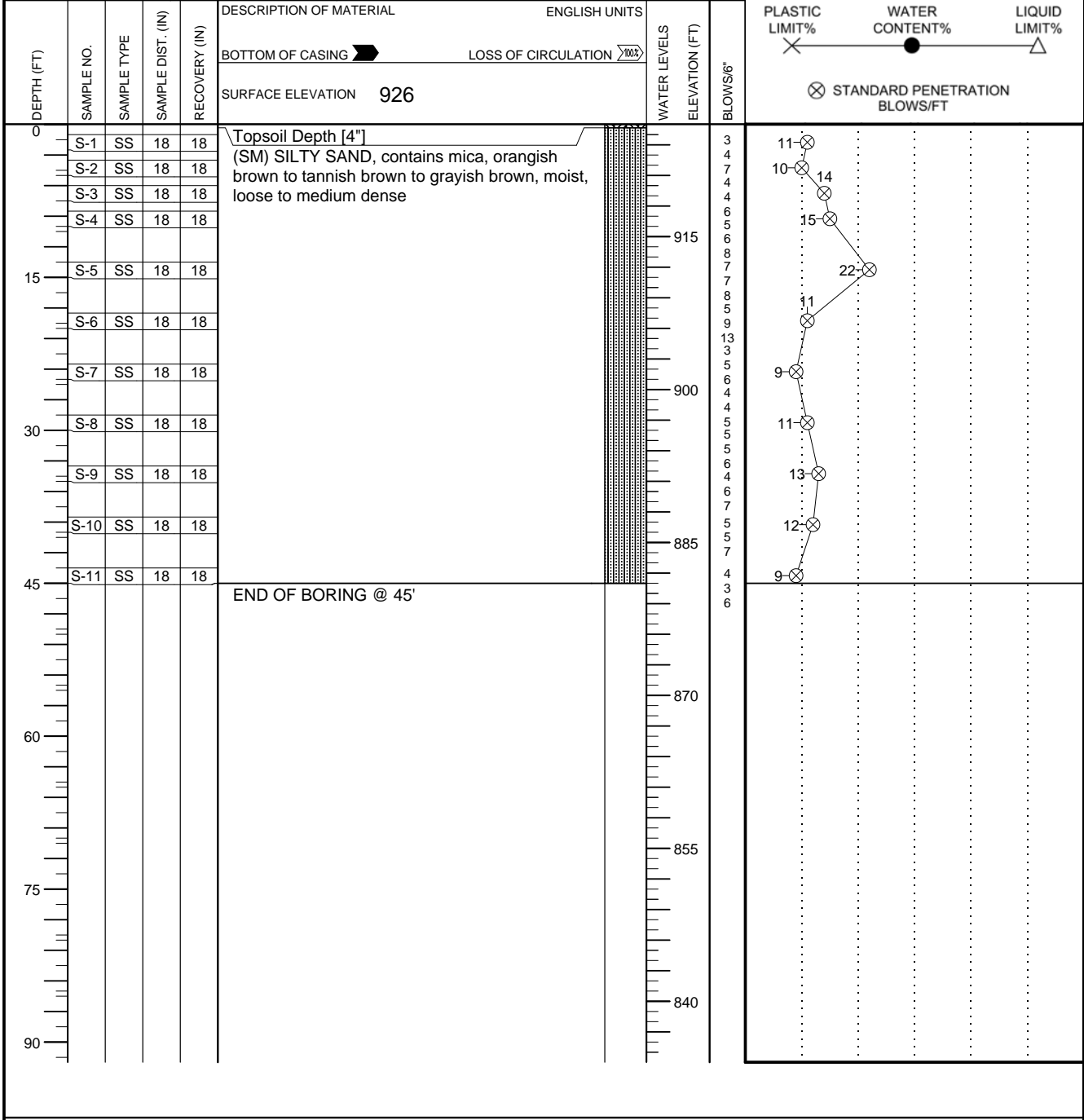


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA


CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-36	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	

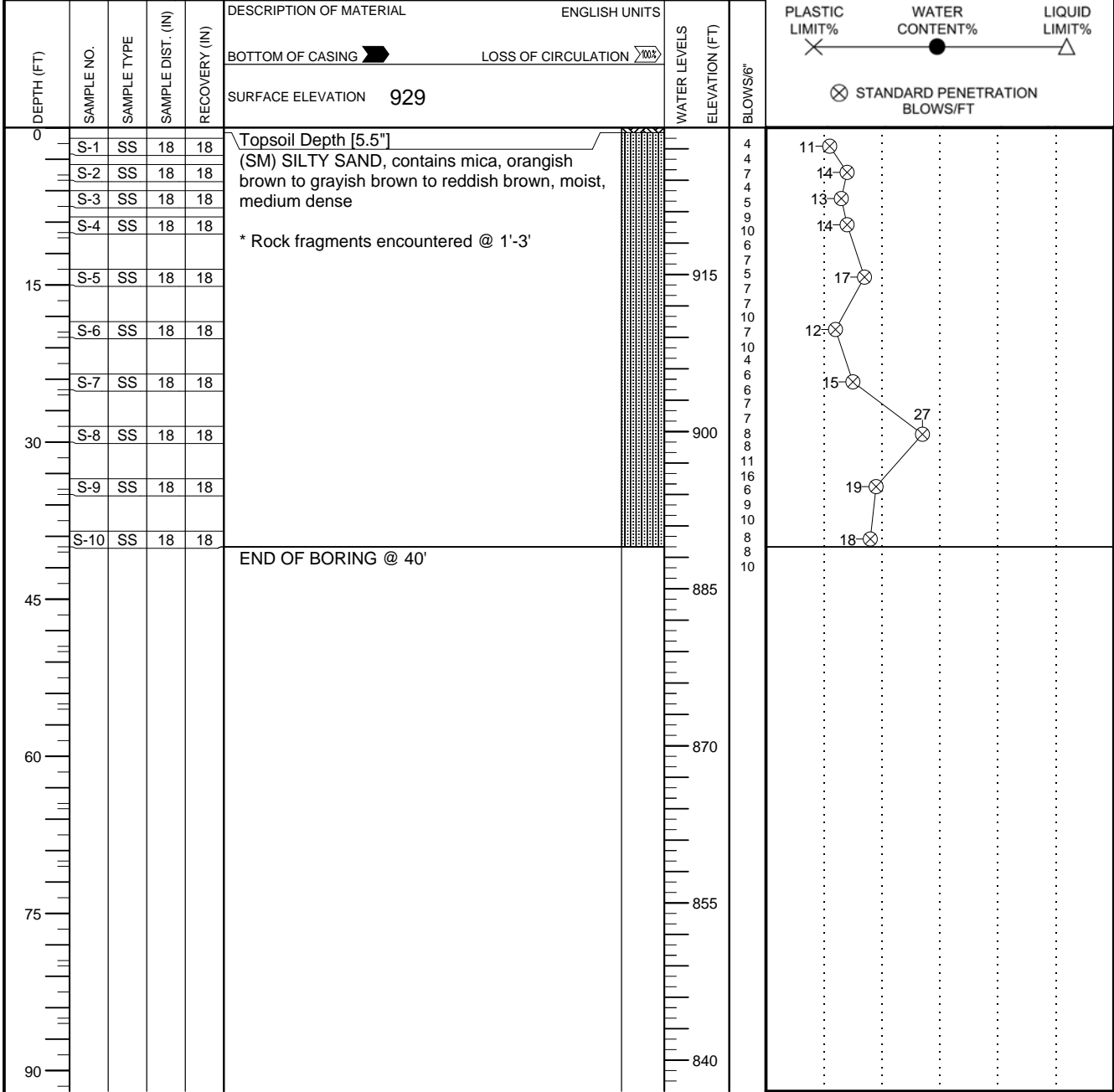


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/21/18	HAMMER TYPE Manual
WL			RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA


CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-37	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	

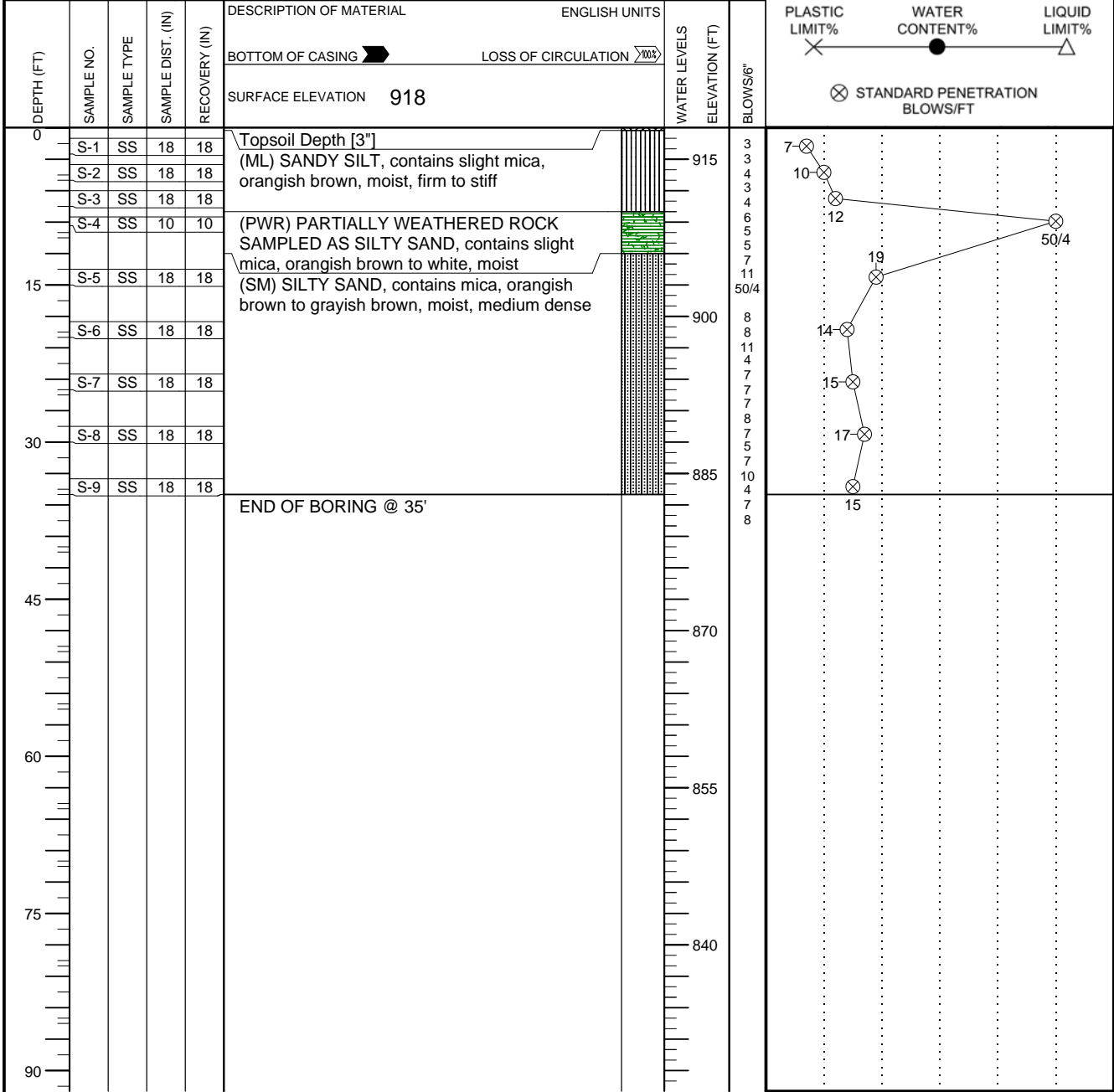


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/22/18	HAMMER TYPE Manual
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-38	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— ▲ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

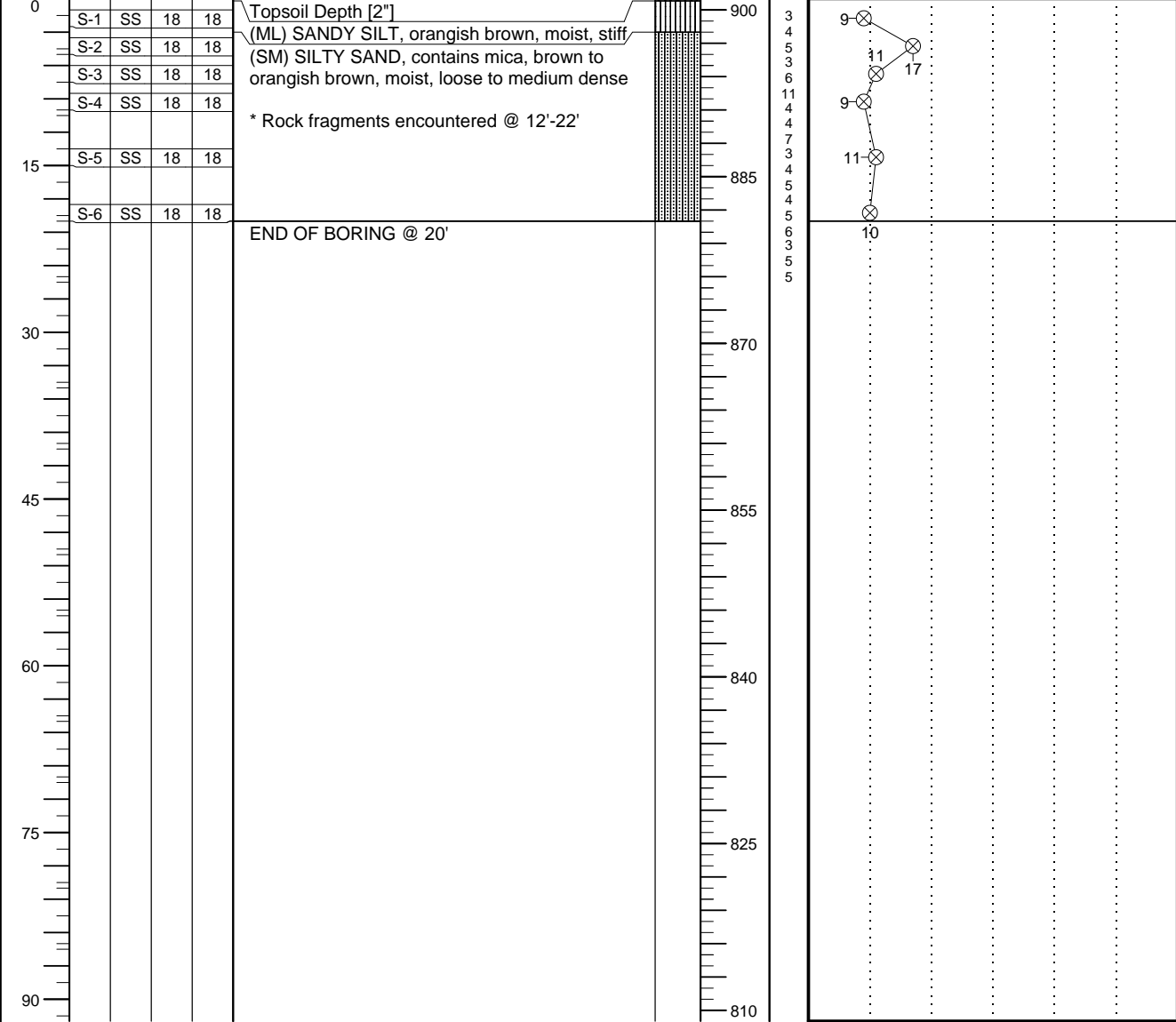
<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED	07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/21/18	HAMMER TYPE Manual
<input checked="" type="checkbox"/> WL	RIG	Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-39	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		



○ CALIBRATED PENETROMETER TONS/FT²


ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-40	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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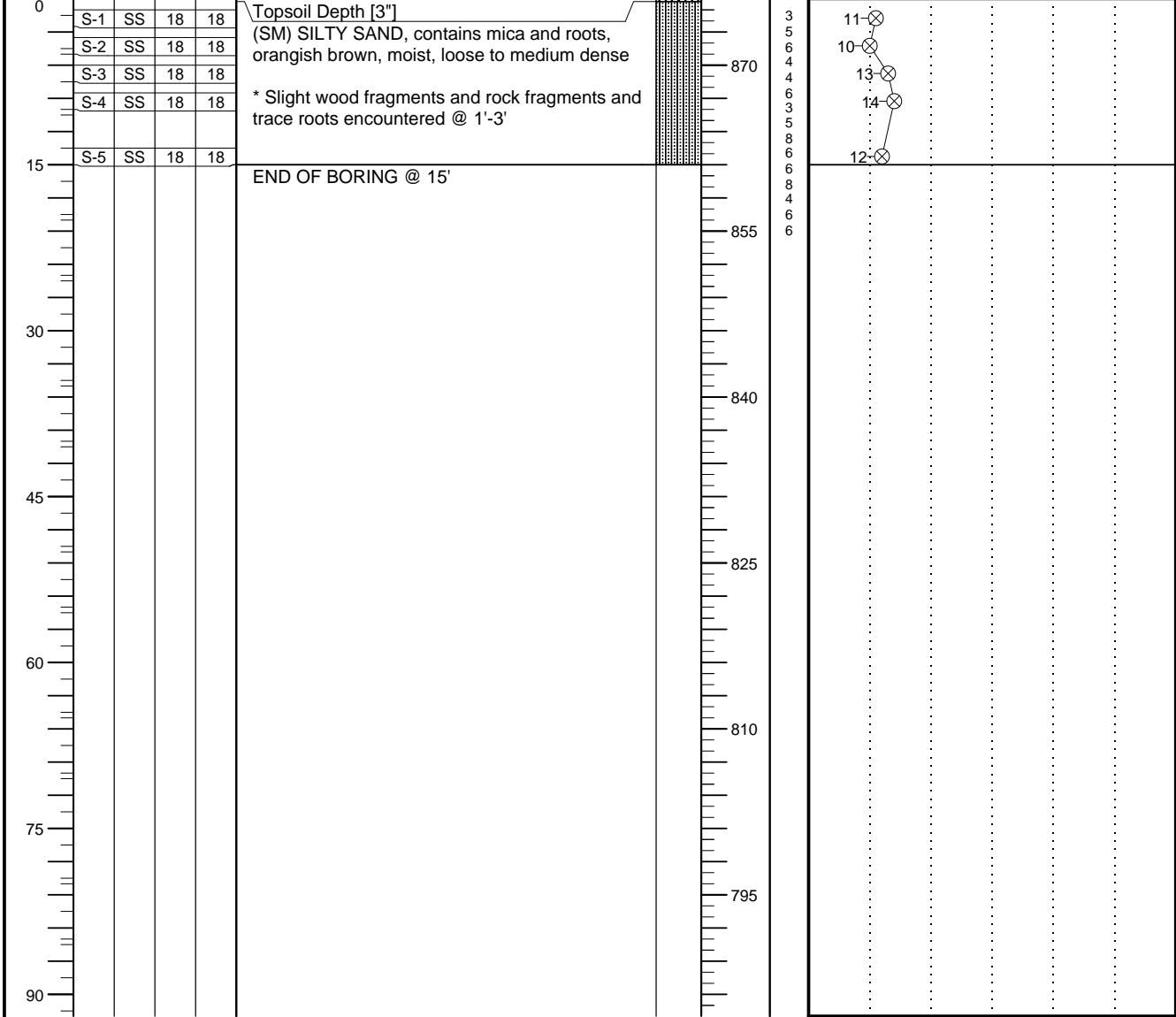
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 876			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-41	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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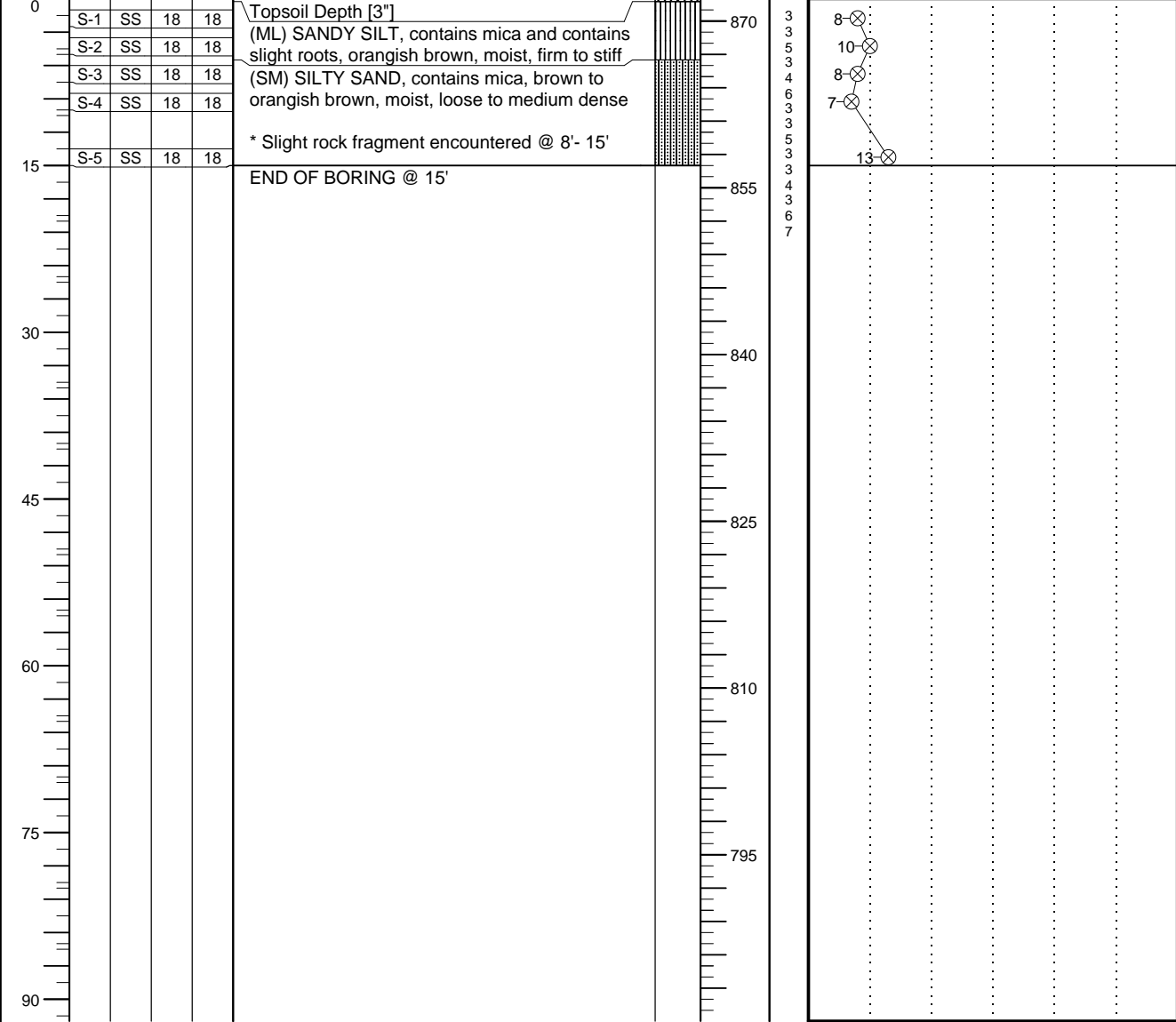
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS(6')
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 872			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-42	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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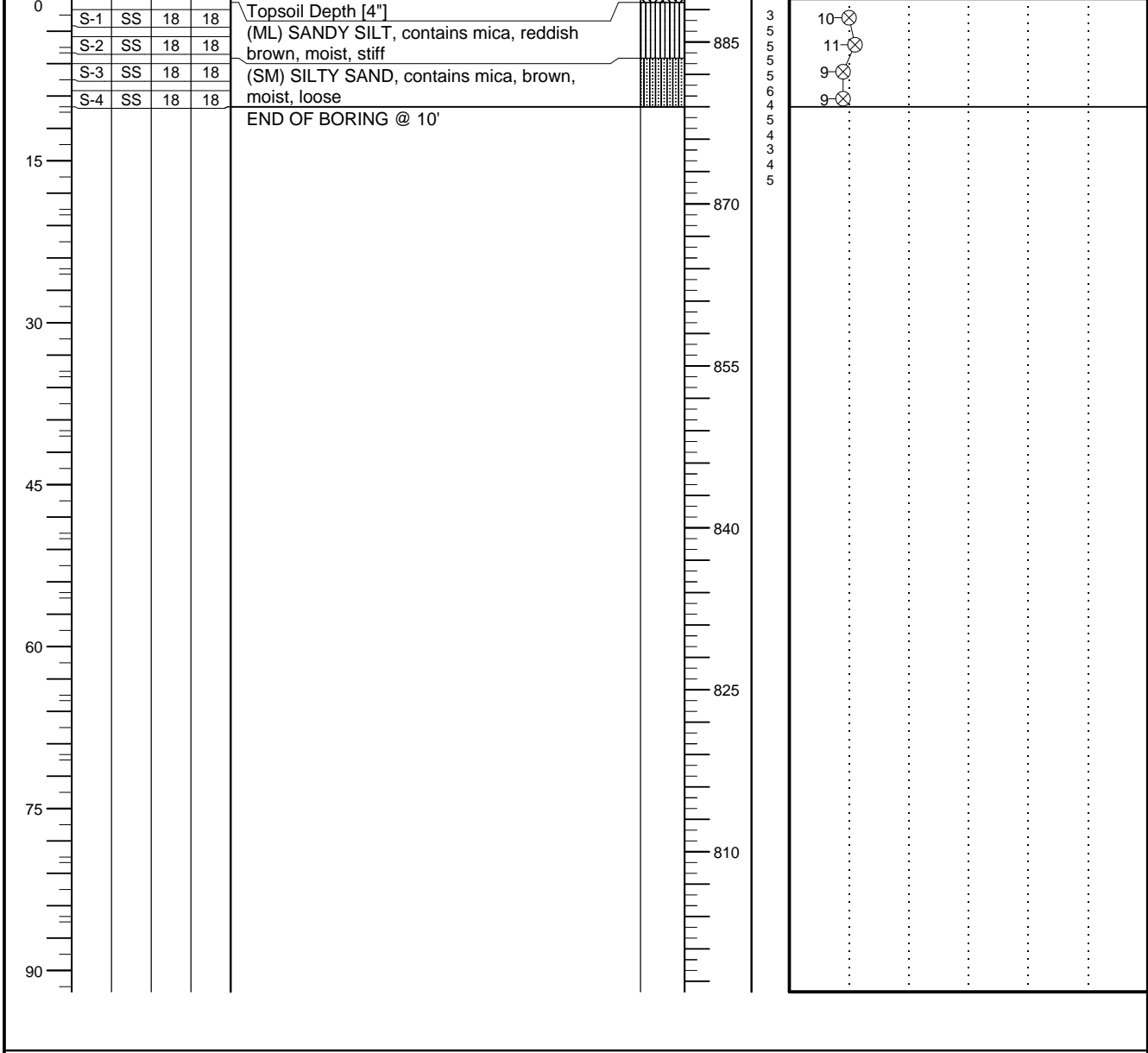
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 889			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

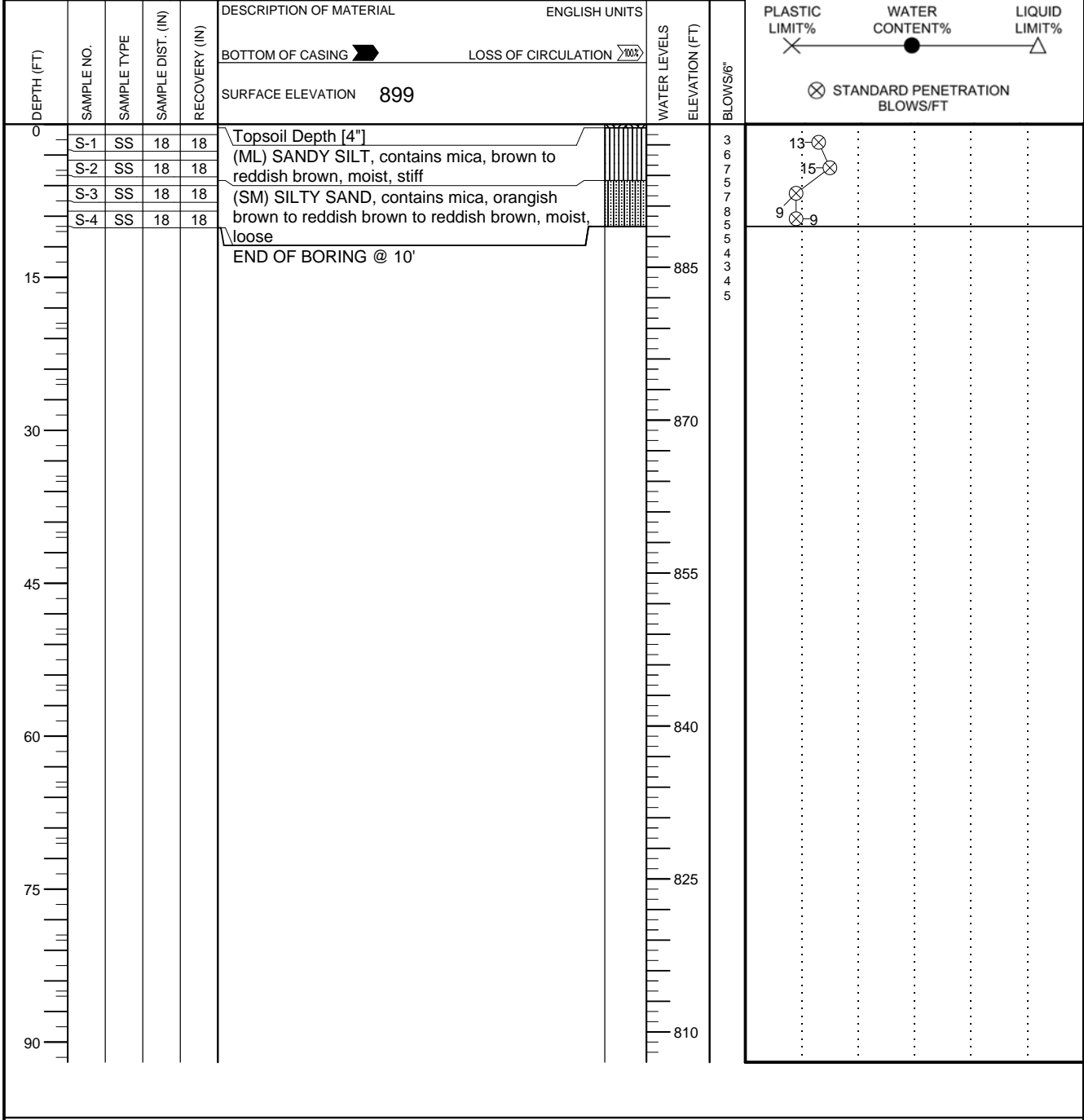


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/20/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/20/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA


CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-43	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ———
NORTHING	EASTING	STATION	PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ————— ● ————— △ ⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED	07/20/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/20/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-44	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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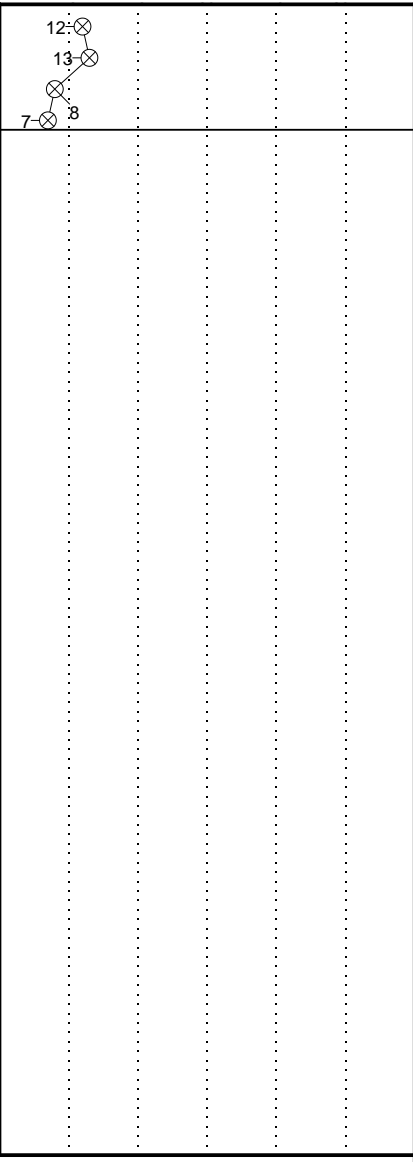
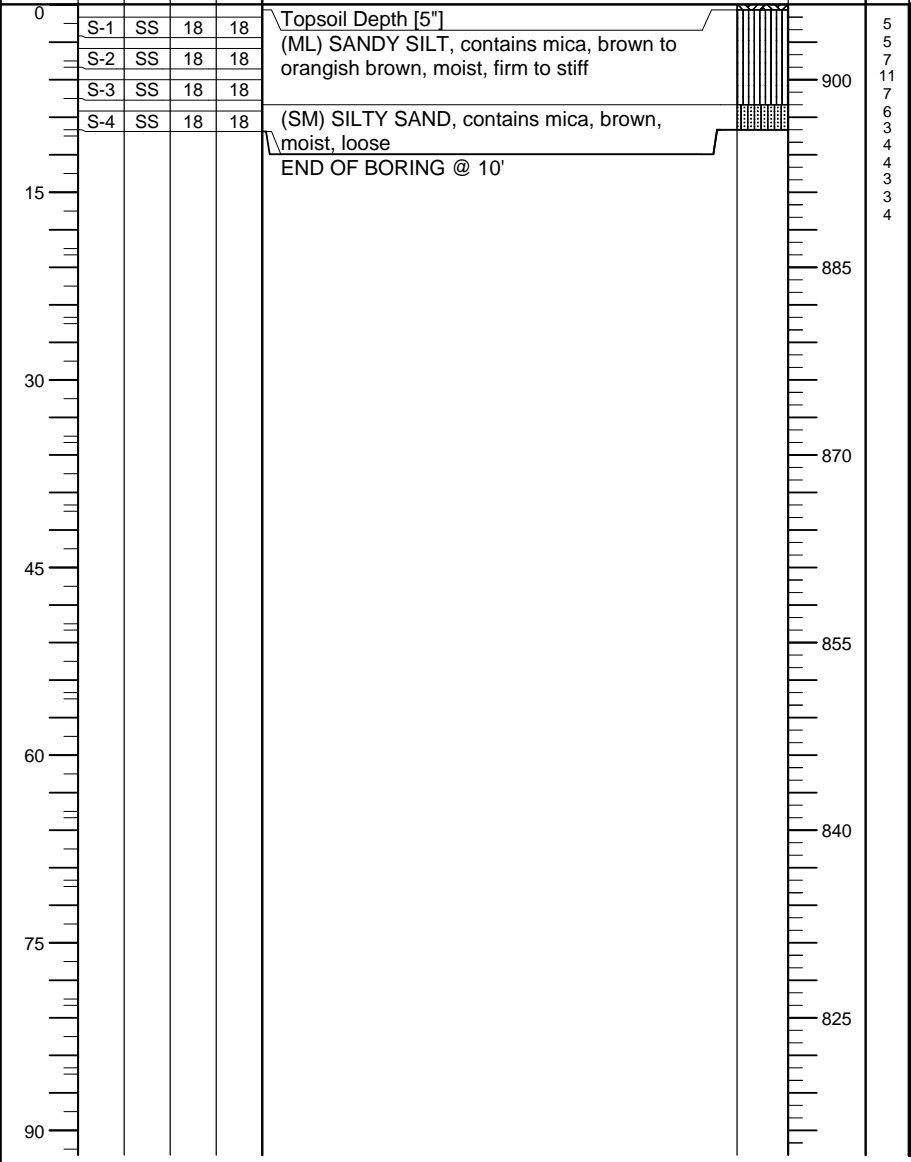
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	906		



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/20/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/20/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-45	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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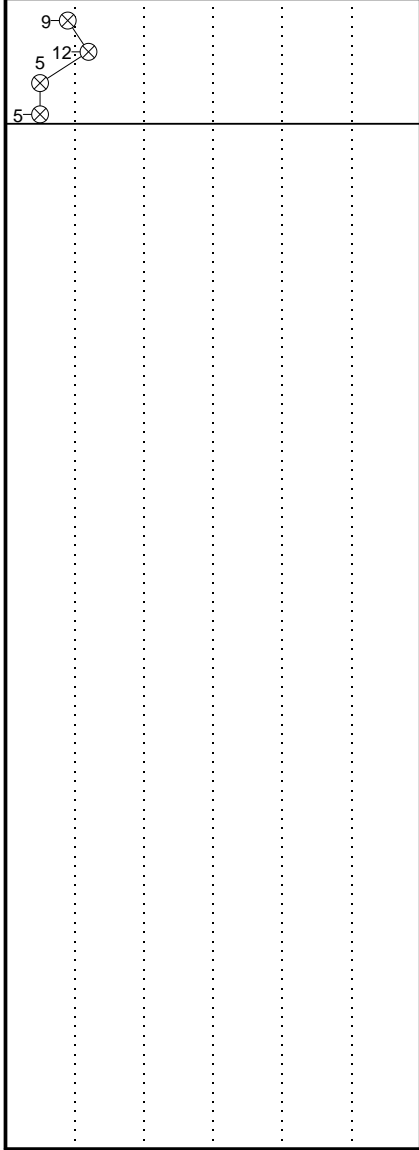
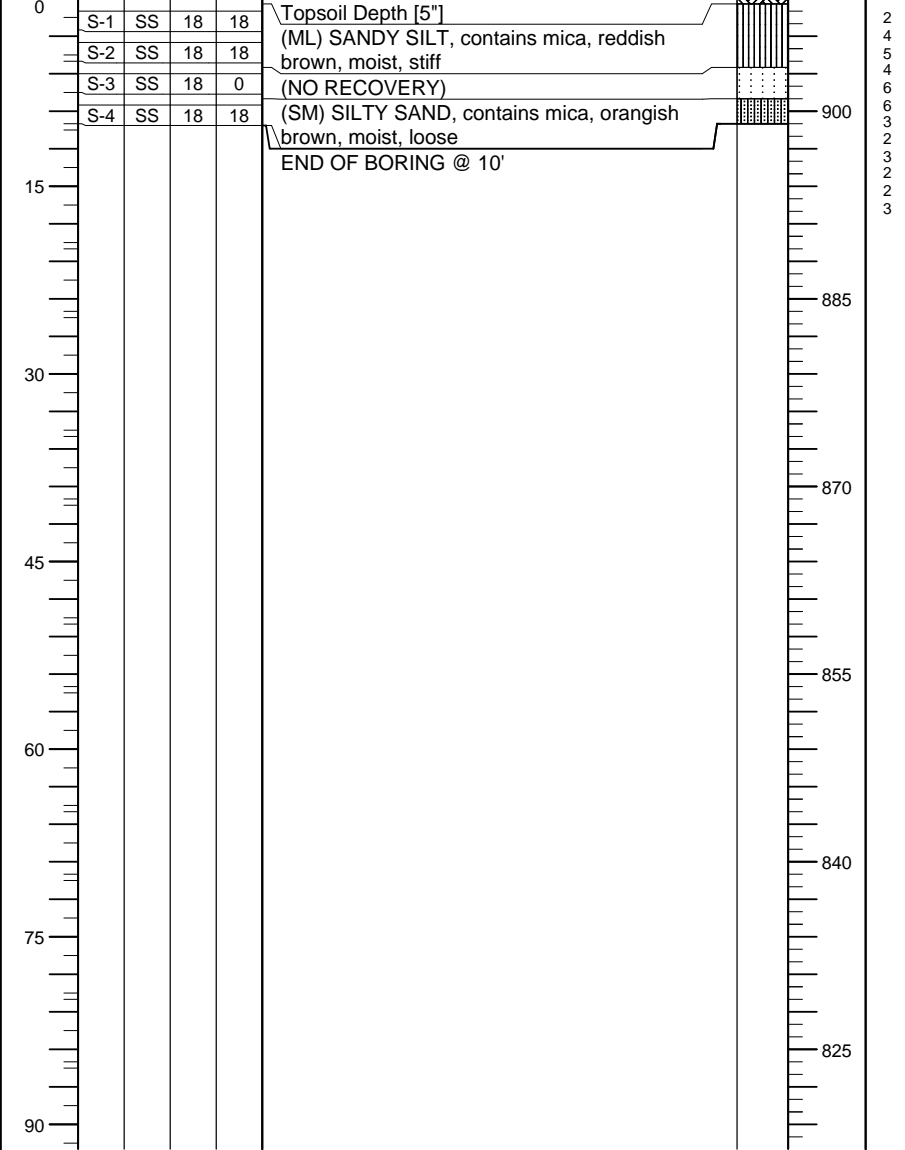
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%


⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS(6')
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	909		



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

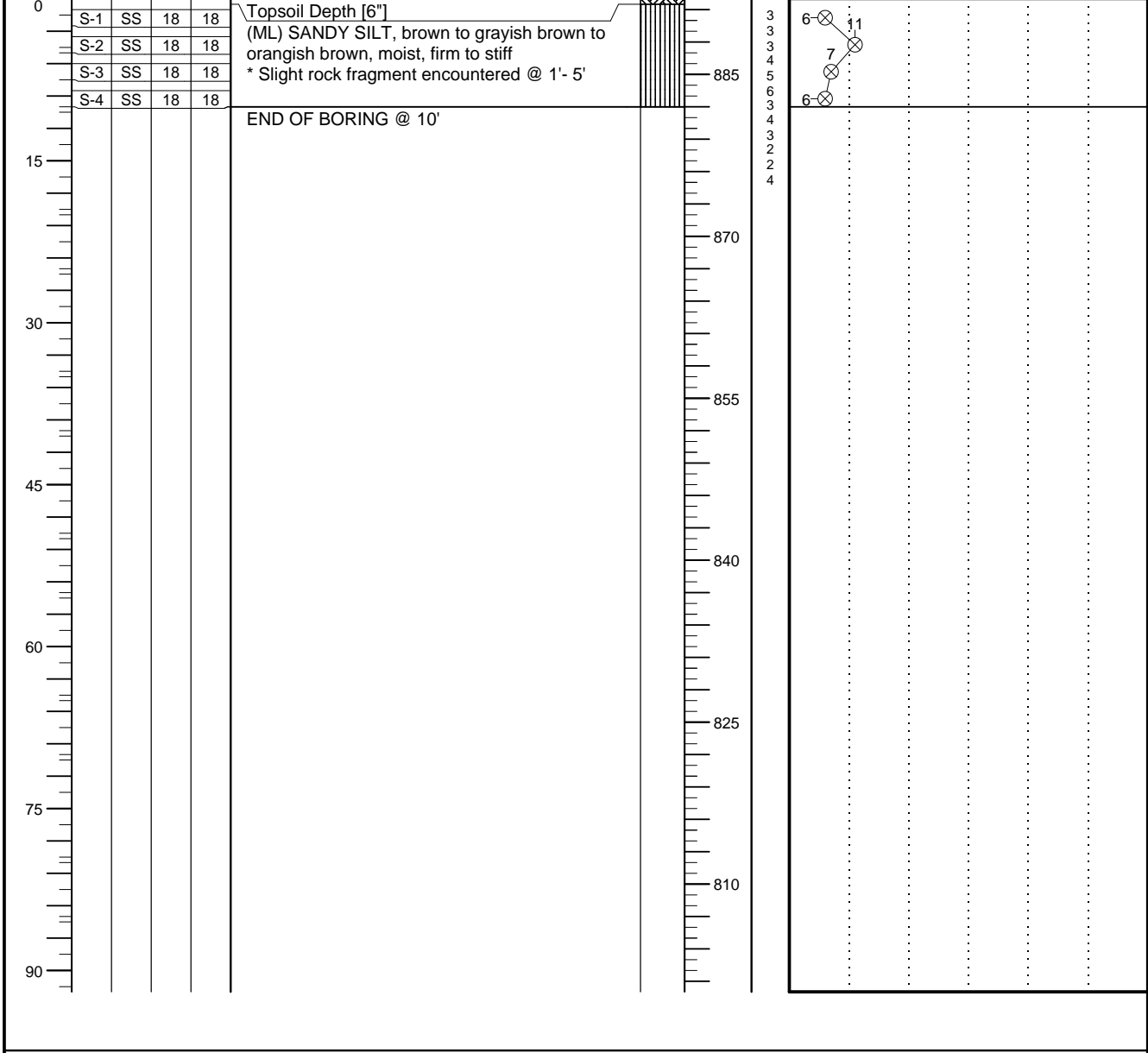
WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/20/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/20/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-46	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL ENGLISH UNITS BOTTOM OF CASING LOSS OF CIRCULATION SURFACE ELEVATION 892	WATER LEVELS ELEVATION (FT)	BLOWS(6')	○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% _____ PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% ● ▲ ⊗ STANDARD PENETRATION BLOWS/FT
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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN JD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-47	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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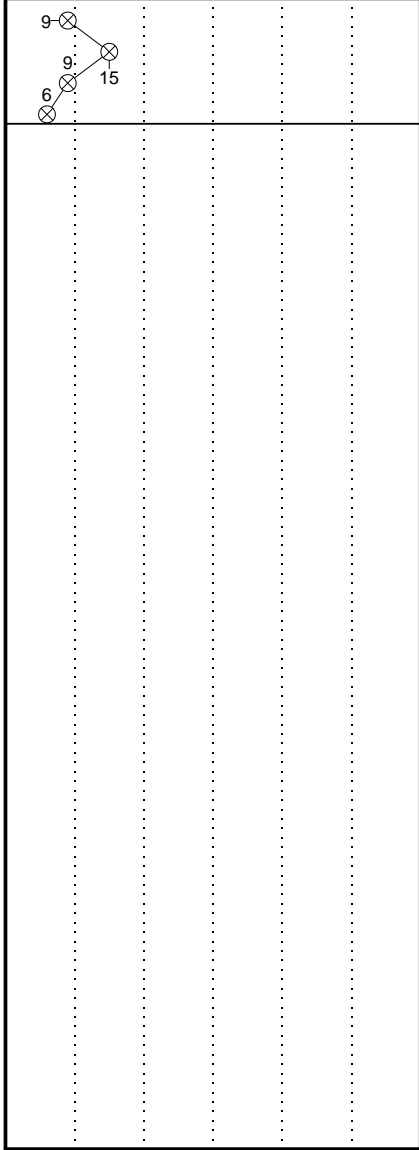
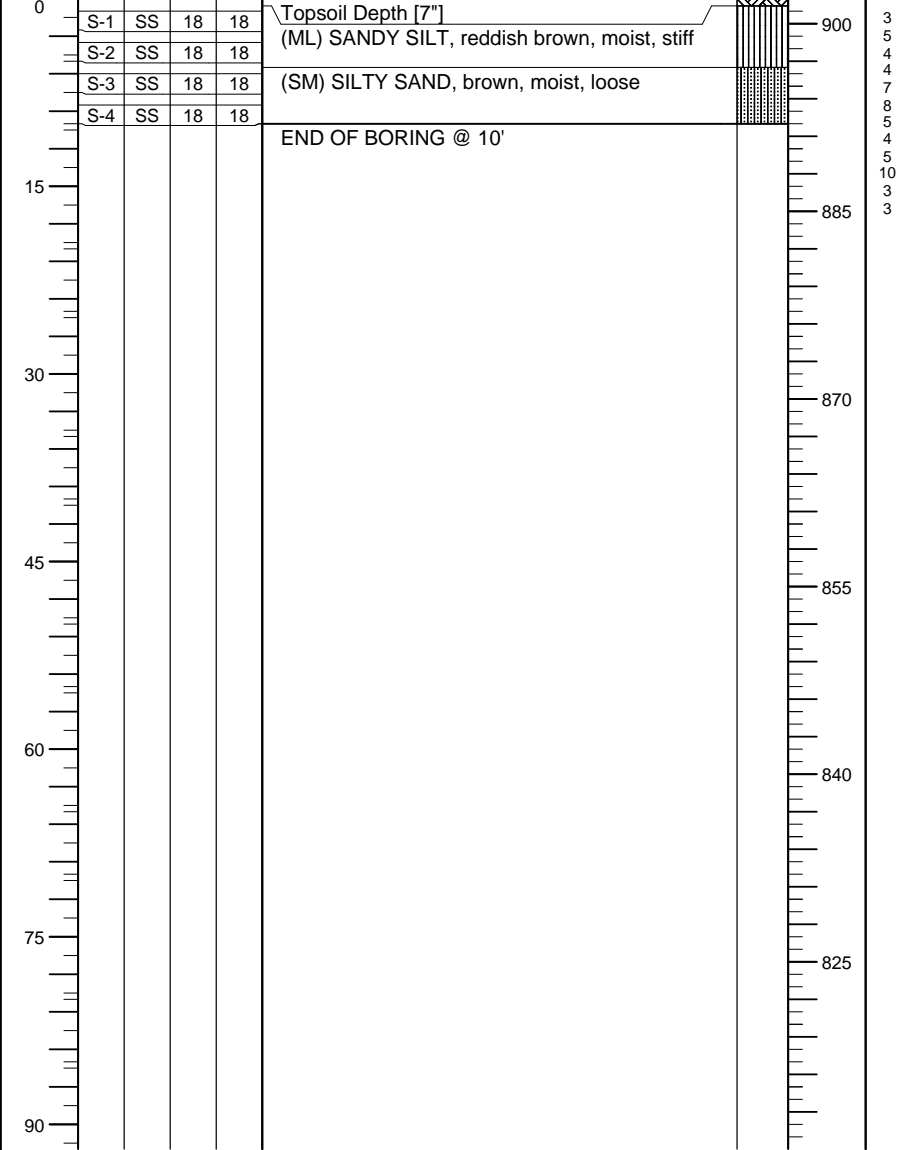
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	902		



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED	07/21/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-48	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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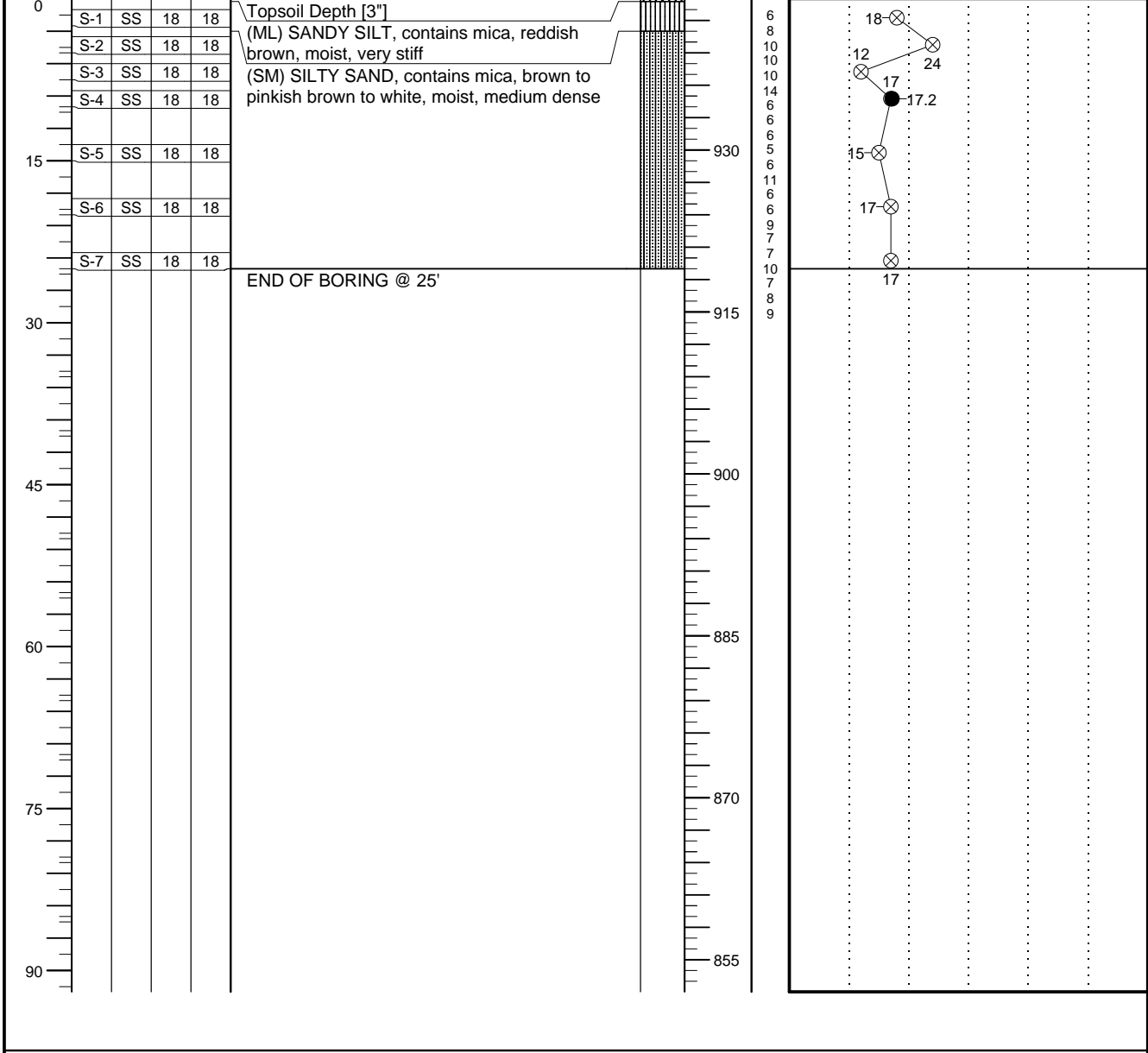
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 944			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

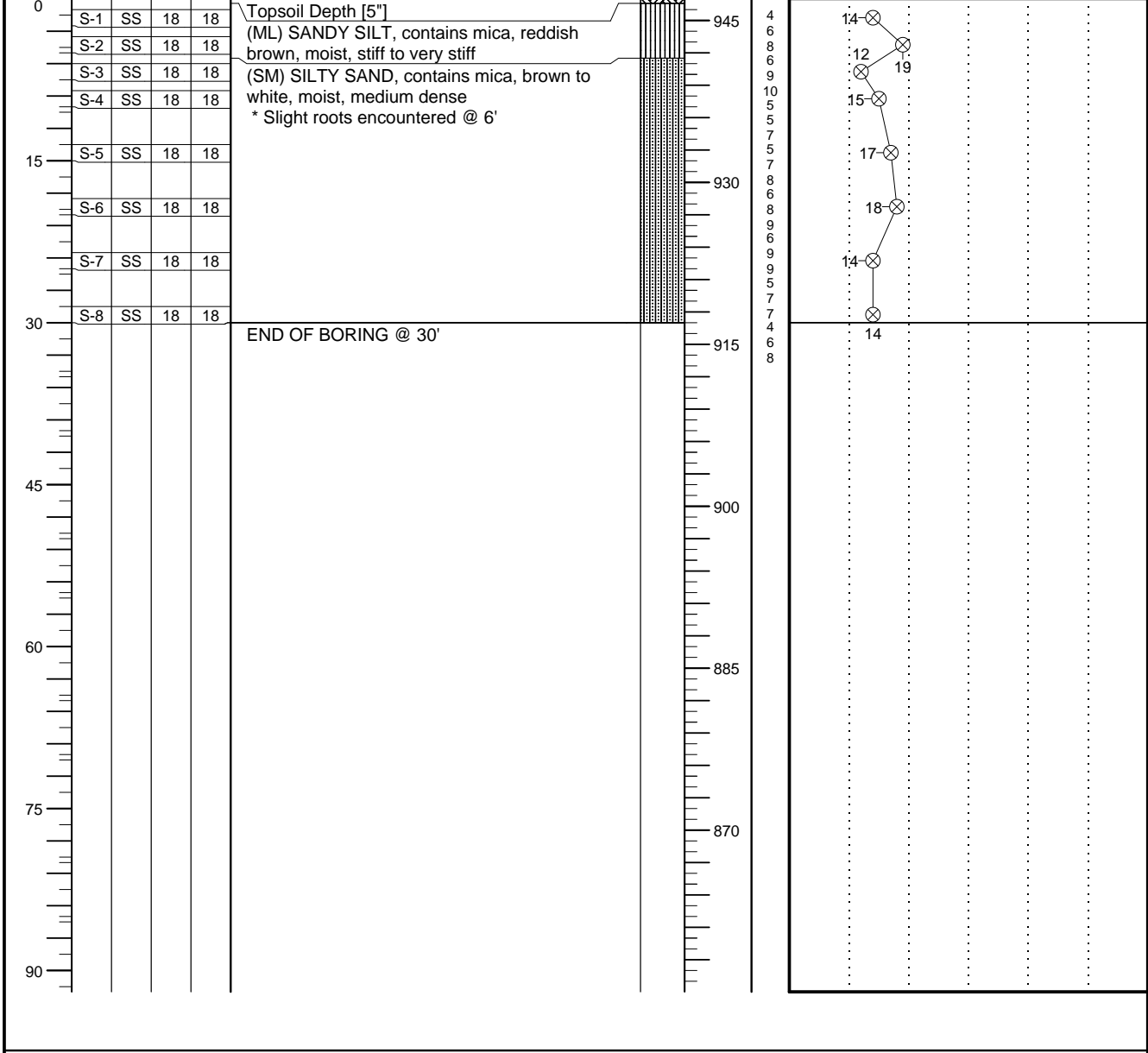
<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-49	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'	ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - -	PLASTIC LIMIT% X	WATER CONTENT% ●	LIQUID LIMIT% △
					BOTTOM OF CASING	LOSS OF CIRCULATION						
					SURFACE ELEVATION 947							



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

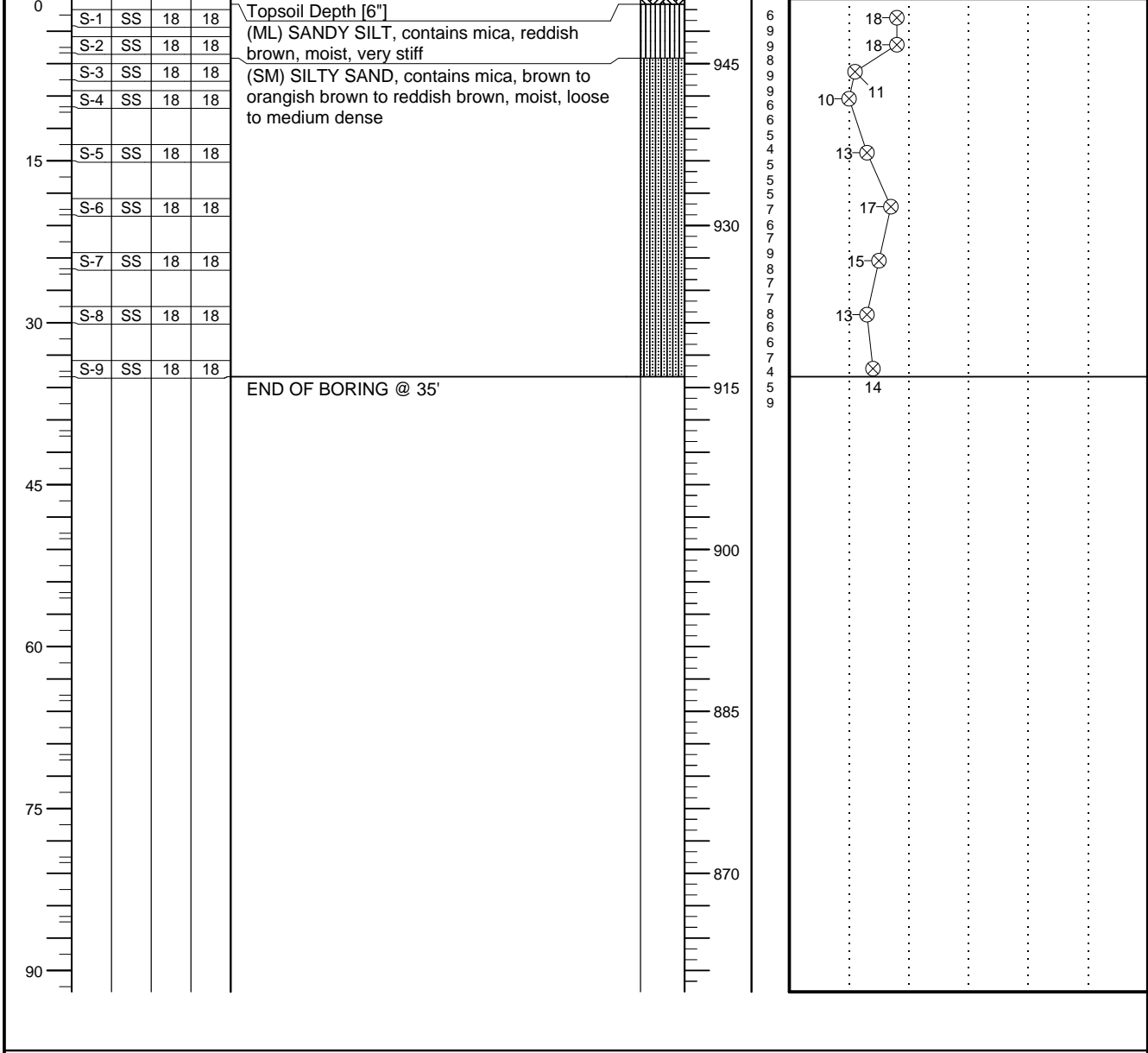
WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/23/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/23/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-50	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	951		





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/21/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN DD	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-51	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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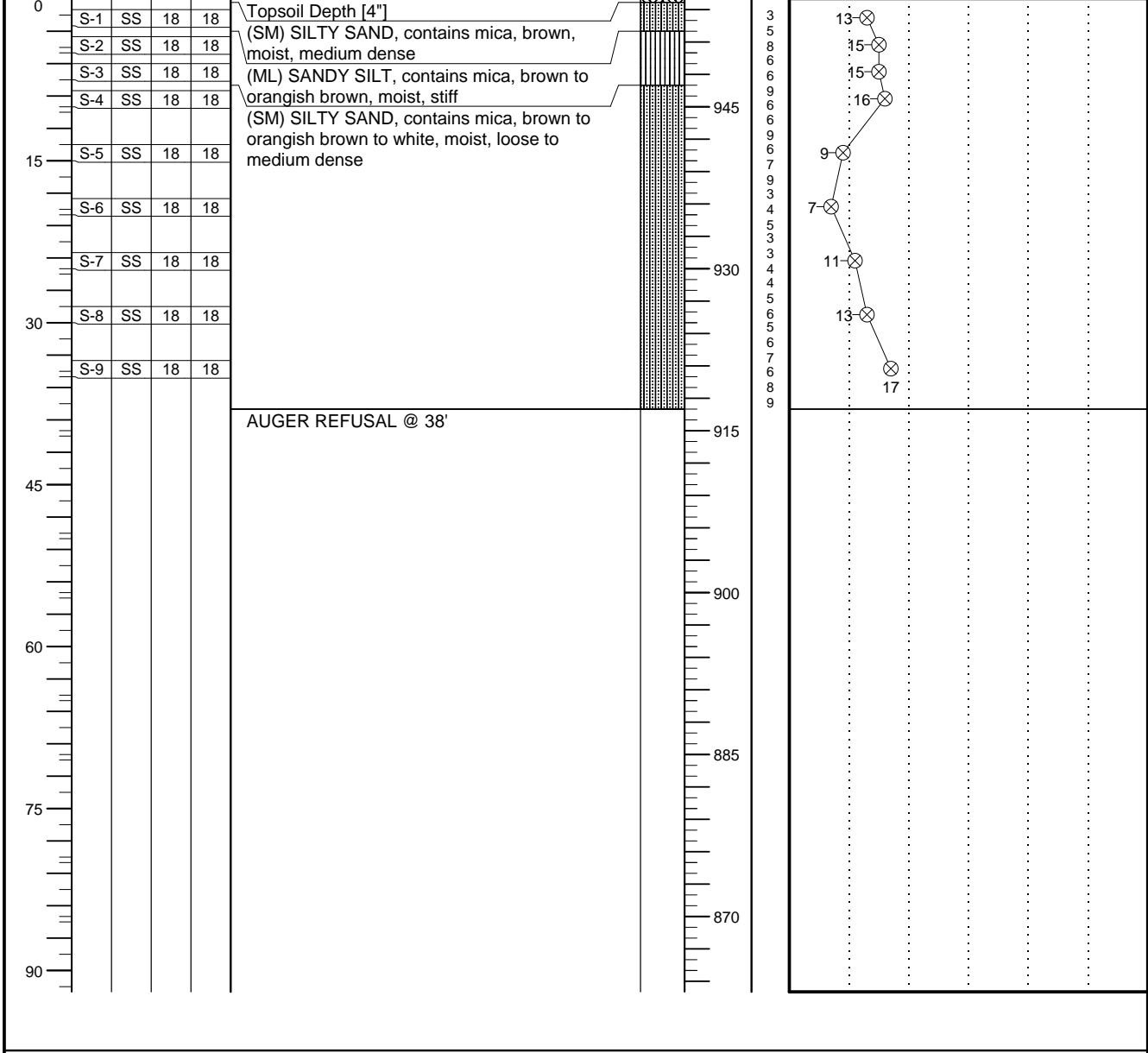
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 955			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-52	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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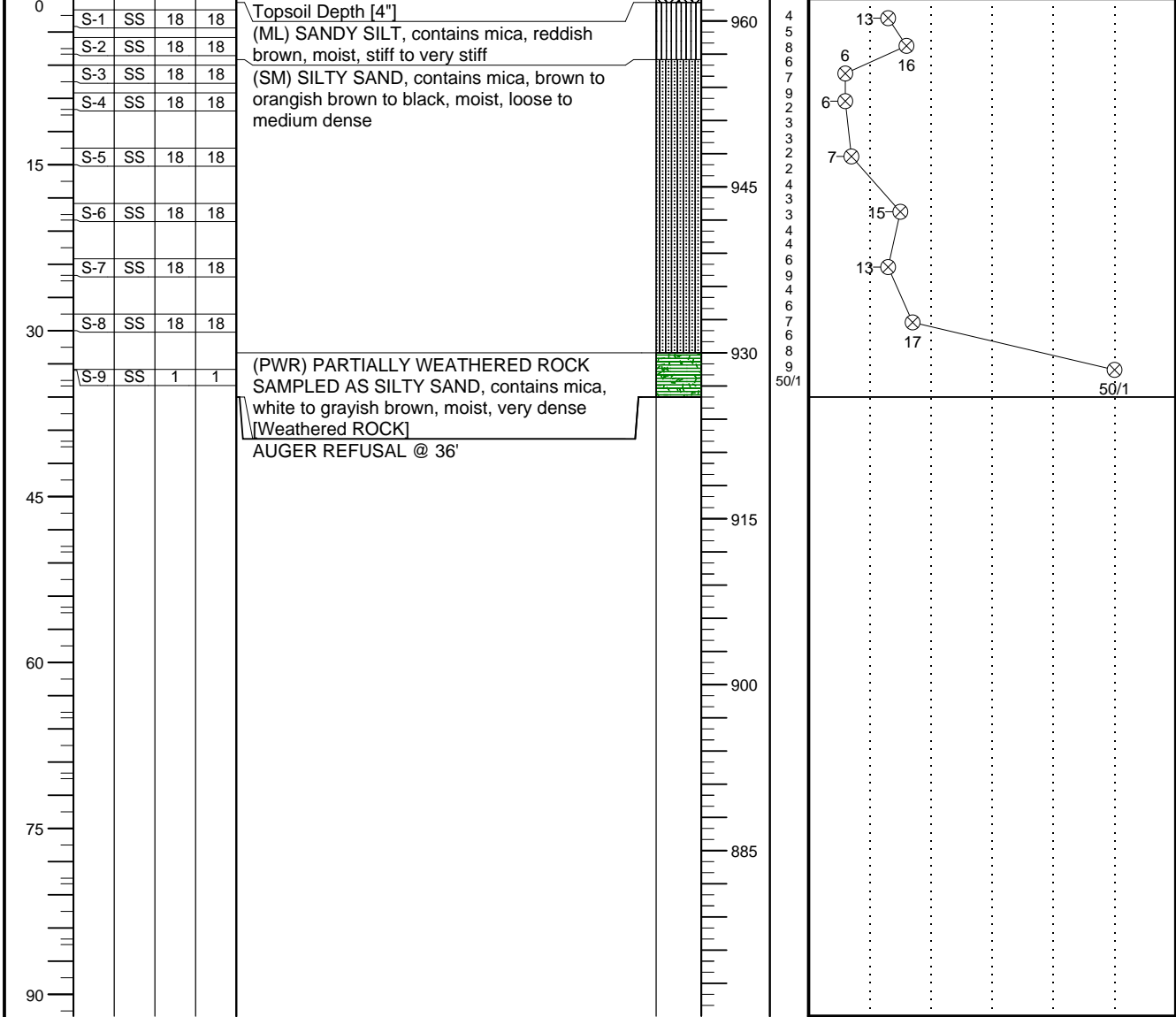
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	962		

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

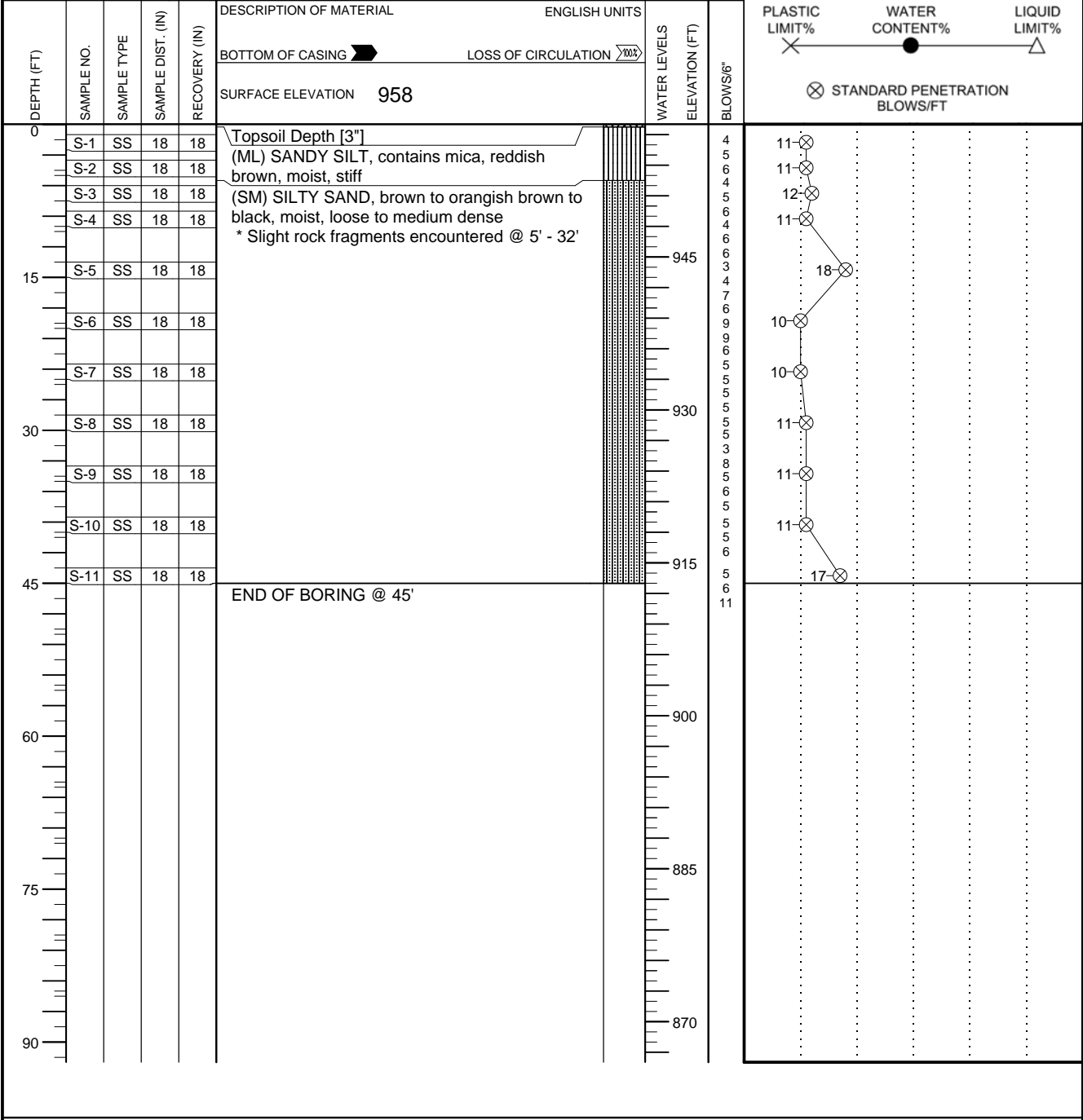


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-53	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% ——— PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	

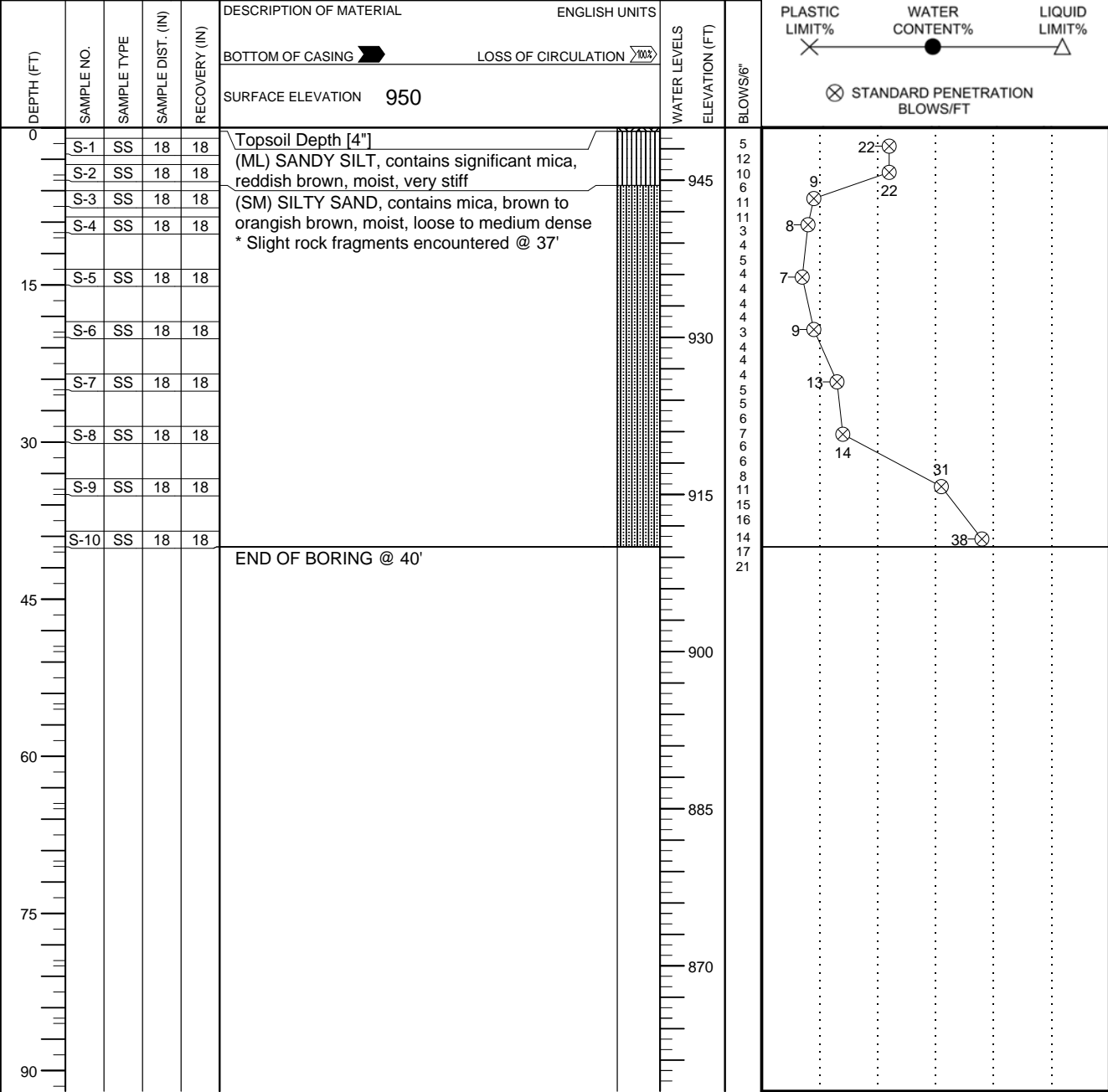


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/22/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-54	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA			○ CALIBRATED PENETROMETER TONS/FT ² ROCK QUALITY DESIGNATION & RECOVERY RQD% - - - REC% - - - PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT% X ● △ ⊗ STANDARD PENETRATION BLOWS/FT
NORTHING	EASTING	STATION	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

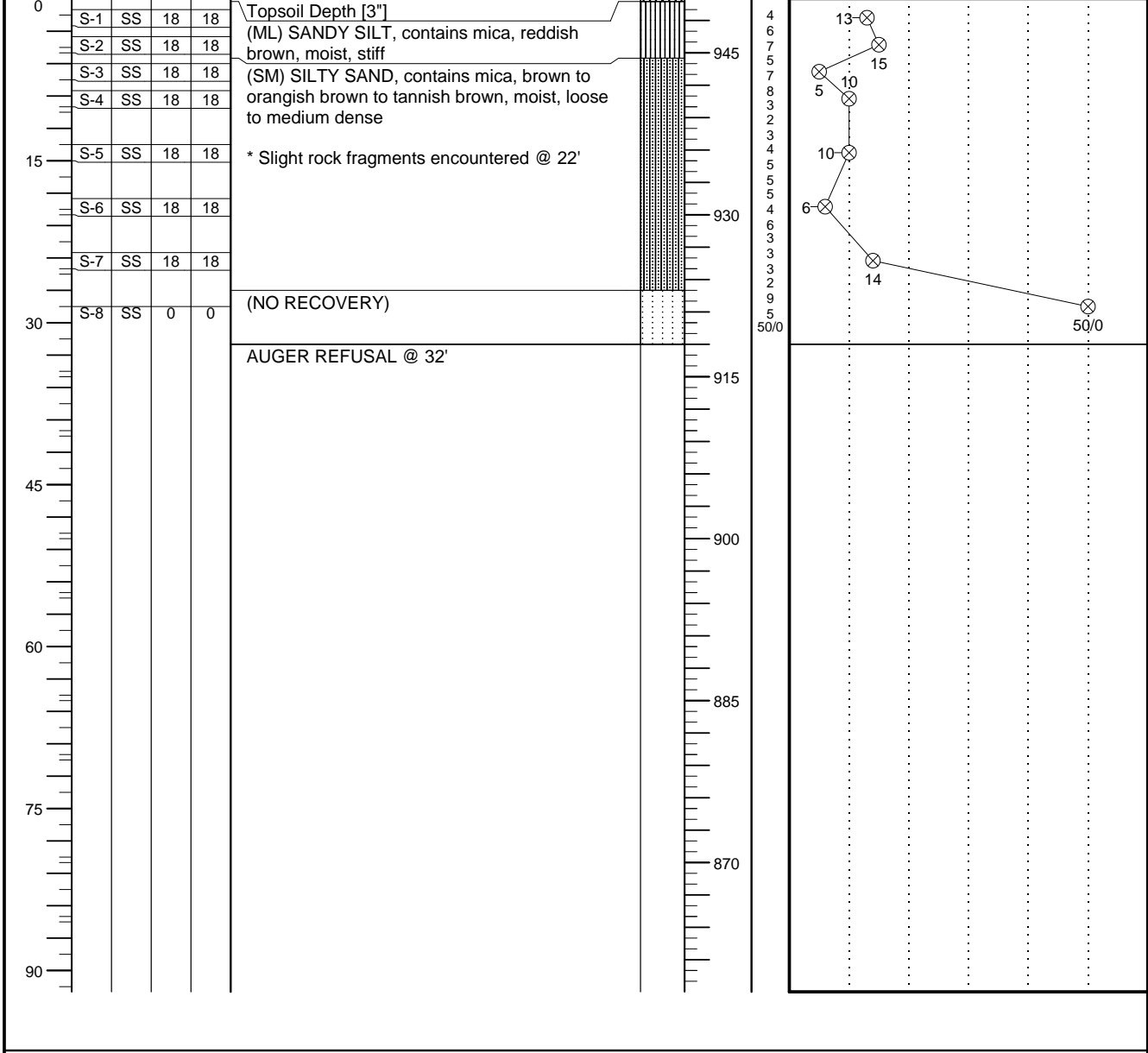
WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-55	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 950			

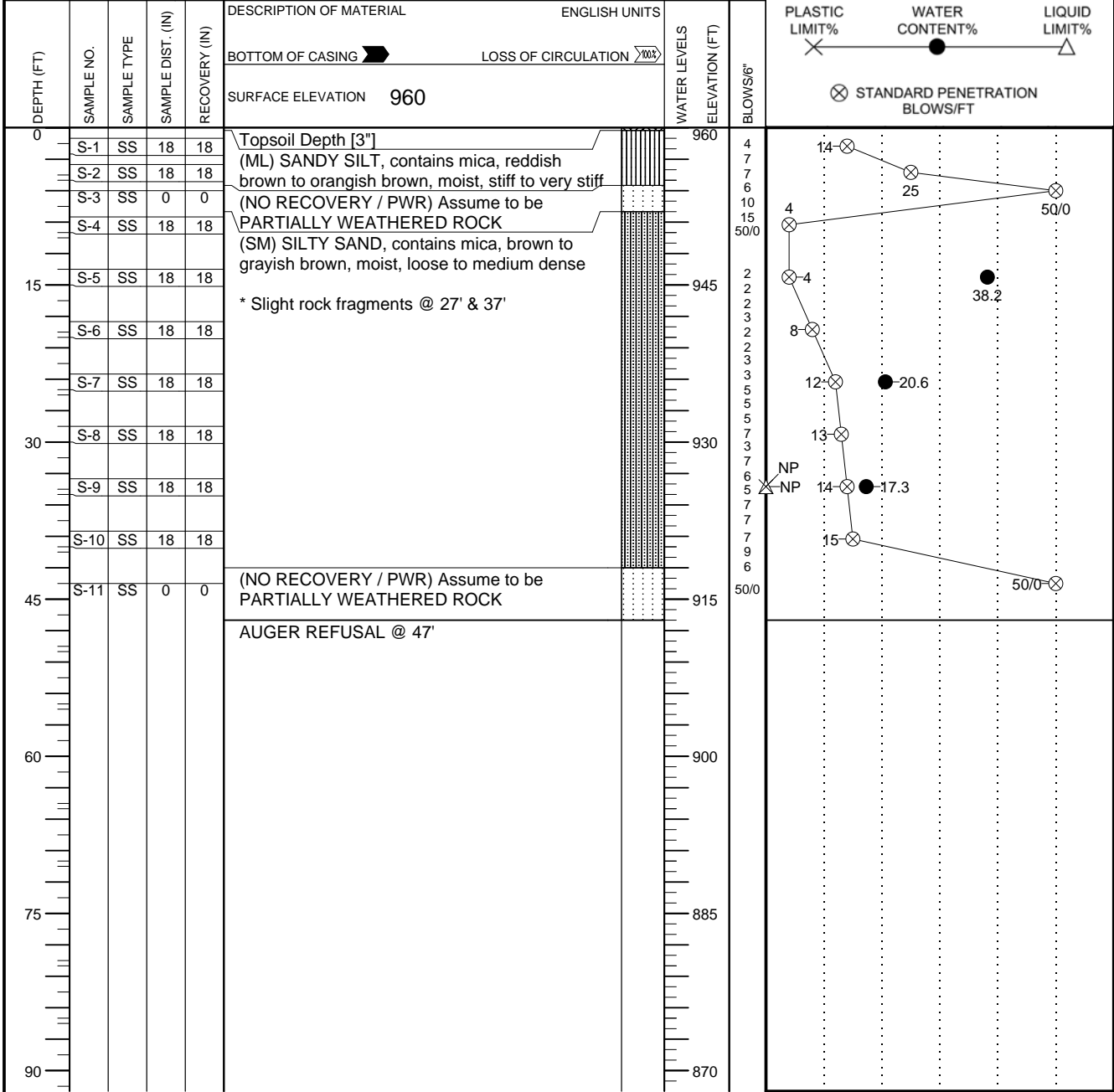


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-56	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION Jefferson, Jackson County, GA		
NORTHING	EASTING	STATION



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/22/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

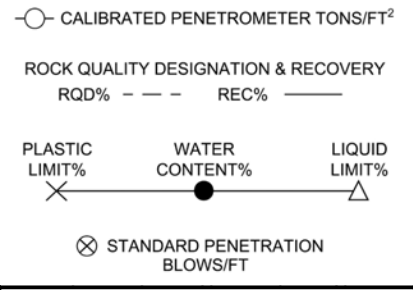
CLIENT	Job #:	BORING #	SHEET
Jackson County Schools	10:9918	B-57	1 OF 1
PROJECT NAME		ARCHITECT-ENGINEER	
West Jackson High-Middle School			



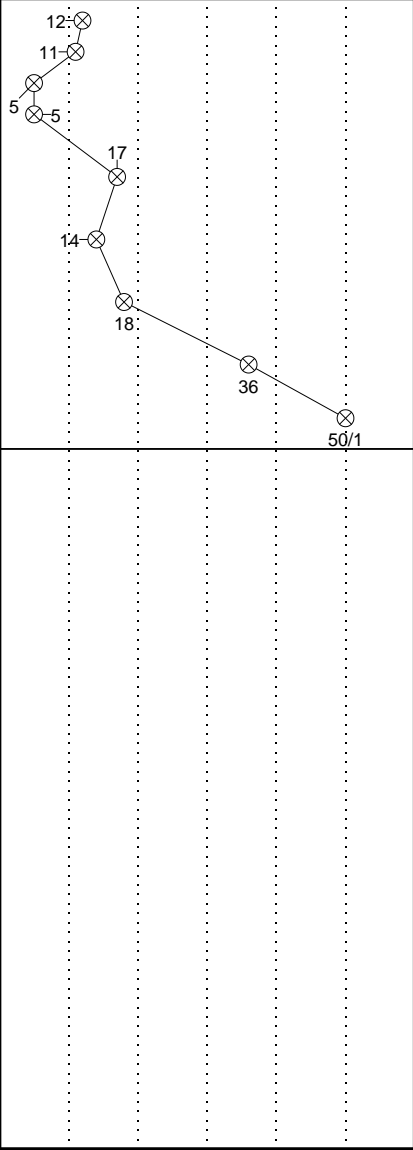
SITE LOCATION

Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
SURFACE ELEVATION 965								
0					Topsoil Depth [5"]			
0	S-1	SS	18	18	(ML) SANDY SILT, contains mica, reddish brown, moist, stiff		960	
0	S-2	SS	18	18	(SM) SILTY SAND, contains mica, brown to grayish brown, moist, loose to medium dense			
0	S-3	SS	18	18	* Slight rock fragments @ 12'-17'			
0	S-4	SS	18	18				
15	S-5	SS	18	18				
15	S-6	SS	18	18				
15	S-7	SS	18	18				
30	S-8	SS	18	18	(SM) SILTY SAND, contains mica, brown to grayish brown, moist, dense			
30	S-9	SS	1	1	(PWR) PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND, contains mica, white to grayish brown, moist		930	
					AUGER REFUSAL @ 36'			
45								
60								
75								
90								



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
WL(SHW)	WL(ACR)		BORING COMPLETED	07/22/18	HAMMER TYPE Auto
WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-58	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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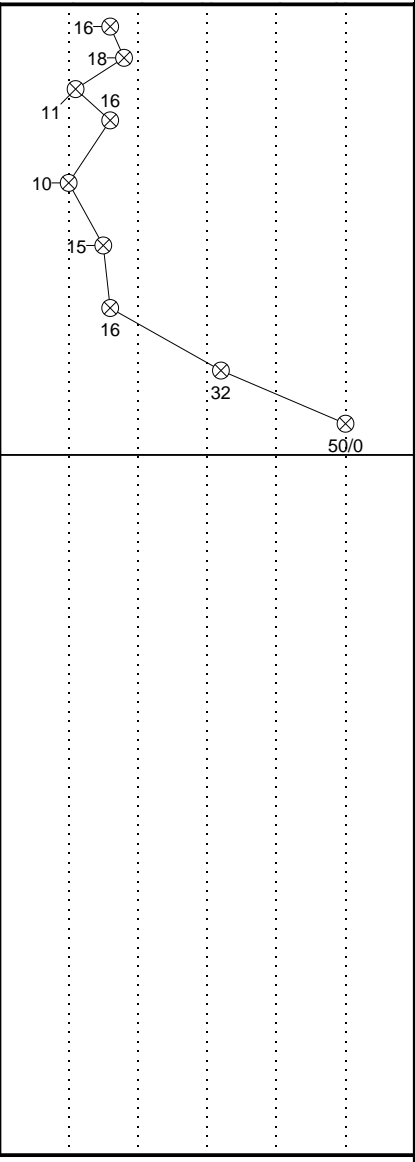
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
0					Topsoil Depth [4"]		960	5
	S-1	SS	18	18	(ML) SANDY SILT, contains mica, reddish brown, moist, stiff to very stiff			7
	S-2	SS	18	18				9
	S-3	SS	18	18				6
	S-4	SS	18	18				7
15	S-5	SS	18	18	(SM) SILTY SAND, contains mica, brown to tannish brown to white, moist, loose to dense * Slight rock fragments @ 17'-30'		945	11
	S-6	SS	18	18				6
	S-7	SS	18	18				5
30	S-8	SS	18	18	(NO RECOVERY / PWR) Assume to be PARTIALLY WEATHERED ROCK		930	10
	S-9	SS	0	0		AUGER REFUSAL @ 36'		885



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-59	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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○ CALIBRATED PENETROMETER TONS/FT²

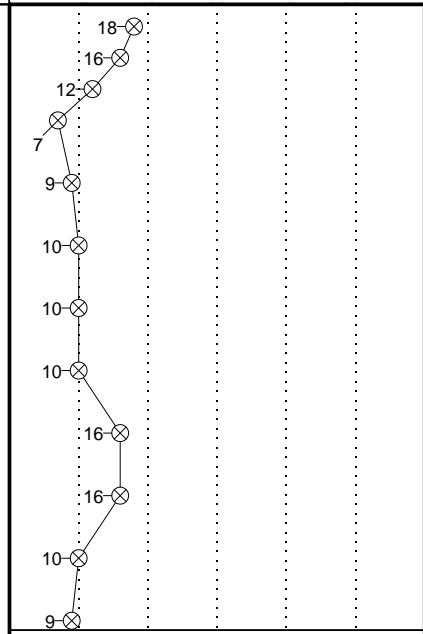
ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	961		

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
0	S-1	SS	18	18	Topsoil Depth [5"]		960	5
	S-2	SS	18	18	(ML) SANDY SILT, contains mica, reddish brown, moist, very stiff			7
	S-3	SS	18	18	(SM) SILTY SAND, contains mica, reddish brown to pinkish brown to black, moist, loose to medium dense			11
	S-4	SS	18	18				16
15	S-5	SS	18	18			945	7
	S-6	SS	18	18				9
	S-7	SS	18	18				12
30	S-8	SS	18	18			930	4
	S-9	SS	18	18				5
	S-10	SS	18	18				5
45	S-11	SS	18	18			915	4
	S-12	SS	18	18				4



60					END OF BORING @ 50'		900	
75							885	
90							870	

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED	07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-60	SHEET 1 OF 1
PROJECT NAME West Jackson High-Middle School		ARCHITECT-ENGINEER	



SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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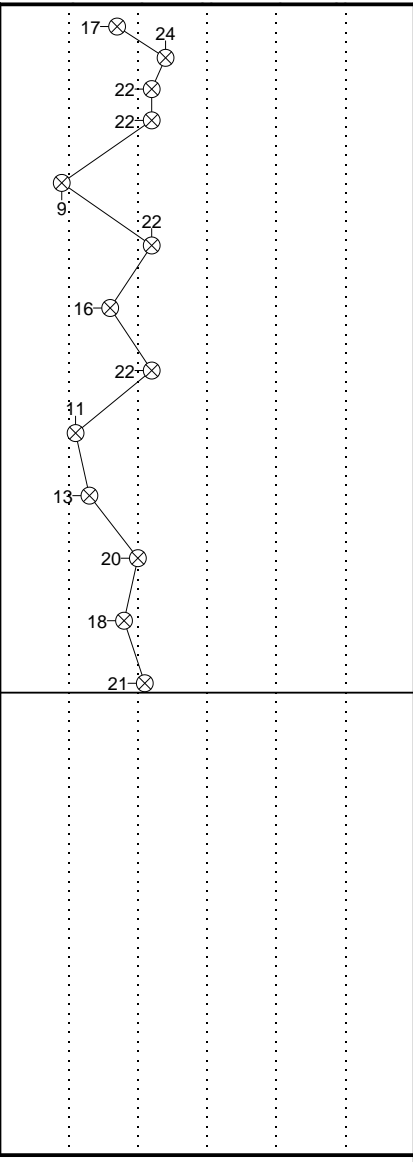
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% --- REC% ---

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
0					Topsoil Depth [5"] (ML) SANDY SILT, contains mica, reddish brown, moist, very stiff		960	
	S-1	SS	18	18	(SM) SILTY SAND, contains mica, brown to orangish brown, moist, loose to medium dense			
	S-2	SS	18	18				
	S-3	SS	18	18				
	S-4	SS	18	18				
15	S-5	SS	18	18	* Slight rock fragments encountered @ 22'-32' & 37'-42'			
	S-6	SS	18	18				
	S-7	SS	18	18				
30	S-8	SS	18	18				
	S-9	SS	18	18				
	S-10	SS	18	18				
45	S-11	SS	18	18				
	S-12	SS	18	18				
	S-13	SS	18	18				
60					END OF BORING @ 55'			



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/22/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/22/18	HAMMER TYPE Auto
WL <input checked="" type="checkbox"/>	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-61	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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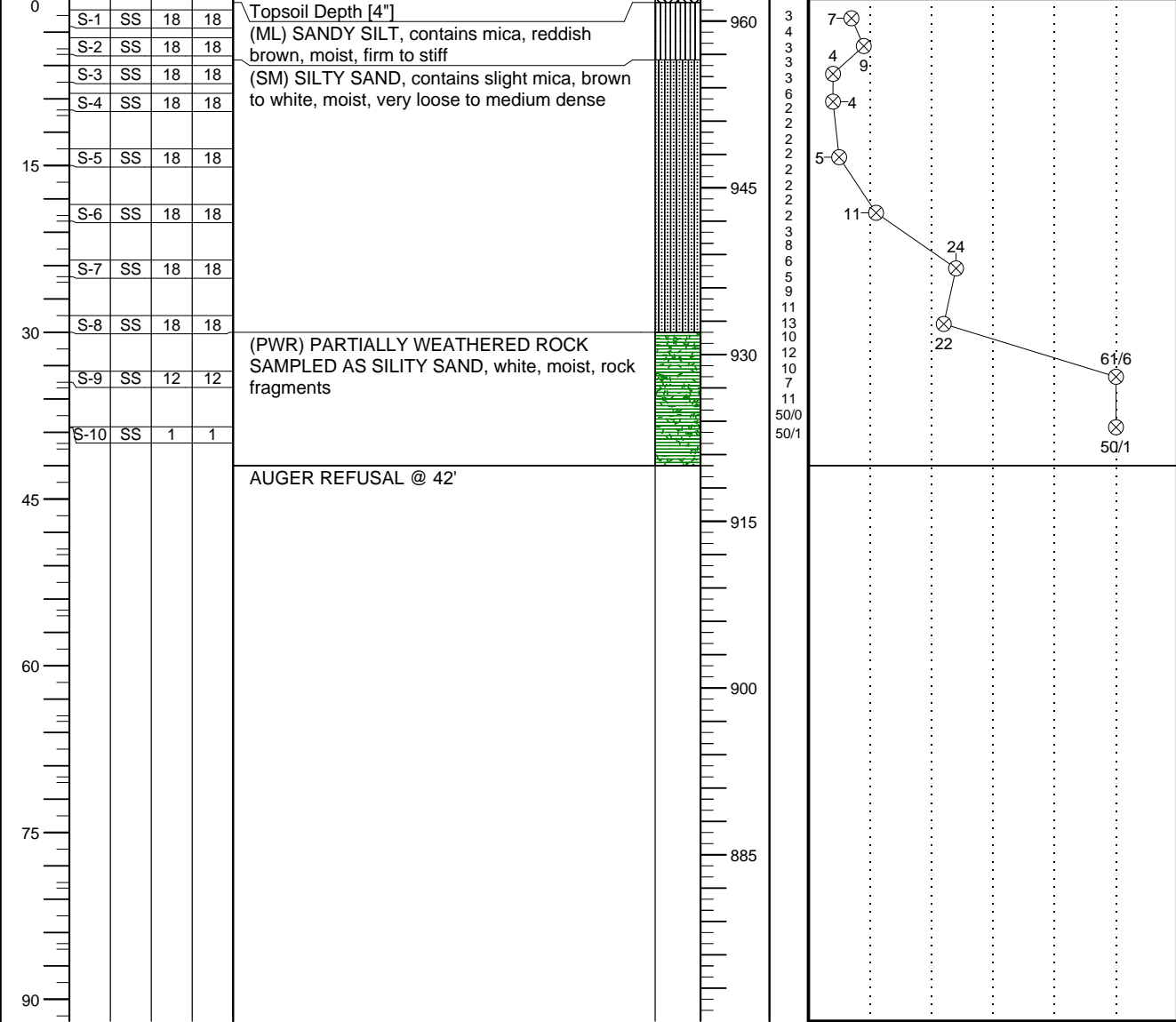
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6'
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION	962		

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED	07/22/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED	07/22/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-62	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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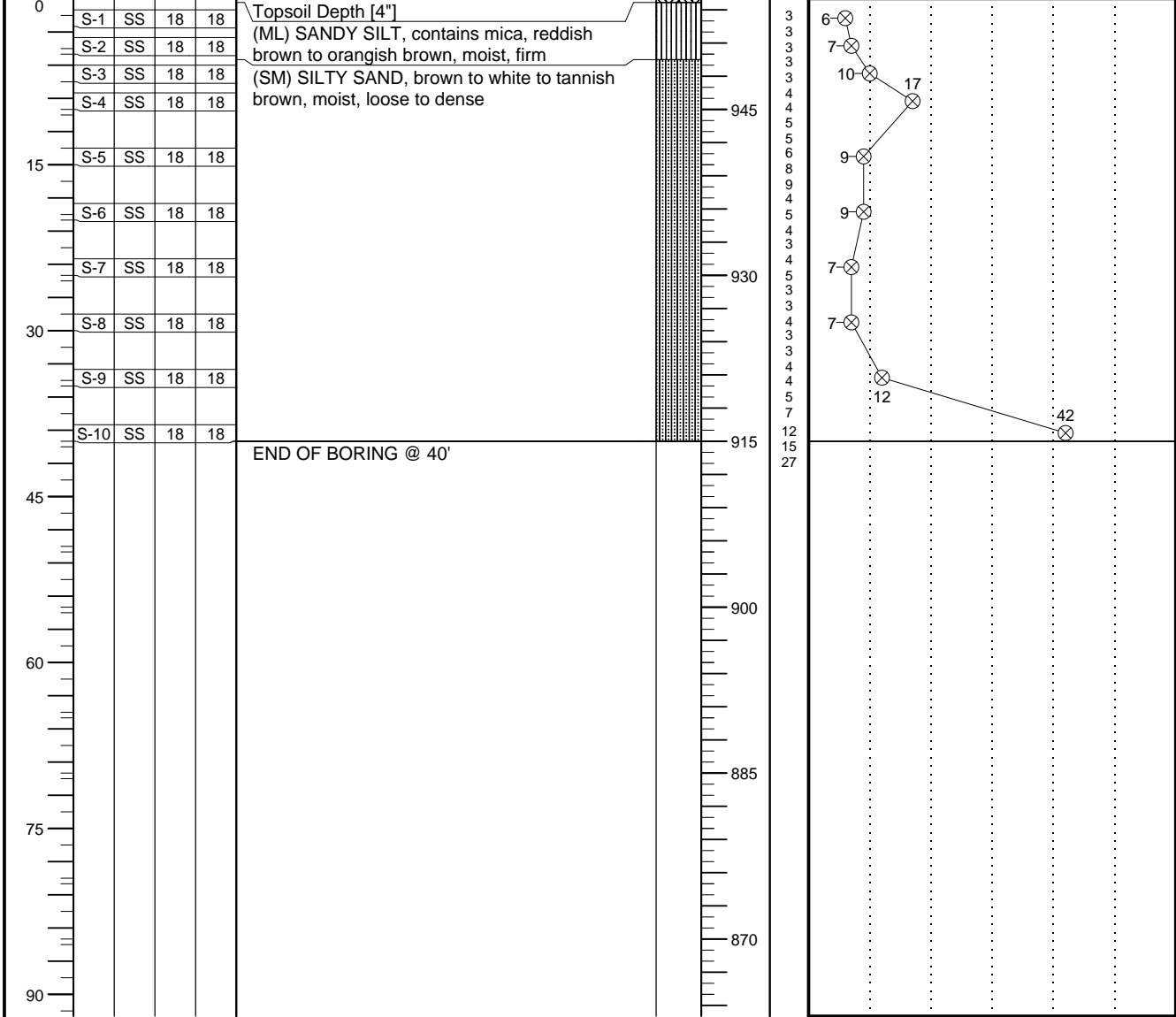
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					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 955			

○ CALIBRATED PENETROMETER TONS/FT²





ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———


PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

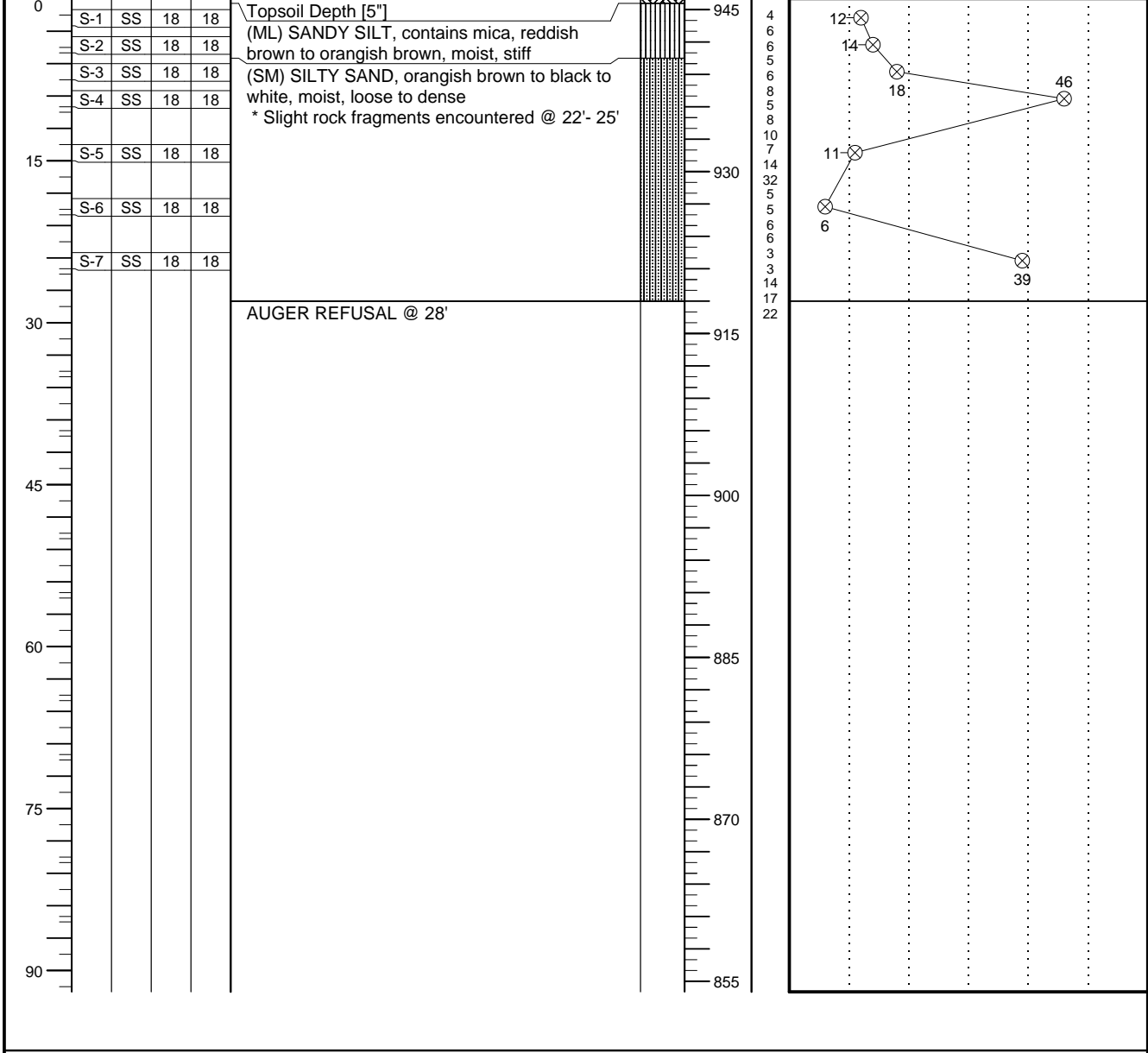
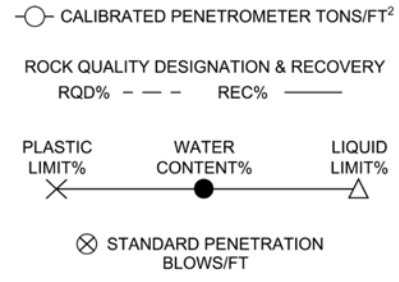
 WL Dry	WS <input type="checkbox"/>	WD <input checked="" type="checkbox"/>	BORING STARTED	07/21/18	CAVE IN DEPTH
 WL(SHW)	 WL(ACR)		BORING COMPLETED	07/21/18	HAMMER TYPE Auto
 WL			RIG Dietrich D-50	FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-63	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			





SITE LOCATION
Jefferson, Jackson County, GA


NORTHING	EASTING	STATION
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DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 946			





THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

 WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
 WL(SHW)  WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
 WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-64	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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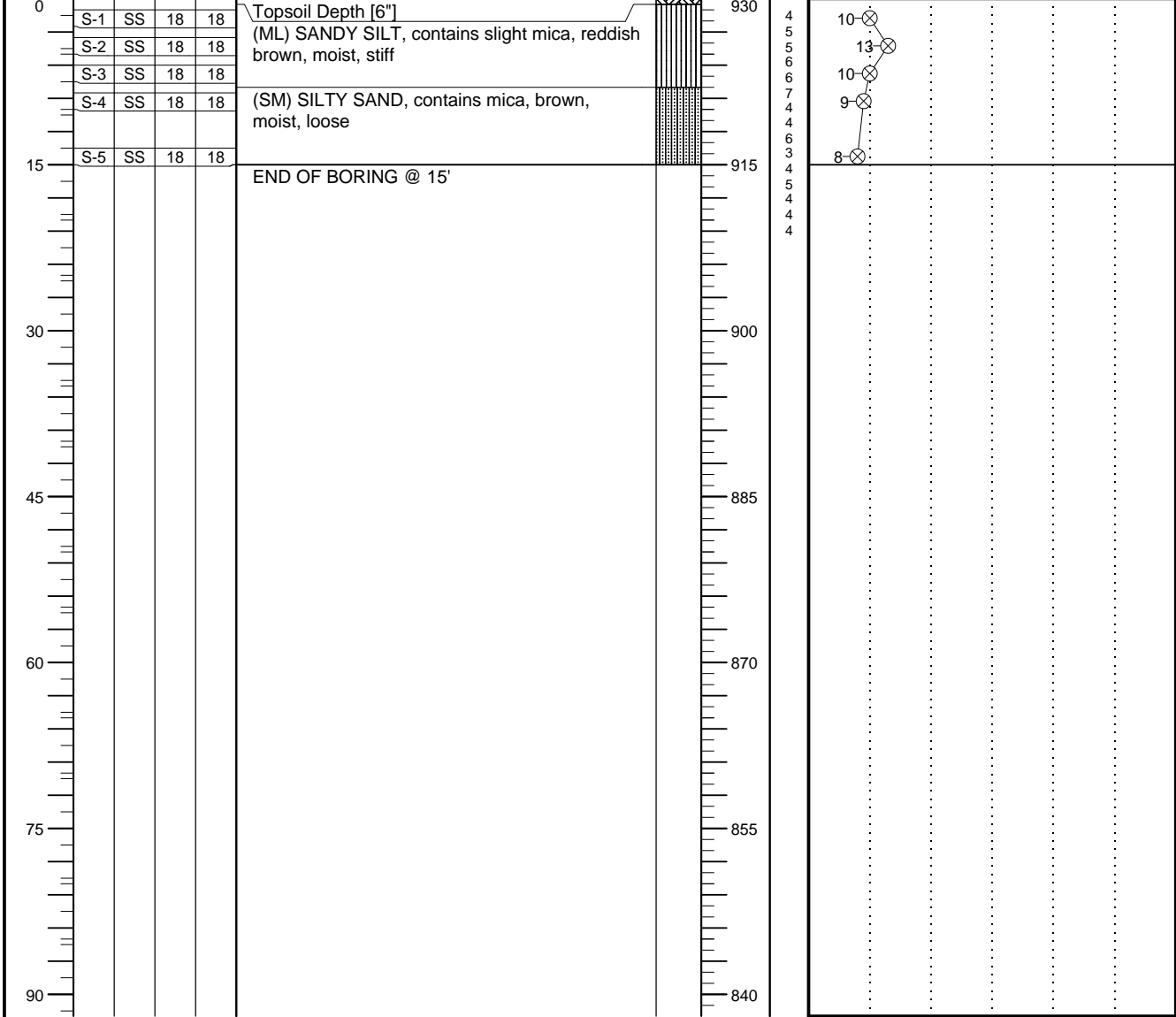
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING 	LOSS OF CIRCULATION 		
					SURFACE ELEVATION 930			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

<input checked="" type="checkbox"/> WL Dry <input type="checkbox"/> WS <input checked="" type="checkbox"/> WD	BORING STARTED 07/21/18	CAVE IN DEPTH
<input checked="" type="checkbox"/> WL(SHW) <input checked="" type="checkbox"/> WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
<input checked="" type="checkbox"/> WL	RIG D-50 ATV FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-65	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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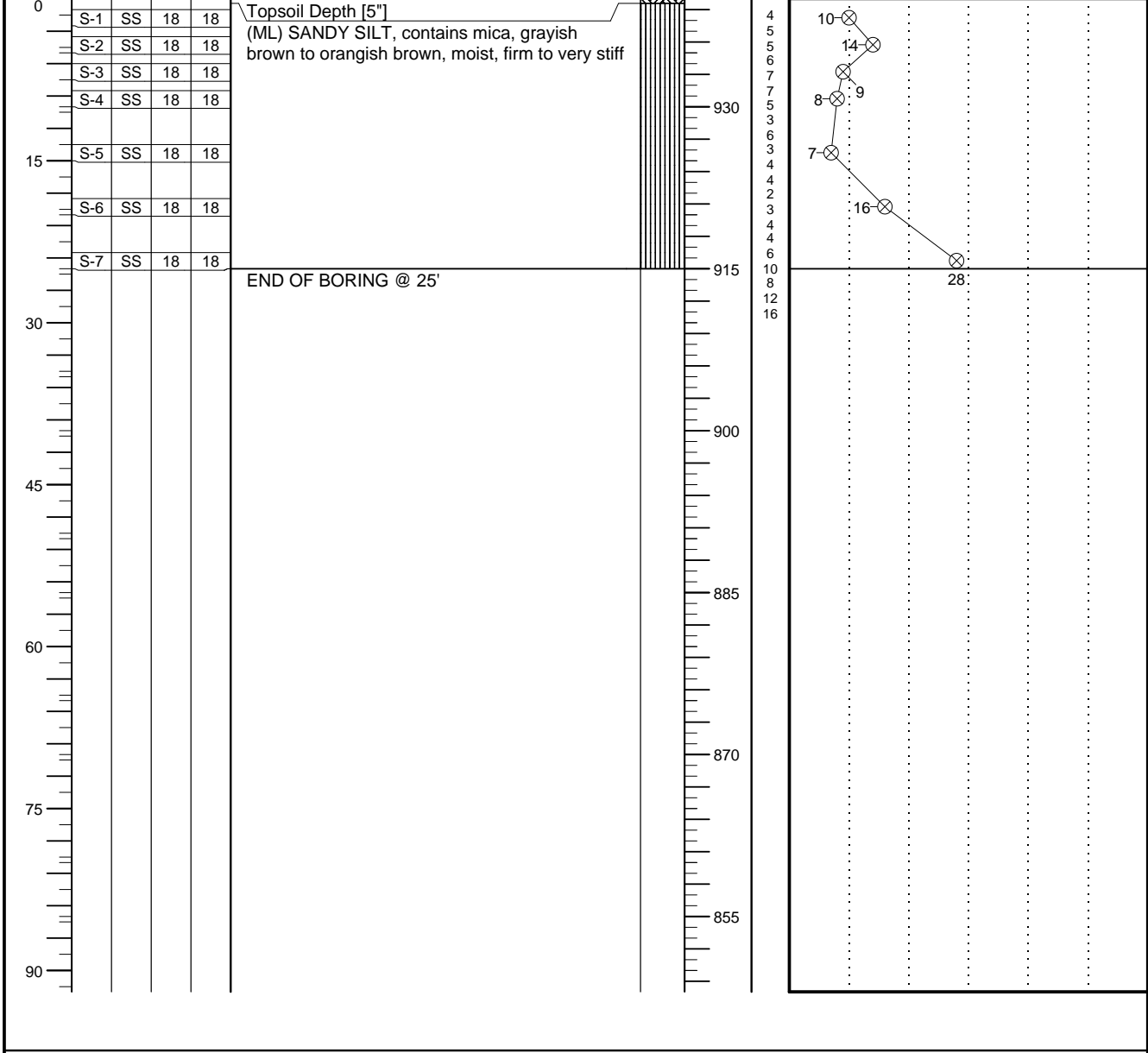
DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
					SURFACE ELEVATION 940			

○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% - - -

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW) WL(ACR)	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

CLIENT Jackson County Schools	Job #: 10:9918	BORING # B-66	SHEET 1 OF 1	
PROJECT NAME West Jackson High-Middle School	ARCHITECT-ENGINEER			

SITE LOCATION
Jefferson, Jackson County, GA

NORTHING	EASTING	STATION
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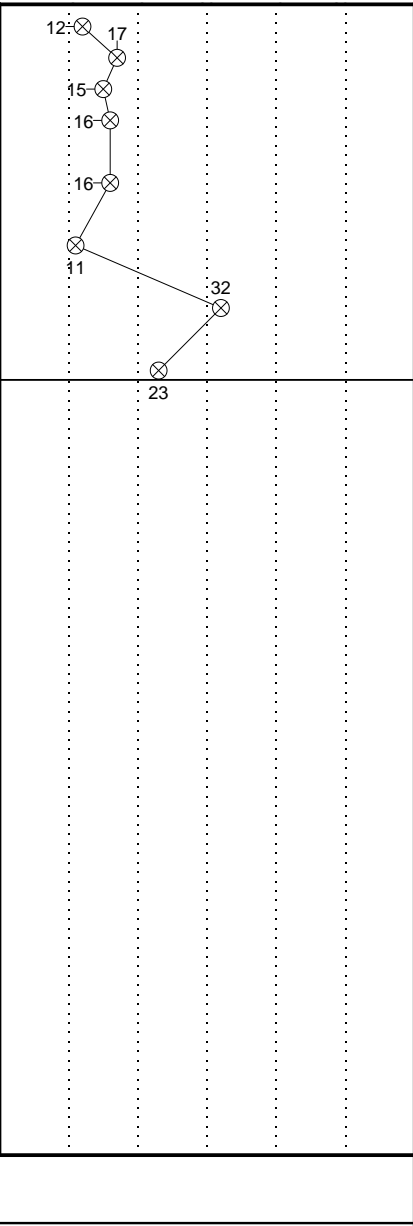
○ CALIBRATED PENETROMETER TONS/FT²

ROCK QUALITY DESIGNATION & RECOVERY
RQD% - - - REC% ———

PLASTIC LIMIT% WATER CONTENT% LIQUID LIMIT%

⊗ STANDARD PENETRATION BLOWS/FT

DEPTH (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DIST. (IN)	RECOVERY (IN)	DESCRIPTION OF MATERIAL	ENGLISH UNITS	WATER LEVELS ELEVATION (FT)	BLOWS/6"
					BOTTOM OF CASING	LOSS OF CIRCULATION		
0					Topsoil Depth [4"] (ML) SANDY SILT, contains slight mica, reddish brown, moist, stiff to very stiff			
	S-1	SS	18	18				
	S-2	SS	18	18				
	S-3	SS	18	18				
	S-4	SS	18	18				
15	S-5	SS	18	18	(SM) SILTY SAND, black to brown, moist, medium dense to dense * Slight rock fragments encountered @ 12-30'		930	
	S-6	SS	18	18				
	S-7	SS	18	18				
30	S-8	SS	18	18	END OF BORING @ 30'		915	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL.

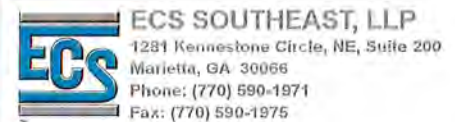
WL Dry WS <input type="checkbox"/> WD <input checked="" type="checkbox"/>	BORING STARTED 07/21/18	CAVE IN DEPTH
WL(SHW) WL(ACR) <input checked="" type="checkbox"/>	BORING COMPLETED 07/21/18	HAMMER TYPE Auto
WL	RIG Dietrich D-50 FOREMAN RH	DRILLING METHOD 2 1/4 HSA

Laboratory Testing Summary

Sample Source	Sample Number	Depth (feet)	MC ¹ (%)	Soil Type ²	Atterberg Limits ³			Percent Passing No. 200 Sieve ⁴	Moisture - Density (Corr.) ⁵		CBR Value ⁶	Other
					LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-4												
	S-2	3.50 - 5.00	13.5									
	S-5	13.50 - 15.00	22.5									
	S-7	23.50 - 25.00	20.0		NP	NP	NP	53.4				
B-33												
	S-4	8.50 - 10.00	27.8									
	S-7	23.50 - 25.00	25.9									
	S-8	28.50 - 30.00	31.3					23.8				
B-48												
	S-4	8.50 - 10.00	17.2					46.3				
B-56												
	S-5	13.50 - 15.00	38.2									
	S-7	23.50 - 25.00	20.6									
	S-9	33.50 - 35.00	17.3		NP	NP	NP	19.2				

Notes: 1. ASTM D 2216, 2. ASTM D 2487, 3. ASTM D 4318, 4. ASTM D 1140, 5. See test reports for test method, 6. See test reports for test method
Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content (ASTM D 2974)

Project No. 10:9918
Project Name: West Jackson High-Middle School
Printed On: Thursday, August 16, 2018



Appendix III

Important Information about This

Geotechnical-Engineering Report

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

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

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

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

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

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



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