SECTION 00 9113B – ADDENDA B

- 1.1 PROJECT INFORMATION
 - A. Project Name: Alabaster Amphitheater Rebid.
 - B. Owner: City of Alabaster.
 - C. Architect: TURNERBATSON.
 - D. Architect Project Number: 2904.
 - E. Date of Addendum: 11/13/2023.

1.2 NOTICE TO BIDDERS

- A. This Addendum is issued pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

C. Attendance at the 10/31 Pre-Bid Conference was optional.

- 1. See 1.4.A.1 below.
- D. The date for receipt of bids is unchanged from the following, at same location.
 - 1. Bid Date: 11/21/2023 at 2:00 pm.

1.3 ATTACHMENTS

- A. This Addendum includes the following attached Sheets:
 - 1. Document 00 2113.13 "A310 Bid Bond", (new).
 - 2. Document 00 2500.13 "Substitution Request Form", (new).
 - 3. Document 00 3132.13 "Geotechnical Data", (new).
 - 4. Document 00 4113 "Bid Form Stipulated Sum (Single-Prime Contract)", (reissued).
 - 5. Document 00 4323 "Alternates Form", (re-issued).
 - 6. Section 01 1000 "Summary", (re-issued).
 - 7. Section 01 2300 "Alternates", (re-issued).

- 8. Section 32 3113 "Chain Link Fences and Gates", (new).
- B. This Addendum includes the following attached sheets:
 - 1. Civil Sheet C0.2 "Overall Site Plan", (re-issued).
 - 2. Civil Sheet C1.0 "South Parking Lot Demo Plan", (re-issued).
 - 3. Civil Sheet C2.0 "South Parking Lot Site Plan", (re-issued).
 - 4. Civil Sheet C2.1 "Amphitheater Site Plan", (re-issued).
 - 5. Civil Sheet C3.0 "South Parking Lot Grading Plan", (re-issued).
 - 6. Civil sheet C3.1 "Amphitheater Grading Plan", (re-issued).
 - 7. Civil Sheet C4.0 "South Parking Lot Phase 1 Erosion Control Plan", (reissued).
 - 8. Civil Sheet C4.2 "South Parking Lot Phase 2 Erosion Control Plan", (reissued).
 - 9. Civil Sheet C4.3 "Amphitheater Phase 2 Erosion Control Plan", (re-issued).
 - 10. Civil Sheet C5.0 "South Parking Lot Utility Plan", (reissued).
 - 11. Civil Sheet C5.1 "Amphitheater Utility Plan", (reissued).
 - 12. Civil Sheet C6.0 "Details", (re-issued).
 - 13. Civil Sheet C6.1 "Details", (re-issued).
- 1.4 REVISIONS TO SPECIFICATIONS
 - A. Specification Section 00 1116 "Invitation to Bid", (not re-issued):
 - 1. Paragraph 1.5.A: Delete last sentence "To be eligible to bid the bidder must attend both the scheduled meeting and site tour."
 - B. Specification Section 01 2100 "Allowances", (not reissued):
 - 1. Paragraph 3.3: Add Allowance No. 5: Lump-sum Allowance: Include \$30,000 for utility Aid-to-Construction costs.
 - C. Specification Section 05 1200 "Structural Steel Framing", (not re-issued):
 - 1. Paragraph 1.6.A: AISC certification is optional.
 - D. Specification Section 06 4023 "Interior Architectural Woodwork", (not re-issued):
 - 1. Paragraph 1.8.A: AWI certification is optional.

END OF DOCUMENT 00 9113B

AIA Document A310[°] – 2010

Bid Bond

CONTRACTOR:

(Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

OWNER: (Name, legal status and address)

BOND AMOUNT: \$

PROJECT: (Name, location or address, and Project number, if any)

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

Signed and sealed this day of ,

(Contractor as Principal) (Seal) (Witness) (Title) (Surety) (Seal) (Witness) (Title)

Init. 1

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SUBSTITUTION REQUEST

(During the Bidding Phase)

Project:			Substitution Request Number:
-			From:
To:			Date:
_			A/E Project Number:
Re:			Contract For:
Specificat	ion Title:		Description:
	Section:	Page:	Article/Paragraph:
Proposed	Substitution:		
Manufactu	irer:	Address:	
Trade Nar	ne:		Model No.:

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: Signed by: Firm: Address:	
Telephone:	

A/E's REVIEW AND ACTION

 Substitution approved - Make submittals in accordance with Specification Section 01330. Substitution approved as noted - Make submittals in accordance with Specification Section 013 Substitution rejected - Use specified materials. Substitution Request received too late - Use specified materials. 	30.
Signed by:	Date:
Supporting Data Attached: Drawings X Product Data Samples Tests	Reports
© Copyright 1996, Construction Specifications Institute, Page of 99 Canal Center Plaza, Suite 300 Alexandria, VA 22314	September 1996 CSI Form 1.5C





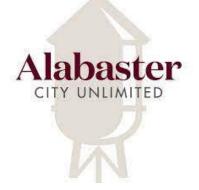
Report of Subsurface Exploration and Geotechnical Engineering Evaluation

Senior Center Addition and Pavilion Alabaster, Alabama



MBA Project Number: G23-008.00 February 22, 2023

Prepared for: Brian J. Binzer City of Alabaster 1953 Municipal Way Alabaster, Alabama 35007



MBA Engineers Inc. – Geotechnical Department 2717 6th Avenue South, Birmingham, AL 35233



February 22, 2023

Brian J. Binzer City Administrator City of Alabaster 1953 Municipal Way Alabaster, Alabama 35007

> Subject: Final Report of Subsurface Exploration and Geotechnical Engineering Evaluation Senior Center Addition and Pavilion Alabaster, Alabama MBA Reference Number: G23-008.00

Dear Mr. Binzer:

MBA Engineers has completed the authorized subsurface exploration and geotechnical engineering evaluation of the proposed Senior Center Addition and Pavilion located to the north of the existing Alabaster Senior Activity Center at 1097 7th Street SW in Alabaster, Alabama. Our services were performed in general accordance with the scope of services outlined in our Proposal Number G9350-23 dated January 18, 2023.

The purpose of our geotechnical study was to determine general subsurface conditions at the site and conduct a geotechnical assessment in order to provide recommendations relative to site preparation, earthwork, and foundation design for the proposed Senior Center Addition and Pavilion. As design of the project progresses, we suggest our office be contacted regarding geotechnical-related design, earthwork specifications and contract documents so we may provide additional input related to development-specific subsurface conditions.

We appreciate the opportunity to work with you and we look forward to assisting you through the design and construction phase of this project. If you have any questions or need any additional information, please call us.

Respectfully submitted, **MBA ENGINEERS, INC**

Drew Thornbury, P.E. Geotechnical Principal Engineer

Tucker Thomas Geotechnical Staff Professional

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APPENDIX

BORING LOCATION PLAN

LOGS OF BORING

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT



1.0 SCOPE OF SERVICES

The objective of the exploration is to provide site preparation and foundation recommendations for the proposed Senior Center Addition and Pavilion. Based on the objectives, the following services were conducted:

- 1. Site reconnaissance, test boring layout, geologic map review and mobilization of a track-mounted Geoprobe 7822DT drill rig.
- 2. <u>Soil Test Borings</u>: In view of the proposed construction, the following soil test borings were conducted:
 - <u>Senior Center Addition</u>: Five (5) borings located within the proposed Senior Center Addition footprint were extended to depths ranging from 2' to 12.5' below the existing ground surface. Borings B-2 and B-3 were offset and redrilled (B-2a and B-3a) due to shallow refusal.
 - <u>Pavilion</u>: Two (2) borings located within the proposed Pavilion footprint were extended to depths ranging from 10.5' to 12.0' below the existing ground surface.
- 3. <u>Laboratory Soil Classification Testing</u>: Laboratory testing primarily focused on the general characteristics of the soils with an emphasis on the potential for highly plastic clays.
- 4. <u>Report Preparation</u>: Engineering evaluation and geotechnical report including site preparation and foundation recommendations for the proposed Senior Center Addition and Pavilion.

2.0 SITE AND PROJECT DESCRIPTION

The subject site is located to the north of the existing Alabaster Senior Activity Center at 1097 7th Street SW in Alabaster, Alabama. The proposed Senior Center Addition is planned to be situated on the north side of the existing Alabaster Senior Activity Center, and the proposed Pavilion is planned to be situated approximately 265' to the northwest of the proposed Senior Center Addition. The existing area mainly consists of landscaped grass with gravel covering the majority of the proposed Pavilion area. Additionally, a few apparent limestone rock outcroppings are located to the east of the proposed Senior Center Addition.

No existing topographic information was provided at the time of this report; however, the subject area is relatively flat, and gently slopes down to the west towards Buck Creek. <u>Figure 1</u> shows the approximate location of the proposed Senior Center Addition and Pavilion.





Figure 1: Approximate Subject Area of Proposed Senior Center Addition and Pavilion Outlined in Red

Based on review of Google Earth historical imagery, approximately 80% of the subject site was previously occupied by the Buck Creek Cotton Mill that was demolished in 2007. An elevated water tank from the previous mill is still present and is located to the east of the proposed Pavilion. <u>Figure 2</u> shows the Google Earth historical image (dated June 2006) of the old cotton mill.



Figure 2: Old Buck Creek Cotton Mill in June 2006 prior to Demolition

Project Description: Based on the *Site Plan – Sheet A0.00* (dated 1/3/2023) provided by you, we understand the proposed Senior Center Addition and Pavilion will consist of the following:

• <u>Senior Center Addition</u>: Construction will consist of an approximately 64' by 36' one-story, wood framed Senior Center Addition. The Senior Center Addition is planned to be added on to the north side of the existing Senior Activity Center, and based on the existing grades, cut and fills are expected to be less than 2'. Based on conversations with Andrew Marlin with MBA, maximum wall loads are anticipated to be on the order of 1.5 kips per LF.



• <u>Pavilion</u>: Construction will consist of an approximately 107' by 55', CMU masonry Pavilion and Amphitheater. The proposed Pavilion is planned to be situated approximately 265' to the northwest of the proposed Senior Center Addition. We understand there is a basement component; therefore, we are anticipating up to 5' of cut. Based on conversations with Andrew Marlin, maximum column loads are expected to be on the order of 50 kips.

3.0 SITE GEOLOGY

Published geologic maps (*Geologic Map of the Alabaster 7.5 minute quadrangle, Shelby County, Alabama, 1998*) show that the subject site is underlain by the **Newala Limestone Formation.** The Newala Limestone Formation typically consists of light and dark gray, thickly bedded limestone and minor dolomite. The overlying, residual soils typically consist of fine-grained silt and clay with varying amounts of sand and chert fragments. Clays in the Newala can exhibit a high plasticity, which is the measure of a soils potential for volume change. Plastic soils shrink and swell with variations in natural moisture content. Additionally, springs are often encountered in the Newala Formation, typically developed when water becomes trapped in the porous sands, chert fragments, and rock joints overlying relatively impermeable silts, clays, and continuous rock. Water seepage can be present continually; however, additional springs and greater flow rates are generally present during periods of high rainfall. Figure 3 is an excerpt from the referenced map and the approximate subject site limits are outlined in red.

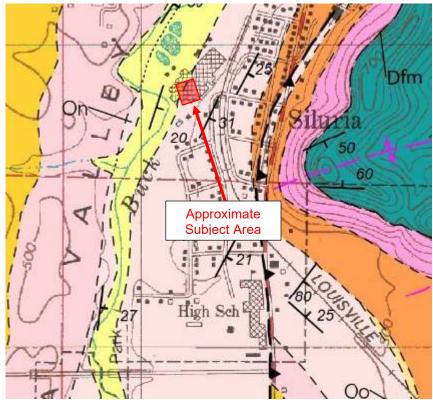


Figure 3: Excerpt from *Geologic Map of the Alabaster 7.5 minute quadrangle, Shelby County, Alabama,* 1998



Because the Newala Formation is a carbonate rock formation, it is subject to dissolution, particularly along fractures, joints, and bedding planes. The rock dissolution is a very slow process and occurs over tens of thousands of years. The dissolution process tends to initially form vertical or steeply dipping slots in the carbonate rock. As water enters the slots and continues to dissolve the rock, the slots widen and can form sizeable cavities in the rock. Soils associated with or disturbed by bedrock dissolution are called *karst disturbed soils*. Sinkholes may result when the overburden collapses or erodes into such voids.

The proposed Senior Center Addition and Pavilion is located less than 0.75 mile to the northwest of an existing quarry. Mining activities associated with quarries, including the lowering of the water table, often trigger sinkhole formation. No surface features were observed that indicated the presence of sinkholes or remnant sinkholes on the site. However, the owner should understand that there is always some risk associated with building over geologic formations that are prone to the formation of sinkholes. Based on the existing site information, the site would be considered a moderate risk for sinkhole formation.

Our scope of services did not include specific exploration to determine the presence of subsurface cavities or to determine sinkhole risk. The site should be monitored for subsidence, depressions, and sinks during and after construction. Should the client so desire, a sinkhole risk assessment could be conducted in a separate exploratory program; however, the risk of sinkhole development or ground subsidence cannot be eliminated even after conducting a comprehensive subsurface study.

4.0 FIELD AND LAB EXPLORATION

The authorized subsurface exploration was conducted on January 30, 2023, and consisted of seven (7) total soil test borings drilled within the proposed Senior Center Addition and Pavilion areas. The following soil test borings were conducted:

- <u>Senior Center Addition</u>: Five (5) borings (designated B-1, B-2, B-2a, B-3, and B-3a) extended to depths ranging from 2' to 12.5' below the existing ground surface.
- <u>Pavilion</u>: Two (2) borings (designated PV-1 and PV-2) extended to depths ranging from 10.5' to 12' below the existing ground surface.

The boring locations were marked in the field by measuring and angling from existing site features, and the boring locations should be considered approximate. The approximate boring locations are shown on the boring location plan in the Appendix. Conditions encountered at the boring locations represent conditions at the specific test locations at the time of exploration. It should be expected that conditions at other locations or at other times could differ from those observed and reported herein.

4.1 SOIL TEST BORINGS AND SPT SAMPLING

Within each soil test boring, split-tube sampling, and Standard Penetration tests (SPT) were performed in accordance with ASTM D1586. The borehole was first advanced to the sample depth by augering and the sampling tools were placed in the open hole. The sampler was then driven 18 inches into the ground with a 140-pound automatic hammer free-falling 30 inches. The number of blows required to drive the sampler each 6-inch increment was recorded. The initial increment is considered the "seating" blows, where the sampler penetrates loose or disturbed soil in the bottom of the borehole.



The blows required to penetrate the final two (2) increments are added together and are referred to as the Standard Penetration Test (SPT) N-value. The N-value, when properly evaluated, gives an indication of the soil's strength and ability to support structural loads. Many factors can affect the SPT N-value, so this result cannot be used exclusively to evaluate soil conditions. The SPT testing was performed using a drill rig equipped with an automatic hammer.

Samples retrieved from the boring locations were labeled and stored in plastic bags at the jobsite before being transported to our laboratory for analysis. The project engineer prepared Boring Logs summarizing the subsurface conditions at the boring locations in general accordance with ASTM D2488. The Logs of Boring in the Appendix indicate the soil descriptions and penetration resistances.

Groundwater levels were measured during and immediately after the borings were drilled and are indicated on the attached Logs of Boring. The completed boreholes were backfilled promptly for safety reasons. Consequently, groundwater levels were evaluated for only a very short time.

4.2 LABORATORY TESTING

In addition to the field exploration, a laboratory-testing program was conducted to obtain data regarding the engineering characteristics of subsurface materials. Results of laboratory testing may be found on the attached boring logs. The following laboratory procedures were conducted:

- <u>Natural Soil Moisture Contents (ASTM D2216)</u> were conducted on selected samples to determine the natural moisture content which is the ratio, expressed as a percentage, of the weight of water in each amount of soil to the weight of solid particles.
- <u>Atterberg Limits (ASTM D4318)</u> were determined on select samples to evaluate how the soil characteristics change upon variations in moisture content. The soil Plasticity Index (PI) is representative of these characteristics and is the difference between the Liquid Limit (LL) and the Plastic Limit (PL).
- <u>Materials in Soil Finer than the No. 200 Sieve (ASTM D1140)</u> was determined on select samples to determine the percentage of fine-grained soils. The No. 200 sieve represents the break point between a material classified as coarse grained versus fine grained.



5.0 GEOTECHNICAL SITE CHARACTERIZATION

The general subsurface conditions encountered, and their pertinent characteristics are described in the following subsections. The described conditions are based on the assumption that significant changes in subsurface conditions do not occur between boreholes. Conditions represented by the logs should be considered applicable only at the boring locations on the dates shown, and it should be assumed that the conditions may be different at other locations or at other times.

Details of the subsurface conditions encountered by the borings are shown on the Logs of Boring in the Appendix. The boring logs represent our interpretation of the subsurface conditions based upon examination of the exploration samples. Stratification lines on the logs represent approximate boundaries between soil types; however, the actual transition between soil types may be gradual.

5.1 SURFACE CONDITIONS

<u>Senior Center Addition</u>: The proposed Senior Center Addition area consists of landscaped grass with observed topsoil on the order of 3 inches thick. Additionally, apparent limestone rock outcroppings are located directly to the east of the proposed building footprint. <u>Figures 4 and 5</u> show images of the pinnacled limestone. No remnant construction from the previous cotton mill was observed at the surface within the proposed Senior Center Addition area.



Figures 4 and 5: Rock Pinnacles Located to the East of the Addition

<u>Pavilion</u>: The majority of the proposed Pavilion area consists of gravel and sparse grass. The observed gravel was measured to be approximately 2" thick. Additionally, the elevated water tank from the previous cotton mill is located directly to the east of the proposed Pavilion area.



5.2 EXISTING UNDOCUMENTED FILL

Soil described as undocumented fill was encountered directly beneath the topsoil at each boring location, and the following was observed within the fill mass:

- <u>Senior Center</u>: The fill mass within the Senior Center Addition extended to depths ranging from approximately 2' to 7' below the existing ground surface.
- <u>Proposed Pavilion</u>: The fill mass within the Pavilion extended to depths ranging on the order of 3' below the existing ground surface.
- The fill encountered typically consisted of a medium-stiff to very soft, dark brown and red-brown, wet, sandy clay.
- Standard penetration test (SPT) N-values within the fill ranged from woh (weight of hammer) to 8 bpf, indicating a low consistency and nonuniform soil mass.
- Boring locations B-2 and B-3 (at the Senior Center) both encountered auger refusal at a depth of 2' and 3.5', prior to penetrating the fill mass.
- The proposed building areas for the Senior Center Addition and Pavilion are located within the area of the old cotton mill, and the fill encountered is likely a result of disturbance during demolition of the cotton mill.
- In view of the consistency of the observed fill samples, it appears the onsite fill soils were not placed in a systematic manner and should be considered highly compressible and unpredictable.

Laboratory Testing of Fill: Results of laboratory test performed on selected fill samples showed moisture contents ranged from approximately 13.8 percent to 20.7 percent. Additionally, classification testing was performed on selected fill samples at boring location B-2 and PV-2 (at approximately 3'), and results are shown in <u>Table 1</u> below. Atterberg limits test results showed a liquid limit of 19 and 36 and a plasticity index of 3 and 22. The percentage passing the No. 200 sieve ranged from 55.7 to 70.0 percent. Results from classification of selected fill samples indicate a low plastic material and a predominantly fine-grained soil.

Boring Location	Sample Depth	Natural Moisture (%)	Liquid Limit	Plastic Limit	Plasticity Index	Percent Fine Grained Soils (%)
B-2	3	20.7	36	14	22	70.0
PV-2	3	13.8	19	16	3	55.7

5.3 RESIDUAL SOILS

Residual soils, or those soils formed by in-place weathering of the parent rock, were encountered directly below fill at each boring location except B-2, B-2a, and B-3. The residual soils extended to auger refusal depths ranging from 9' to 12.5' below the existing ground surface. The residual soils encountered typically



consisted of very stiff to medium-stiff, red-brown or tan, sandy clay. Standard penetration test (SPT) N-values within the residuum ranged from 2 to over 50 bpf; however, typical N-values ranged from 7 to 12 bpf indicating medium to high consistency soil.

The low SPT N-value was observed at PV-2 slightly below the upper loose frill from 2' to 5.5'. The low consistency zone is likely a result of trapped water in the fill mass saturating the upper residual soils. We anticipate the upper 6" to 24" of residual soils below the fill mass to consist of saturated medium to low consistency material.

Results of laboratory test performed on selected residuum samples showed moisture contents ranged from approximately 12.2 to 26.1 percent.

5.4 AUGER REFUSAL

Auger refusal is defined as the depth at which the soil test boring can no longer be advanced by conventional soil auger drilling techniques. Auger refusal was encountered at each soil test boring location at depths ranging from 2' to 12.5' below the existing ground surface. <u>Table 2</u> below is a summary of the auger refusal depths.

Boring Location	Auger Refusal (ft)
B-1	9'
B-2	2′*
B-2a	2.5'*
B-3	3.5′ [*]
B-3a	12.5′
PV-1	12'
PV-2	10.5′

Table	3.	Augor	Refusal	Donth
Table	: Z:	Auger	Refusal	Depth

* Refusal prior to penetrating fill mass

No rock coring was performed during our exploration; however, the auger refusal material observed appeared to be pinnacled limestone. Typically, auger refusal within a fill mass (as noted above at B-2 and B-3) can typically indicate refusal on buried debris such as footings, buried utilities, boulders etc. However, based on the presence of pinnacled rock at the surface, we anticipate the auger refusal material to be limestone.

5.5 GROUNDWATER

During our exploration, groundwater seepage was not encountered in any of our borings. The absence of water in the borings during our exploration does not necessarily mean that groundwater would or would not be present at other times.

Due to the relatively short time frame of the field exploration, the groundwater may not have had sufficient time to stabilize. We note that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors not evident at the time the measurement was made and reported herein. Water is often trapped slightly above subsurface interfaces such as fill/residual and



residual/rock intervals and should be expected during mass grading and undercut. We anticipate water seepage will likely be trapped water within the fill/residuum/rock interfaces and will likely be observed during excavation in both building pads during mass cut of the new Pavilion.

6.0 SITE PREPARATION AND GRADING CONSIDERATIONS

The evaluation of the site and the following considerations and recommendations are based on the subsurface conditions encountered at the exploration locations, results of geotechnical laboratory testing, provided plans, and provided structural loading information. As discussed previously, our recommendations are based on the assumption that significant changes in subsurface conditions do not occur between boreholes. However, anomalous conditions can occur between borings, across the site, or due to the modifying effects of construction or weather. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

Based on the existing grades, cut and fills are expected to be less than 2' for the proposed Senior Center Addition, and due to the basement component, we are anticipating up to 5' of cut for the proposed Pavilion.

6.1 GENERAL SITE PREPARATION

General site preparation for the proposed Senior Center Addition and Pavilion should include removal of all gravel, topsoil, debris, vegetation, and soil containing organic matter to a depth where uniform, stable subgrade conditions are encountered. Topsoil within the Senior Center Addition area should be expected to be on the order of approximately 3" in thickness. All soft, compressible organics soils will require undercutting prior to fill placement or construction of structural features. Gravel was encountered at a depth of two (2) inches within the proposed Pavilion area; however, gravel thickness may be greater in other areas.

<u>Old Demolition Debris</u>: Although not observed in the borings, we understand the Buck Creek Cotton Mill was demolished in 2007; however, we are unaware of the demolition procedures. Any old demolition debris including buried foundations and utilities will need to be removed from the proposed building pads.

<u>Undocumented Fill</u>: Soils described as undocumented fill were observed to depths ranging from 2' to 7' within the proposed Senior Center Addition and Pavilion areas. The following should be considered in regards to the presence of undocumented fill:

- <u>Compressible Fill</u>: The undocumented fill was described as medium to very low consistency sandy clay and should be considered highly variable and compressible. We do not recommend supporting the building foundations on the undocumented due to the risk of differential settlement across the building pad.
- <u>Stabilization by Undercut and Replacement</u>: We recommend stabilizing the subgrade by undercutting and replacing with properly compacted structural fill. All stabilized areas should extend 10' outside the building pad area.
- <u>Subgrade Evaluation</u>: Prior to any stabilization recommendation or procedure, the subgrade should be evaluated by the geotechnical engineer to determine the extent of stabilization required.



- <u>Senior Center Addition</u>: Undocumented fill depths within the Senior Center Addition area should be expected to range from 3' to 9' below the existing grade. Average undercut thickness is expected to be on the order of 6'.
- <u>Pavilion</u>: Undocumented fill depths within the proposed Pavilion area should be expected to be on the order of approximately 3' below the existing grade. We understand some cut is required in the Pavilion; therefore, the low consistency fill material maybe removed during initial grading.

Excavation Considerations: Auger refusal due to apparent limestone was encountered at each boring location within the proposed Senior Center Addition and Pavilion areas and ranged from 2' to 12.5' below the existing ground surface. Consequently, weathered limestone pinnacles could be encountered within the Senior Center Addition during mass undercut of the undocumented fill. *Weathered limestone is anticipated to be encountered at depths ranging from 2' to 9' below the existing grades within the area of the proposed Senior Center Addition.* We anticipate rock will not require removal during the undercut procedures; however, there is a risk of pinnacled rock being encountered during footing and utility excavations.

The rock weathering profile, the size and condition of the excavation equipment, and the effort applied will all affect production rates. It should be expected that unconventional excavation such as "hoe-ramming" would be required when excavating below the refusal depths encountered by our borings.

Based on the shallow auger refusal depths, we recommend the project be set up based on **unclassified excavation**, whereby the contractors bidding the project are provided the available subsurface information and are encouraged to do their own test digging with their own equipment to assist them in evaluating excavation difficulty.

All excavations by the contractor should meet and follow OSHA standard.

<u>Anticipated Groundwater</u>: As noted previously, depending on the prevailing weather conditions, it is possible that some groundwater seepage could be encountered when excavating through fill/ soil/rock interfaces and layered rock bedding planes. The contractor should be prepared to handle water seepage caused by shallow perched or trapped water.

6.2 SUBGRADE OBSERVATION

Following preparation of the subgrade, areas that are at final subgrade or areas that are to receive engineered fill should be evaluated by the geotechnical engineer. Such an evaluation will include proofrolling by a fully loaded tandem axle dump truck or other heavy pneumatic tire-mounted construction equipment in an effort to reveal areas containing soft or loose soil. The geotechnical engineer can then determine the amount of undercutting or stabilization that would be necessary to prepare a suitable subgrade to support the placement and compaction of new fill. The project budget should include a quantity allowance for undercutting and or stabilization with a clear definition of basis of measurement and payment. As a minimum, unit rates for undercutting and replacement should be established.



6.3 FILL PLACEMENT RECOMMENDATIONS

Based on the existing grades, we anticipate final grading will require less than 2' of fill to reach final subgrade elevation. The following is recommended for placement of structural fill placed at the site:

- <u>Proofrolling</u>: Prior to placement of fill, we recommend any areas to receive fill should be proofrolled thoroughly by a loaded dump truck in the presence of the geotechnical engineer.
- <u>Engineered Fill Requirements</u>: Engineered fill placed at the site should be virtually free of organic matter and other deleterious materials and should be low plasticity (LL less than 50, PI less than 25 and a maximum dry density greater than 105 pcf). Rock fragments in the fill mass should be no greater than four (4) inches in greatest dimension following compaction.
- <u>Reuse of Onsite Fill Soils</u>: We do not recommend reusing the onsite fill soils as structural fill due to the unpredictable and nonuniform nature of the fill. For budgeting purposes, we recommend any undercut soils not be re-used as structural fill.
- <u>Field Density Testing</u>: A sufficient number of field density tests should be performed during fill placement to indicate whether the fill is in general compliance with the project specifications. A commonly used testing frequency is one test per lift of compacted fill per 2,500 square feet of fill area.
- <u>Compaction Requirements</u>: Structural fill should be compacted to a minimum 98 percent of the maximum dry density obtained by a Standard Proctor compaction test. Fill moisture content should typically be in the range of ±2 percent of optimum as determined by ASTM D698. Mass fills should be placed in maximum 8-inch loose lifts.
- <u>Structural Fill Testing</u>: We recommend the grading contractor provide (well in advance of the start of site grading) us with representative samples of proposed off site borrow soil (if required) so tests can be performed to confirm compliance with the above structural fill recommendations. In general, soils with higher maximum dry densities and lower liquid limits and plasticity indices have better structural characteristics, are easier to moisture condition and compact, and will perform better than soils with lower maximum dry densities or higher liquid limits and plasticity indices.
- <u>Confined Space Backfilling</u>: Backfilling around storm drains and within utility trenches must be performed in a controlled manner to prevent settlement of the fill and cracking of floor slabs and pavements supported by the backfill. The same level of care must be exercised when backfilling around below-grade structures such as manholes, junction boxes, etc. Backfilling around such structures typically involves placing and compacting fill in relatively confined spaces where manually operated equipment must be utilized for effective compaction of fill. *We recommend limited spaces be backfilled with acceptable fill in four-inch lifts and densified by mechanical compactors to the project requirements.*
- <u>Utility Backfill</u>: Should seepage occur in excavation trenches, it may be necessary to "floor" the trench with open-graded crushed stone (compacted in lifts) to provide a dry working surface. Systematic compaction of limited space backfill will be required even if stone backfill is used.



6.4 SITE DRAINAGE DURING AND POST CONSTRUCTION

Site grading plans should include positive drainage away from the structures, and the contractor should provide drainage during the construction period. Surface water should be diverted away permanently from the surface improvements. It may be necessary to install temporary interceptor ditches to collect and divert surface water away from the construction area.

Excessive twisting and turning of construction equipment have the potential to disturb the subgrade soils and may cause the need for near-surface soil remediation. Consequently, preparing/protecting the exposed subgrade prior to rain events will be particularly important if backfilling cannot be completed promptly and the upper soil would be vulnerable to strength loss from water ponding. We recommend the project specification address the contractor's responsibility to maintain controlled site drainage during construction.

7.0 FOUNDATION RECOMMENDATIONS

Based on conversations with Andrew Marlin, maximum wall loads are expected to be on the order of 1.5 kips per LF for the proposed Senior Center Addition, and maximum column loads are expected to be on the order of 50 kips for the proposed Pavilion.

Considering the structural loads and the soils that our exploratory borings encountered under the proposed building footprint, it is our opinion that spread and strip footings would be an appropriate foundation system for support of the Senior Center Addition and Pavilion buildings. *The use of spread footings assumes that all recommendations in the site preparation section are followed including undercutting and replacing any low consistency fill and replacing with properly compacted structural fill.*

Foundation Construction Consideration: Foundations bearing on high consistency, *properly compacted structural fill* can be designed for a maximum allowable bearing capacity of 2,000 psf. Additionally, we recommend that the following items be incorporated into the building foundation design:

- Minimum footing dimensions of 18 inches are recommended for continuous strip footings. Column footings should have a minimum dimension of 24 inches.
- The geotechnical engineer of record should observe the exposed foundation bearing surfaces prior to concrete placement to verify that the conditions anticipated during the subsurface exploration are encountered.
- Pockets of organic or low consistency soils encountered during footing excavation should be fully penetrated to reach the high consistency soils for proper bearing. All undocumented fill and low consistency soils observed during footing construction will require over excavation. Footing over excavation can be backfilled with lean concrete to the original bottom of footing elevation.
- It is recommended that all footing bearing surfaces be compacted by a manually operated piston type tamper or vibratory plate compactor prior to placement of the reinforcing steel and observation by the geotechnical engineer. We suggest that bearing surface compaction be addressed in the foundation notes.
- Soil exposed in the base of all satisfactory foundation trenches should be protected against any



detrimental change in conditions such as disturbance from rain, frost, or flooding. Surface runoff water should be drained away from the excavations and not be allowed to pond during construction.

- All footing concrete should be placed during the same day the excavation is made. If this is not possible, then the footing excavation and bearing surface should be adequately protected using a 'mud mat' or other suitable means.
- Roof drainage should be routed away from the structure by positive drainage. Roof runoff should be directed away from the foundation areas and discharged a minimum of 5' away from the foundations with a positive slope away from the building.
- Limiting water intrusion around the building perimeter will be important. Applying "hardscape" such as sidewalks adjacent to the building's exterior walls is preferred to landscaped areas that require regular irrigation. Moisture penetration under slabs and foundation areas will be detrimental to the bearing capacity as well as shrink-swell of the onsite clays.

8.0 FLOOR SLAB SUPPORT CONSIDERATIONS

Based on the subsurface conditions, the buildings may be supported on-grade if recommendations made in the <u>Site Preparation</u> section are followed. We recommend floor slabs for the proposed structures be supported on a minimum four-inch layer of ½-inch up to 1½-inch, free-draining, gap-graded gravel, such as No. 57 stone, with no more than 10 percent passing the ASTM No. 200 sieve. The purpose of this layer is to help distribute concentrated loads and act as a capillary break for moisture migration through the subgrade soil. This gravel material should be consolidated in-place with vibratory equipment.

<u>Capillary Break</u>: Care should be taken so that fines are not allowed to contaminate the capillary break. If fines contaminate the stone, capillary rise and subsequent damage to moisture sensitive floor covering could occur. Moisture penetration through the slab and subsequent wetting of walls, carpets etc. can also result in other problems such as mold contamination.

<u>Building Pad Grading</u>: On most project sites, the site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of sub-base material and concrete and corrective action will be required. We suggest that provisions be included in the project specifications for the contractor to restore the floor slab subgrade soils to an acceptable condition prior to the construction of floor slabs. Subgrade restoration can be challenging (and a source of controversy) if the gravel sub-slab layer is placed early in the construction process, rainwater becomes trapped in the under slab gravel, and construction traffic contributes to rutting of the nearly completed pad.

<u>Final Grading</u>: We recommend the area underlying the floor slabs be rough graded and then thoroughly proofrolled with a loaded dump truck prior to final grading and placement of the sub-base. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill. All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the sub-base and concrete.



<u>Vapor Retarder</u>: The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder. Our geotechnical evaluation did not include any detailed evaluation for determining the potential for mold growth inside the building due to the observed subsurface conditions and the site development plan.

<u>Joint Spacing and Slab Design</u>: Based on our experience, wide joint spacing is a common reason for floor slab cracking. Where appropriate, saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or any cracks that develop should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments. Slab thickness design recommendations and establishing a slab joint pattern were not within our scope of services.

<u>Construction of Slab</u>: Special precautions must be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot or cold weather conditions could lead to excessive shrinkage cracking or curling of the slabs. Any crack control steel (including wire mesh) included in the slab should be <u>supported permanently</u> in its proper position in the slab during concrete placement to gain maximum benefit.

9.0 RETAINING WALL RECOMMENDATIONS

Although a site grading plan was not available during this report, we understand there is potential for the construction of a basement wall for the Pavilion. Any structural walls that also function as retaining walls and are restricted from lateral movement should be designed for an "at rest" pressure condition. When retaining walls are not restrained from horizontal movements, then the walls should be designed for "active" pressure conditions.

"Active" and "at-rest" design pressures are provided below. Our retaining wall design input is based on the assumption that a "wedge" of open-graded, free-draining gravel would be placed as backfill behind permanent below-grade walls. In order to achieve relatively low lateral pressures acting on the walls, the wedge of gravel backfill should extend up from the wall foundation at a 45 degree angle. Because surface improvements, including building floor slabs, sidewalks, pavements, etc., will be constructed over the backfilled zone, it would be important to systematically compact the crushed stone backfill to a high degree to preclude future settlement of the backfill and supported structures. The following are ultimate lateral earth pressures without factors of safety FOR WALLS BACKFILLED WITH SYSTEMATICALLY-COMPACTED GRANULAR MATERIAL:

• Backfill behind walls should be compacted by at least five passes of equipment suitable to compact in limited spaces and behind permanent walls. Backfill placed within three (3) feet of the walls should be compacted by light or manually-operated equipment. The recommended zone of free-draining granular material should be included in the wall details. Under such a condition, the following equivalent fluid pressures may be used during design.



Active Pressure	30 pcf
At-Rest Pressure	50 pcf
Soil Unit Weight	105 pcf (ALDOT # 57 Stone)

- We strongly recommend that once the design concept is finalized, the geotechnical engineer should be contacted to review the geotechnical aspects of retaining wall design with the structural engineer. Additional geotechnical design parameters can be provided following such a review, if necessary.
- <u>Post-Construction Wall Movements</u>: Retaining walls designed for "*Active Pressure*" conditions are anticipated to move after backfill is placed.
 - In order to achieve the active state in granular soils the top-of-wall displacement must be about 1-inch horizontally for every 20 feet of wall height.
 - In the event cantilever-type walls that are free to deflect are designed to connect into a rigid structure, special provisions should be made at the juncture between the wall and the building structure.
 - Improperly compacted backfills can also cause vertical movements due to fill settlement causing damage to structural elements constructed on them.
 - Proper construction quality control is essential to minimize post-construction problems with retaining walls.
- <u>Wall design should incorporate drainage measures to prevent the buildup of water in the retained</u> <u>soil behind the retaining wall.</u> Water collected behind a retaining wall can more than double the lateral forces acting on the wall and can cause failure of the wall. Placement of the gravel wedge behind walls is intended to prevent the buildup of hydrostatic pressure. In addition to the presence of a gravel wedge, a drainage pipe should be placed at the base of the wedge to allow proper drainage of any water behind the retaining wall.
- <u>MSE Walls</u>: We emphasize that the recommendations in this report are not intended for use in the design of segmental or MSE walls and should not be used for that purpose. In the event such walls are part of the final site development concept, a geotechnical study specific to the proposed wall alignment, addressing all design parameters, should be conducted by the wall designer/builder. In addition, the wall designer should determine all necessary input parameters (such as backfill and foundation strength) necessary to permit him to complete a turnkey design, including settlement, global stability, bearing capacity, etc.

We recommend MBA be allowed the opportunity to review final wall plans to confirm all aspects of MSE wall design have been addressed prior to construction.



10.0 CONSTRUCTION OBSERVATION AND TESTING

Geotechnical engineering is an inexact science due to the potential manmade or natural changes that may have occurred between borings, across the site, or due to the modifying effects of construction or weather. The analysis and recommendations presented in this report are based upon the data obtained from a limited amount of borings performed at the indicated locations and from other information discussed in this report, and because we sample only a limited portion of the soils affecting the performance of the proposed site improvements, variations may occur at other locations throughout the site that will require the geotechnical engineer of record to provide supplementary recommendations. We recommend the owner retain MBA Engineers to provide a construction observation and testing program to assist in determining that certain aspects of construction are being carried out in general conformance with the project plans and specifications, including recommendations from the geotechnical report.

Construction testing commonly includes testing of construction materials such as compacted fill and concrete, inspection of structural steel and wood framing, and engineering observations and testing during the earthwork and foundation construction portions of the project. In addition, Special Inspections, in accordance with the International Building Code (IBC) are usually required during the construction of most structures other than single-family homes. According to current industry practice, if MBA is not retained to provide construction phase observation and testing services, we will cease to be the engineer of record for the project and will assume no responsibility for any potential claim during or after construction of the project.

Engineering observation and materials testing during the earthwork and foundation construction phases is particularly important because assumptions (and recommendations) have been made based on the soil test borings. Comprehensive geotechnical observation and testing during construction are essential to allow the design engineer the opportunity to confirm that actual subsurface conditions are comparable to the assumed conditions. In actuality, observation during the site preparation, earthwork, and foundation installation phases is an essential part of the subsurface exploration process. Failure to engage the design geotechnical engineer to provide field observation during earthwork and foundation construction would result in an incomplete subsurface exploration and could increase the owner's risk of delays, change orders, and disputes.

The recommended *quality assurance* program would be for the owner's benefit and would not be intended to serve the quality control function for which the general contractor would be responsible. Inspection and testing would be done solely for the owner's benefit and would not relieve the contractor of his contractual obligation to meet the project specification requirements. The contractor would be responsible for his own quality control function, regardless of whether independent testing is conducted by the owner's representative.

11.0 GENERAL REMARKS AND LIMITATIONS

This report has been prepared for the exclusive use of **Brian Binzer with the City of Alabaster** for specific application to the subject project and is non-transferable to any third party without prior consent from MBA Engineers. All recommendations contained in this report have been made in accordance with generally accepted soil and foundation engineering practices in the area where the services were performed. No other warranties are implied or expressed.



At the time this report was prepared, the site grading plan had not been finalized, and consequently the report may not address all geotechnical-related design issues. In addition, the analysis and recommendations submitted in this report are based, in part, upon the data obtained from a limited number of borings. The nature and extent of variations in soil conditions between the borings may not become evident until construction. If variations then appear evident, it may be necessary to re-evaluate the recommendations of this report

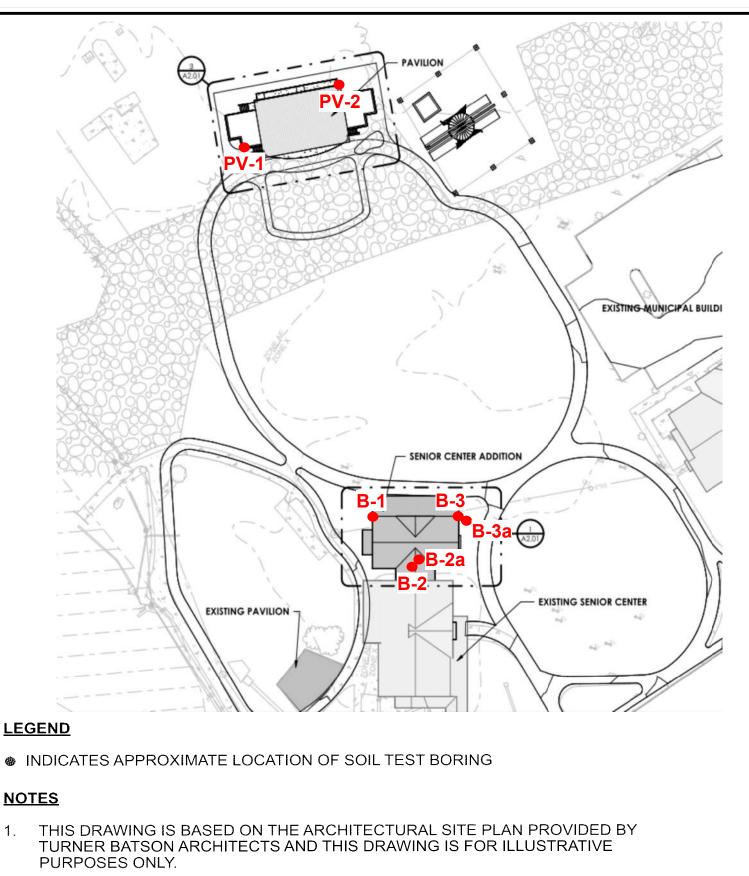
The information contained in this report is not intended, nor is sufficient, for the design of segmental retaining walls. Segmental wall designers/builders should perform independent analysis to determine <u>all</u> necessary soil characteristics (including soil shear strength and bearing capacity) used in wall design. Also, the geotechnical engineer in charge of this project is not a mold prevention consultant; none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention.

It is important that the geotechnical engineer be provided the opportunity to review the final geotechnical related plans and specifications to provide a level of confidence that the recommendations in this report were properly interpreted and incorporated in the design. It will be the client's responsibility to furnish the final grading and foundation plans to MBA Engineers for the necessary review. *If the geotechnical engineer is not accorded the privilege of making this recommended review, he can assume no responsibility for misinterpretation of the recommendations in this report.*

The information contained in this report is for the benefit of the client and to aid the other project professionals in planning and design of the subject project. The report is not intended to serve as a contract document and should <u>not</u> be used as a substitute for a project-specific earthwork or foundation specification. Instead, the input herein should be interpreted and applied to the appropriate specification sections.

An article published by the Geoprofessional Business Association (GBA), titled Important Information About Your Geotechnical Report, has been included in the Appendix. We encourage all individuals to become familiar with the article to help manage risk.





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SCALE:	N/A	
DATE:	21-Feb-2023	MBA ENGINEERS, INC.
DRAWN BY:	RTT	STRUCTURAL CIVIL GEOTECHNICAL

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5—		Very soft, tan, sandy clay	2		woh - 1 - 1	2	14.2						
-		Very stiff, tan, sandy clay	3	X	3 - 3 - 2	5	18.6						
10— -		same (Residuum) – Auger Refusal at 10.5'	4	Ø	5 - 50/4 - x	50+	26.1						GNE
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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.

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

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on 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 the Full Report

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

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

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

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

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

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a lightindustrial 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. *Geotechnical engineers cannot* accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.

Subsurface Conditions Can Change

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

Most Geotechnical Findings Are Professional Opinions

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

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmationdependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

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

Give Constructors a Complete Report and Guidance

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

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnicalengineering 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 environmental problems have led to numerous project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else*.

Obtain Professional Assistance To Deal with Mold

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

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of 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. Confer with you GBC-Member geotechnical engineer for more information.



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SECTION 00 4113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder:
- B. Project Name: Alabaster Amphitheater Rebid.
- C. Project Location: 1097 7th St. SW, Alabaster, Alabama 35007.
- D. Owner: The City of Alabaster.
- E. Architect: TURNERBATSON Architects.
- F. Architect Project Number: 2904.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by TURNERBATSON Architects and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the project scope, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
 - 1. _____ Dollars
 - 2. The above amount may be modified by amounts indicated by the Bidder for Unit Prices listed below.

1.3 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 60 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
 - 1. _____ Dollars

B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect and shall fully complete the Work (Base Bid) within 365 calendar days.

1.5 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
 - 1. Addendum No. A, dated ______.
 - 2. Addendum No. B, dated ______.
 - 3. Addendum No. C, dated ______.
 - 4. Addendum No. D, dated ______.

1.6 BID FORM SUPPLEMENT (ALLOWANCES)

A. The undersigned Bidder certifies that Base Bid submission to which this Bid Supplement is attached includes those allowances described in the Contract Documents and scheduled in Section 01 2100 "Allowances."

1.7 BID FORM SUPPLEMENT (UNIT PRICES)

A. The undersigned Bidder proposes the amounts below be added to or deducted from the Contract Sum on performance and measurement of the individual items of Work and for adjustment of the quantity given in the Unit-Price Allowance for the actual measurement of individual items of the Work.

1.8 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of Alabama, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full. The City of Alabaster will waive building permit fees for this project.

ALABASTER AMPHITHEATER - REBID

1.9	SUBMISSION OF BID		
Α.	Respectfully submitted this	day of	_, 2023.
В.	Submitted By: corporation).		(Name of bidding firm or
C.	Authorized Signature: signature).		(Handwritten
D.	Signed By:		(Type or print name).
E.	Title: President).	(Owner/Pa	rtner/President/Vice
F.	Witnessed By: signature).		(Handwritten
G.	Attest:		(Handwritten signature).
Н.	Ву:		(Type or print name).
I.	Title: Secretary).	(Corporate S	ecretary or Assistant
J.	Street Address:		
К.	City, State, Zip:		
L.	Phone:		
M.	License No.:		
N.	Federal ID No.:		_(Affix Corporate Seal Here).

END OF DOCUMENT 00 4113

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DOCUMENT 00 4323 - ALTERNATES FORM

- 1.1 BID INFORMATION
 - A. Bidder: _____
 - B. Project Name: Alabaster Amphitheater Rebid.
 - C. Project Location: 1097 7th St. SW, Alabaster, Alabama 35007.
 - D. Owner: City of Alabaster.
 - E. Architect: TURNERBATSON.
 - F. Architect Project Number: 2904.
- 1.2 BID FORM SUPPLEMENT
 - A. This form is required to be attached to the Bid Form.
- 1.3 DESCRIPTION
 - A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
 - B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
 - C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
 - D. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.
 - E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 60 days of the Notice of Award unless otherwise indicated in the Contract Documents.
 - F. Acceptance or non-acceptance of any alternates by the Owner shall have no affect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

1.4 SCHEDULE OF ALTERNATES

- A. Alternate No. One Senior Center addition.
 - 1. ADD____DEDUCT____NO CHANGE____NOT APPLICABLE____.
 - 2. _____ Dollars
 - 3. ADD_____DEDUCT_____ calendar days to adjust the Contract Time for this alternate.
- B. Alternate No. One (A) Paint existing Senior Center.
 - 1. ADD____DEDUCT____NO CHANGE____NOT APPLICABLE____.
 - 2. _____ Dollars
 - 3. ADD_____DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- C. Alternate No. Two Parking Lot and Bus Shelter.
 - 1. ADD____DEDUCT____NO CHANGE____NOT APPLICABLE____.
 - 2. _____ Dollars
 - 3. ADD_____DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- D. Alternate No. Three Pavilion Sound System.
 - 1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
 - 2. _____ Dollars
 - 3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- E. Alternate No. Four Video Wall.
 - 1. ADD____DEDUCT____NO CHANGE____NOT APPLICABLE____.
 - 2. _____ Dollars
 - 3. ADD_____DEDUCT____ calendar days to adjust the Contract Time for this alternate.

1.5 SUBMISSION OF BID SUPPLEMENT

- A. Respectfully submitted this ____ day of _____, 2023.
- B. Submitted By:_____(Insert name of bidding firm or corporation).

ARCHITECT'S NO. 2904

- C. Authorized Signature:_____(Handwritten signature).
- D. Signed By:_____(Type or print name).
- E. Title:_____(Owner/Partner/President/Vice President).

END OF DOCUMENT 00 4323

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SECTION 01 1000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- 1.2 SUMMARY
 - A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Work performed by Owner.
 - 4. Owner-furnished/Contractor-installed (OFCI) products.
 - 5. Contractor's use of site and premises.
 - 6. Coordination with occupants.
 - 7. Work restrictions.
 - 8. Specification and Drawing conventions.
 - B. Related Requirements:
 - 1. Section 01 5000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
 - 2. Section 01 7300 "Execution" for coordination of Owner-installed products.

1.3 PROJECT INFORMATION

- A. Project Identification: Alabaster Amphitheater, Architect's Number 2904.
 - 1. Project Location: 1097 7th St. SW, Alabaster, Alabama 35007..
- B. Owner: City of Alabaster.
 - 1. Owner's Representative: Earnest Clark, 205.600.8106, eclark@cityofalabaster.com.
- C. Architect: TURNERBATSON
 - 1. Architect's Representative: Hal Bishop, 205.278.6240 office, 205.908.7691 cell, hbishop@turnerbatson.com.

- D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:
 - 1. Civil Engineer: Engineering Design Group.
 - a. Representative: Wade Lowery, 205.403.9158.
 - 2. Landscape Architecture: Forme Design Group.
 - a. Representative: Neil Couvilon, 662.418.7450.
 - 3. Structural Engineering: MBA Engineers, Inc.
 - a. Representative: Andrew Marlin, 205.323.6385.
 - 4. Mechanical Engineering: Pinnacle Engineering, Inc.
 - a. Representative: James Hogland, 205.733.6912.
 - 5. Electrical Engineering: Gunn & Associates.
 - a. Representative: Frankie Portera, 205.285.1273.
- 1.4 WORK COVERED BY CONTRACT DOCUMENTS
 - A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:
 - 1. The construction of a stage pavilion, associated site work, and other Work indicated in the Contract Documents. Alternates include an addition to the existing Senior Center, new parking, and audio/visual systems.
 - B. Type of Contract:
 - 1. Project will be constructed under a single prime contract.

1.5 WORK PERFORMED BY OWNER

- A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.
- B. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations will be conducted simultaneously with Work under this Contract.
 - 1. IT and security.

ALABASTER AMPHITHEATER - REBID

1.6 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

- A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:
 - 1. Provide to Contractor Owner-reviewed Product Data, Shop Drawings, and Samples.
 - 2. Provide for delivery of Owner-furnished products to Project site.
 - 3. Upon delivery, inspect, with Contractor present, delivered items.
 - a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.
 - 4. Obtain manufacturer's inspections, service, and warranties.
 - 5. Inform Contractor of earliest available delivery date for Owner-furnished products.
- B. Contractor's Responsibilities: The Work includes the following, as applicable:
 - 1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
 - 2. Review Owner-reviewed Product Data, Shop Drawings, and Samples, noting discrepancies and other issues in providing for Owner-furnished products in the Work.
 - 3. Receive, unload, handle, store, protect, and install Owner-furnished products.
 - 4. Make building services connections for Owner-furnished products.
 - 5. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
 - 6. Repair or replace Owner-furnished products damaged following receipt.

1.7 CONTRACTOR'S USE OF SITE AND PREMISES

- A. Limits on Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.
- C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.8 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy Project site and existing adjacent building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.
- B. Owner Limited Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.
 - 1. The owner will occupy the stage pavilion during the month of December 2023 at which time construction activities will pause. Prior to owner occupancy:
 - a. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner acceptance of the completed Work.
 - b. Obtain a Certificate of Occupancy from authorities having jurisdiction before limited Owner occupancy.
 - c. Before limited Owner occupancy, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of Work.
 - d. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of Work.

1.9 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Owner's written permission before proceeding with utility interruptions.
- C. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances within the Owner's property is not permitted.
- 1.10 SPECIFICATION AND DRAWING CONVENTIONS
 - A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
 - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
 - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
 - B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
 - C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 1000

SECTION 01 2300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other Work of the Contract.
- C. Schedule: A Part 3 "Schedule of Alternates" Article is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

- 3.1 SCHEDULE OF ALTERNATES
 - A. Alternate No. One: Senior Center Addition.
 - 1. Base Bid: Work as shown on BASE BID Landscape drawings.
 - 2. Alternate: Senior Center Addition as shown on the Drawings.
 - B. Alternate No. One (A): Paint existing Senior Center.
 - 1. Base Bid: Existing conditions remain as is.
 - 2. Alternate: Paint the exterior of the existing Senior Center as shown on the Drawings.
 - C. Alternate No. Two: Parking Lot.
 - 1. Base Bid: Existing conditions remain as is.
 - 2. Alternate: Additional, paving, striping, curbs and gutters as shown on the Drawings.
 - D. Alternate No. Three: Sound System.
 - 1. Base Bid: No sound system.
 - 2. Alternate: Sound system as described in the Electrical Drawings.
 - E. Alternate No. Four: Video Wall.
 - 1. Base Bid: No video wall.
 - 2. Alternate: Video Wall as described in the Electrical Drawings.

END OF SECTION 01 2300

SECTION 32 3113 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- 1.2 SUMMARY
 - A. Section Includes:
 - 1. Chain-link fences.
 - 2. Swing gates.
 - B. Related Requirements:
 - 1. Section 03 3053 "Miscellaneous Cast-in-Place Concrete" for cast-in-place concrete post footings.
- 1.3 ACTION SUBMITTALS
 - A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
 - a. Fence and gate posts, rails, and fittings.
 - b. Chain-link fabric, reinforcements, and attachments.
 - c. Gates and hardware.
 - B. Shop Drawings: For each type of fence and gate assembly.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - 2. Include accessories, hardware, gate operation, and operational clearances.
 - C. Samples for Verification: For each type of component with factory-applied finish, prepared on Samples of size indicated below:
 - 1. Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.

- 1.4 INFORMATIONAL SUBMITTALS
 - A. Qualification Data: For factory-authorized service representative.
 - B. Product Test Reports: For framework strength according to ASTM F1043, for tests performed by manufacturer and witnessed by a qualified testing agency or a qualified testing agency.
 - C. Sample Warranty: For special warranty.
- 1.5 FIELD CONDITIONS
 - A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.
- 1.6 WARRANTY
 - A. Special Warranty: Installer agrees to repair or replace components of chain-link fences and gates that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to comply with performance requirements.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist according to "CLFMI Product Manual" and requirements indicated below:
 - 1. Fabric Height: 72 inches.
 - 2. Steel Wire for Fabric: Wire diameter of 0.192 inch.
 - a. Mesh Size: 2-1/8 inches.
 - b. Zinc-Coated Fabric: ASTM A392, Type II, Class 2, 2.0 oz./sq. ft. with zinc coating applied after weaving.
 - c. Polymer-Coated Fabric: ASTM F668, Class 2b over zinc-coated steel wire.

- 1) Color: Black, according to ASTM F934.
- 3. Selvage: Twisted top and knuckled bottom.

2.2 FENCE FRAMEWORK

- A. Posts and Rails: ASTM F1043 for framework, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F1043 or ASTM F1083 based on the following:
 - 1. Fence Height: 72 inches.
 - 2. Heavy-Industrial-Strength Material: Group IA, round steel pipe, Schedule 40.
 - a. Line Post: 6.625 inches in diameter.
 - b. End, Corner, and Pull Posts: 6.625 inches in diameter.
 - 3. Horizontal Framework Members: top and bottom rails according to ASTM F1043.
 - a. Top Rail: 1.66 inches in diameter.
 - 4. Metallic Coating for Steel Framework:
 - a. Type A: Not less than minimum 2.0-oz./sq. ft. average zinc coating according to ASTM A123/A123M or 4.0-oz./sq. ft. zinc coating according to ASTM A653/A653M.
 - 5. Polymer coating over metallic coating.
 - a. Color: Black, according to ASTM F934.

2.3 SWING GATES

- A. General: ASTM F900 for gate posts and single and double swing gate types.
 - 1. Gate Leaf Width: 2 3' 0'' leaves (6'-0'' double leaf).
 - 2. Framework Member Sizes and Strength: Based on gate fabric height of more than 72 inches.
- B. Pipe and Tubing:
 - 1. Zinc-Coated Steel: ASTM F1043 and ASTM F1083; protective coating and finish to match fence framework.
 - 2. Gate Posts: Round tubular steel.
 - 3. Gate Frames and Bracing: Round tubular steel.

- C. Frame Corner Construction: Welded or assembled with corner fittings.
- D. Hardware:
 - 1. Hinges: 360-degree inward and outward swing.
 - 2. Latch: Permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
- 2.4 FITTINGS
 - A. Provide fittings according to ASTM F626.
 - B. Post Caps: Provide for each post.
 - C. Rail and Brace Ends: For each gate, corner, pull, and end post.
 - D. Rail Fittings: Provide the following:
 - 1. Top Rail Sleeves: Pressed-steel or round-steel tubing not less than 6 inches long.
 - 2. Rail Clamps: Line and corner boulevard clamps for connecting bottom rails to posts.
 - E. Tension Bars: Steel, length not less than 2 inches shorter than full height of chain-link fabric. Provide one bar for each gate and end post, and two for each corner and pull post, unless fabric is integrally woven into post.
 - F. Truss Rod Assemblies: Steel, hot-dip galvanized after threading rod and turnbuckle or other means of adjustment.
 - G. Tie Wires, Clips, and Fasteners: According to ASTM F626.
 - 1. Standard Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, according to the following:
 - a. Hot-Dip Galvanized Steel: 0.148-inch- diameter wire; galvanized coating thickness matching coating thickness of chain-link fence fabric.
 - H. Finish:
 - 1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz./sq. ft. of zinc.
 - a. Polymer coating over metallic coating.

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2.5 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydrauliccontrolled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating, and that is recommended in writing by manufacturer for exterior applications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for a certified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 CHAIN-LINK FENCE INSTALLATION

- A. Install chain-link fencing according to ASTM F567 and more stringent requirements specified.
- B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- C. Post Setting: Set posts in concrete with mechanical anchors at indicated spacing into firm, undisturbed soil.

- 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
- 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water.
 - b. Posts Set into Holes in Concrete: Form or core drill holes not less than 5 inches deep and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout or anchoring cement, mixed and placed according to anchoring material manufacturer's written instructions. Finish anchorage joint to slope away from post to drain water.
- D. Terminal Posts: Install terminal end, corner, and gate posts according to ASTM F567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more. For runs exceeding 500 feet, space pull posts an equal distance between corner or end posts.
- E. Line Posts: Space line posts uniformly at 10 feet o.c.
- F. Post Bracing: Install according to ASTM F567, maintaining plumb position and alignment of fence posts. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
- G. Top Rail: Install according to ASTM F567, maintaining plumb position and alignment of fence posts. Run rail continuously through line post caps, bending to radius for curved runs and terminating into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended in writing by fencing manufacturer.
- H. Bottom Rails: Secure to posts with fittings.
- Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2-inch bottom clearance between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
- J. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts, with tension bands spaced not more than 15 inches o.c.
- K. Tie Wires: Use wire of proper length to firmly secure fabric to line posts and rails. Attach wire at one end to chain-link fabric, wrap wire around post a minimum

of 180 degrees, and attach other end to chain-link fabric according to ASTM F626. Bend ends of wire to minimize hazard to individuals and clothing.

- 1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.
- L. Fasteners: Install nuts for tension bands and carriage bolts on the side of fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

3.4 GATE INSTALLATION

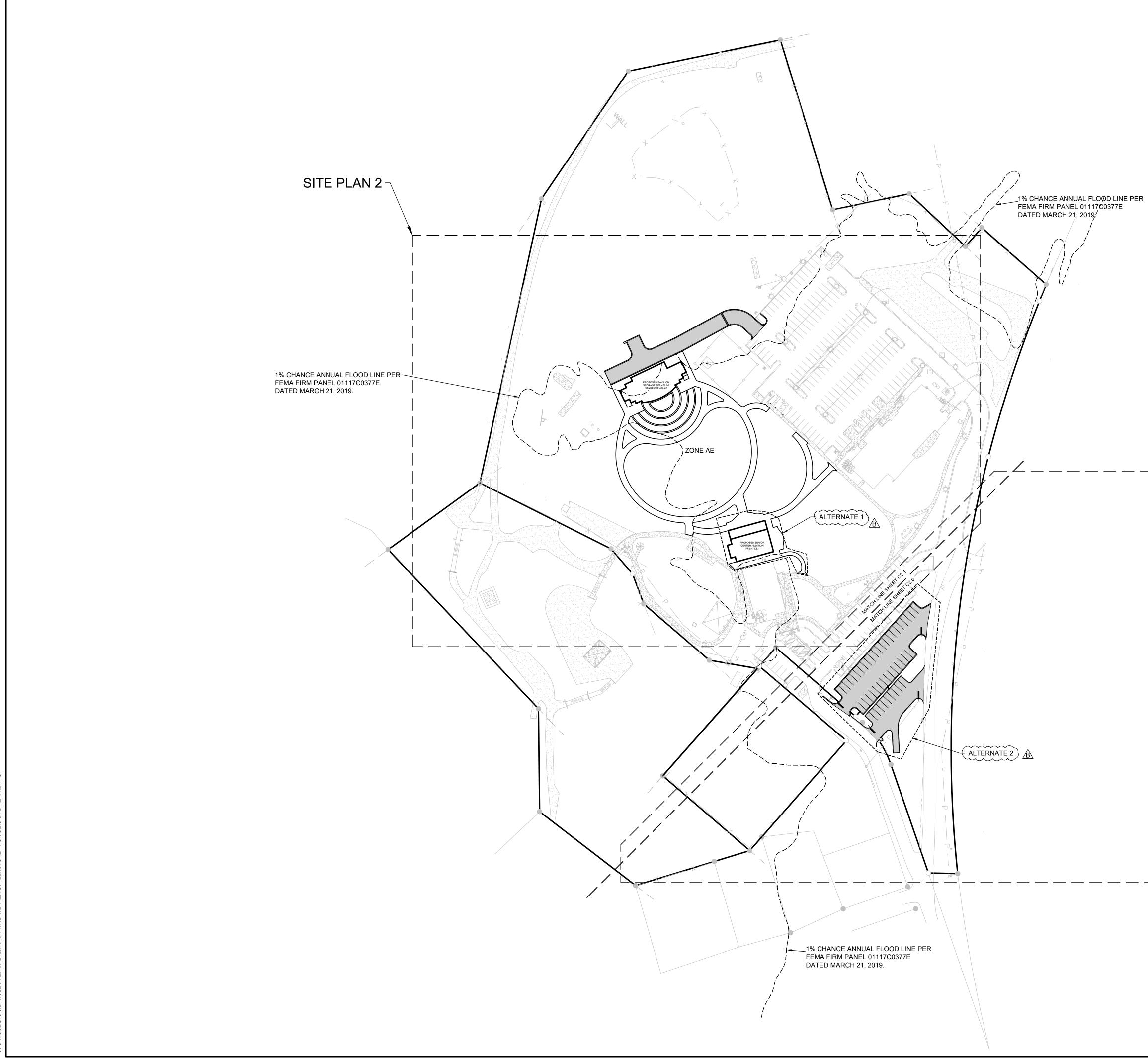
A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation.

3.5 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware and other moving parts.

END OF SECTION 32 3113

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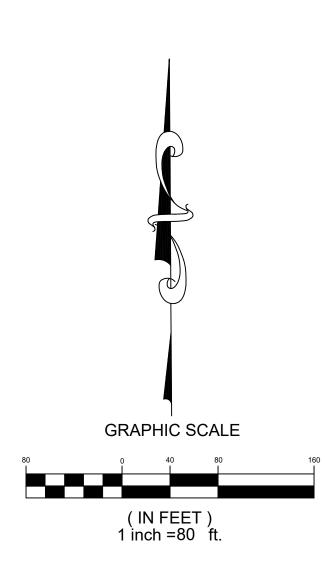
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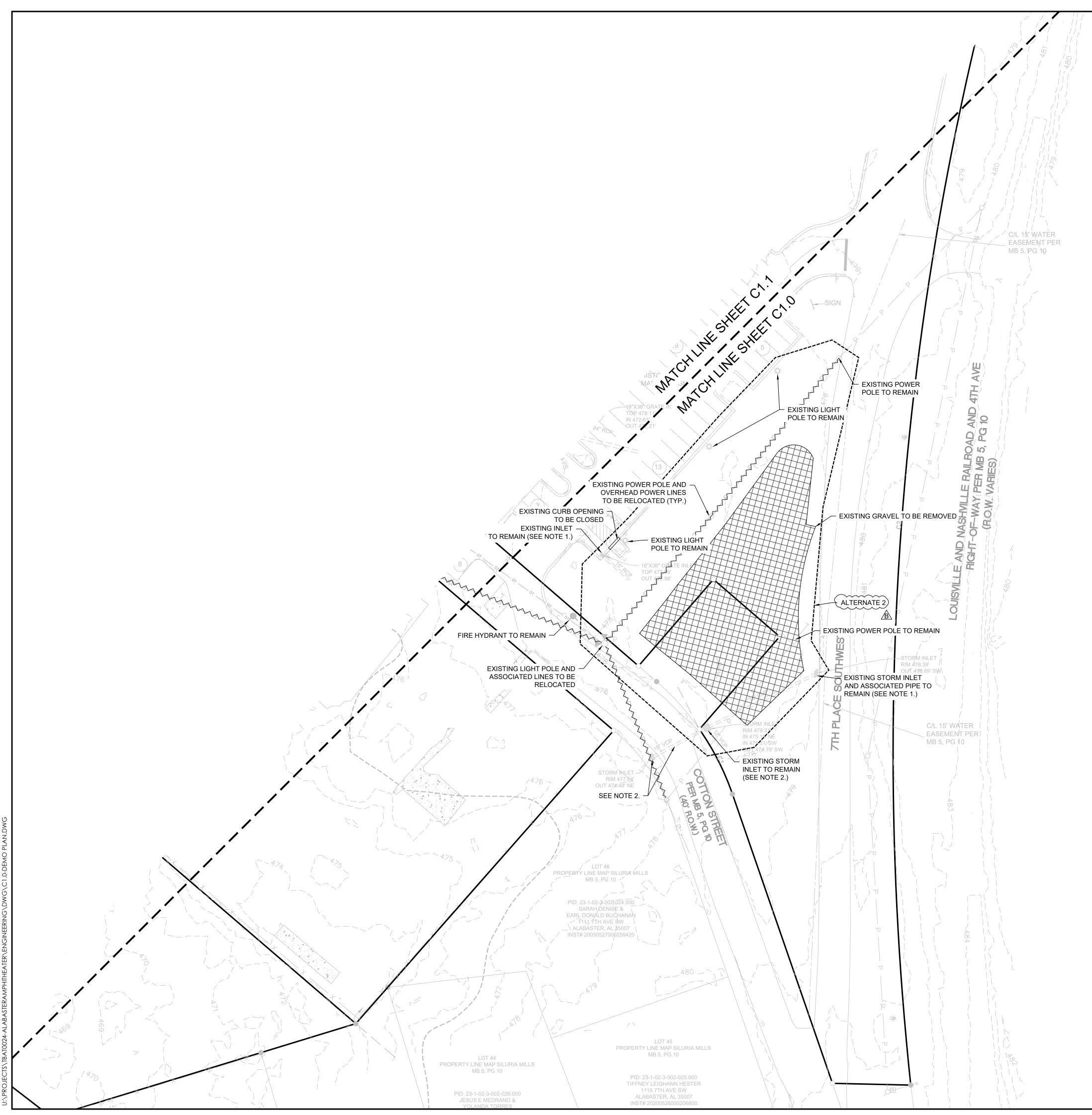


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FOLEY, AL 21106 STATE HIGHWAY 98 FOLEY, AL 36535 (251) 963 - 8960







DEMOLITION LEGEND

REMOVED

ITEM TO BE REMOVED

ITEM TO BE REMOVED

NOTE: (1. ALL WORK DEPICTED ON THIS SHEET IS

2. SEE SHEET C0.1 FOR DEMOLITION NOTES.

INSTALLED PRIOR TO START OF DEMOLITION

3. ALL EROSION CONTROL BMPs TO BE

PART OF ALTERNATE 2

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ENGINEERING DESIGN GROUP PELHAM, AL 20 BISHOP CIRCLE SUITE 30

> FOLEY, AL 106 STATE HIGHWAY 98 FOLEY, AL 36535 (251) 963 - 8960

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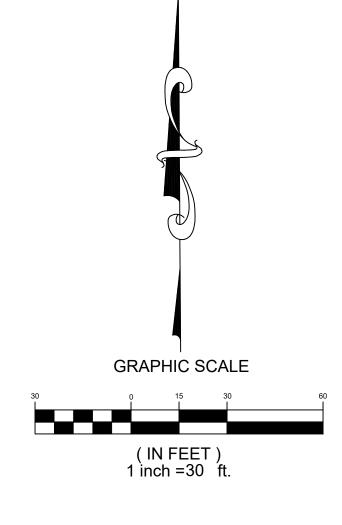
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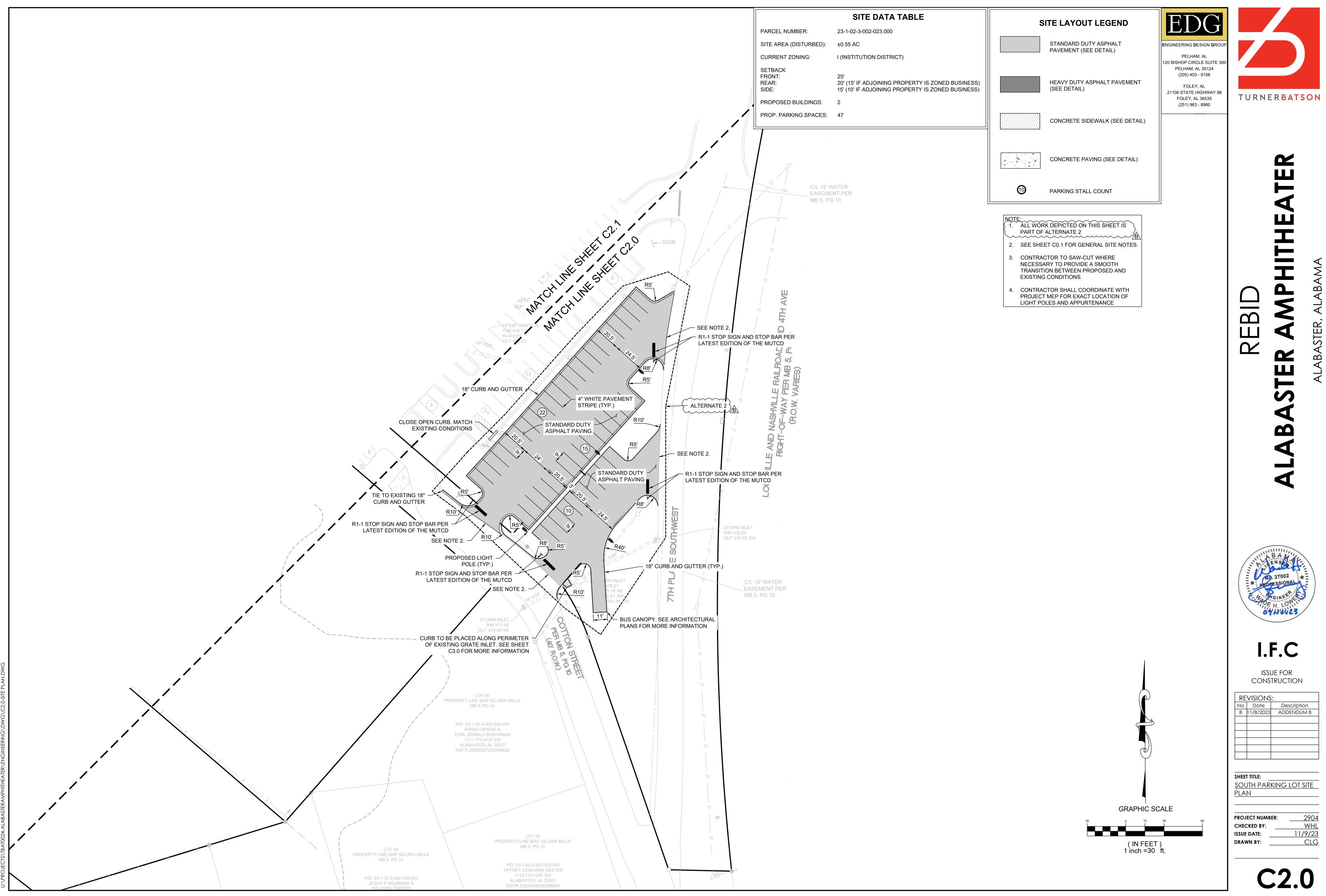
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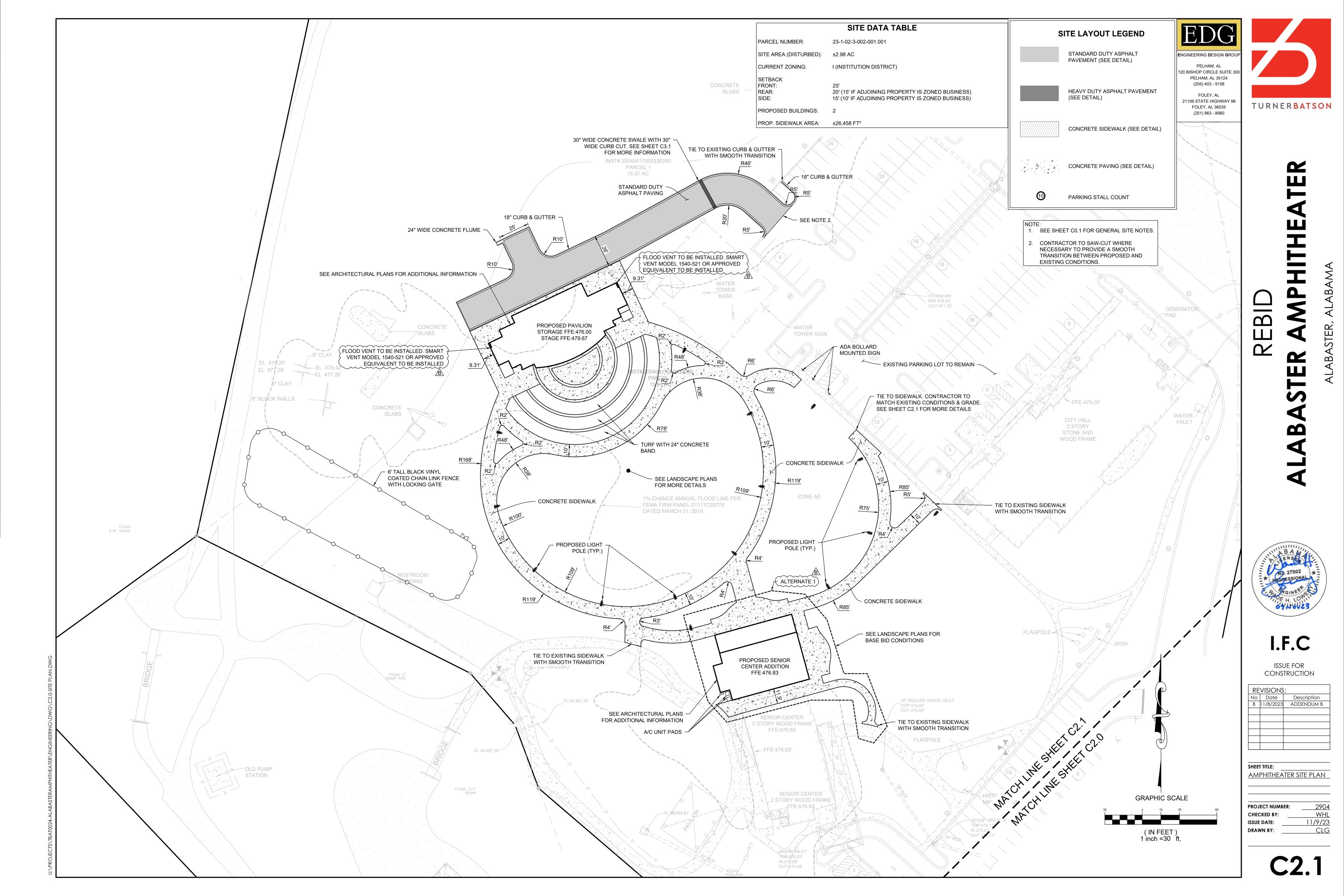
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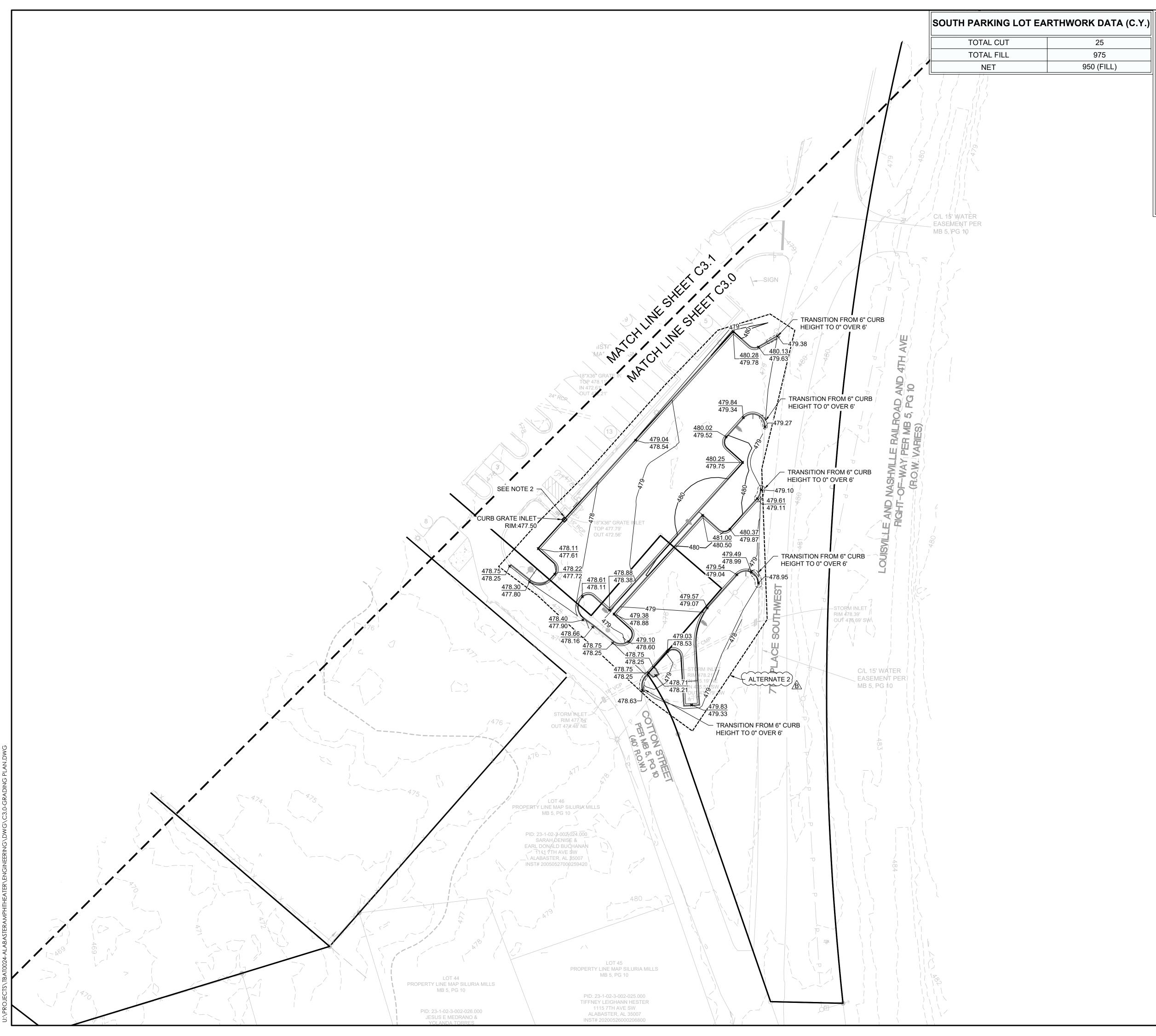






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**GRADING & DRAINAGE LEGEND** 

TOP OF CURB SPOT ELEVATION

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GI AD

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MINOR CONTOUR

MAJOR CONTOUR

(18"Ø OR MORE)

(15"Ø OR LESS)

DWCI DOUBLE WING CURB INLET

RD ROOF DRAIN

NOTE: (1. ALL WORK DEPICTED ON THIS SHEET IS

2. SEE SHEET C0.1 FOR GRADING NOTES

TO BE FIELD VERIFIED.

PART OF ALTERNATE 2

3. CURB GRATE INLET TO BE INSTALLED INLINE WITH EXISTING STORM PIPE. PIPE INVERT

YARD INLET

GRATE INLET

SWCI SINGLE WING CURB INLET

STMH STORM SEWER MANHOLE

AREA DRAIN INLET

HOODED GRATE INLET

STORM DRAINAGE PIPING

STORM DRAINAGE PIPING

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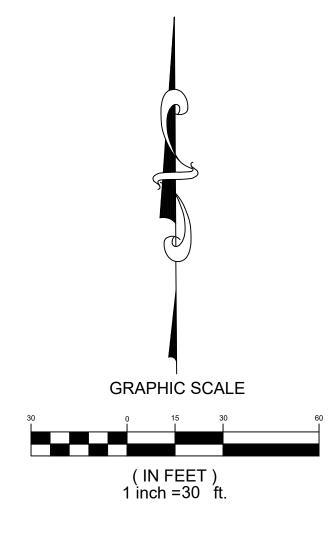
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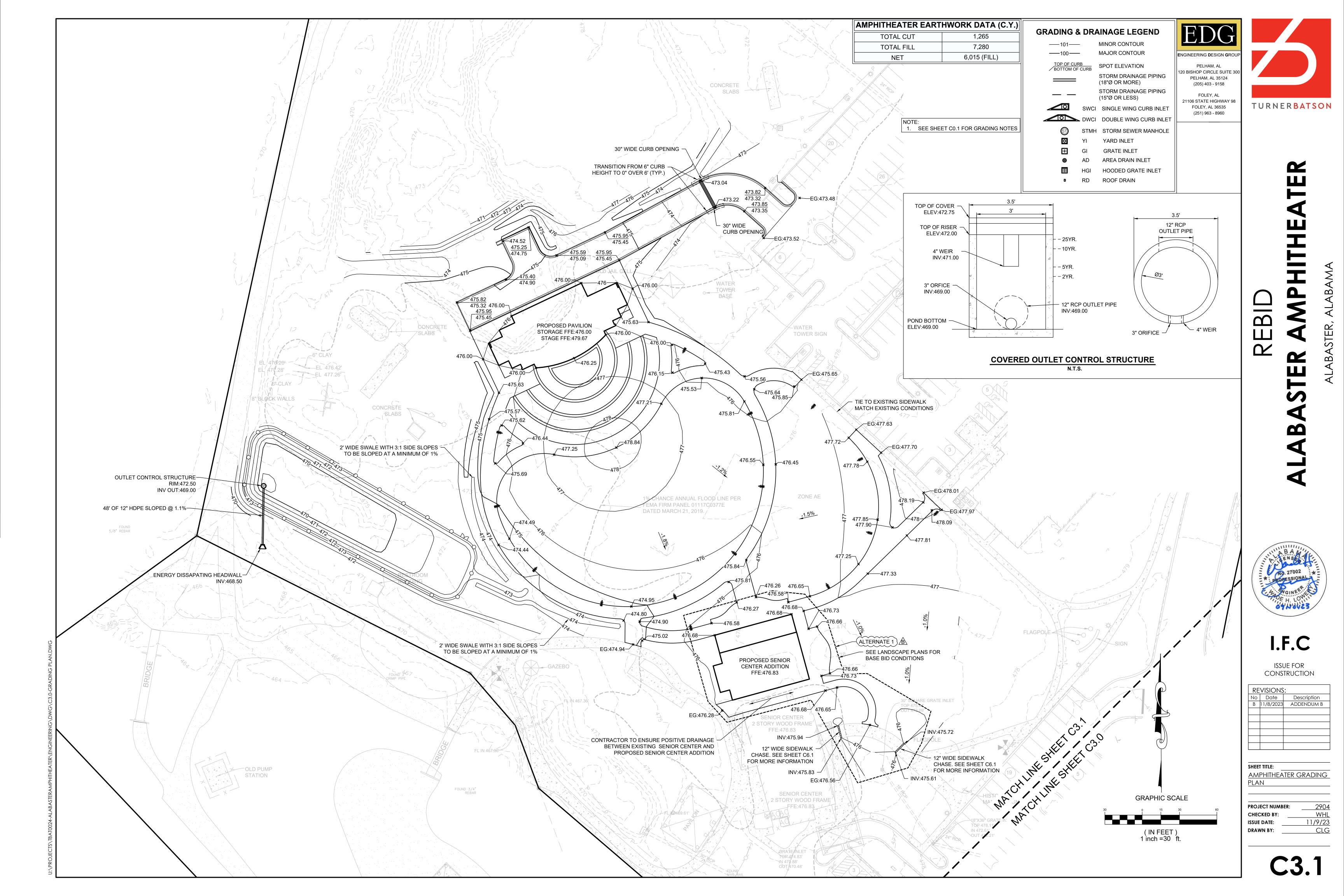
SHEET TITLE: SOUTH PARKING LOT GRADING PLAN

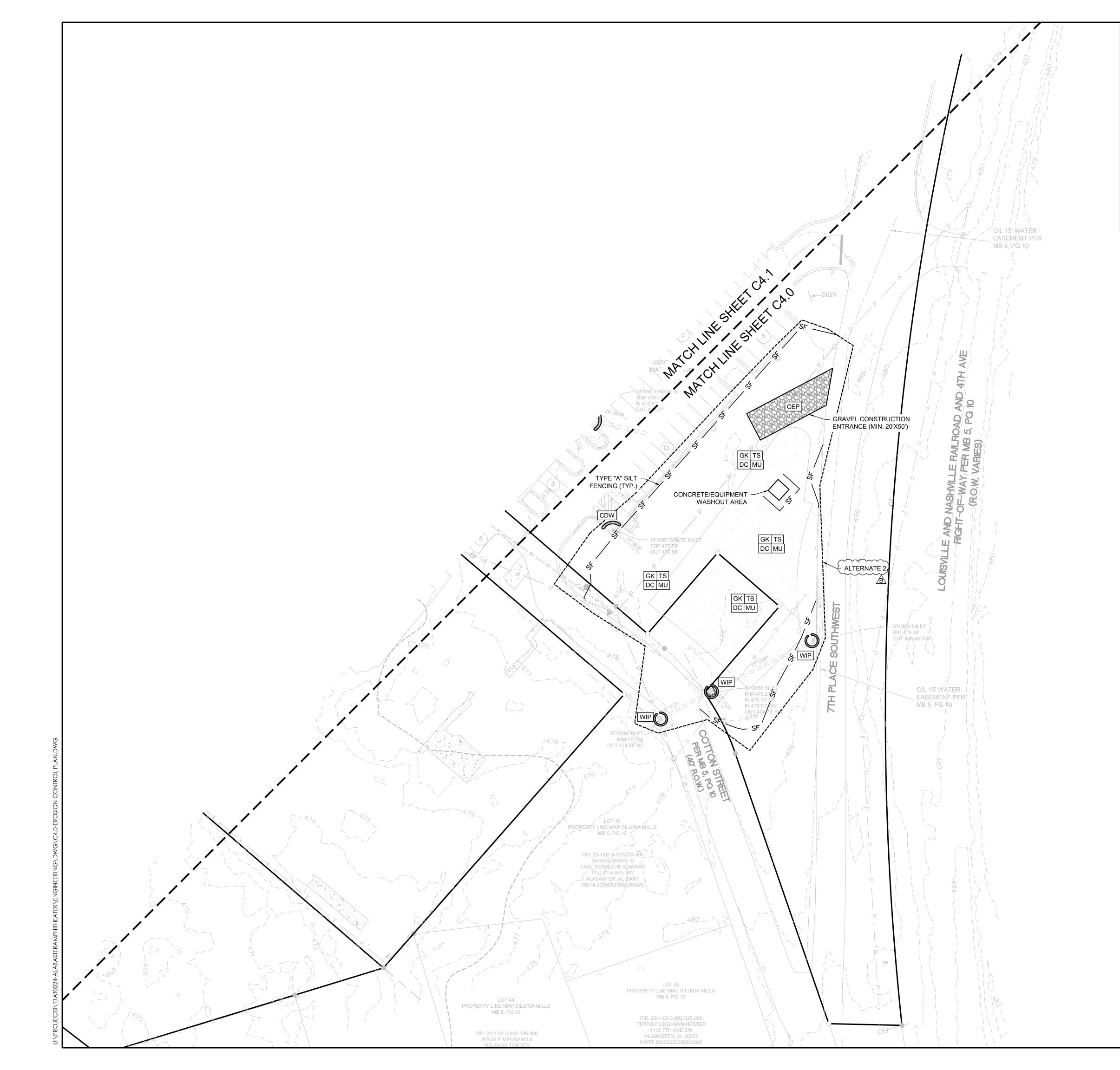
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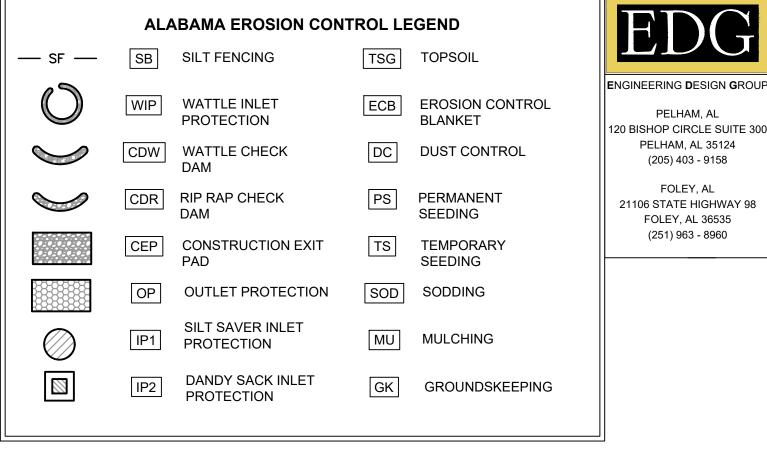




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2. SEE SHEET C0.1 FOR EROSION CONTROL NOTES.



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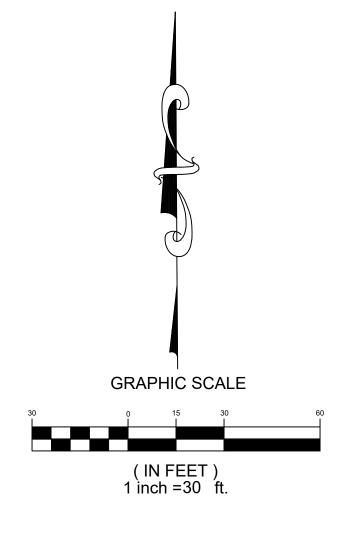
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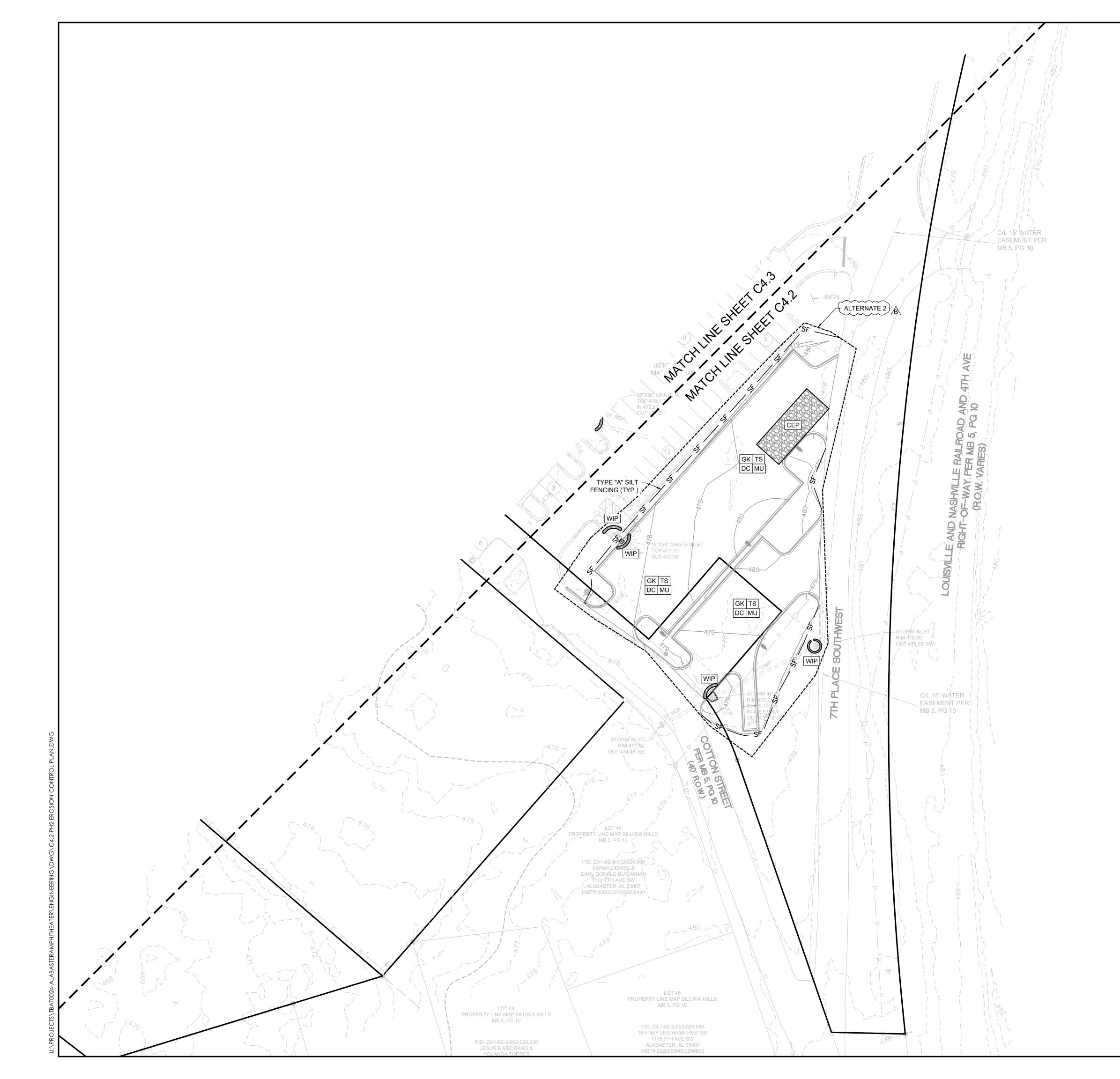
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Sheet Title: South Parking Lot Phase 1 Erosion Control Plan

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|              | ALABAMA EROSION CON                | NTROL LEGEND                   | EDG                                                                   |                                      |
|--------------|------------------------------------|--------------------------------|-----------------------------------------------------------------------|--------------------------------------|
| SF           | SB SILT FENCING                    | SK SKIMMER                     |                                                                       |                                      |
| O            | WIP WATTLE INLET<br>PROTECTION     | ECB EROSION CONTROL<br>BLANKET | ENGINEERING DESIGN GROUP<br>PELHAM, AL<br>120 BISHOP CIRCLE SUITE 300 |                                      |
|              | CDW WATTLE CHECK<br>DAM            | DC DUST CONTROL                | PELHAM, AL 35124<br>(205) 403 - 9158                                  |                                      |
|              | CDR RIP RAP CHECK<br>DAM           | PS PERMANENT<br>SEEDING        | FOLEY, AL<br>21106 STATE HIGHWAY 98<br>FOLEY, AL 36535                | T U R N E R <mark>B A T S O N</mark> |
|              | CEP CONSTRUCTION EXIT<br>PAD       | TS TEMPORARY<br>SEEDING        | (251) 963 - 8960                                                      |                                      |
|              | OP OUTLET PROTECTION               | SOD SODDING                    |                                                                       |                                      |
| $ \bigcirc $ | IP1 SILT SAVER INLET<br>PROTECTION | MU MULCHING                    |                                                                       |                                      |
|              | IP2 DANDY SACK INLET<br>PROTECTION | GK GROUNDSKEEPING              |                                                                       | Ц<br>Ц                               |
|              |                                    |                                |                                                                       |                                      |

NOTE: 1. ALL WORK DEPICTED ON THIS SHEET IS PART OF ALTERNATE 2 2. SEE SHEET C0.1 FOR EROSION CONTROL NOTES.



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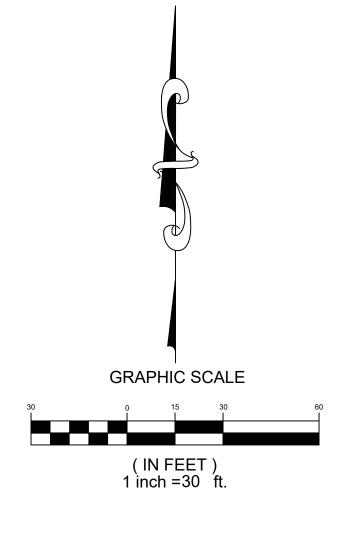
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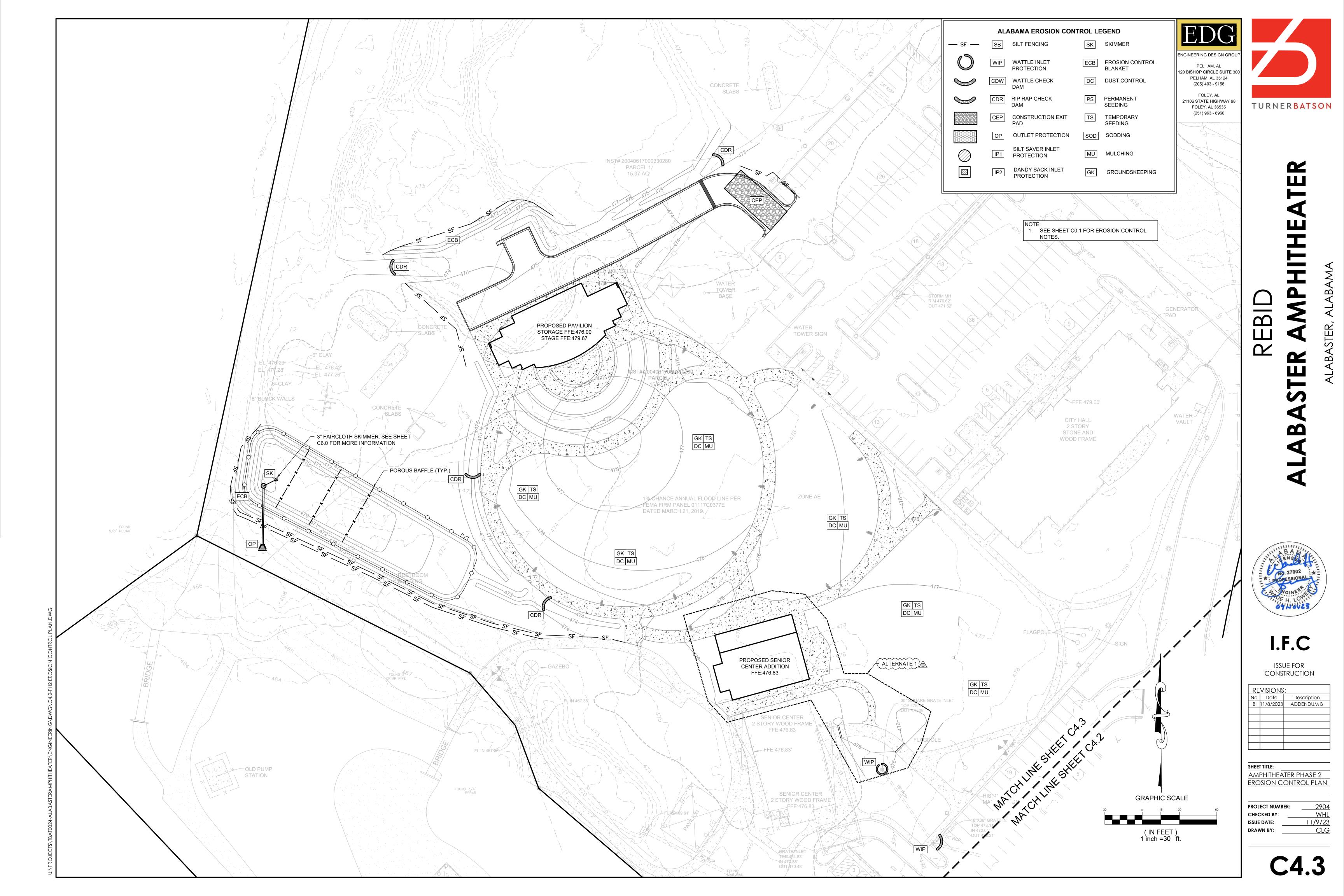
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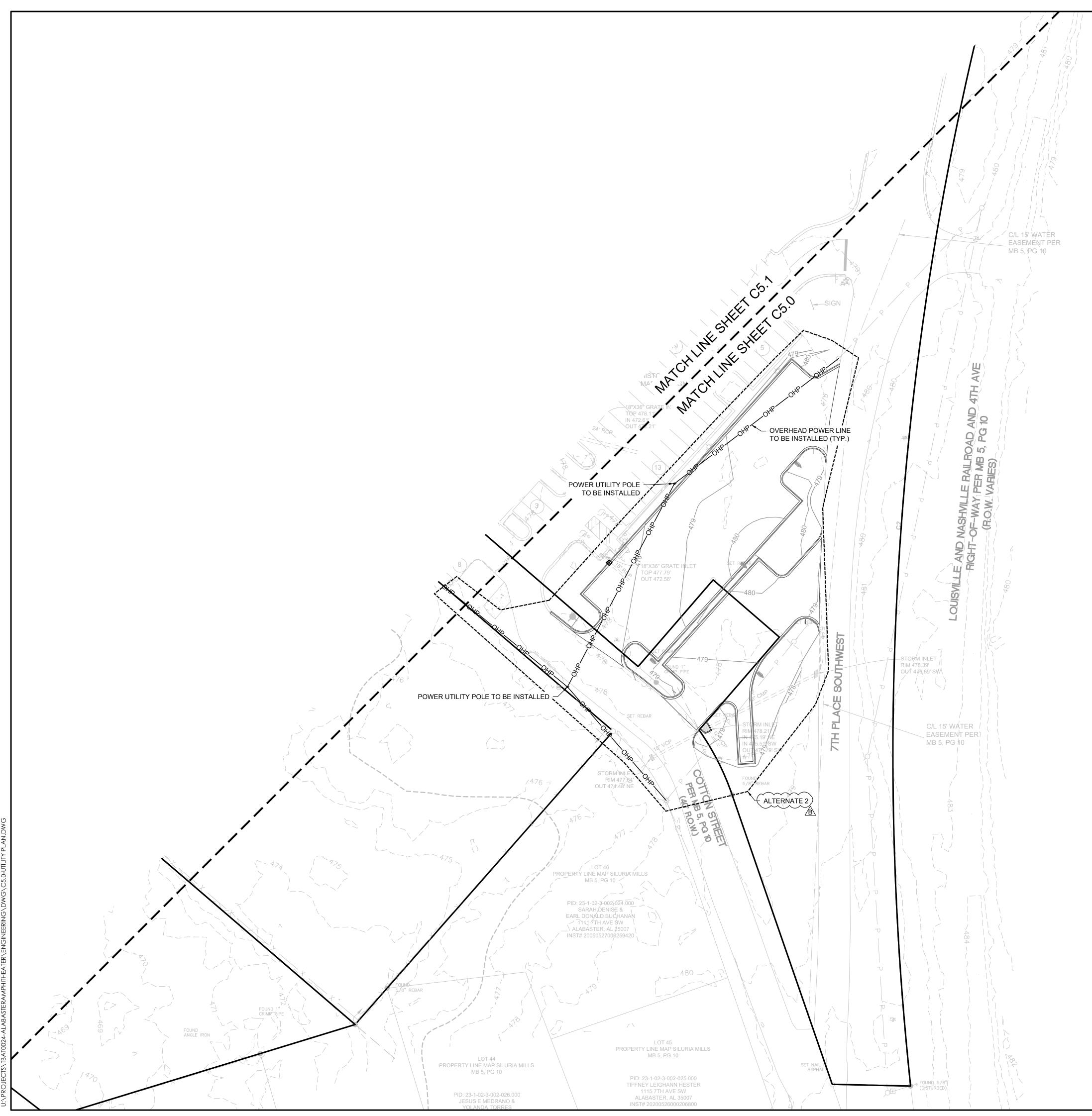
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C4.2







# UTILITY LEGEND FIRE SERVICE

GAS

DOMESTIC WATER

COMMUNICATION

IRRIGATION SERVICE

OVERHEAD POWER

SANITARY SEWER

SANITARY SEWER

FIRE HYDRANT

MANHOLE

CLEANOUT

ALE: ALL WORK DEPICTED ON THIS SHEET IS PART OF ALTERNATE 2

2. SEE SHEET C0.1 FOR GENERAL

CONTRACTOR TO COORDINATE

POWER POLE RELOCATION WITH

CONTRACTOR TO USE EXTREME

CAUTION WHEN WORKING ADJACENT TO OVERHEAD POWER

UTILITY NOTES.

LINES

UTILITY PROVIDER.

UNDERGROUND POWER

—WFM—

—\_W\_\_\_\_

——IRR——

—COMM—

—UGP—

-OHP----

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ENGINEERING DESIGN GROUP PELHAM, AL 120 BISHOP CIRCLE SUITE 30 PELHAM, AL 35124

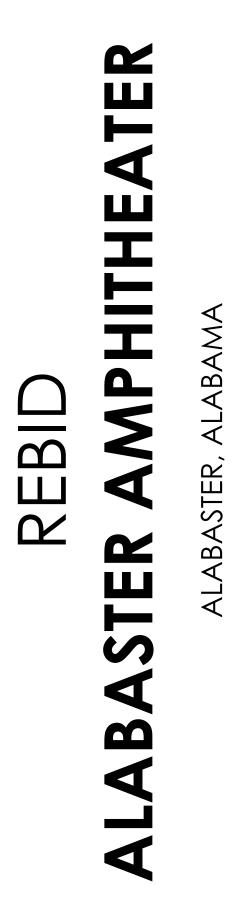
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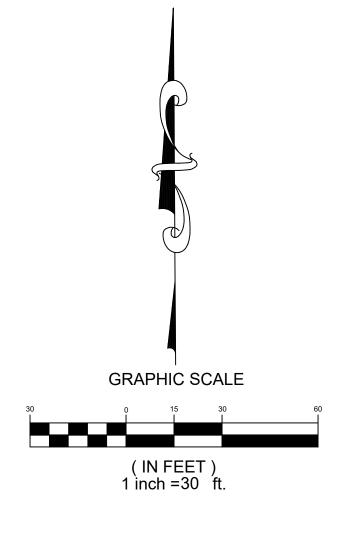
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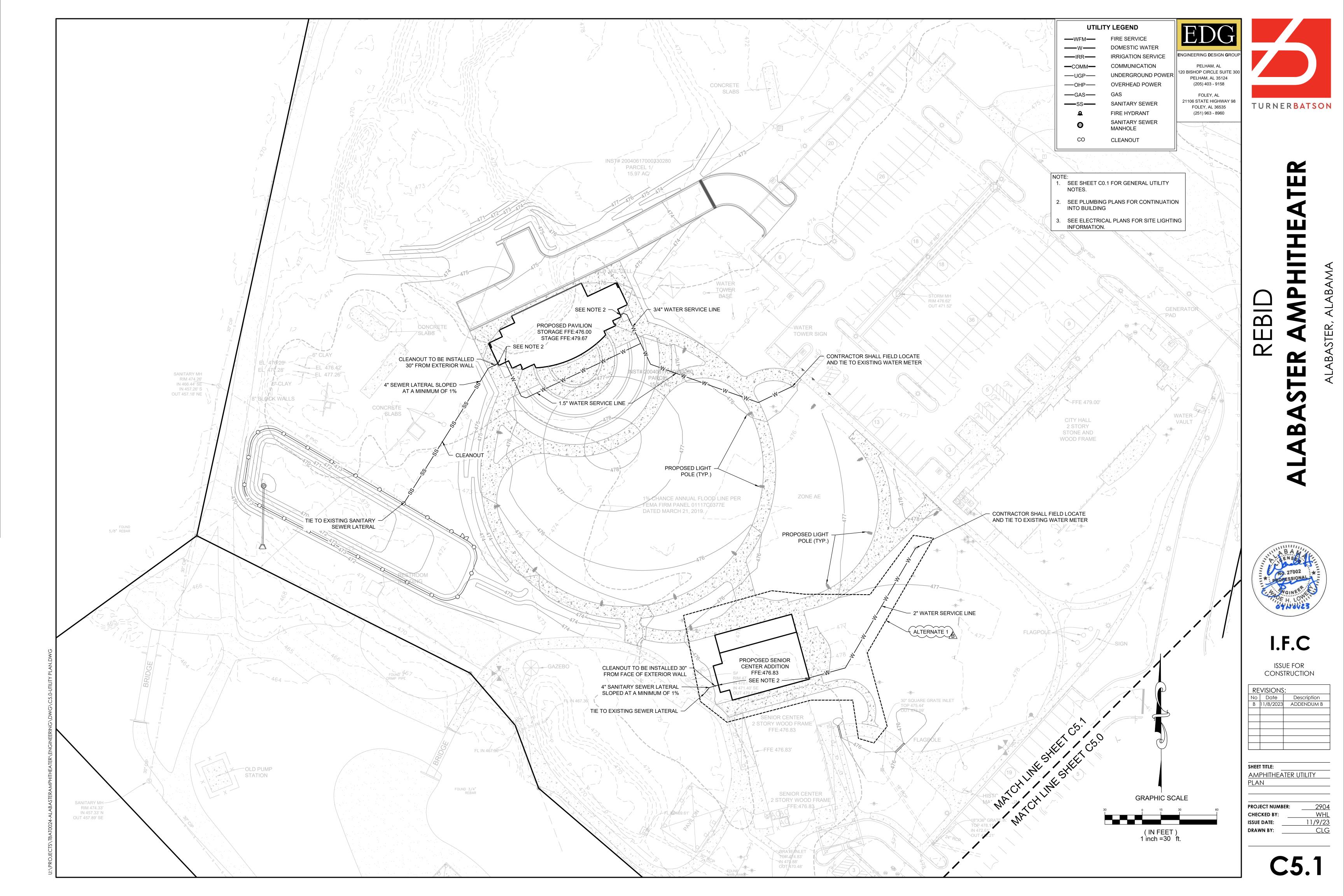
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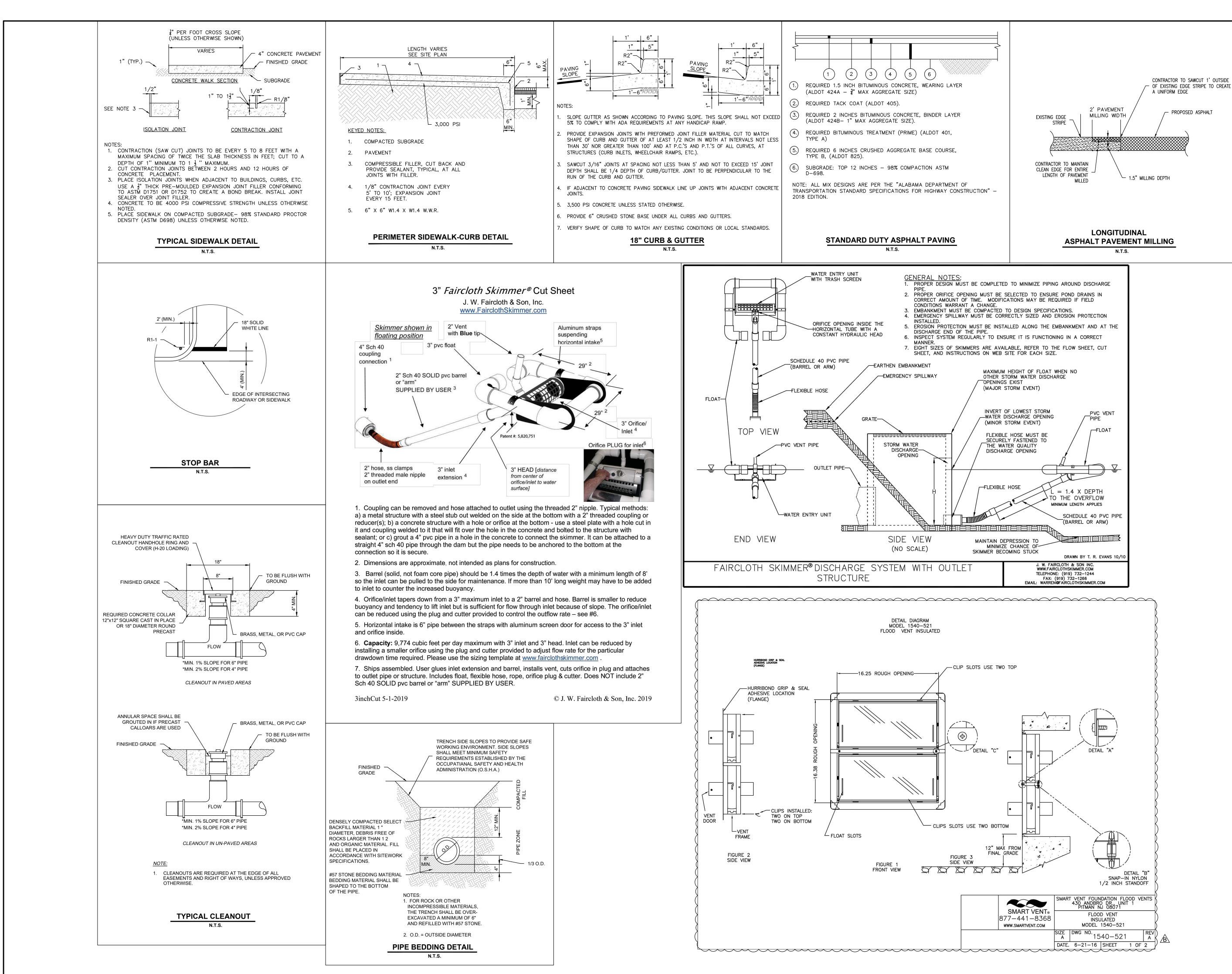
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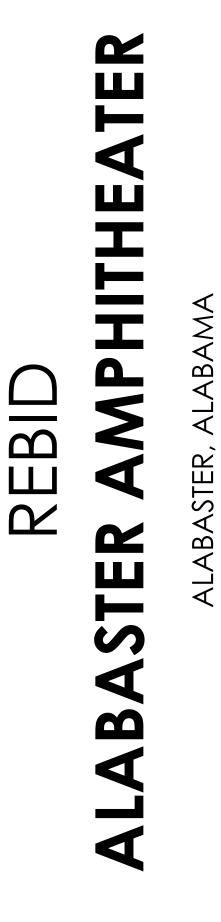


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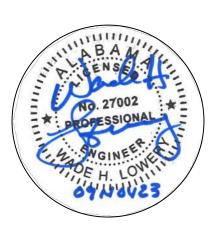
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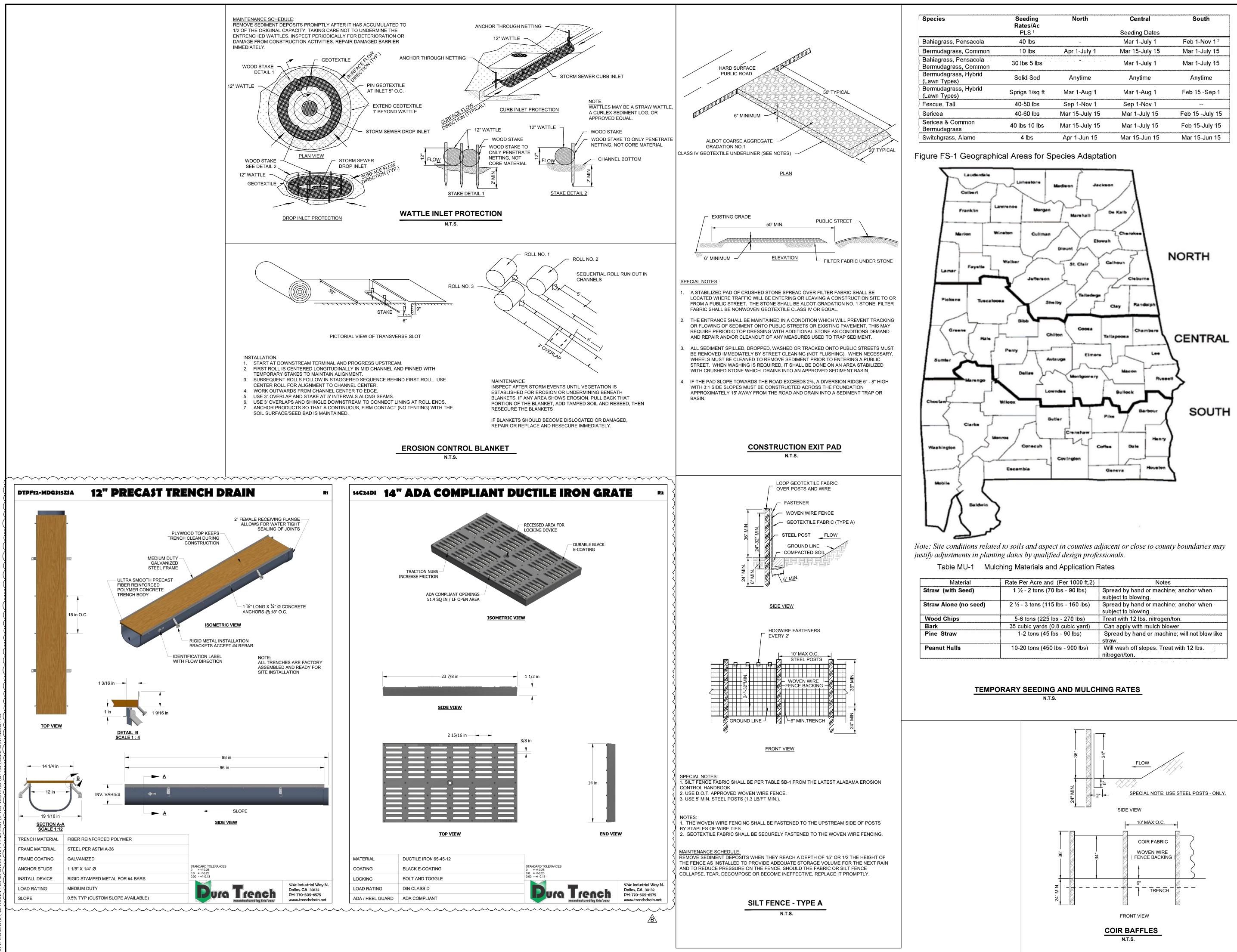


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SHEET TITLE: DETAILS

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PELHAM, AL 20 BISHOP CIRCLE SUITE 30 PELHAM, AL 35124 (205) 403 - 9158

FOLEY, AL 1106 STATE HIGHWAY 98 FOLEY, AL 36535 (251) 963 - 8960



|      | Rate Per Acre and (Per 1000 ft.2) | Notes                                                      |
|------|-----------------------------------|------------------------------------------------------------|
| )    | 1 ½ ~ 2 tons (70 lbs ~ 90 lbs)    | Spread by hand or machine; anchor when subject to blowing. |
| eed) | 2 ½ - 3 tons (115 lbs - 160 lbs)  | Spread by hand or machine; anchor when subject to blowing. |
|      | 5-6 tons (225 lbs - 270 lbs)      | Treat with 12 lbs. nitrogen/ton.                           |
|      | 35 cubic yards (0.8 cubic yard)   | Can apply with mulch blower.                               |
|      | 1-2 tons (45 lbs - 90 lbs)        | Spread by hand or machine; will not blow like straw.       |
|      | 10-20 tons (450 lbs - 900 lbs)    | Will wash off slopes. Treat with 12 lbs. nitrogen/ton.     |

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