ADDENDUM NUMBER
03

March 22, 2024

PROJECT: **MORGAN COUNTY EVENTS CENTER**
ARCHITECT: GOODWYN MILLS CAWOOD
OWNER: MORGAN COUNTY COMMISSION

AD3-1 GENERAL:

A. The following revisions and/or additions to the Drawings and Project Manual are hereby made a part of same, and shall be incorporated in the Work of the Contract the same as if originally included in the Bid and Construction Documents.

B. Bidders shall acknowledge receipt of this Addendum in writing, as provided on the Proposal Form.

C. When a revision and/or addition is called for to the Drawings or Project Manual, they shall be fully coordinated with and carried through all applicable Drawings and portions of the Project Manual, including in part, all related Civil, Landscaping, Architectural, Structural, Plumbing, Mechanical, Electrical, and other Documents.

AD3-2 CLARIFICATIONS:

A See Geotech report attached.
B Sheet E301: The receptacle in Kitchen 110 on Circuit RPB#39 shall be a GFCI type receptacle.

AD3-3 DRAWINGS

Drawings Removed:

G1.01 – Index & General Information (Revision 3/15/2024)
G1.21 – Plumbing Layouts & Partition Types (Revision 3/15/2024)
C-102 – Site Layout Plan (Issue Date 2/16/2024)
A1.01 – First Floor Plan (Revision 3/15/2024)
M0.01 – HVAC Schedules, Notes, and Legends (Issue Date 2/16/2024)
P1.01 – First Floor Plan – Non-Pressure Piping (Issue Date 2/16/2024)

Drawings Added:

G1.01 – Updated Sheet Index (Revision 3/22/2024)
G1.21 – Revised Partition Types (Revision 3/22/2024)
G1.22 –Wall Types - exterior (Revision 3/22/2024)
C-102 – Site Layout Plan – bollards added(Revision 3/22/2024)
A1.01 – First Floor Plan – added wall tags(Revision 3/22/2024)
M0.01 – HVAC Schedules, Notes, and Legends – dx cooling and reheat (Revision 3/20/2024)
P1.01 – First Floor Plan -Non-Pressure Piping moved sanitary line (Revision 3/20/2024)

AD3-4 SPECIFICATION

Items Removed:

1. …

Items Added:

1. 011000 – Summary
2. 01400 – Quality Requirements
3. 01600 – Product Requirements
4. 017419 – Construction Waste Management and Disposal
5. 081113 – Hollow Metal Doors & Frames
6. 087100 – Door Hardware
7. 096500 – Resilient Flooring
8. 102800 – Toilet Accessories
9. 104400 – Fire Protection
10. 10530 – Metal Canopies

AD3-5 RFIs & QUESTIONS

- Please see attached RFI Log for responses, additional RFI responses are pending.

….

Morgan County Event Center

SOMERVILLE, MORGAN COUNTY, ALABAMA

March 1, 2024

REPORT OF GEOTECHNICAL EXPLORATION

Prepared By

Goodwyn Mills Cawood, LLC
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GMC PROJECT NUMBER: GHUN240001

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March 1, 2024

Mr. Greg Bodley
Morgan County Engineering Department
580 Shull Road NE
Hartselle, AL 35640

RE: REPORT OF GEOTECHNICAL EXPLORATION
PROPOSED MORGAN COUNTY EVENT CENTER
SOMERVILLE, MORGAN COUNTY, ALABAMA
GMC PROJECT GHUN240001

Dear Mr. Bodley,

Goodwyn Mills Cawood, LLC (Geotechnical Division) is pleased to provide this report of geotechnical exploration performed for the above-referenced project. This report includes the results of field and laboratory testing and general recommendations for foundation design and site recommendations.

We appreciate the opportunity to perform this study during this phase of the project for you and look forward to continued participation during the construction phase of this project. If you have any questions pertaining to this report, or if we may be of further service, please do not hesitate to call.

Sincerely,
GOODWYN MILLS CAWOOD, LLC

ALABAMA LICENSED No. 20146 PROFESSIONAL 3/1/24 ENGINEER KEVIN WAYNE WALES

Kevin W. Wales, PE
Executive Vice President
Licensed Alabama 20146

Michael J. McNeill, PE
Vice President, Geotechnical
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GMC

TABLE OF CONTENTS **Page**

1.0 EXECUTIVE SUMMARY 1
2.0 PROJECT INFORMATION AND SCOPE OF WORK 2
2.1 Project Information 2
2.2 Scope of Work 2
3.0 SITE AND SUBSURFACE CONDITIONS 2
3.1 General 2
3.2 Field Exploration 3
3.3 Site Geology 3
3.4 Sinkhole Risk 3
3.5 Subsurface Conditions 4
3.6 Groundwater Information 5
3.7 Laboratory Testing 5
4.0 SITEWORK RECOMMENDATIONS 5
4.1 General 5
4.2 Sitework Recommendations 5
4.3 Time of Year Site Preparation Considerations 6
4.4 Fill Placement 7
4.5 Backfilling of Utility Trenches 8
5.0 STRUCTURAL RECOMMENDATIONS 8
5.1 Shallow Foundations 8
5.2 Floor Slabs 9
5.3 Lateral Resistance 9
5.4 Seismic Site Classification 10
6.0 REPORT LIMITATIONS 10

APPENDIX:
Site Location Map
Boring Location Plan
Shear Wave Velocity Test Location Plan
Shear Wave Velocity Profile
Shear Wave Velocity Line Photograph
Soil Classification Chart
Subsurface Diagram
Boring Records
Summary of Laboratory Results
Field and Laboratory Procedures

1.0 EXECUTIVE SUMMARY

The summary of conclusions and recommendations contained in this section of the report are provided for your convenience. A geotechnical exploration has been conducted for the proposed Morgan County Event Center site in Somerville, Morgan County, Alabama. The planned finish floor elevation of the gym will be EL 631 feet. Current grades in the gym area range from EL 628 feet to EL 630 feet, which will result in about 1 to 2 feet of fill in the building area. We understand from the structural engineer that CMU wall loads at the stair well will be a little over 6 kips/lf. We have assumed that maximum column loads will be 150 kips.

Five (5) soil test borings were drilled in the planned building footprint. The borings encountered auger refusal at depths ranging from 14 to 23 feet below existing grade. The borings generally encountered moderate to highly plastic clay (USCS Soil Classification CL and CH), with plasticity increasing with depth. Groundwater was encountered at depth of 4, 8, and 20 feet below grade in three of the borings.

Because of past farming activities, the soils in the upper 1.5 to 3 feet of the building are not suitable for subgrade or foundation support. These soils also have a high natural moisture content, which will require drying to achieve a workable state. The upper 1.5 to 3 feet of soil across the site was classified as lean clay (CL) to fat clay (CH). The upper soils were underlain by moderately to highly plastic (fat) clay (CH). Fat clays (CH) have the potential to shrink and swell with changes in moisture content. Therefore, we recommend the following be set up in the base bid of the sitework package:

1. **Once the site is stripped of the surficial organic laden material, undercut and replace with compacted structural fill up to 3 feet across the building footprint.** The limits should extend a minimum of 10 feet beyond the building perimeter. Depending on the time of year construction occurs, the depths may be less.
2. The reuse of the undercut material will be dependent on the moisture content of the existing soils. The undercut material may be reused, but it will likely require moisture conditioning (drying) to facilitate compaction. **We recommend the budget contain pricing for the use of imported drier material.** If the undercut material is not used, it may be spread across the site in pavement areas, allowed to dry, and reused as compacted fill.

If the site is prepared as outlined above, shallow foundations can be used and should be sized for a net allowable bearing capacity of 2,000 pounds per square foot (psf). The foundations should bear at a minimum depth of 24 inches below the proposed final exterior grade. We anticipate total and differential settlements of up to 1-inch and ½-inch, respectively.

Based on the results of the shear wave velocity test, a seismic site class of "C" can be used.

The following sections of the report should be referenced for site specific design and construction recommendations.

2.0 PROJECT INFORMATION AND SCOPE OF WORK

2.1 Project Information

We understand a new gym and event center with associated parking are planned at the site located at 382 Union Hill Road in Somerville, Morgan County, Alabama. We understand the construction will consist of CMU walls in the stair well and the structure will be a PEMB. The site is currently a field with short to medium grasses and is relatively level. A grading plan was provided. The planned finish floor elevation of the gym will be EL 631 feet. Current grades in the gym area range from EL 628 feet to EL 630 feet, which will result in about 1 to 2 feet of fill in the building area. We understand from the structural engineer that CMU wall loads at the stair well will be a little over 6 kips/lf. We have assumed that maximum column loads will be 150 kips.

2.2 Scope of Work

The purpose of this exploration was to perform a general evaluation of the subsurface soil conditions at the site and to provide site preparation and foundation recommendations. The scope of the exploration and evaluation included field and laboratory testing and an engineering evaluation of the materials encountered.

Five (5) soil test borings were drilled in the planned building area. The planned depth of the borings was 30 feet below existing grade or auger refusal, whichever occurred first. The borings were advanced to the planned termination depth or to auger refusal to soil drilling methods. Split-spoon sampling and standard penetration testing were performed at standard intervals in the borings. Groundwater levels were recorded in the borings at the time of drilling. Each borehole was backfilled with soil cuttings from the drilling process upon completion.

The scope of services for the geotechnical study did not include any environmental assessment for the presence or absence of wetlands or hazardous or toxic materials in the soil, surface water, groundwater, or air, on or below or around this site. Any statements in this report or on the boring records regarding odors, colors, or unusual or suspicious items or conditions are strictly for the information of the client.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 General

At the time of this study, the site had low-lying grasses with a gentle slope from the high elevation of EL 630 feet at the proposed building location to a low of EL 625 feet at the southwest corner.

The following pictures show the site conditions at the time of our exploration:

View from NW to SE

View from W to E

3.2 Field Exploration

The boring locations and depths were selected by GMC personnel. Field-testing employed by GMC was performed in general accordance with ASTM standards or generally accepted methods.

The borings were performed on February 13, 2024 using an ATV-mounted drill rig equipped with a rotary head and hollow stem augers (HSA). Soils were sampled using a two-inch OD split barrel sampler in accordance with ASTM D1586 driven with an automatic hammer.

3.3 Site Geology

Published geologic information indicates that the site is underlain by the Bangor Limestone geologic formation. The Bangor Limestone consists of medium to thick-bedded limestone, with interbedded partings of shale. The soil overburden is generally residual moderate to highly plastic clay and elastic silt. The bedrock surface is highly irregular.

3.4 Sinkhole Risk

Since the Bangor Limestone Formation is primarily carbonate rock, it is susceptible to dissolution from the groundwater as it moves through joints and fissures in the rock formation. As dissolution progresses, cavities begin to form within the rock mass and the overlying residual soil can be eroded downward into the slots, therefore forming sinkholes in the overburden soils. Sinkholes can form spontaneously and are extremely difficult to predict. Sinkhole activity can be influenced by many factors, including both on-site and off-site activities.

Since the movement of water through the soil and bedrock can influence the dissolution process, site grading should be designed to minimize surface water infiltration. It should be noted that in the developing the site, there is a risk of future sinkhole development, however taking precaution during development can reduce the potential. However, the level of these risks cannot be defined since they are partially controlled by nature. To minimize the potential, we recommend that water be diverted away from structures and collected in catch basins, construct drainage swales away from structures and roads, provide positive drainage away from structures, minimize or do not install irrigation systems, and use the on-site clays for bedding material. With these precautions, it is our

opinion that the site will have no greater risk of subsidence than the nearby developments overlying similar geologic conditions. The borings did not encounter any voids or evidence of current sinkhole activity in the borings and depths explored.

3.5 Subsurface Conditions

The site was explored by drilling five (5) soil test borings in the building area. The borings encountered auger refusal prior to the planned depth of 30 feet. The borings area summarized below:

Boring	Existing Elevation (feet)	Auger Refusal Depth (feet, below existing grade)
B-01	628.5	19.1
B-02	629	14
B-03	629	14
B-04	629.5	17
B-05	630	23

The following summarizes the subsurface conditions encountered:

Ground Cover
Surficial ground cover consisted of organic laden material (OLM) to depths of about 2 to 3 inches. Thicker areas may be encountered in other areas of the site.

Cultivated Material
Due to past farming activity at the site, all borings encountered an upper 1 to 3 feet of the material consisted of very soft to medium lean clay (CL) with rootlets. The material's moisture content was also elevated due to rain penetrating the soft/loose material. Standard Penetration Test (SPT) N-values in this zone ranged from 1 to 7 blows per foot (bpf).

Residuum
Below the cultivated material, residual soils, weathered from the underlying limestone bedrock, consisted of medium to very stiff lean and fat clay (CL and CH) to the boring refusal depths. Standard Penetration Test (SPT) N-values in these materials ranged from 7 to 19 blows per foot (bpf).

The subsurface descriptions contained herein are of a generalized nature to highlight the major soil stratification features and soil characteristics. The boring records included in the Appendix should be reviewed for specific information as to individual boring locations. The stratification shown on the boring records represents conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials, and the transition may be gradual.

3.6 Groundwater Information

Groundwater was encountered in borings B-1, B-3, and B-5 at depths of 4, 8, and 20 feet, respectively, at the time of drilling. The borings were backfilled prior to leaving the site for safety reasons and therefore no long-term groundwater levels were recorded. It is important to note that the groundwater levels may not have stabilized in the borings. Furthermore, groundwater levels may vary due to seasonal conditions, proximity to bodies of water, and recent rainfall.

The shallow groundwater depth in boring B-1 may indicate a perched or "trapped" condition of the water between the upper soft soils and the less permeable residual clays. This condition could be present in other areas of the site. Groundwater at these depths could impact site grading and foundation construction.

3.7 Laboratory Testing

The laboratory-testing program included visual classification of all soil samples by a geotechnical professional. Laboratory tests were performed on selected samples including moisture content, grain size, and Atterberg limits tests. The laboratory-testing program was conducted in general accordance with applicable ASTM standards and the results are indicated on the Boring Records and summarized in the Appendix.

4.0 SITEWORK RECOMMENDATIONS

4.1 General

Because of past farming activities, the soils in the upper 1.5 to 3 feet of the building are not suitable for subgrade or foundation support. These soils also have a high natural moisture content, which will require drying to achieve a workable state. The upper 1.5 to 3 feet of soil across the site was classified as lean clay (CL) and fat clay (CH). The upper soils were underlain by moderately to highly plastic (fat) clay (CH). Fat clays (CH) have the potential to shrink and swell with changes in moisture content. Therefore, we recommend the following be set up in the base bid of the sitework package:

1. **Once the site is stripped of the surficial organic laden material, undercut and replace with compacted structural fill up to 3 feet across the building footprint.** The limits should extend a minimum of 10 feet beyond the building perimeter. Depending on the time of year construction occurs, the depths may be less.
2. The reuse of the undercut material will be dependent on the moisture content of the existing soils. The undercut material may be reused, but it will likely require moisture conditioning (drying) to facilitate compaction. **We recommend the budget contain pricing for the use of imported drier material.** If the undercut material is not used, it may be spread across the site in pavement areas, allowed to dry, and reused as compacted fill.

4.2 Sitework Recommendations

Clearing and Stripping

Sitework should begin with clearing and grubbing of the site and should include the removal of the removal of the organic laden material (OLM).

Proofrolling

Once the site is at grade and prior to the placement of any new fill, the areas should be proofrolled with repeated passes of a loaded tandem axle dump truck to locate deeper soft soils. Soils that are observed to rut or deflect excessively under the moving load should be undercut and replaced with properly compacted fill. **We recommend the grading budget account for undercutting and replacing the upper 3 feet of the soft, high moisture, cultivated material in the building area. We also recommend that off-site borrow meeting the requirements for select fill be budgeted for use if the on-site undercut soils are not suitable for reuse as fill.**

The proofrolling, undercutting, and filling activities should be witnessed by a qualified representative of the geotechnical engineer and should be performed during a period of dry weather.

Attempts can first be made to compact the problem soils. If dry weather conditions exist prior to and at the time of construction, re-compaction and densification may prove successful. The soils should be scarified and the soil moisture should be adjusted to within 3 percent of optimum moisture for low plasticity soils. Once proofrolling has been accomplished, then re-compaction of the soils may be attempted. In pavement areas where unsuitable soils are encountered, stabilization using geotextile or geogrid with stone may be a more economical option than removal and replacement of the soils.

Highly Plastic Clays

Highly plastic, or fat, clay (CH) was encountered in the borings B-2 and B-4 below 1.5 feet. Such fat clays (PI › 25%) have the potential to shrink and swell with a corresponding loss or gain in soil moisture which can result in subsidence or heave of floor slabs, foundations, and pavements. If these soils are encountered near the surface in other areas, to reduce this volume change potential, we recommend that the fat clays be "capped" with low plasticity compacted fill meeting the requirements in Section 4.4 of this report. Fat clays should not be used as compacted fill in the upper 24 inches below the subgrade elevation.

4.3 Time of Year Site Preparation Considerations

The time of the year that the sitework begins can affect the project considerably. In this area, the "wet" season is generally between the months of November to April, and the "dry" season from May to October. There are many considerations that need to be addressed prior to bidding a project that could affect the budget based on the time of year a project starts earthwork activities. The time of the year that the geotechnical borings were performed can provide a false sense of actual near surface conditions depending on the time of year and weather conditions. Below are considerations that should be addressed based on the time of the year the earthwork is started.

"Wet" Season

During the "wet" season, the amount of undercutting may be greater, therefore resulting in greater excavation costs. The soils are typically proofrolled to determine their suitability for the placement of new fill or subgrade support. During the wet season, the surface soils have a higher moisture content and will tend to pump, therefore, hindering the placement of new fill. In addition, the drying time, time period between rain events, and temperature is not conducive to scarify soils, allow to dry, and recompact. At this time, the decision should be made by the owner to try either to scarify/dry/compact the in-place soils, which could take time, or undercut and replace with suitable material, which could increase the sitework costs. Based on our experience, the amount of

undercut could be an additional 1 to 2 feet (or greater in localized areas), whereas in drier weather, lesser amounts of undercutting may be necessary, if recompaction or stabilization of soils left in place can be achieved.

Some undercut soils are not always "unsuitable" soil and can be moisture conditioned and reused as fill in the deep areas if drying conditions are favorable.

"Dry" Season

During the "dry" season, the surface soils have a lower moisture content and will tend to "bridge" or "crust" softer underlying soils. They will generally allow the placement of new fill, but the crust can break down if repeated passes with heavily loaded equipment is persistent. In addition, new fill from cuts or other sources may need to be moisture conditioned prior to compaction. The soils can dry significantly, requiring the addition of water for proper compaction. Water trucks should be used, as necessary, by the contractor to condition the soils within the required specifications.

Contractor Responsibility

The grading contractors have the option of performing their own evaluation of the site conditions to assess the excavation considerations based on the time of year a project is bid. We strongly suggest that the grading contractors conduct their own exploration and evaluation of the site conditions and material management requirements to cost effectively develop the site.

Typically, due to the movement of heavy equipment and weather conditions, the subgrade becomes disturbed during construction. As a result, fine grained clayey soils have a tendency to lose shear strength and support capability. Therefore, additional effort on the Contractor's part will be required to reduce traffic and limit disturbance of soils. It is essential that the subgrade be restored to a properly compacted condition based on optimum moisture and density requirements. Restoration of the subgrade should be addressed in the project specifications.

4.4 Fill Placement

Soil Fill Material

Soil fill material in structural and paving areas should be placed in loose lifts not exceeding 8-inches in thickness with a maximum particle size of 3 inches. Samples of the proposed fill materials, either from on-site or borrow, should be provided to the geotechnical engineer for Proctor testing and evaluation prior to placement. Density tests should be performed to document compaction and moisture content of any earthwork involving soils and other applicable materials. Density tests should be performed frequently, with a recommended minimum of one test per 5,000 square feet per lift of fill in structural areas and one test per 10,000 square feet per lift in other areas. Fill material must meet the specified density and moisture requirements to be considered acceptable.

The following table summarizes the compacted fill requirements:

Location	Test Method	Compaction Required (minimum)	Moisture Content
Building Area and 10' beyond perimeter	ASTM D698 (standard)	98 %	-/+3 percentage points of optimum moisture

Structural fill material should meet the following characteristics:

Property	Requirement
Organic Material	≤ 5%
Liquid Limit	‹ 50%
Plasticity Index	≤ 25%
Maximum Dry Density	≥ 95 lb/ft^3
Maximum Particle Size	3 inches or less

4.5 Backfilling of Utility Trenches

Backfilling of storm drain and utility trenches must be performed in a controlled manner to reduce settlement of the fill and cracking of overlying floor slabs and pavements. We recommend that utility trenches be backfilled with acceptable borrow or dense-graded crushed stone in 6-inch loose lifts compacted with mechanical piston tampers to the project requirements. Should seepage occur in utility trenches, it may be necessary to "floor" the trench with dense-graded gravel to provide a working surface. If crushed stone is used to backfill utility trenches, we recommend that dense graded aggregate (DGA, compacted in lifts) be used. Open-graded crushed stone, such as ALDOT #57, can serve as a channel for seepage toward structures and therefore is not recommended for use as utility trench backfill.

5.0 STRUCTURAL RECOMMENDATIONS

5.1 Shallow Foundations

Based on the assumed and provided loads, we do not anticipate column and wall loads to exceed 150-kips and 8-kips per foot, respectively. If the site is prepared as recommended in Section 4.0, shallow foundations can be used and should be sized for a net allowable bearing capacity of 2,000 pounds per square foot (psf). The foundations should bear at a minimum depth of 18-inches below the proposed final exterior grade. Total and differential settlements of up to 1-inch and ½-inch, respectively, should be expected.

Even though computed footing dimensions may be less, column footings and continuous footings should have minimum width dimensions of 24 inches and 18 inches, respectively. This allows for hand cleaning of materials disturbed during the excavation process and reduces the potential for punching shear failure.

Foundation concrete should be placed the same day as footings are excavated so that the foundation bearing soils can remain near the existing moisture content. Foundation bearing surfaces should not be disturbed or left

exposed during inclement weather. Saturation of the on-site soils can cause a loss of strength and increased compressibility. If bearing soils dry excessively, the can later well and heave foundations. Excavations for footings should be hand cleaned to remove loose soil or mud and the bearing surface should be thoroughly compacted. If concrete placement is not possible immediately after excavation, we recommend that a thin layer (approximately 2 inches) of lean concrete or CLSM be placed on the bearing surface for protection after we have observed and evaluated the exposed bearing surfaces.

All foundation excavations should be observed by the geotechnical engineer or designated representative thereof. The engineer can provide geotechnical guidance to the owner's design team should any unforeseen foundation problems develop during construction. If areas of foundation surfaces prove to be unsuitable, the foundation may need to be over-excavated. The over-excavated area can be backfilled with "lean" concrete, controlled low strength material (CLSM), or well-compacted dense graded crushed stone (ALDOT 825B) up to the planned foundation bearing depth.

5.2 Floor Slabs

It is our opinion that floor slabs can be built on-grade achieving support from properly compacted fill. For select fill subgrade soils compacted to at least 98 percent of the materials standard Proctor maximum dry density, we recommend a modulus of subgrade reaction of 150 psi/in (pci). Ground supported slabs should be founded on a minimum of 4 inches of compacted, free-draining granular material. This layer should provide uniform and immediate support for the slab and act as a capillary break. A vapor retarder should be used on top of the granular layer, as required by the building use and type of floor covering. ACI 360 should be referenced for the proper use and placement of the vapor retarder.

Care should be taken so that fines from the subgrade are not allowed to contaminate the granular layer. If fines do contaminate this layer, capillary rise and subsequent damage to moisture sensitive floor coverings could occur. On most projects, there is some time lag between initial grading and the time when the contractor is ready to place concrete for the slab-on-grade. Inclement weather just prior to placement of concrete for the slab-on-grade can result in trapped water in the granular layer.

5.3 Lateral Resistance

Lateral loads created by wind may be resisted by the passive pressure of the soil acting against the side of the footing and/or the friction developed between the base of the footing and the underlying soil. For compacted backfill or in-situ residual soil, the passive pressure can be taken as an equivalent to the pressure exerted by a fluid weighing 120 pcf ($\emptyset = 0°$, moist unit weight of soil = 120 pcf). A coefficient of friction of 0.35 may be used for calculating the frictional resistance at the base of the shallow footings.

The resistance values discussed are based on assumption that the foundations can withstand horizontal movements of up to ¼-inch. In addition, the excavation of the footing walls should be near vertical and the concrete placed directly against the soil. The passive pressure will be reduced if the loaded side is benched or sloped. Lateral resistance determined in accordance with these recommendations should be considered the total available resistance. The design should include a minimum factor of safety of 1.5.

5.4 Seismic Site Classification

A shear wave velocity test was performed using passive method to determine Seismic Site Class. Seismic Site Class is based on the average shear wave velocity (Vs) to a depth of 100 feet. Analysis of surface waves can be used to determine shear wave velocities (Vs). Surface waves propagate to depths that are inversely proportional to their frequencies. These waves are recorded at the ground surface using a series of geophones. Measurements are transformed from time domain to frequency domain, and a dispersion curve (i.e., phase velocity curve) is developed. The dispersion curve is then transformed into a one-dimensional (1D) shear wave velocity profile through a data inversion process. The profile is attached in the Appendix.

The calculated weighted average Vs100-value was 1,884 feet/second, **resulting in a Seismic Site Class C**.

Based on our understanding of the project, we have assumed a Risk Category of III. If the Risk Category is different, the values below may need to be revised. According to the ASCE 7/SEI 7-16 hazard standard information, the following values have been calculated for this site:

Type	Value	Description
S_S	0.255	MCE_R ground motion (for 0.2 second period)
S_1	0.112	MCE_R ground motion (for 1.0s period)
S_{DS}	0.221	Numeric seismic design value at 0.2 second SA
S_{D1}	0.112	Numeric seismic design value at 1.0 second SA
F_a	1.3	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second

6.0 REPORT LIMITATIONS

The recommendations submitted are based on the available soil information obtained by GMC and design details furnished by GMC for the proposed project. The recommendations submitted are based on the available soil information obtained by GMC and design details furnished by GMC for the proposed project. If there are any revisions to the plans for this project or if deviations from the subsurface conditions noted in this report are encountered during construction, we should be notified immediately to determine if changes in the foundation, or other, recommendations are required. If GMC is not retained to perform these functions, GMC cannot be responsible for the impact of those conditions on the performance of the project.

The findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

The geotechnical engineer should be provided the opportunity to review the final design plans and specifications to check that our engineering recommendations have been properly incorporated into the design documents. At that time, it may be necessary to submit supplementary recommendations.

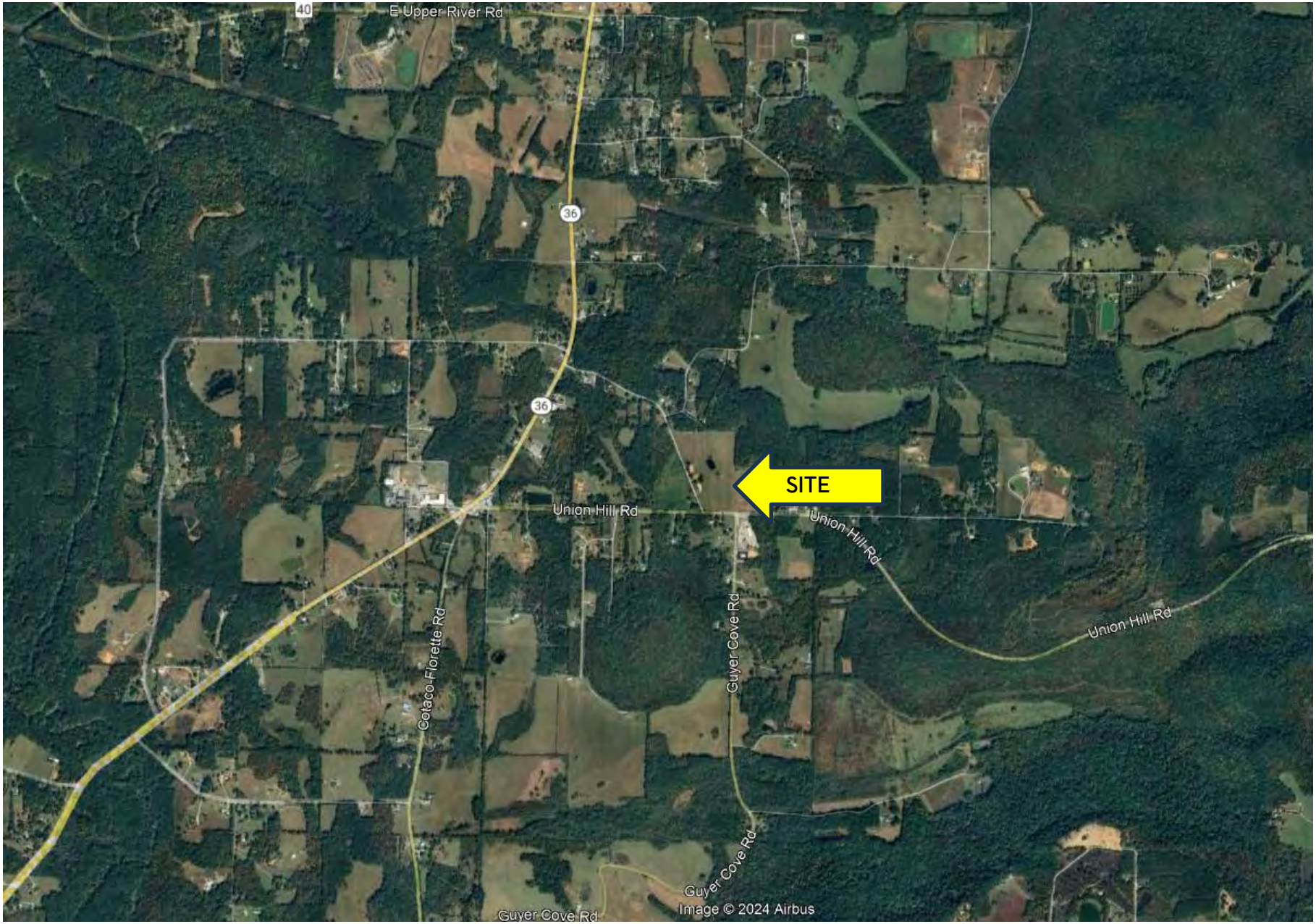
We emphasize that this report was prepared for design and informational purposes only and may not be sufficient to prepare an accurate construction budget. Contractors reviewing this report should acknowledge that the

recommendations contained herein are for design and informational purposes only. In no case should this report be utilized as a substitute for the development of specific earthwork specifications.

The information contained in this report is not intended, nor is sufficient, to aid in the design of segmental or mechanically stabilized earth (MSE) retaining walls. Segmental or MSE wall designers and builders should not rely on this report and should perform independent analysis to determine all necessary soil characteristics for use in their wall design, including but not limited to, soil shear strengths, bearing capacities, global stability, etc.

APPENDIX

Site Location Map
Boring Location Plan
Shear Wave Velocity Test Location Plan
Shear Wave Velocity Profile
Shear Wave Velocity Line Photograph
Soil Classification Chart
Subsurface Diagram
Boring Records
Summary of Laboratory Results
Field and Laboratory Procedures



Google Earth Imagery dated 12-4-23

REF. SHEET:
DESCRIPTION:

SITE LOCATION MAP
Morgan County Event Center
Somerville, Alabama

GMC #: GHUN240001
DATE: 3-1-2024
DRAWN BY: KWW

GMC

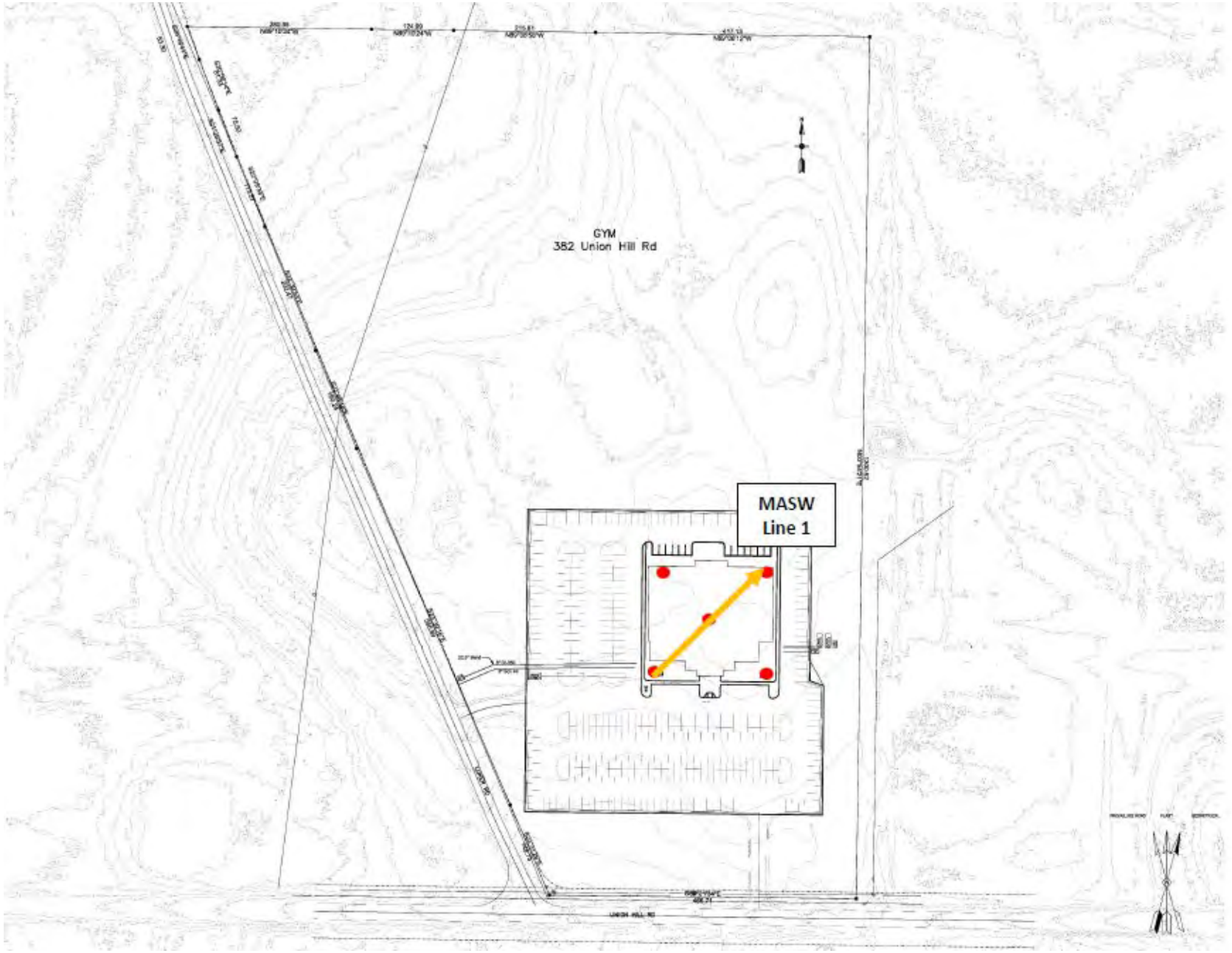
Approximate Proposed Boring Locations

REF. SHEET:
DESCRIPTION:

BORING LOCATION PLAN
Morgan County Event Center
Somerville, Alabama

GMC #: GHUN240001
DATE: 3-1-2024
DRAWN BY: KWW

GMC

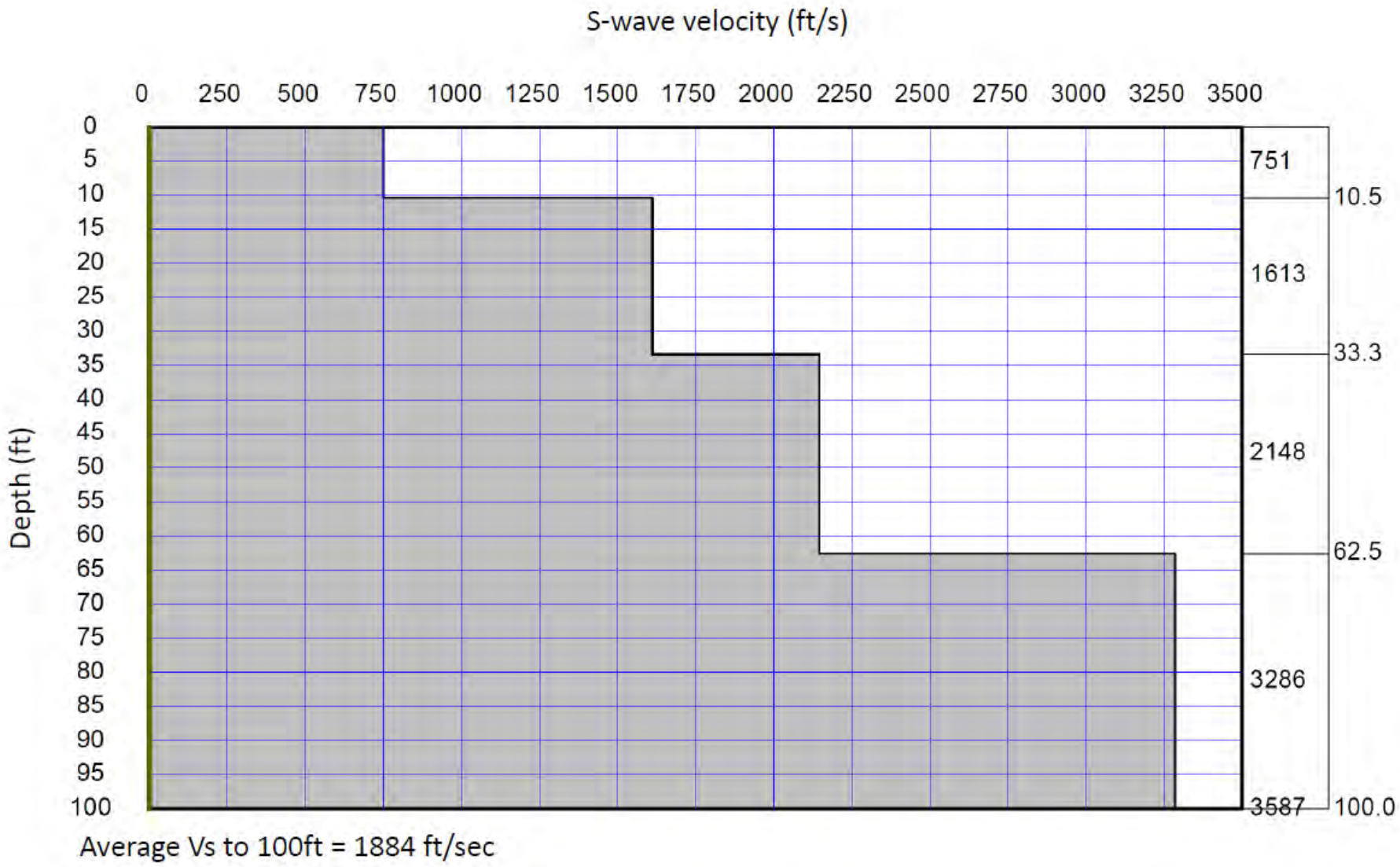


Approximate MASW Line Location

Shear Wave Velocity Test Location Plan
Morgan County Event Center
Somerville, Alabama

GMC #	GHUN240001
DATE:	3-1-2024
DRAWN BY:	KWW

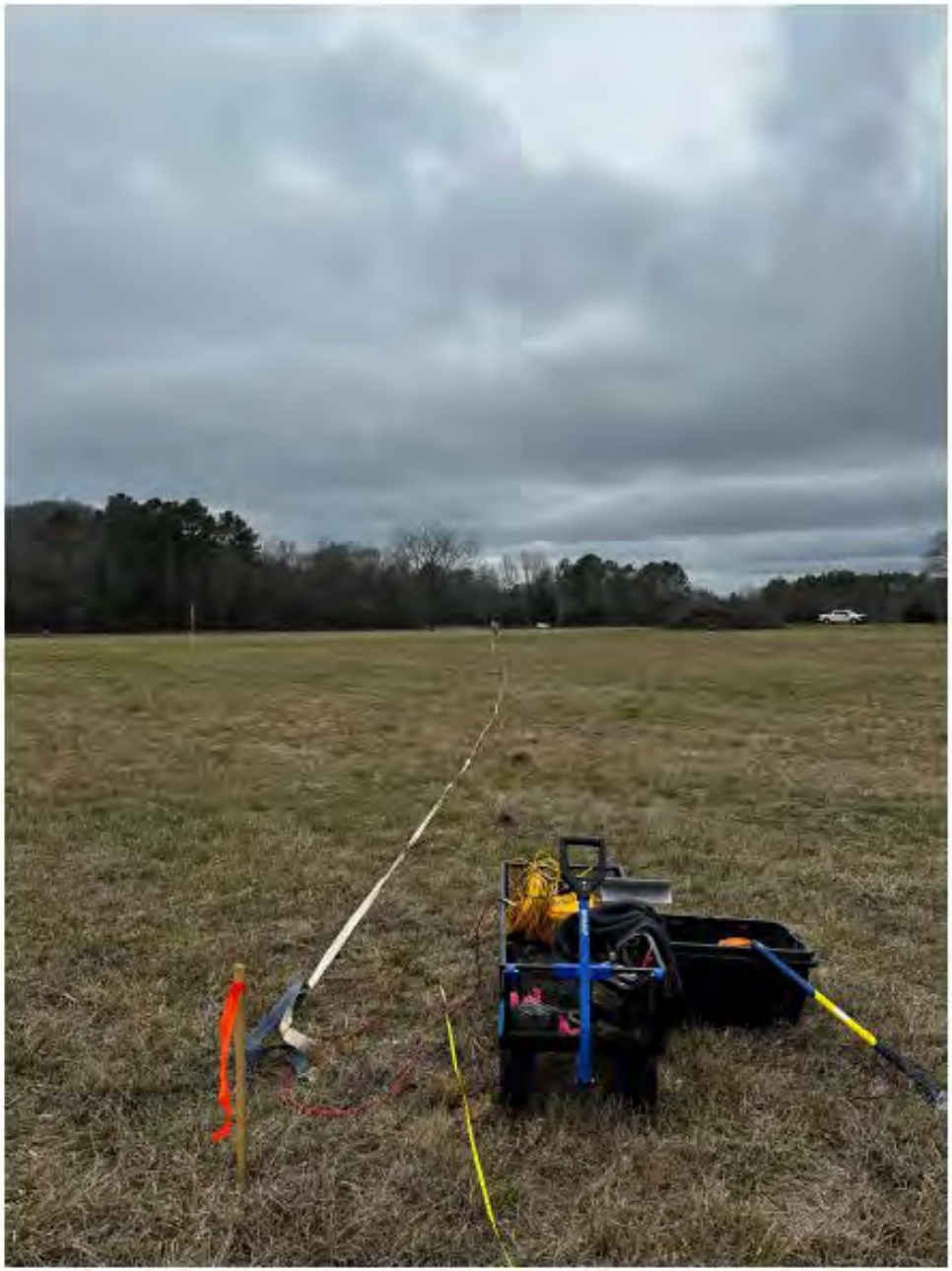
GMC



Shear Wave Velocity Profile
Morgan County Event Center
Somerville, Alabama

GMC #: GHUN240001
DATE: 3-1-2024
DRAWN BY: KWW

GMC



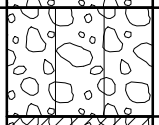
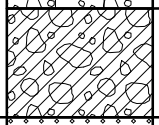
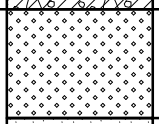
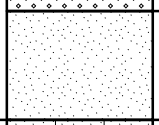
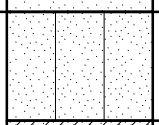
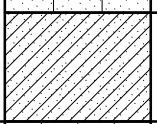
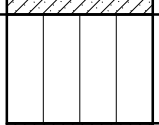
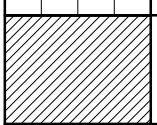
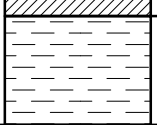
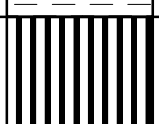
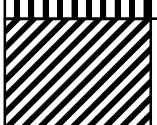
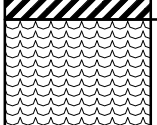
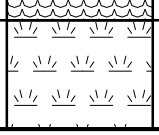
Shear Wave Velocity Line Photograph
Morgan County Event Center
Somerville, Alabama

GMC #	GHUN240001
DATE:	3-1-2024
DRAWN BY:	KWW

GMC

GMC

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

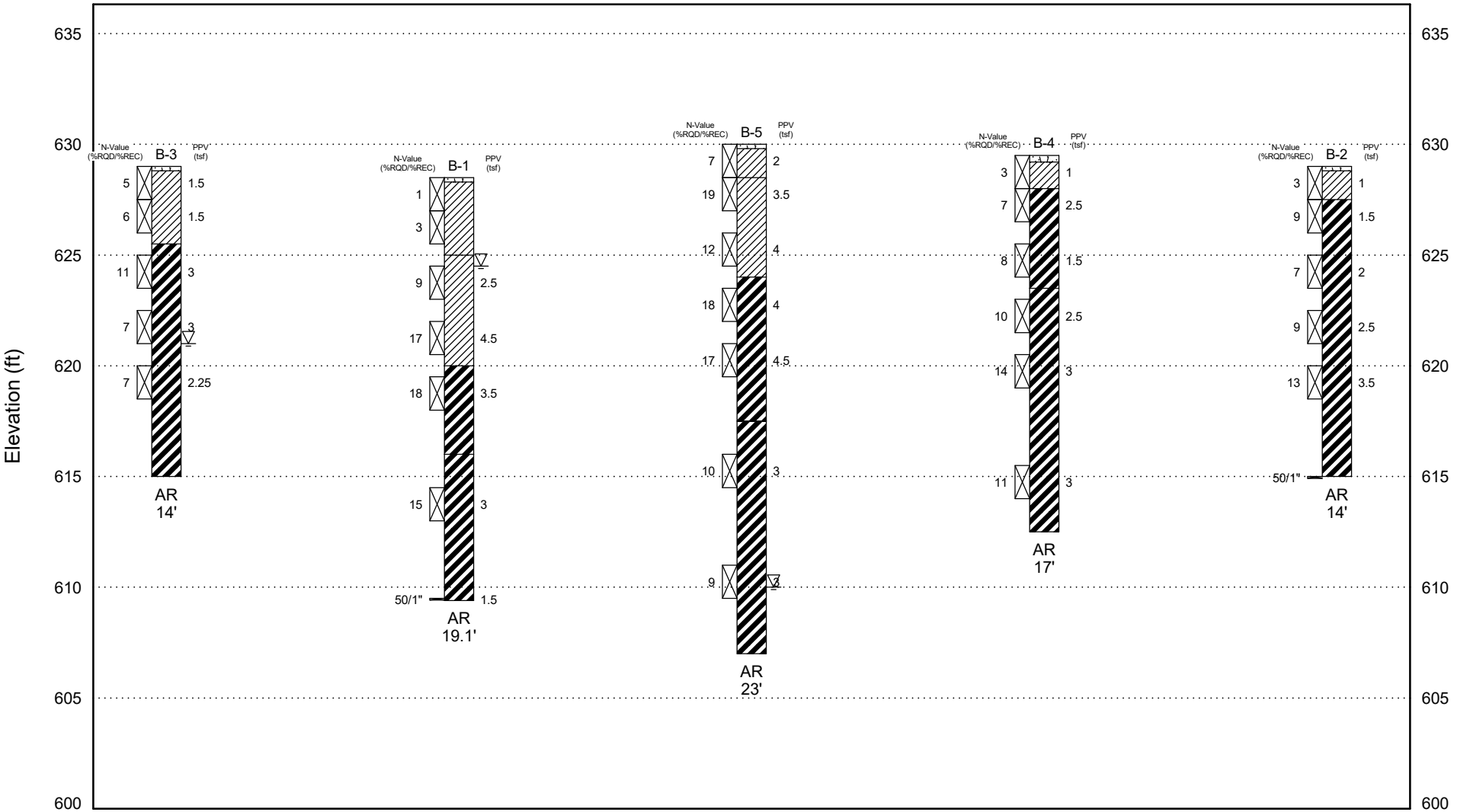
NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SUBSURFACE DIAGRAM

TOPSOIL CL CH

CLIENT Morgan County **PROJECT NAME** Morgan County Recreation Center

PROJECT NUMBER GHUN240001 **PROJECT LOCATION** Somerville, Alabama



BT - Boring Termination
AR - Auger Refusal

BT-AR DEPTH LOG GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

BORING NUMBER B-1

CLIENT Morgan County
PROJECT NAME Morgan County Recreation Center
PROJECT NUMBER GHUN240001
PROJECT LOCATION Somerville, Alabama
DATE STARTED 2/13/24 **COMPLETED** 2/13/24
GROUND ELEVATION 628.5 ft **HOLE SIZE**
DRILLING CONTRACTOR Earth Core, LLC
GROUND WATER LEVELS:
DRILLING METHOD Diedrich D-50, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING 4.00 ft / Elev 624.50 ft
LOGGED BY K. Wales **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM) 2"										
			SANDY LEAN CLAY (CL), brown, very soft to soft, saturated	SS		1-0-1 (1)			19				
				SS		2-2-1 (3)			20				
625													
	5		LEAN CLAY (CL), light gray, brown, red, black, stiff to very stiff	SS		4-4-5 (9)	2.5		20	34	16	18	68
				SS		7-8-9 (17)	4.5		19	45	20	25	70
620													
	10		FAT CLAY (CH), red & light gray, very stiff	SS		7-8-10 (18)	3.5						
615			FAT CLAY (CH), yellow, light gray, black, stiff										
	15			SS		4-6-9 (15)	3						
610													
	20		Auger refusal was encountered at 19.1 feet.	SS		50/1"	1.5						
605													
	25												
600													
	30												
595													
	35												

1.GMC BORINGS GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

BORING NUMBER B-2

CLIENT Morgan County
PROJECT NAME Morgan County Recreation Center
PROJECT NUMBER GHUN240001
PROJECT LOCATION Somerville, Alabama
DATE STARTED 2/13/24 **COMPLETED** 2/13/24
GROUND ELEVATION 629 ft **HOLE SIZE**
DRILLING CONTRACTOR Earth Core, LLC
GROUND WATER LEVELS:
DRILLING METHOD Diedrich D-50, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING none encountered
LOGGED BY K. Wales **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM) 2"										
			SANDY LEAN CLAY (CL), brown, soft, moist	SS		1-1-2 (3)	1		30				
			FAT CLAY with SAND (CH), red, yellow, light gray, medium to stiff	SS		2-5-4 (9)	1.5		35				
625													
	5			SS		2-3-4 (7)	2		30				
				SS		3-4-5 (9)	2.5		27				
620													
	10			SS		4-5-8 (13)	3.5						
615													
	15		Auger refusal was encountered at 14.0 feet.	SS		50/1"							
610													
	20												
605													
	25												
600													
	30												
595													
	35												

1.GMC BORINGS GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

BORING NUMBER B-3

CLIENT Morgan County
PROJECT NAME Morgan County Recreation Center
PROJECT NUMBER GHUN240001
PROJECT LOCATION Somerville, Alabama
DATE STARTED 2/13/24 **COMPLETED** 2/13/24
GROUND ELEVATION 629 ft **HOLE SIZE**
DRILLING CONTRACTOR Earth Core, LLC
GROUND WATER LEVELS:
DRILLING METHOD Diedrich D-50, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING 8.00 ft / Elev 621.00 ft
LOGGED BY K. Wales **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM) 2"										
			SANDY LEAN CLAY (CL), yellowish brown & light gray, medium, with some silt & rootlets, saturated	SS		1-2-3 (5)	1.5		25				
				SS		4-3-3 (6)	1.5		22				
625			FAT CLAY (CH), red, yellow, light gray, stiff to medium										
	5			SS		4-5-6 (11)	3		27				
				SS		3-4-3 (7)	3		28				
620													
	10			SS		2-3-4 (7)	2.25						
615			Auger refusal was encountered at 14.0 feet.										
	15												
610													
	20												
605													
	25												
600													
	30												
595													
	35												

1.GMC BORINGS GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

BORING NUMBER B-4

CLIENT Morgan County
PROJECT NAME Morgan County Recreation Center
PROJECT NUMBER GHUN240001
PROJECT LOCATION Somerville, Alabama
DATE STARTED 2/13/24 **COMPLETED** 2/13/24
GROUND ELEVATION 629.5 ft **HOLE SIZE**
DRILLING CONTRACTOR Earth Core, LLC
GROUND WATER LEVELS:
DRILLING METHOD Diedrich D-50, Auto-Hammer, HSA w/ SPT
AT TIME OF DRILLING none encountered
LOGGED BY K. Wales **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
	0		Organic Laden Material (OLM) 3"										
			SANDY LEAN CLAY (CL), brownish yellow, soft, moist	SS		1-1-2 (3)	1		21				
			FAT CLAY (CH), red, yellow, light gray, medium	SS		3-3-4 (7)	2.5		28	88	20	68	84
625	5			SS		3-4-4 (8)	1.5		31				
			FAT CLAY (CH), yellow & light gray, stiff	SS		3-4-6 (10)	2.5		29				
620	10			SS		3-5-9 (14)	3						
			- w/ weathered chert fragments										
615	15			SS		4-5-6 (11)	3						
			Auger refusal was encountered at 17.0 feet.										
610	20												
605	25												
600	30												
595	35												

1.GMC BORINGS GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

BORING NUMBER B-5

CLIENT Morgan County
PROJECT NAME Morgan County Recreation Center
PROJECT NUMBER GHUN240001
PROJECT LOCATION Somerville, Alabama
DATE STARTED 2/13/24 **COMPLETED** 2/13/24
GROUND ELEVATION 630 ft **HOLE SIZE**
DRILLING CONTRACTOR Earth Core, LLC
GROUND WATER LEVELS:
DRILLING METHOD Diedrich D-50, Auto-Hammer, HSA w/ SPT
▽ **AT TIME OF DRILLING** 20.00 ft / Elev 610.00 ft
LOGGED BY K. Wales **CHECKED BY** K. Wales
AT END OF DRILLING ---
NOTES
AFTER DRILLING ---

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
630	0		Organic Laden Material (OLM) 2"										
			LEAN CLAY (CL), red, medium	SS		2-2-5 (7)	2		19				
			LEAN CLAY (CL), red, very stiff to stiff	SS		5-8-11 (19)	3.5		19	44	19	25	72
625	5			SS		4-5-7 (12)	4		21				
			FAT CLAY (CH), yellowish red & black, very stiff, with iron oxide nodules	SS		7-8-10 (18)	4		22				
620	10			SS		7-8-9 (17)	4.5						
			FAT CLAY (CH), yellow, light gray, stiff	SS		4-4-6 (10)	3						
615	15												
610	20		▽	SS		3-3-6 (9)	3						
			Auger refusal was encountered at 23.0 feet.										
605	25												
600	30												
595	35												

1.GMC BORINGS GHUN240001 MORGAN COUNTY RECREATION CENTER.GPJ GMC DATA TEMPLATE.GDT 3/1/24

SUMMARY OF LABORATORY RESULTS

CLIENT Morgan County **PROJECT NAME** Morgan County Recreation Center

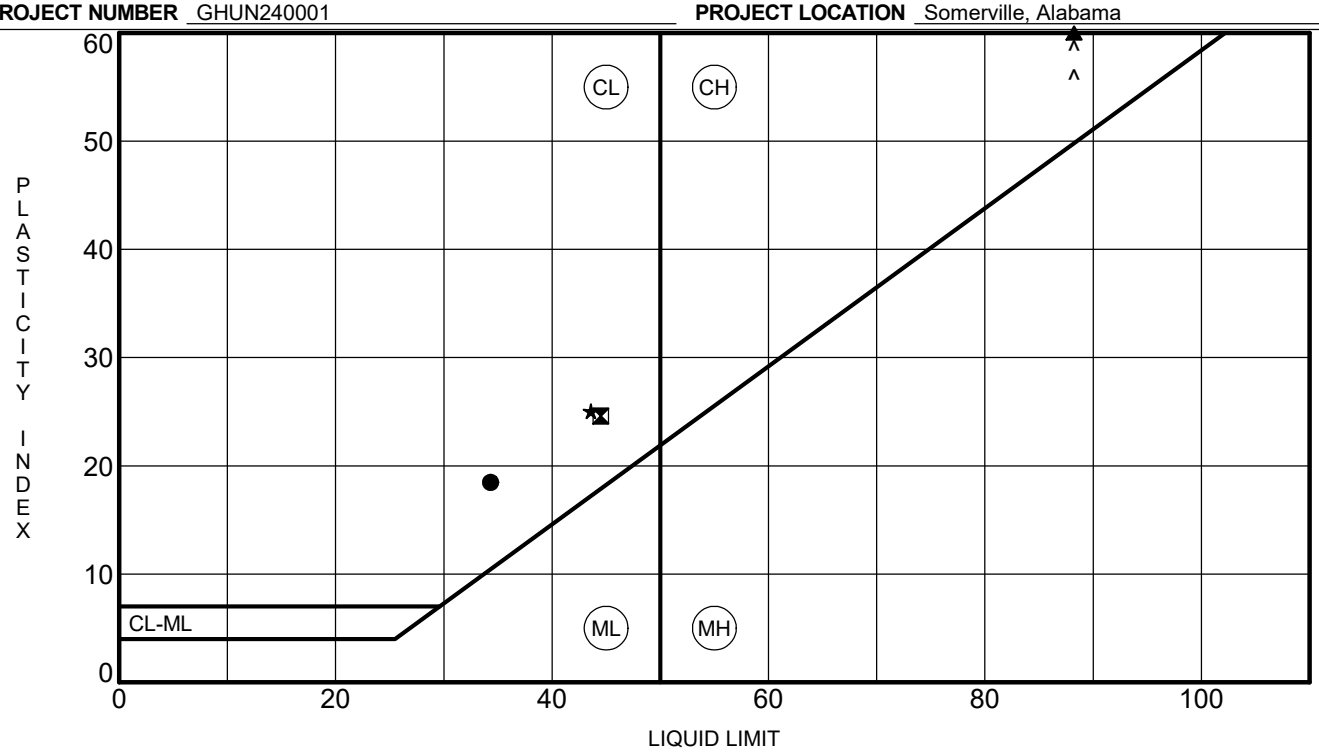
PROJECT NUMBER GHUN240001 **PROJECT LOCATION** Somerville, Alabama

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Max. Sieve Size Tested (mm)	%<#200 Sieve	Natural Moisture (%)	Class-ification	Opt. Moisture Content (%)	Max Dry Density (pcf)	Specific Gravity
B-1	0-1.5						18.5				
B-1	1.5-3						20.3				
B-1	4-5.5	34	16	18	9.5	68	19.9	CL			
B-1	6.5-8	45	20	25	4.75	70	18.7	CL			
B-2	0-1.5						29.8				
B-2	1.5-3						35.2				
B-2	4-5.5						30.5				
B-2	6.5-8						26.7				
B-3	0-1.5						25.1				
B-3	1.5-3						21.9				
B-3	4-5.5						26.5				
B-3	6.5-8						27.9				
B-4	0-1.5						21.1				
B-4	1.5-3	88	20	68	4.75	84	28.3	CH			
B-4	4-5.5						30.7				
B-4	6.5-8						29.3				
B-5	0-1.5						19.4				
B-5	1.5-3	44	19	25	4.75	72	18.7	CL			
B-5	4-5.5						21.5				
B-5	6.5-8						22.2				

ATTERBERG LIMITS' RESULTS

CLIENT Morgan County **PROJECT NAME** Morgan County Recreation Center

PROJECT NUMBER GHUN240001 **PROJECT LOCATION** Somerville, Alabama

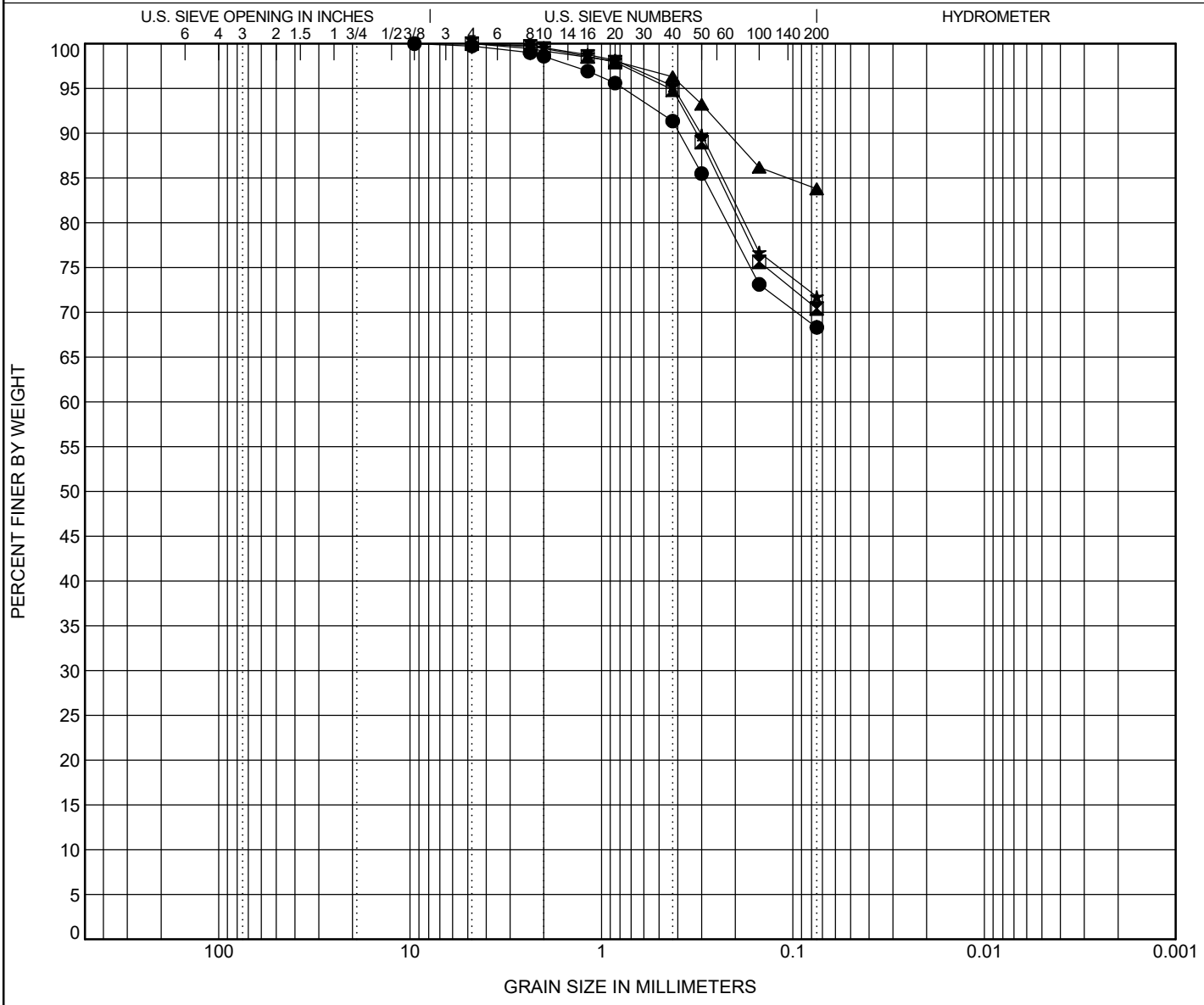


	Specimen Identification		LL	PL	PI	Fines	Classification
●	**B-1**	**4.0-5.5**	**34**	**16**	**18**	**68**	**SANDY LEAN CLAY(CL)**
⧓	**B-1**	**6.5-8.0**	**45**	**20**	**25**	**70**	**LEAN CLAY with SAND(CL)**
▲	**B-4**	**1.5-3.0**	**88**	**20**	**68**	**84**	**FAT CLAY with SAND(CH)**
★	**B-5**	**1.5-3.0**	**44**	**19**	**25**	**72**	**LEAN CLAY with SAND(CL)**

GRAIN SIZE DISTRIBUTION

CLIENT Morgan County **PROJECT NAME** Morgan County Recreation Center

PROJECT NUMBER GHUN240001 **PROJECT LOCATION** Somerville, Alabama



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	B-1	4.0-5.5	SANDY LEAN CLAY(CL)	34	16	18		
⊠	B-1	6.5-8.0	LEAN CLAY with SAND(CL)	45	20	25		
▲	B-4	1.5-3.0	FAT CLAY with SAND(CH)	88	20	68		
★	B-5	1.5-3.0	LEAN CLAY with SAND(CL)	44	19	25		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	B-1	4.0-5.5	9.5				0.3	31.4	68.3	
⊠	B-1	6.5-8.0	4.75				0.0	29.6	70.4	
▲	B-4	1.5-3.0	4.75				0.0	16.2	83.8	
★	B-5	1.5-3.0	4.75				0.0	28.3	71.7	

GMC

FIELD TEST PROCEDURES

General

The general field procedures employed by Goodwyn Mills Cawood, LLC (GMC), are summarized in the American Society for Testing and Materials (ASTM) Standard D420 which is entitled "Investigating and Sampling Soil and Rock". This recommended practice lists recognized methods for determining soil and rock distribution and groundwater conditions. These methods include geophysical and in-situ methods as well as borings.

The detailed collection methods used during this exploration are presented in the following paragraphs.

Standard Drilling Techniques

General: To obtain subsurface samples, borings are drilled using one of several alternate techniques depending upon the subsurface conditions. These techniques are as follows:

In Soils:

a) Continuous hollow stem augers.
b) Rotary borings using roller cone bits or drag bits, and water or drilling mud to flush the hole.
c) "Hand" augers.

In Rock:

a) Core drilling with diamond-faced, double or triple tube core barrels.
b) Core boring with roller cone bits.

Hollow Stem Auger: A hollow stem augers consists of a hollow steel tube with a continuous exterior spiral flange termed a flight. The auger is turned into the ground, returning the cuttings along the flights. The hollow center permits a variety of sampling and testing tools to be used without removing the auger.

Rotary Borings: Rotary drilling involves the use of roller cone or drag type drill bits attached to the end of drill rods. A flushing medium, normally water or bentonite slurry, is pumped through the rods to clear the cuttings from the bit face and flush them to the surface. Casing is sometimes set behind the advancing bit to prevent the hole from collapsing and to restrict the penetration of the drilling fluid into the surrounding soils. Cuttings returned to the surface by the drilling fluid are typically collected in a settling tank, to allow the fluid to be recirculated.

Hand Auger Boring: Hand auger borings are advanced by manually twisting a 4" diameter steel bucket auger into the ground and withdrawing it when filled to observe the sample collected. Posthole diggers are sometimes used in lieu of augers to obtain shallow soil samples. Occasionally these hand auger borings are used for driving 3-inch diameter steel tubes to obtain intact soil samples.

Core Drilling: Soil drilling methods are not normally capable of penetrating through hard cemented soil, weathered rock, coarse gravel or boulders, thin rock seams, or the upper surface of sound, continuous rock. Material that cannot be penetrated by auger or rotary soil-drilling methods at a reasonable rate is designated as "refusal material". Core drilling procedures are required to penetrate and sample refusal materials.

Prior to coring, casing may be set in the drilled hole through the overburden soils, to keep the hole from caving and to prevent excessive water loss. The refusal materials are then cored according to ASTM D2113 using a diamond studded bit fastened to the end of a hollow, double or triple tube core barrel. This device is rotated at high speeds, and the cuttings are brought to the surface by circulating water. Core samples of the material penetrated are protected and retained in the swivel-mounted inner tube. Upon completion of each drill run, the core barrel is brought to the surface, the core recovery is measured, and the core is placed, in sequence, in boxes for storage and transported to our laboratory.

Sampling and Testing in Boreholes

General: Several techniques are used to obtain samples and data in soils; however, the most common methods in this area are:

a) Standard Penetrating Testing
b) Water Level Readings

These procedures are presented below. Any additional testing techniques employed during this exploration are contained in other sections of the Appendix.

Standard Penetration Testing: At regular intervals, the drilling tools are removed and soil samples obtained with a standard 2-inch diameter split tube sampler connected to an A or N-size rod. The sampler is first seated 6 inches to penetrate any loose cuttings, and then driven an additional 12 inches with blows of a 140-pound safety hammer falling 30 inches. Generally, the number of hammer blows required to drive the sampler the final 12 inches is designated the "penetration resistance" or "N" value, in blows per foot (bpf). The split barrel sampler is designed to retain the soil penetrated, so that it may be returned to the surface for observation. Representative portions of the soil samples obtained from each split barrel sample are placed in jars, sealed and transported to our laboratory.

The standard penetration test, when properly evaluated, provides an indication of the soil strength and compressibility. The tests are conducted according to ASTM Standard D1586. The depths and N-values of standard penetration tests are shown on the Boring Records. Split barrel samples are suitable for visual observation and classification tests but are not sufficiently intact for quantitative laboratory testing.

Water Level Readings: Water table readings are normally taken in the borings and are recorded on the Boring Records. In sandy soils, these readings indicate the approximate location of the hydrostatic water table at the time of our field exploration. In clayey soils, the rate of water seepage into the borings is low and it is generally not possible to establish the location of the hydrostatic water table through short-term water level readings. Also, fluctuation in the water table should be expected with variations in precipitation, surface run-off, evaporation, and other factors. For long-term monitoring of water levels, it is necessary to install piezometers.

The water levels reported on the Boring Records are determined by field crews immediately after the drilling tools are removed, and several hours after the borings are completed, if possible. The time lag is intended to permit stabilization of the groundwater table, which may have been disrupted by the drilling operation.

Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the cave-in zone. The cave-in depth is measured and recorded on the Boring Records.

Boring Records

The subsurface conditions encountered during drilling are reported on a field boring record prepared by the Driller. The record contains information concerning the boring method, samples attempted and recovered, indications of the presence of coarse gravel, cobbles, etc., and observations of ground water. It also contains the driller's interpretation of the soil conditions between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are kept on file in our office.

After the drilling is completed, a geotechnical professional classifies the soil samples and prepares the final Boring Records, which are the basis for all evaluations and recommendations. The following terms are taken from ASTM D2487 or Deere's Technical Description of Rock Cores for Engineering Purposes, Rock Mechanical Engineering Geology 1, pp. 18-22.

GMC

Relative Density of Cohesionless Soils From Standard Penetration Test	
Very Loose	‹ 4 bpf
Loose	5 - 10 bpf
Medium	11 – 30 bpf
Dense	31 - 50 bpf
Very Dense	› 50 bpf
(bpf = blows per foot, ASTM D 1586)	

Consistency of Cohesive Soils	
Very Soft	‹ 2 bpf
Soft	3 - 4 bpf
Medium	5 - 8 bpf
Stiff	9 - 15 bpf
Very Stiff	16 - 30 bpf
Hard	› 30 bpf

Relative Hardness of Rock
Very Soft Rock disintegrates or easily compresses to touch; can be hard to very hard soil.
Soft Rock may be broken with fingers.
Moderately Soft Rock may be scratched with a nail, corners and edges may be broken with fingers.
Moderately Hard Rock a light blow of hammer is required to break samples.
Hard Rock a hard blow of hammer is required to break sample.

Particle Size Identification	
Boulders	Larger than 12"
Cobbles	3" - 12"
Gravel	
Coarse	3/4" - 3"
Fine	4.76mm - 3/4"
Sand	
Coarse	2.0 - 4.76 mm
Medium	0.42 - 2.00 mm
Fine	0.42 - 0.074 mm
Fines (Silt or Clay)	Smaller than 0.074 mm

Rock Continuity	
RECOVERY = $\frac{\text{Total Length of Core}}{\text{Length of Core Run}}$ x 100 %	
Description	Core Recovery %
Incompetent	Less than 40
Competent	40 - 70
Fairly Continuous	71 - 90
Continuous	91 - 100

Relative Quality of Rocks	
RQD = $\frac{\text{Total core, counting only pieces › 4" long}}{\text{Length of Core Run}}$ x 100 %	
Description	RQD %
Very Poor	0 - 25 %
Poor	25 - 50 %
Fair	50 - 75 %
Good	75 - 90 %
Excellent	90 - 100 %

LABORATORY TESTING

GENERAL

The laboratory testing procedures employed by Goodwyn Mills Cawood, LLC (GMC) are in general accordance with ASTM standard methods and other applicable specifications.

Several test methods, described together with others in this Appendix, were used during the course of this exploration. The Laboratory Data Summary sheet indicates the specific tests performed.

SOIL CLASSIFICATION

Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our investigations, samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our "Boring Records".

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D-2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented in this report.

POCKET PENETROMETER TEST

A pocket penetrometer test is performed by pressing the tip of a small, spring-loaded penetrometer with even pressure to a prescribed depth into a soil sample. This test yields a value for unconfined compressive strength, which may be correlated with unconfined compressive strengths obtained by other laboratory methods.

MOISTURE CONTENT

Moisture contents are determined from representative portions of the specimen. The soil is dried to a constant weight in an oven at 110° C and the loss of moisture during the drying process is measured. From this data, the moisture content is computed.

ATTERBERG LIMITS

Liquid Limit (LL), Plastic Limit (PL) and Shrinkage Limit (SL) tests are performed to aid in the classification of soils and to determine the plasticity and volume change characteristics of the materials. The Liquid Limit is the minimum moisture content at which a soil will flow as a heavy viscous fluid. The Plastic Limit is the minimum moisture content at which the soil behaves as a plastic material. The Shrinkage Limit is the moisture content below which no further volume change will take place with continued drying. The Plasticity Index (PI) is the numeric difference of Liquid Limit and Plastic Limit and indicates the range of moisture content over which a soil remains plastic. These tests are performed in accordance with ASTM D4318, D4943 and D427.

PARTICLE SIZE DISTRIBUTION

The distribution of soils coarser than the No. 200 (75-mm) sieve is determined by passing a representative specimen through a standard set of nested sieves. The weight of material retained on each sieve is determined and the percentage retained (or passing) is calculated. A specimen may be washed through only the No. 200 sieve, if the full range of particle sizes is not required. The percentage of material passing the No. 200 sieve is reported. The distribution of materials finer than the No. 200 sieve is determined by use of a hydrometer. The particle sizes and distribution are computed from the time rate of settlement of the different size particles while suspended in water. These tests are performed in accordance with ASTM D-421, D-422 and D-1140.

GENERAL NOTES

DIVISION NOTES:

A. DIVISION 1 – GENERAL REQUIREMENTS:

1.01. **COMPLETE CONTRACT DOCUMENTS:** THE COMPLETE DRAWINGS, SPECIFICATIONS, ADDENDA, AND CLARIFICATIONS ISSUED BY FIELD ORDER OF SIMILAR INSTRUMENTS CONSTITUTE THE CONTRACT DOCUMENTS AND SHALL REMAIN INTACT. THE GENERAL CONTRACTOR IS FULLY RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS INCLUDED, OR REASONABLE INFERRED THEREIN. THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR (AS APPLICABLE) MUST NOT ISSUE PARTIAL SETS OR OTHERWISE CAUSE INCOMPLETE CONTRACT INFORMATION TO BE PROVIDED TO PARTIES TO THE CONTRACT, INCLUDING ASSOCIATED SUB-CONTRACTORS, OR SUB-SUB-CONTRACTORS.

1.02. **MULTI-TRADE COORDINATION:** ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. SUB-CONTRACTORS SHALL WORK TOGETHER IN THE REVIEW OF WORK AND COORDINATION OF SYSTEMS IN PLENUM AREAS, AND OTHER LOCATIONS WHERE CAREFUL COORDINATION IS NECESSARY TO ERECT THE WORK IN LIMITED SPACES. **NO ALLOWANCES WILL BE MADE FOR THE FAILURE TO COORDINATE BETWEEN DISCIPLINES, SYSTEMS OR EQUIPMENT. UNCOORDINATED WORK THAT RESULTS IN THE INEFFICIENT USE OF AVAILABLE SPACE MAY BE SUBJECT TO REJECTION OF INSTALLED WORK.** WHERE COMPLEXITY OF THE INSTALLED WORK OR WHERE WORK INSTALLED IN COMPACT SPACES NECESSITATES CAREFUL COORDINATION FOR SUCCESSFUL INSTALLATION, THE GENERAL CONTRACTOR IS STRONGLY ENCOURAGED TO UNDERTAKE A SYSTEMS COORDINATION PROGRAM THAT INCLUDES THREE-DIMENSIONAL MODELING OF THE REQUIRED WORK PRIOR TO INSTALLATION, WHETHER OR NOT REQUIRED ELSEWHERE BY THE CONTRACT DOCUMENTS.

1.03. **VERIFICATION:** THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, CONSTRUCTION, MATERIALS, METHODS OF CONSTRUCTION, GRADES AND ELEVATIONS; AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS WITHIN THE DOCUMENTS PRIOR TO BID, CONSTRUCTION, AND/OR INSTALLATION OF ASSOCIATED WORK. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE THAT THE EXISTING CONDITIONS ARE CONSISTENT WITH THOSE OF THE CONTRACT DOCUMENTS. ANY CHANGE ORDER REQUEST ASSOCIATED WITH AN IDENTIFIABLE EXISTING CONDITION, WHETHER IN CONFLICT OR COMPLIANCE WITH THE CONTRACT DOCUMENTS, WILL NOT BE ACCEPTED. THIS PROVISION SHALL NOT APPLY TO WORK PERFORMED UNDER UNIT PRICE OR ALLOWANCE FEE STRUCTURES.

1.04. **DISCREPANCIES:** THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT PROMPTLY UPON IDENTIFICATION OF ANY DISCREPANCIES OR CONFLICTS IN THE CONTRACT DOCUMENTS, WITH THE OBJECTIVE OF RESOLVING THE CONFLICT OR DISCREPANCY IN A TIMELY MANNER AND PRIOR TO ANY IMPACT TO THE CONTRACT TIME OR PRICE. THE GENERAL CONTRACTOR SHALL INCLUDE THE MORE EXPENSIVE, COMPLEX, AND TIME CONSUMING COMPONENTS OF ANY DISCREPANCIES IN THE BASE BID PRICE. FAILURE TO NOTIFY THE ARCHITECT PROMPTLY OF A KNOWN DISCREPANCY CONSTITUTES ACCEPTANCE OF FULL RESPONSIBILITY FOR THE ASSOCIATED COST AND SCHEDULE IMPACT.

1.05. **DRAWING SCALE:** REPROGRAPHIC TECHNIQUES MAY RENDER DRAWINGS DIFFERENTLY THAN THE INTENDED PRINTED SCALE. THEREFORE, DO NOT RELY UPON THE SCALE OF ANY PRINTED DRAWINGS. CONTACT THE ARCHITECT FOR REQUIRED DIMENSIONS THAT ARE NOT PROVIDED CLEARLY IN NUMERIC FORM HEREIN. FAILURE TO REQUEST CRITICAL DIMENSIONAL INFORMATION FROM THE ARCHITECT MAY RESULT IN THE REJECTION OF INSTALLED WORK.

1.06. **DIMENSIONAL STANDARDS:** STANDARD DIMENSION CONVENTIONS UTILIZED HEREIN CALL FOR DIMENSIONS TO FACE OF STUD (MASONRY) OF FINISHED PARTITION, FACE OF FINISH, OR CENTERLINE OF COLUMN LINE OR OTHER REFERENCE LINE, UNLESS OTHERWISE NOTED OR GRAPHICALLY ILLUSTRATED. DIMENSIONS NOTED AS "CLEAR", "MIN", OR "MAX" SHALL BE STRICTLY ENFORCED.

1.07. **[PM SOFTWARE]**

1.08. **PERMITTING:** THE GENERAL CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY AND REQUIRED PERMITS AND APPROVALS FROM JURISDICTIONAL AUTHORITIES, PRIOR TO COMMENCING THE WORK. THIS REQUIREMENT SHALL APPLY TO ON-SITE AND OFF-SITE WORK REQUIRED BY THE CONTRACT DOCUMENTS.

1.09. **CODE COMPLIANCE:** THE WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH ALL APPLICABLE LAWS, CODES, AND ORDINANCE. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL PERFORM THEIR WORK IN COMPLIANCE WITH ALL APPLICABLE BUILDING CODES, LAWS, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY READ AND FAMILIARIZE THEMSELVES WITH THE CODE COMPLIANCE DATA INCLUDED IN THE DRAWINGS AND SPECIFICATIONS.

1.10. **NON-COMBUSTIBLE CONSTRUCTION TYPES:** THE PROPOSED BUILDING STRUCTURE IS NON-COMBUSTIBLE IN ACCORDANCE WITH APPLICABLE CODES, AND THEREFORE REQUIRES NON-COMBUSTIBLE CONSTRUCTION TECHNIQUES. ALL NEW CONSTRUCTION SHALL BE IN COMPLIANCE WITH APPLICABLE REQUIREMENTS, INCLUDING WOOD BLOCKING, FURRING, FRAMING, SHEATHING, BACK-BOARDS, AND RELATED WORK. FIRE RETARDANT TREATED [FRT] IS PERMITTED WHERE ALLOWED BY CODE. SEE CODE COMPLIANCE DRAWINGS FOR DETAILED INFORMATION AND REQUIREMENTS.

1.11. **TEMPORARY GUARDS:** THE GENERAL CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY GUARDS AT ALL SLAB EDGES, PIT EDGES, ELEVATED PLATFORM EDGES, AND SIMILAR CONDITIONS WHERE REQUIRED BY OSHA, ANY APPLICABLE CODE OR ORDINANCE, AND AT MINIMUM ALL CHANGES IN ELEVATION IN EXCESS OF THIRTY INCHES (30") INCLUDING BOTH SIDES OF STAIRS AND LADDERS. TEMPORARY GUARDS MUST BE MAINTAINED UNTIL THE PERMANENT GUARDS ARE INSTALLED.

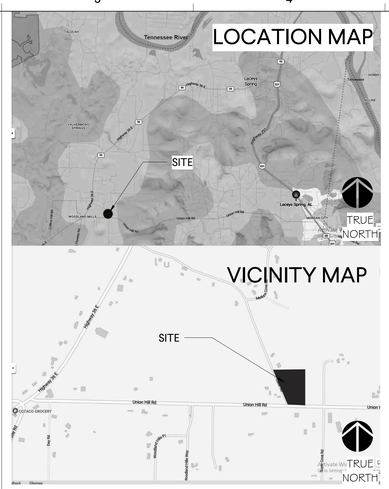
1.12. **LIFE-SAFETY MEASURES DURING CONSTRUCTION:** THE GENERAL CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS REQUIRED BY OSHA, CODE, AND OTHER APPLICABLE REGULATORY AUTHORITIES.

1.13. **MEANS OF EGRESS:** THE GENERAL CONTRACTOR SHALL MAINTAIN CLEAR AND UNOBSTRUCTED MEANS OF EGRESS AT ALL TIMES DURING CONSTRUCTION, WITHOUT EXCEPTION.

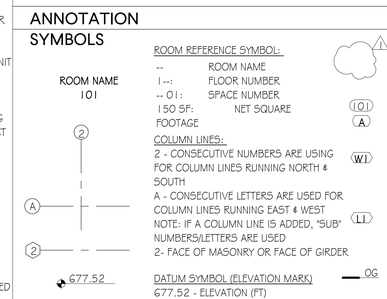
1.14. **CONSTRUCTION LOADS:** THE GENERAL CONTRACTOR SHALL NEVER LOAD NEW OR EXISTING CONSTRUCTION BEYOND ITS DESIGN CAPACITY WITH STORED MATERIAL, CONSTRUCTION EQUIPMENT, TEMPORARY LOADS ASSOCIATED WITH MATERIAL MOVEMENT, HOISTING, OR STORAGE, OR SIMILAR CONDITIONS.

1.15. **GENERAL CLEAN-UP:** THE GENERAL CONTRACTOR SHALL INCLUDE ONGOING CLEAN-UP OF THE PROPERTY AND BUILDING, INCLUDING REMOVAL OF TRASH AND WASTE MATERIALS, ON A REGULAR BASIS DURING CONSTRUCTION. RECYCLING OF CONSTRUCTION WASTE IS ENCOURAGED.

1.16. **OWNER FURNISHED EQUIPMENT:** LOOSE FURNISHINGS, WORKSTATIONS, OFFICE EQUIPMENT, COPIERS, VENDING MACHINES, KITCHEN EQUIPMENT, AND SIMILAR ITEMS THAT ARE BOTH LABELED "OWNER FURNISHED" OR "OF/OI", AND SHOWN DASHED OR IN GRAY-TONE SHALL BE CONSIDERED OWNER FURNISHED EQUIPMENT. OWNER FURNISHED EQUIPMENT IS SHOWN FOR THE GENERAL CONTRACTOR'S KNOWLEDGE AND UNDERSTANDING TO FACILITATE COORDINATION WITH THE OWNER'S WORK. THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW THE SCOPE OF WORK, AND REQUEST CLARIFICATION FROM THE ARCHITECT IN THE EVENT OF ANY UNCERTAINTY ABOUT THE DEFINITION OF OWNER FURNISHED WORK.



ANNOTATION SYMBOLS



ROOM REFERENCE SYMBOL:
-- ROOM NAME
1--: FLOOR NUMBER
-- 01: SPACE NUMBER
150 SF: NET SQUARE FOOTAGE

COLUMN LINES:
2 - CONSECUTIVE NUMBERS ARE USING FOR COLUMN LINES RUNNING NORTH & SOUTH
A - CONSECUTIVE LETTERS ARE USED FOR COLUMN LINES RUNNING EAST & WEST
NOTE: IF A COLUMN LINE IS ADDED, "SUB" NUMBERS/LETTERS ARE USED
2- FACE OF MASONRY OR FACE OF GIRDER

DATUM SYMBOL (ELEVATION MARK)
677.52 - ELEVATION (FT)

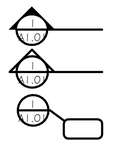
REVISION SYMBOL
USED TO INDICATE SCOPE OF CURRENT REVISION

DOOR SYMBOL:
-DOOR NUMBER 101
-DOOR TYPE A
SEE DOOR SCHEDULE AND FLOOR PLANS

WINDOW SYMBOL:
-WINDOW TYPE A
SEE EXTERIOR ELEVATIONS AND WINDOW SCHEDULE

LOUVER SYMBOL:
-LOUVER TYPE L1
SEE LOUVER SCHEDULE

WALL SYMBOL:
-WALL TYPE 0G
SEE PARTITION LEGEND



SPECIALTY EQUIPMENT TAG:
-SPECIALTY EQUIPMENT TYPE 2
SEE SPECIALTY EQUIPMENT SCHEDULE

PLAN KEYNOTE TAG
- NOTE NUMBER A
SEE PLAN KEYNOTE SCHEDULE

BUILDING SECTION SYMBOL:
SECTION 1 ON SHEET A101

WALL SECTION SYMBOL:
SECTION 1 ON SHEET A101

ENLARGED DETAIL SYMBOL:
DETAIL 1 ON SHEET A101

EXTERIOR ELEVATION SYMBOL:
ELEVATION 1 ON SHEET A101

INTERIOR ELEVATION SYMBOL:
INTERIOR ELEVATION 3 ON SHEET A101

NORTH ARROW

FF&E:
BY OTHERS

ABBREVIATIONS AND ACRONYMS

AC	acre
ACC	accessible
ACI	Amencan Concrete Institute
ACT	acoustical ceiling tile
ADD	addendum
AFF	above finished floor
ALT	alternate
ALUM	aluminum
APPROX	approximate
ARCH	architect (ural)
ADJ	adjacent
B&B	balled and burlapped
B/B	back to back
BC	base of curb
BD	board
BLDG	building
BLKG	blocking
BM	benchmark
BOT	bottom
BRG	beanng
BSMT	basement
BUR	built-up roof
BOW	bottom of wall
B/W	between
C	channel
CAB	cabinet
CAL	caliper
CB	catch basin
C/C	center to center
CD	core deck
CF	cubic foot
CI	cast iron
CIP	cast iron pipe
CJ	construction or control joint
CLG	ceiling
CLO	closet
CLR	clear (ance)
CMP	corrugated metal pipe
CMU	concrete masonry unit
CO	clean out
COL	column
CONC	concrete
CONN	connection
CONST	construction
CONT	continuous or continue
COORD	coordinate
CPT	carpet (ed)
CS	countersink
CSMU	calcium silicate masonry unit
CT	ceramic tile
CW	curtain wall
CY	cubic yard
D	dryer
DBL	double
DEM	demolish or demolition
DET	detail
DH	double hung
DIA	diameter
DIAG	diagonal
DIM	dimension
DIP	ductile iron pipe
DL	dead load
DS	downspout
DWG	drawing
DF	dnnking fountain
EA	each
EF	each face
EIFS	exterior insulation finish system
EJ	expansion joint
ELEV	elevation/elevator
ELEC	electnc (al)
ENGR	engineer
EOP	edge of pavement
EOS	edge of slab
EQ	equal
EW	each way
EWC	electnc water cooler
EXH	exhaust
EXIST	existing
EXP	exposed
EXPN	expansion
EXT	exterior
FBO	furnished by others
FD	floor drain
FEC	fire extinguisher and cabinet
FFE	finish floor elevation
FFW	finish face of wall
FHC	fire hose and cabinet
F/F	face to face
FL	floor
FLG	flange
FND	foundation
FO	face of
FOB	face of bnck
FOC	face of concrete
FOF	face of finish
FOM	face of masonry
FOS	face of stud
FR	frame (ed), (ing)
FRT	fire retardant treated
FT	foot/feet
FTG	footing
GA	gauge
GALV	galvanized
GB	grab bar
GHM	galvanized hollow metal
GI	galvanized iron
GWB	gypsum wall board
GYP	gypsum
H	height
HC	handicap
HM	hollow metal
HOD	highest operable device
HORIZ	honzontal
HP	high point/horse power
HSS	hollow structural steel
HT	height
HVAC	heating/ventilating/air conditioning
HW	hardware
ID	inside diameter
IE	invert elevation
IJ	isolation joint
IN	inch/inches
INSUL	insulation
JAN	janitor's closet
JG	joist girder
JT	joint
K	thousand
KIP	1000 #
KJ	key joint
KSI	1000 # per sq in
LAM	laminate (d)
LF	linear foot
L	length, angle
LAB	laboratory
LAV	lavatory
LH	left hand
LL	live load
LLH	long leg honzontal
LLV	long leg vertical
LP	low point
LT GA	light gauge
LT	light
MATL	matenal
MAX	maximum
MC	miscellaneous channel
MECH	mechanical
MEZZ	mezzanine
MANUF	manufacture (er)
MH	manhole
MIN	minimum
MO	masonry opening
MULL	mullion
NIC	not in contract
NO	number
NOM	nominal
NTS	not to scale
O/H	overhead
OC	on center (s)
OCC	occupant (s)
OD	outside diameter
OH	opposite hand
OPG	opening
OPP	opposite
PJ	precast joint
PL	property line, plate
PLAM	plastic laminate
PNT	paint (ed)
PREFAB	prefabncated
PREFIN	prefinished
PREMANUF	premanufactured
PSF	pounds per square foot
PSI	pounds per square inch
PT	point/pressure treated/ point of tangency
PVC	polyvinyl chlonde
PVMT	pavement
PWD	plywood
QT	quarry tile
RA	return air
RAD	radius
RB	rubber base
RCP	reflected ceiling plan
RD	roof drain
REBAR	reinforcement bar
REF	refngerator/ reference
REINF	reinforce (d), (ing)
REQ'D	required
RET	retaining
REV	revision (s), revised
RH	right hand
RJ	recessed joint
RM	room
RO	rough opening
ROW	right of way
RTU	roof top unit
SC	sealed concrete
SCHED	scheduled
SD	storm drain
SECT	section
SF	storefront
SIM	similar
SPEC	specification (s)
SQ	square
SS	solid surface
SST	stainless steel
STD	standard
STL	steel
STOR	storage
STRUCT	structural
SY	square yard
TELE	telephone
TERM	termination
T&G	tongue and groove
TH	thick (ness)
THK	thick (ness)
TO	top of
TOC	top of curb
TOGB	top of grab bar
TOF	top of footing
TOJ	top of joist
TOS	top of slab/top of steel
TOW	top of wall
TYP	typical
TZ	terrazzo
UNO	unless noted otherwise
VB	vinyl base
VCT	vinyl composition tile
VERT	vertical
VWC	vinyl wall covenng
W	washer/width/wide flange
WB	wood base
WC	water closet
WD	wood
WH	water heater
WIN	window
WP	work point, waterproofing
WT	weight
W/W	wall to wall
WWF	welded wire fabnc
W/	with
W/O	without

INDEX OF DRAWINGS

	Sheet Name	Sheet Issue Date
1.0 GENERAL		
T1	TITLE SHEET	02/15/2024
G1.01	INDEX & GENERAL INFORMATION	02/15/2024
G1.12	ACCESSIBILITY DATA	02/15/2024
G1.21	PLUMBING LAYOUTS & PARTITION TYPES	02/15/2024
G1.22	WALL TYPES	03/20/2024
G1.31	FIRESTOPPING - THRU-PENETRATION SYSTEMS	02/15/2024
G2.01	FIRST FLOOR LIFE SAFETY PLAN	02/15/2024
G2.02	MEZZANINE FLOOR LIFE SAFETY PLAN	02/15/2024
2.0 CIVIL		
C001	GENERAL NOTES	02/16/2024
C101	OVERALL SITE LAYOUT PLAN	02/16/2024
C102	SITE LAYOUT PLAN	02/16/2024
C201	SITE GRADING PLAN	02/16/2024
C601	EROSION AND SEDIMENT CONTROL PLAN	02/16/2024
C903	CONSTRUCTION DETAILS	02/16/2024
3.0 ARCHITECTURE		
A1.01	FIRST FLOOR PLAN	02/15/2024
A1.02	MEZZANINE FLOOR PLAN	02/15/2024
A2.01	REFLECTED CEILING PLAN - FIRST FLOOR	02/15/2024
A2.02	MEZZANINE REFLECTED CEILING PLAN	02/15/2024
A3.01	ROOF PLAN	02/15/2024
A4.01	EXTERIOR ELEVATIONS	02/15/2024
A5.01	BUILDING SECTIONS	02/15/2024
A5.02	BUILDING SECTIONS	02/15/2024
A5.11	WALL SECTIONS	02/15/2024
A5.22	VERTICAL CIRCULATION EXT STAIR	02/15/2024
A5.23	VERTICAL CIRCULATION INT STAIRWELL	02/15/2024
A5.24	DETAILS	02/15/2024
A6.01	DOOR SCHEDULE, LEGEND, & DETAILS	02/15/2024
A6.02	DOOR DETAILS	02/15/2024
A7.01	ENLARGED PLANS & INTERIOR ELEVATIONS	02/15/2024
A7.02	ENLARGED PLANS & INTERIOR ELEVATIONS	02/15/2024
A7.03	INTERIOR ELEVATIONS	02/15/2024
A7.04	INTERIOR ELEVATIONS	02/15/2024
A7.05	INTERIOR ELEVATIONS	02/15/2024
A8.01	FIRST FLOOR - FINISH PLAN	02/15/2024
A8.02	MEZZANINE FLOOR - FINISH PLAN	02/15/2024
A8.03	FINISH SCHEDULE AND LEGEND	02/15/2024
A8.04	SIGNAGE	02/15/2024
A8.05	SITE DETAILS	03/14/2024
4.0 STRUCTURAL		
S1.00	GENERAL NOTES	02/16/2024
S1.01	GENERAL NOTES	02/16/2024
S1.02	TYPICAL DETAILS	02/16/2024
S1.03	TYPICAL DETAILS	02/16/2024
S1.04	TYPICAL DETAILS	02/16/2024
S2.01	FOUNDATION PLAN	02/16/2024
S2.02	MEZZANINE FRAMING PLAN	02/16/2024
S2.03	ROOF FRAMING PLAN	02/16/2024
S3.01	SECTIONS	02/16/2024
S3.02	SECTIONS	02/16/2024
S3.03	SECTIONS	02/16/2024
5.0 MECHANICAL		
M0.01	HVAC SCHEDULES, NOTES, AND LEGENDS	02/16/2024
M0.02	OUTSIDE AIR CALCULATIONS	02/16/2024
M1.01	FIRST FLOOR HVAC PLAN	02/16/2024
M1.02	MEZZANINE FLOOR HVAC PLAN	02/16/2024
M2.01	FIRST FLOOR HVAC PIPING PLAN	02/16/2024
M3.01	HVAC SECTIONS	02/16/2024
M4.01	HVAC DETAILS	02/16/2024
M5.01	HVAC CONTROLS	02/16/2024
M5.02	HVAC CONTROLS	02/16/2024
6.0 PLUMBING		
P0.01	SCHEDULES, LEGENDS, NOTES, & DETAILS	02/16/2024
P1.01	FIRST FLOOR PLAN - NON-PRESSURE PIPING	02/16/2024
P2.01	FIRST FLOOR PLAN- PRESSURE PIPING	02/16/2024
6.5 FIRE PROTECTION		
FP1.00	DETAILS & NOTES FIRE PROTECTION	02/16/2024
FP1.01	FIRST FLOOR PLAN FIRE PROTECTION	02/16/2024
FP1.02	MEZZANINE FLOOR PLAN FIRE PROTECTION	02/16/2024
7.0 ELECTRICAL		
E001	LEGEND AND NOTES	02/16/2024
E002	RISER DIAGRAM AND PANEL SCHEDULES	02/16/2024
E003	SCHEDULES AND DETAILS	02/16/2024
E004	DETAILS	02/16/2024
E101	SITE PLAN - ELECTRICAL	02/16/2024
E201	FIRST FLOOR PLAN - LIGHTING	02/16/2024
E202	MEZZANINE PLAN - LIGHTING	02/16/2024
E301	FIRST FLOOR PLAN - POWER AND AUXILIARY	02/16/2024
E302	MEZZANINE PLAN -POWER AND AUXILIARY	02/16/2024
E401	FIRST FLOOR PLAN - HVAC AND FIRE ALARM	02/16/2024
E402	MEZZANINE PLAN - HVAC AND FIRE ALARM	02/16/2024

GMC

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117 Jefferson Street North
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GMCNETWORK.COM

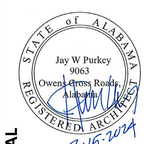
Morgan County, Alabama

ISSUE	DATE
ISSUED FOR BID	2.15.24
1 ADDENDUM-2	03.15.2024
2 ADDENDUM-3	03.22.2024

DRAWN BY: JE
CHECKED BY: JP

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEYS SPRING, ALABAMA 35754

GMC AHUN230008



INDEX & GENERAL INFORMATION

G1.01

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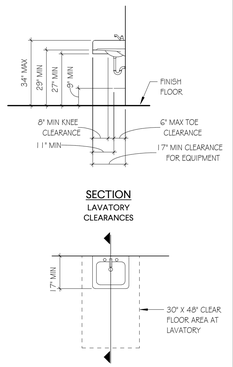
ACCESSIBLE PLUMBING LAYOUTS - ADAAG / ANSI

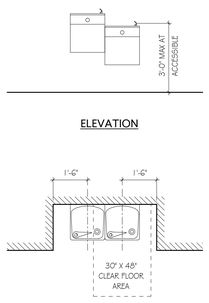
ACCESSIBLE LAVATORIES



SECTION
LAVATORY CLEARANCES

PLAN

ACCESSIBLE LAVATORY
FRONT APPROACH

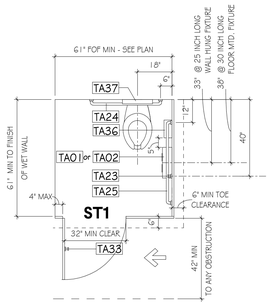


ELEVATION

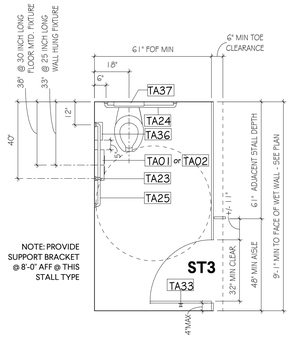
PLAN

FOUNTAIN / COOLER - HI-LO

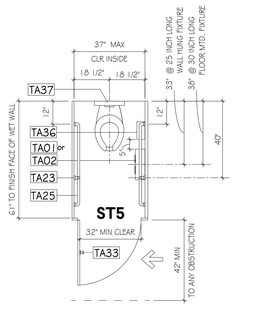
ACCESSIBLE TOILET STALL OR COMPARTMENT LAYOUTS



WHEELCHAIR ACCESS. STALL
PLAN DESIGNATION **ST1**

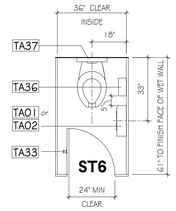


WHEELCHAIR ACCESS. STALL - END OF ROW
PLAN DESIGNATION **ST3**

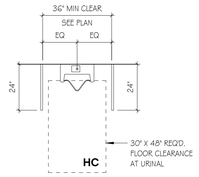


AMBULATORY ACCESSIBLE STALL
PLAN DESIGNATION **ST5**

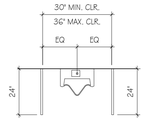
OTHER STALL LAYOUTS



STANDARD TOILET STALL
PLAN DESIGNATION **ST6**



ACCESSIBLE URINAL STALL
PLAN DESIGNATION ST8



STANDARD URINAL STALL
PLAN DESIGNATION ST7

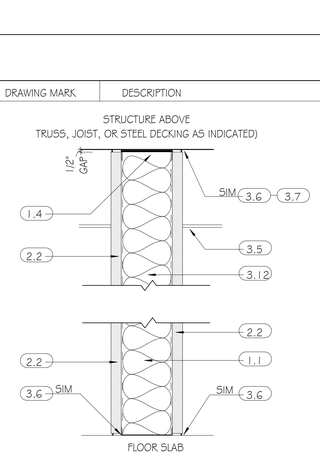
NOTES - TOILETS & FIXTURES:

1. LOCATE FLUSH ACTIVATION ON WIDE SIDE AT ALL TOILETS - LOCATE FLUSH VALVE BENEATH ADJACENT GRAB BARS.

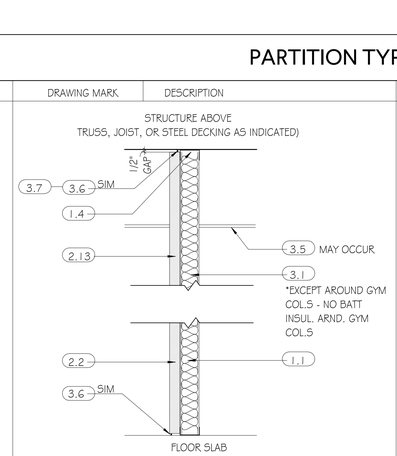
2. SANITARY NAPKIN DISPOSALS TO BE PROVIDED AT ALL FEMALE, UNISEX, & FAMILY TOILETS

PARTITION TYPES INTERIOR

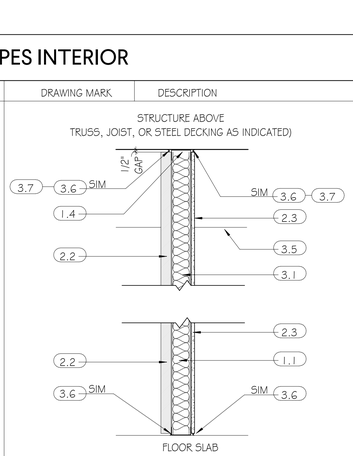
DRAWING MARK	DESCRIPTION	STC
OL-2	0 HR. - METAL LINER PANEL 14" 10" METAL STUD FRAMING w/ METAL PANEL AT BOTH SIDES	--



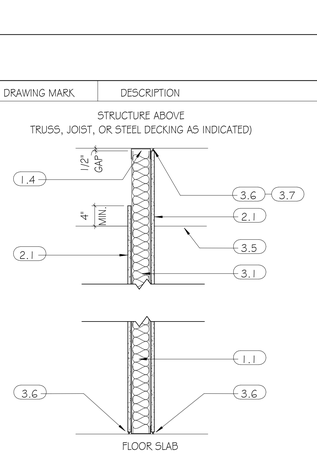
DRAWING MARK	DESCRIPTION	STC
OL-1 3.5	0 HR. - METAL LINER PANEL- 1 SIDE 3 5/8" METAL STUD FRAMING	--



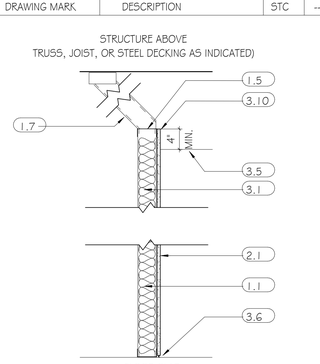
DRAWING MARK	DESCRIPTION	STC
OL 8	0 HR. - METAL LINER PANEL- 1 SIDE 8" WALL BY MTL BLDG MANUFACTURER. 0 HR. - GYPSUM - 1 SIDE	--



DRAWING MARK	DESCRIPTION	STC
OG-2 6	0 HR. - GYPSUM (BOTH SIDES) 6" METAL STUD FRAMING	47

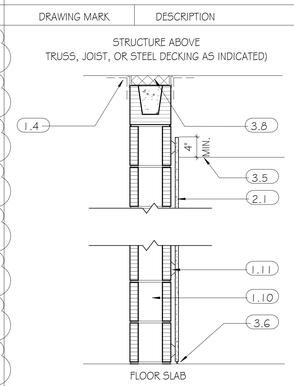


DRAWING MARK	DESCRIPTION	STC
OG-1 3.5	0 HR. - GYPSUM - 1 SIDED 3 5/8" METAL STUD FRAMING	
OG-1 6	0 HR. - GYPSUM - 1 SIDED 6" METAL STUD FRAMING	



SEE G1.22 FOR EXTERIOR WALL TYPES

DRAWING MARK	DESCRIPTION	STC
1MG	1 HR. - CMU - GYPSUM FURRED	



PARTITION KEY

1G 6"	TYPE 1G 6" METAL STUDS
1S 2.5"	TYPE 1S 2.5" METAL CH STUDS
OM 4"	TYPE OM 4" CMU
PARTITION TYPE FRAMING SIZE IN INCHES	

GENERAL NOTES - PARTITIONS

1. UL LISTED ASSEMBLIES
   A. WHERE UL ASSEMBLY NUMBERS ARE REFERENCED ABOVE, PARTITIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH REQUIREMENTS SET FORTH BY THE UL FIRE RESISTANCE DIRECTORY. NO DEVIATION SHALL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE ARCHITECT AND/OR BUILDING OFFICIAL.
2. FIRE BARRIERS, FIRE PARTITIONS, & SMOKE BARRIERS [FIRE-RATED]
   A. ALL PERIMETER JOINTS MUST BE PROTECTED BY UL LISTED FIRE-RESISTANT JOINT SYSTEMS.
   B. ALL PENETRATIONS OF RATED ASSEMBLIES MUST BE PROTECTED BY UL LISTED THROUGH-PENETRATION FIRESTOPPING ASSEMBLIES.
   C. FIRE DAMPERS MUST PROTECT HVAC DUCT PENETRATIONS.
   D. IDENTIFY FIRE WALLS, SMOKE BARRIERS, ETC., IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES, BY STENCILING "X-HOUR FIRE AND /OR SMOKE BARRIER" IN 3-INCH HIGH CONTRASTING LETTERS, 3/8-INCH MINIMUM STROKE. LOCATE WITHIN 15 FEET OF END OF WALL, AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
3. SMOKE PARTITIONS [NON-RATED]
   A. ALL PERIMETER JOINTS MUST BE SEALED WITH AIRTIGHT SEALANT APPLICATION.
   B. ALL PIPING, ELECTRICAL, AND DUCT PENETRATIONS MUST BE SEALED WITH AIRTIGHT SEALANT APPLICATION.
4. SOUND INSULATION
   A. INSULATION THICKNESS SHALL MATCH CAVITY DEPTH UNLESS NOTED OTHERWISE.
   B. INSULATE BEHIND RECESSED ITEMS IN ANY SCHEDULED ACOUSTIC PARTITIONS.
   C. INSULATION MAY BE OMITTED AT CHASES NOT EXCEEDING 10 S.F. IN AREA.
5. ACOUSTICAL SEALANT
   A. AT ALL GYP BOARD AND METAL STUD PARTITIONS: REQUIRED AT BOTTOM AND TOP RUNNERS AND AT WALL ANGLES WHERE DISSIMILAR MATERIALS MEET (SEE DETAILS).
   B. AT SCHEDULED ACOUSTIC PARTITIONS: AIRTIGHT SEAL IS REQUIRED AT ALL PENETRATIONS.
   C. ELECTRICAL AND OTHER BOXES TO BE WRAP-SEALED (SEE DETAILS).
6. PARTITION COORDINATION
7. A. COMPLY WITH "PARTITION COORDINATION WITH OTHER TRADES" REQUIREMENTS LOCATED UNDER "GENERAL NOTES" ON PROJECT INFORMATION DRAWING G1.00.

NUMBERED NOTES

1.1	Metal studs 16" OC Double-stud jambs full height at all door openings
1.4	Deflection track (0.0329 in. metal thickness). Maintain min. 1/2" stud gap
1.5	Continuous top track (0.0329 in. metal thickness)
1.7	Stud bracing min. 48 in. OC (24" OC at wall-hung cabinets)
1.10	CMU (UL Listed where applicable). See Structural for reinforcing, lintel, and top bracing requirements
1.11	At Interior furring: provide 7/8 in. hat-shaped metal furring
2.1	One layer 5/8 in. gyp. bd
2.3	One layer 5/8 in. type 'X' gyp. bd
2.13	2" Metal liner panel
3.1	Sound attenuation batt insulation. Thickness varies - see plan.
3.12	Sound attenuation batt insulation. 10 in. thick
3.5	Acoustical ceiling panels. Where ceiling panels with combined NRC/CAC ratings of 0.70/35 (or better) are used, draped insulation may be omitted
3.6	Acoustical Sealant Joint. Provide continuous bead under each layer gyp bd
3.7	Acoustical Sealant Joint. At fluted decks, cope gyp. bd. to underside of deck. Fill voids with insulation. Apply acoustical sealant continuous at joint
3.8	UL Listed fire-resistance rated HW (head of wall) joint
3.10	Gypsum board shall extend fully to top of track to establish a draft stop assembly. Conduit turnouts and electrical boxes must stand clear of metal studs to allow for application of an uninterrupted gypsum membrane.
3.11	2 1/2" exterior mtl liner panel

GMC
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117 Jefferson Street North
Huntsville, AL 35801
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Morgan County, Alabama

ISSUE	DATE
ISSUED FOR BID	2.15.24
ADDENDUM-3	03.22.2024
1	

DRAWN BY: VK
CHECKED BY: Checker

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEY'S SPRING, ALABAMA 35754

GMC AHUN230008

STATE of ALABAMA
Jay W Purkey
9063
Owens Cross Roads, Alabama
REGISTERED ARCHITECT
2.15.2024

PLUMBING LAYOUTS & PARTITION TYPES

G1.21

3/22/2024 9:27:17 AM

WALL TYPES EXTERIOR

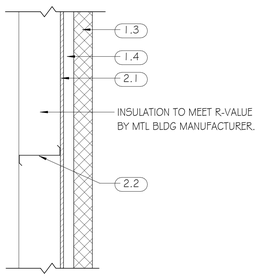
DRAWING MARK	DESCRIPTION		
	OL 12	0 HR. - METAL LINER PANEL- 1 SIDE 12" WALL BY MTL BLDG MANUFACTURER.	U.L. # N/A STC --

DRAWING MARK	DESCRIPTION		
	OL 10	0 HR. - METAL LINER PANEL- 1 SIDE 10" WALL BY MTL BLDG MANUFACTURER.	U.L. # N/A STC --

DRAWING MARK	DESCRIPTION		
	BV-1 15 3/8"	EXTERIOR 3 5/8" BRICK VENEER ON STL GIRT, GYP INTERIOR	U.L. # N/A STC --

DRAWING MARK	DESCRIPTION		
	BV-1 14 1/2"	EXTERIOR 3 5/8" BRICK VENEER ON STL GIRT, GYP INTERIOR	U.L. # N/A STC --

DRAWING MARK	DESCRIPTION		
	BV-3 14 1/2"	EXTERIOR 3 5/8" BRICK VENEER ON STL GIRT, NO-GYP BRD ON INTERIOR SIDE.	U.L. # N/A STC --



DRAWING MARK	DESCRIPTION		
			U.L. # STC

PARTITION KEY

BV TYPE BV
15 3/8" BRICK VENEER ON STL GIRT WALL

OL TYPE OL
4" STL GIRT WALL

WALL TYPE
FRAMING SIZE IN INCHES

NUMBERED NOTES

1.1 Exterior mtl siding by mtl bldg manufacturer.

1.2 5/8" gypsum board

1.3 3 5/8" masonry veneer

1.4 2" air space

1.5 1 1/2" air space

2.1 5/8" plywood sheathing

2.2 Inset girts by mtl bldg manufacturer.

2.3 2" acoustic perforated mtl insultd. liner panel to be shop-fabricated, pnmed & finished. Insulating material to be black. Mtl panel color to be selected.

GENERAL NOTES - WALLS

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5. ACOUSTICAL SEALANT
   A. ELECTRICAL AND OTHER BOXES TO BE WRAP-SEALED (SEE DETAILS).

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1	

DRAWN BY: Author
CHECKED BY: Checker

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEYS SPRING, ALABAMA 35754

GMC AHUN230008

STATE of ALABAMA
Jay W Purkey
9063
Owens Cross Roads, Alabama
REGISTERED ARCHITECT
2.15.2024

WALL TYPES

G1.22

3/22/2024 9:27:56 AM

PROPOSED MASS GRADING, UTILITIES, ASPHALT PAVEMENT, AND STRIPING IN SEPARATE CONTRACT. CONTRACTOR TO COORDINATE WORK WITH OTHER CONTRACT BEFORE, AND DURING CONSTRUCTION.

REQ'D 18" CURB AND GUTTER (SEE DETAIL)

R10.00'

R3.00'

9.00'

20.00'

58.31'

6" DIA. BOLLARDS, BY OTHERS. TYP.

REQ'D CONCRETE 6' SIDEWALK (SEE DETAIL)

N=1629099.8998
E=2215132.6606

N=1629097.9229
E=2215321.9835

6.00' (TO BOC)

MORGAN COUNTY RECREATION CENTER
FFE=631.00
(SEE A-DRAWINGS FOR DETAILS, DOOR LOCATIONS, ETC.

10.67'

15.31'

8.00'

N=1628986.3218
E=2215131.4746

N=1628984.3449
E=2215320.7976

N=1628957.1254
E=2215134.1699

N=1628955.3991
E=2215299.4942

5000 gal Septic tank

Pump Chamber

Grease Trap

REQ'D ACCESSIBLE PARKING, SIGNAGE AND RAMP (SEE DETAILS)

REQ'D CONCRETE WHEEL STOP (SEE DETAIL)

REQ'D CONCRETE 6' SIDEWALK (SEE DETAIL)

TRANS-FORMER

31.00'

32.85'

11.00'

5.00'

8.00'

REQ'D CONCRETE PAVEMENT (SEE DETAIL)

REQ'D ACCESSIBLE RAMP (SEE DETAIL)

REQ'D CONCRETE PAVEMENT (SEE DETAIL)

628.5'

LEGEND

- CONCRETE PAVEMENT
- CONCRETE SIDEWALK (SEE TYP. SEC.)
- ADA DETECTABLE WARNING PAVERS

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

Goodwyn Mills Cawood, LLC
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Morgan County, Alabama

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ADDENDUM - 3	3.22.2024
1	

DRAWN BY:
CHECKED BY:

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEY'S SPRING, ALABAMA 35754

GMC AHUN230008

02-16-2024

SITE LAYOUT PLAN

C-102

DRAWING FILE: T:\Projects\Ala\Morgan County\AHUN230003 - Morgan County Recreation Center\0 DWG\1 PLANS\02 SHEETS\03 CIVIL\C-101 Site Layout Plan.dwg
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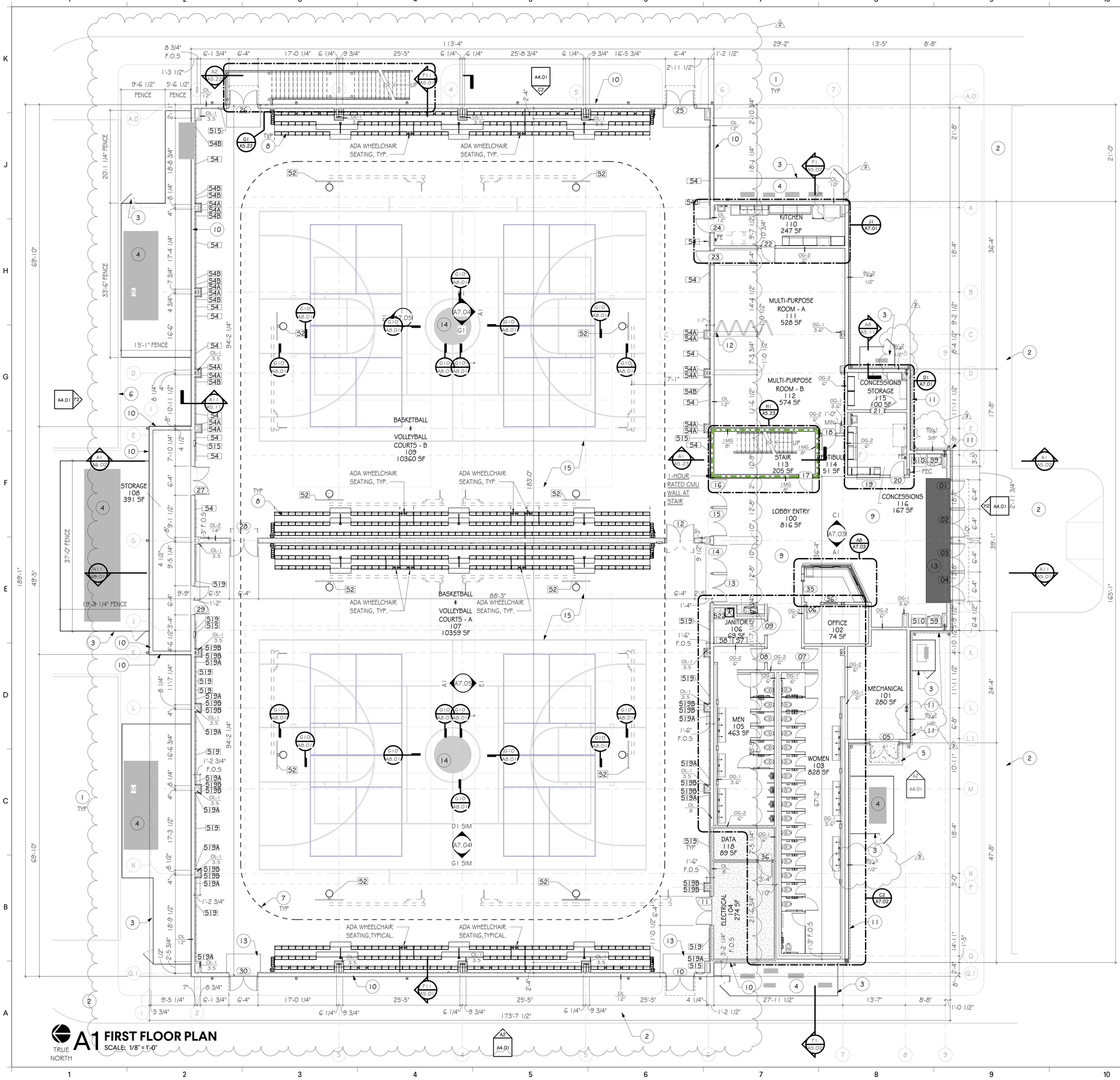

A1 FIRST FLOOR PLAN

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

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SPECIALTY EQUIPMENT SCHEDULE

TAG	DESCRIPTION	COMMENTS
S2	CEILING SUSPENDED, SIDE-FOLD, REAR OR FRONT-BRACED BASKETBALL GOAL	CFCI
S4	BLUE BASKETBALL WALL SAFETY PADS 24" X 72"	CFCI
S4A	BLUE BASKETBALL WALL SAFETY CORNER PADS 12" X 72"	CFCI
S4B	BLUE BASKETBALL WALL SAFETY PADS CUSTOM SIZE FIELD VERIFY	CFCI
S5	SCOREBOARD - ATHLETIC - WALL MOUNTED - BY OWNER. WIRELESS CONTROLLED, BUT HARDWIRED FOR POWER.	OFOI
S6	MOP SINK	CFCI
S7	METAL INDUSTRIAL SHELVING - 4 POST WITH 6 SHELVES - 36"W X 18"D X 84"H	CFCI
S8	METAL INDUSTRIAL SHELVING - 4 POST WITH 6 SHELVES - 48"W X 18"D X 84"H	CFCI
S9	ICE MACHINE	OFCI
S10	VENDING MACHINES	OFCI
S11	MICROWAVE	OFOI
S12	REFRIGERATOR/FREEZER - SIDE BY SIDE	OFCI
S13	COOLER	OFCI
S14	FIRE EXTINGUISHER	CFCI
S15	FIRE EXTINGUISHER CABINET	
S16	STAINLESS STEEL SHELF	CFCI
S17	WARMING CART	OFCI
S18	COMMERCIAL GRADE FREEZER	OFCI
S19	GREEN BASKETBALL WALL SAFETY PADS 24" X 72"	CFCI
S19A	GREEN BASKETBALL WALL SAFETY PADS CUSTOM SIZE FIELD VERIFY	CFCI
S19B	GREEN BASKETBALL WALL SAFETY CORNER PADS 12" X 72"	CFCI
S20	GRAY BASKETBALL WALL SAFETY CORNER PADS 12"X72"	CFCI
S21	GRAY BASKETBALL WALL SAFETY CUSTOM CORNER PADS FIELD VERIFY	CFCI
S22	MOP HOLDER # SHELF - 36"W	CFCI

KEYNOTES - FLOOR PLAN:

1. GRADING TO SLOPE AWAY FROM BUILDING AND PROVIDE POSITIVE DRAINAGE. SEE CIVIL.
2. CONCRETE SIDEWALK. SLOPE AWAY FROM BUILDING. SEE CIVIL.
3. VINYL (HVAC) FENCING w/ LOCKABLE GATE, TYPICAL. SEE DETAIL 1/A8.05
4. HVAC UNIT. SEE MECHANICAL
5. CONCRETE PAD, SEE CIVIL
6. CURB & GUTTER, SEE CIVIL
7. RUNNING TRACK ABOVE AT MEZZANINE
8. BLEACHER SYSTEM, SEE SPECIFICATIONS
9. WALLS IN LOBBY TO HAVE IMPACT RESITANT GYPSUM
10. METAL BUILDING WALL ASSEMBLY:
    - METAL PANEL (EXTERIOR SIDE)
    - AIR SPACE
    - INSET GIRTS BY MTL BLDG MANUFACTURER.
    - METAL PANEL PERFORATED ACOUSTICAL INTERIOR PANEL.
11. BRICK VENEER WALL ASSEMBLY:
    - BRICK VENEER (EXTERIOR SIDE)
    - AIR SPACE
    - WEATHER BARRIER OVER EXTERIOR GRADE SHEATHING
    - INSET GIRTS BY MTL BLDG MANUFACTURER.
    - GYPSUM WALL BOARD (INTERIOR SIDE)
12. OPERABLE PARTITION
13. 1" RECESS FOR WALK OFF MAT
14. COUNTY LOGO, PAINTED ON FLOOR. SEE INTERIOR DETAILS / SHEETS
15. SEE STRIPING PLAN FOR FLOOR DETAILS

BLEACHER NOTES:

- ALL VERIFIABLE DIMENSIONS ARE SUBJECT TO CHANGE PENDING FIELD VERIFICATION.
- FLOOR SHALL BE SMOOTH AND LEVEL, WITH SLOPE NOT TO EXCEED 1/8" IN 10'-0" (ALTERNATIVELY RECOMMEND FF50/FL35)
- IF WALL COLUMNS OR OTHER OBSTRUCTIONS EXIST IN PROPOSED BLEACHER AREA, VERIFY TYP, LOCATION, WIDTH, & DEPTH.
- BLEACHER SUPPLIER TO PROVIDE SHOP DRAWINGS SHOWING ALL COMPONENTS AND DIMENSIONS.

RELEASE A-GROUP 1: 144 SEATS + 3 WC SPACES
RELEASE A-GROUP 2: 129 SEATS + 2 WC SPACES

TOTAL: 273 SEATS + 5 WC SPACES

PARTITION LEGEND

- TYPICAL PARTITION
- TYPICAL CMU PARTITION
- 1-HOUR FIRE RATED PARTITION

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. REFER TO SHEET G1.01 FOR GENERAL INFORMATION.
3. REFER TO SHEET G1.11 FOR ABBREVIATIONS, MATERIAL AND SYMBOL LEGENDS AND TYPICAL MOUNTING HEIGHTS.
4. REFER TO SHEET G1.21 FOR INTERIOR PARTITION TYPES.
5. REFER TO SHEET G1.31 FOR FIRESTOPPING-THRU-PENETRATION SYSTEMS.
6. UNLESS NOTED OTHERWISE LOCATE HINGE SIDE OF DOOR JAMB 6" FROM ADJACENT WALL FOR STUD FRAMING, 8" FOR MASONRY.
7. DIMENSIONS SHOWN ARE TO FACE OF STUD OR BLOCK UNLESS NOTED OTHERWISE. COLUMN DIMENSIONS ARE CENTERLINE DIMENSIONS.
8. INSTALL APPROPRIATE WOOD FRAMING ADEQUATE TO SUPPORT WALL OR CEILING MOUNTED EQUIPMENT, ACCESSORIES, CASEWORK OR OTHER MOUNTED ITEMS IN CONSTRUCTION. INSTALL PRESSURE TREATED WOOD FRAMING AT EXTERIOR WALLS OR WHERE FRAMING IS IN CONTACT WITH CONCRETE AND/OR MASONRY. INSTALL FIRE RETARDANT TREATED BLOCKING IN ALL RATED CONSTRUCTION.
9. INSTALL BULLNOSE MASONRY UNITS AT ALL OUTSIDE CORNERS EXPOSED TO THE INTERIOR OF THE PROJECT. START BULLNOSE MASONRY UNITS 1 COURSE ABOVE FINISHED FLOOR AND STOP 1 COURSE BELOW CEILING.
10. FINISHED FLOOR GRADE TO BE FLUSH THROUGHOUT EVENT CENTER.

GMC

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117 Jefferson Street North
Huntsville, AL 35801
T 256.539.3431
GMCNETWORK.COM

Morgan County, Alabama

ISSUE	DATE
ISSUED FOR BID	2.15.24
2 ADDENDUM-2	03.15.2024
3 ADDENDUM-3	03.20.2024

DRAWN BY: VK
CHECKED BY: Checker

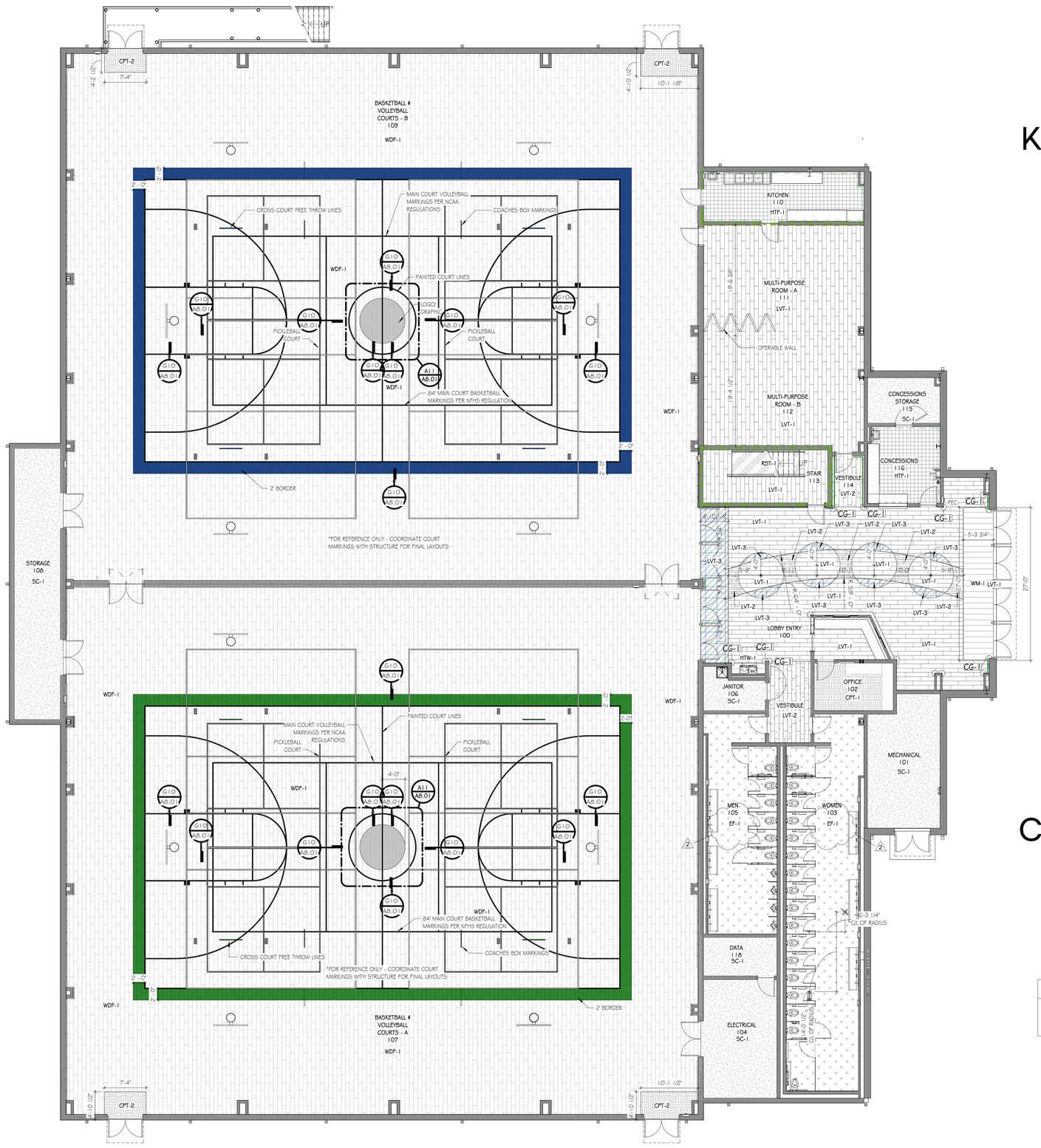
MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEYS SPRING, ALABAMA 35754

GMC AHUN230008

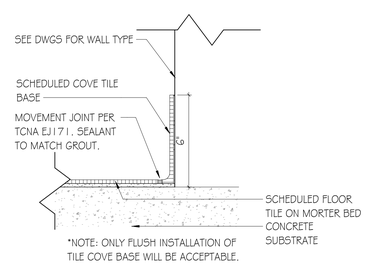
STATE of ALABAMA
Jay W Purkey
9063
Owen Gross Reese & Associates
REGISTERED ARCHITECT
2.15.2024

FIRST FLOOR PLAN

A1.01

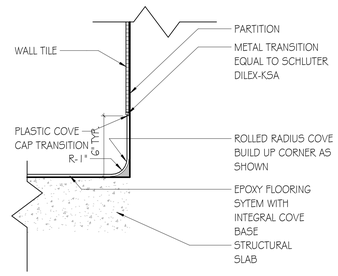


A1 FIRST FLOOR FINISH PLAN



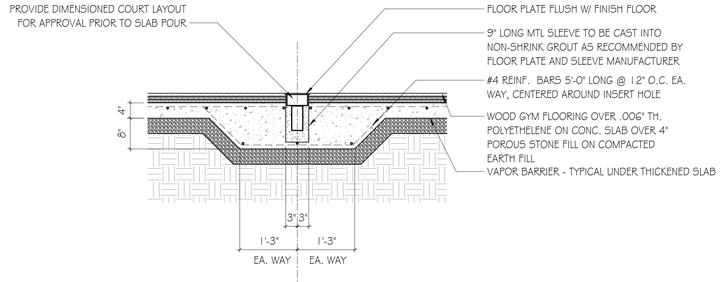
*NOTE: ONLY FLUSH INSTALLATION OF TILE COVE BASE WILL BE ACCEPTABLE.

K9 HTF-1 & HTB-1 DETAIL@ KITCHEN
SCALE: 3" = 1'-0"

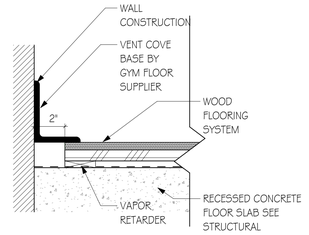


*NOTE: USE DRY MIX TROWABLE VERSION OF FLOORING SYSTEM TO BUILD COVE BASE

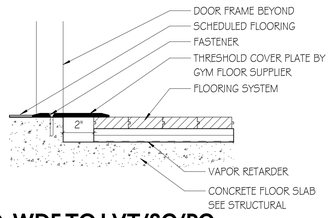
K11 EPX PERIMETER DETAIL
SCALE: 3" = 1'-0"



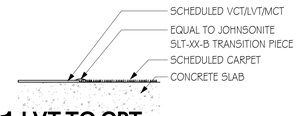
G10 VOLLEYBALL POST FLOOR DETAIL
SCALE: 3/4" = 1'-0"



E10 WOOD GYM FLOOR BASE
SCALE: 3" = 1'-0"



C9 WDF TO LVT/SC/PC
SCALE: 3" = 1'-0"



C11 LVT TO CPT
SCALE: 3" = 1'-0"

WALL PROTECTION LEGEND
WP-1
WP-2

A11 GYM FLOOR LOGO
SCALE: 1/2" = 1'-0"

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GMC AHUN230008

FIRST FLOOR - FINISH PLAN

STATE of ALABAMA
Jay W Purkey
9063
Owens Cross Roads, Alabama
REGISTERED ARCHITECT
2.15.2024

A8.01

3/18/2024 1:02:57 PM

ROOM FINISH SCHEDULE

ROOM #	ROOM NAME	FLOOR	BASE	WALL	CASEWORK/MILLWORK		COMMENTS
					CABINET	COUNTERTOP	
100	LOBBY ENTRY	WM-1, LVT-1, LVT-2, LVT-3	RB-1	PNT-1	PL-1, PL-2	SS-2	INCLUDES CHECK-IN DESK
101	MECHANICAL	SC-1	RB-1	PNT-1			
102	OFFICE	CPT-1	RB-1	PNT-1			
103	WOMEN	EF-1	EPB-1	HTW-1, HTW-2			
104	ELECTRICAL	SC-1	RB-1	PNT-1			
105	MEN	EF-1	EPB-1	HTW-1, HTW-2			
106	JANITOR	SC-1	RB-1	PNT-1			
107	BASKETBALL & VOLLEYBALL COURTS - A	WDF-1, CPT-2	VB-1	PNT-1, PNT-3, PNT-5			
108	STORAGE	SC-1	RB-1	PNT-1			
109	BASKETBALL & VOLLEYBALL COURTS - B	WDF-1, CPT-2	VB-1	PNT-1, PNT-3, PNT-4			
110	KITCHEN	HTF-1	HTB-1	PNT-1, WP-1	PL-1	SS-1	
111	MULTI-PURPOSE ROOM - A	LVT-1	RB-1	PNT-1			
112	MULTI-PURPOSE ROOM - B	LVT-1	RB-1	PNT-1			
113	STAIR	LVT-1, RST-1	RB-1	PNT-1			
114	VESTIBULE	LVT-1	RB-1	PNT-1			
115	CONCESSIONS STORAGE	SC-1	RB-1	PNT-1			
116	CONCESSIONS	HTF-1	HTB-1	PNT-1, WP-1	PL-1	SS-1	
118	DATA	SC-1	RB-1	PNT-1			
200	STAIR	RST-1, RF5-1	RB-1	PNT-1			
201	HALL	RF5-1	RB-1	PNT-1			
203	RUNNING TRACK	RF5-1	RB-1	PNT-1, PNT-3			

FINISH NOTES

FLOORS:

- REFER TO FLOOR FINISH PLANS FOR FLOOR PATTERN. CONTRACTOR MUST NOTIFY INTERIOR DESIGNER BEFORE INSTALLATION OF FLOORING TO REVIEW DESIGN INTENT OF FLOOR PATTERN PLAN

- ALL FLOORING TRANSITIONS INCLUDING TRANSITIONS TO SIMILAR MATERIAL OR REDUCER STRIPS AND OTHER THRESHOLDS TO DISSIMILAR MATERIAL SHALL BE LOCATED AT THE CENTERLINE OF DOOR WHEN IN CLOSED POSITION. COLORS SHALL BE SELECTED DURING SUBMITTAL REVIEW. REFER TO DETAILS FOR TRANSITIONS BETWEEN FLOORING MATERIALS. CONTRACTOR TO PROVIDE TRANSITION SIZES APPROPRIATE FOR THICKNESS

- AVOID ALL FLOORING MATERIAL SLIVER CUTS LESS THAN 4" WIDE @ WALL PERIMETERS & MATERIAL TRANSITIONS. CONTACT DESIGNER IF JOBSITE CONDITIONS DIFFER.

- INSTALL FLOORING CONTINUOUS UNDER ALL CASEWORK, MILLWORK, EQUIPMENT, & FURNITURE

- ALIGN VERTICAL GROUT JOINTS IN TILE BASE WITH THOSE IN THE FLOOR TILE UNLESS NOTED OTHERWISE

WALLS:

- REFER TO FINISH PLANS & ELEVATIONS FOR LOCATION OF ACCENT PAINT COLORS

- ALL HOLLOW METAL DOOR & WINDOW FRAMES TO BE PAINTED (PNT-3) UNLESS OTHERWISE NOTED

- ALL ACCESS PANELS AND MISCELLANEOUS METAL (RETURN AND AIR SUPPLY GRILLES, EXPANSION JOINTS, ETC.) LOCATED ON WALL SURFACES OR CEILING SURFACES TO BE PAINTED WALL OR CEILING COLOR U.N.O.

- WALL BASE TO BE INSTALLED ON ALL WALLS, MILLWORK, AND CASEWORK U.N.O.

- INSTALL FINISH STRIP EQUAL TO SCHLUTER "JOLLY" AT ALL EXPOSED TILE EDGES & CORNERS

MILLWORK / CASEWORK:

- INSTALL 3MM EDGEBAND ON ALL PLASTIC LAMINATE COUNTERTOPS AND CABINETS.

- GROMMET LOCATIONS TO BE COORDINATED WITH OWNER

- FIELD VERIFY ALL DIMENSIONS FOR CASEWORK & MILLWORK PRIOR TO FABRICATION & INSTALLATION

- ALL EXPOSED ENDS AND EXPOSED INTERIORS OF CASEWORK/ MILLWORK TO RECEIVE MATCHING LAMINATES

MISC:

- DO NOT PAINT DOOR LABELS AT RATED DOORS OR FRAMES.

- PROVIDE BLOCKING FOR ALL GRAB BARS AND TOILET ACCESSORIES

- REFER TO RCP FOR ACCENT PAINT COLOR LOCATIONS IN CEILING - WHERE CEILINGS ARE CALLED OUT TO BE PAINTED, BOTH CEILING AND SOFFIT/BULKHEAD WALLS ARE TO BE PAINTED ACCENT COLOR

- NON ADA TOILET FIXTURES SHALL BE CENTERED IN STALL

- CAULK ALL DOOR FRAMES, MILLWORK, AND VIEW WINDOW FRAMES AFTER WALLCOVERING INSTALLATION IS COMPLETE. COLOR OF CAULK TO MATCH ADJACENT FINISH.

- GC TO PROVIDE SPECIFIED EXPANSION JOINT COVER AT ALL EXPOSED FINISH FLOOR, CEILING, AND WALL LOCATIONS

- ALL PARTIES RESPONSIBLE FOR DELIVERING FINISHES TO THE SITE SHALL CHECK AVAILABILITY OF QUANTITIES AND DELIVERY DATES UPON NOTICE TO PROCEED. NO CONSIDERATION WILL BE GIVEN FOR FAILURE TO COMPLY WITH THIS REQUIREMENT.

RCP NOTES:

- ALL SPRINKLER HEADS IN FINISHED CEILINGS ALL SHALL BE CENTERED IN CEILING TILE. SPRINKLER HEADS SHALL NOT BE PAINTED.

- INTERIOR CEILING HEIGHTS SHALL BE AS INDICATED ON THE REFLECTED CEILING PLANS.

- WHERE EXIT SIGNS ARE LOCATED ABOVE DOORWAYS, CENTER ABOUT DOOR, BUT MAINTAIN MINIMUM OVERHEAD CLEARANCE.

- IN EXPOSED CEILINGS (EXP-2) ALL EXPOSED ELEMENTS NOT LIMITED TO TRUSS SYSTEM, ACOUSTICAL DECK, DUCTWORK, CONDUIT, AND PIPING TO BE PAINTED

- ALL GYP CEILINGS TO BE PAINTED (PNT-2) UNLESS OTHERWISE NOTED IN RCP. BOTH CEILING AND SOFFIT /BULKHEAD SURFACES ARE TO BE PAINTED THE SAME COLOR.

- DO NOT INSTALL CEILING TILE LESS THAN 6" IN ANY DIRECTION - WHEN POSSIBLE CENTER TILE IN ROOM.

SPECIALTY EQUIPMENT SCHEDULE

TAG	DESCRIPTION	COMMENTS
52	CEILING SUSPENDED, SIDE-FOLD, REAR OR FRONT-BRACED BASKETBALL GOAL	CFCI
54	BLUE BASKETBALL WALL SAFETY PADS 24" X 72"	CFCI
54A	BLUE BASKETBALL WALL SAFETY CORNER PADS 12" X 72"	CFCI
54B	BLUE BASKETBALL WALL SAFETY PADS CUSTOM SIZE FIELD VERIFY	CFCI
55	SCOREBOARD - ATHLETIC - WALL MOUNTED - BY OWNER. WIRELESS CONTROLLED, BUT HARDWIRED FOR POWER.	OFOI
56	MOP SINK	CFCI
57	METAL INDUSTRIAL SHELVING - 4 POST WITH 6 SHELVES - 36"W X 18"D X 84"H	CFCI
58	METAL INDUSTRIAL SHELVING - 4 POST WITH 6 SHELVES - 48"W X 18"D X 84"H	CFCI
59	ICE MACHINE	OFCI
S10	VENDING MACHINES	OFCI
S11	MICROWAVE	OFOI
S12	REFRIGERATOR/FREEZER - SIDE BY SIDE	OFCI
S13	COOLER	OFCI
S14	FIRE EXTINGUISHER	CFCI
S15	FIRE EXTINGUISHER CABINET	
S16	STAINLESS STEEL SHELF	CFCI
S17	WARMING CART	OFCI
S18	COMMERCIAL GRADE FREEZER	OFCI
S19	GREEN BASKETBALL WALL SAFETY PADS 24" X 72"	CFCI
S19A	GREEN BASKETBALL WALL SAFETY PADS CUSTOM SIZE FIELD VERIFY	CFCI
S19B	GREEN BASKETBALL WALL SAFETY CORNER PADS 12" X 72"	CFCI
S20	GRAY BASKETBALL WALL SAFETY CORNER PADS 12"X72"	CFCI
S21	GRAY BASKETBALL WALL SAFETY CUSTOM CORNER PADS FIELD VERIFY	CFCI
S22	MOP HOLDER & SHELF - 36"W	CFCI

TOILET ACCESSORIES SCHEDULE

TAG	DESCRIPTION	COMMENTS
TA01	TOILET TISSUE DISP - DBL. STD. ROLL W/SHELF	CFCI
TA03	PAPER TOWEL DISPENSER (FOLDED, HIGH-CAPACITY)	CFCI
TA16	COMBO TOWEL DISPENSER/WASTE RECEPTACLE (RECESSED, FOLDED)	CFCI
TA18	STERIS SDS SOAP DISPENSER, SURFACE-MOUNT, MANUAL (LIQUID TYPE)	CFCI
TA23	18" VERTICAL GRAB BAR	CFCI
TA24	36" HORIZONTAL GRAB BAR	CFCI
TA25	42" HORIZONTAL GRAB BAR	CFCI
TA30	MIRROR, CHANNEL FRAMED WITHOUT SHELF (18 x 36 INCHES)	CFCI
TA36	SANITARY NAPKIN DISPOSAL - SURF-MT, BOTTOM HINGED	CFCI
TA85	DIAPER CHANGING STATION, SURFACE-MOUNT	CFCI

CASEWORK SCHEDULE

NOTE: CABINET DESIGN SERIES (CDS) NUMBERS BASED ON AWI STANDARDS EDITION 2

CDS #	CASEWORK TYPE	DESCRIPTION
100	BASE CAB	OPEN W/ ADJUSTABLE SHELVES
222	BASE CAB	DBL DOORS / DBL DRWRS
230	BASE CAB	BASE CABINET WITH 3 EQUAL SIZE DRAWERS
424	TALL STG CAB	4 DOORS

FINISH LEGEND

FLOOR

NUMBER	TYPE	DETAIL DESCRIPTION
CPT-1	CARPET	MANUFACTURER: SHAW STYLE NAME: ENCLAVE TILE COLOR: RESERVOIR 71485 SIZE: 18X36 INSTALLATION: ASHLAR LOCATION: OFFICE
CPT-2	WALK-OFF CARPET	MANUFACTURER: BENTLEY STYLE NAME: ROUGH IDEA SHEAR COLOR: DESIGN 80011G SIZE: 24X24 INSTALLATION: MONOLITHIC LOCATION: COURTS
HTF-1	HARD TILE FLOOR	MANUFACTURER: CROSSVILLE TILE STYLE NAME: CROSS-TREAD COLOR: GREY MINGLE SIZE: 8" x 8" INSTALLATION: STACK BOND LOCATION: KITCHEN & CONCESSION
WDF-1	WOOD FLOORING	MANUFACTURER: ROBBINS STYLE NAME: BIO CHANNEL SB PLANK: 25/32" CONTINUOUS STRIP XL FINGER JOINT NORTHERN HARD MAPLE - CLEAR FINISH GAME LINE PAINT: AS RECOMMENDED BY MFG COLORS: TBD LOCATION: GYM A, GYM B, SEE DRAWINGS
EF-1	EPOXY FLAKE	MANUFACTURER: TORGINOL STYLE NAME: COLOR FLAKES 1/4" COLOR: FB-807 TIDAL WAVE LOCATION: RESTROOMS
SC-1	SEALED CONCRETE	CLEAR SEALED ON CLEANED AND GROUND FACED STRUCTURAL CONCRETE PROVIDED BY STAINED CONCRETE SUB-CONTRACTOR, TYP LOCATION: WHERE NOTED
RST-1	RUBBER STAIR TREAD	MANUFACTURER: JOHNSONITE STYLE NAME: HAMMERED TREAD/RISER COMBO #VIHTR COLOR: HNSP-LC4 MOUNTAINEER WG SIZE: FIELD MEASURE LOCATION: INTERIOR EGRESS STAIRS. LANDINGS: MATCH RUBBER TILE TO TREAD/RISER AND SAME DYE LOT
RF5-1	RESILIENT FLOOR SYSTEM	MANUFACTURER: ROBBINS STYLE NAME: PULASTIC CLASSIC 110 SEAMLESS FLOOR SYSTEM COLOR: 506 DUSTY GREY GAMELINE PAINT COLOR: WHITE LOCATION: 2ND LEVEL TRACK AND WHERE NOTED, SEE DRAWINGS
WM-1	WALK OFF MAT	MANUFACTURER: CS GROUP STYLE NAME: PEDITRED G4 COLOR: 7325 WROUGHT IRON FRAME: LEVEL BASE FRAME RECESS: 3/4" LOCATION: MAIN ENTRY
LVT-1	LUXURY VINYL TILE	MANUFACTURER: SHAW STYLE NAME: INLET II COLOR: VALLEY 72103 SIZE: 9" X 48" LOCATION: MAIN ENTRY & MULTI-PURPOSE
LVT-2	LUXERY VINYL TILE	MANUFACTURER: SHAW STYLE NAME: COMMINGLE COLOR: 50105 CONCRETE SIZE: 9" X 48" LOCATION: MAIN ENTRY
LVT-3	LUXERY VINYL TILE	MANUFACTURER: SHAW STYLE NAME: TYPE, DIALOGUE 4142V COLOR: 42595 ENGAGE SIZE: 24" X 24" LOCATION: MAIN ENTRY

BASE

NUMBER	TYPE	DETAIL DESCRIPTION
RB-1	RUBBER BASE	MANUFACTURER: ROPPE STYLE NAME: 4" RUBBER COVE BASE COLOR: 669 BATTLESHIP LOCATION: TYPICAL
HTB-1	HARD TILE BASE	MANUFACTURER: CROSSVILLE TILE STYLE NAME: CROSS-TREAD COLOR: GREY MINGLE SIZE: 6" x 8" COVE BASE INSTALLATION: LOCATION: KITCHEN & CONCESSIONS
EPB-1	EPOXY BASE	MANUFACTURER: MATCH EF-1 STYLE NAME: MATCH EF-1 COLOR: MATCH EF-1 SIZE: 6" H INSTALLATION: INTEGRAL WITH FLOOR, SEE FLOORING DETAILS LOCATION: TOILETS
VB-1	VENTED BASE	MANUFACTURER: ROBBINS SPORTS SURFACE STYLE: VENTILATED COVE BASE COLOR: BLACK SIZE: 3" X 4" BASE NOTE: PROVIDE MATCHING OUTSIDE CORNERS LOCATION: BASKETBALL & VOLLEYBALL COURTS

WALL

NUMBER	TYPE	DETAIL DESCRIPTION
PNT-1	PAINT	MANUFACTURER: SHERWIN WILLIAMS COLOR: SW 7016 MINDFUL GRAY LOCATION: GENERAL WALL
PNT-2	PAINT	MANUFACTURER: SHERWIN WILLIAMS COLOR: PURE WHITE #SW 7005 LOCATION: CEILING PAINT
PNT-3	PAINT	MANUFACTURER: COLOR: SW 7067 CITYSCAPE LOCATION: TRIM / HOLLOW METAL FRAMES
PNT-4	PAINT	MANUFACTURER: SHERWIN WILLIAMS COLOR: SW 7605 GALE FORCE LOCATION: ACCENT - BASKETBALL & VOLLEYBALL COURTS - B 109
PNT-5	PAINT	MANUFACTURER: SHERWIN WILLIAMS COLOR: SW 6734 ESPALIER LOCATION: ACCENT - BASKETBALL & VOLLEYBALL COURTS A 107
PNT-6	PAINT	MANUFACTURER: SHERWIN WILLIAMS COLOR: SW 7016 MINDFUL GRAY LOCATION: EPOXY PAINT FOR WET AREAS & KITCHEN AND CONCESSIONS
HTW-1	HARD TILE WALL	MANUFACTURER: DALTILE STYLE NAME: MULTITUDE COLOR: NOSTALGIC BLUE RECTANGLE SIZE: 12" X 24" LOCATION: RESTROOMS
HTW-2	HARD TILE WALL	MANUFACTURER: DALTILE STYLE NAME: MULTITUDE COLOR: NOSTALGIC BLUE RECTANGLE WAVE SIZE: 12" X 24" LOCATION: RESTOOMS
WP-1	WALL PROTECTION	MANUFACTURER: CS ACROVYN STYLE NAME: STANDARD RIGID SHEET COLOR: 209 SLATE, IRISH LINEN TEXTURE THICKNESS: .040" SIZE: 4' X 10' LOCATION: WHERE NOTED
WP-2	WALL PROTECTION	MANUFACTURER: INPRO CORP STYLE NAME: PALLADIUM RIGID WALL COLOR: PEPPERDUST 0119 THICKNESS: .040" SIZE: 48" HIGH LOCATION: WHERE NOTED NOTE: PROVIDE TOP TRIM CAP & DIVIDER BARS WHERE SEAMS OCCUR
CG-1	CORNER GUARDS	MANUFACTURER: INPRO CORP STYLE NAME: 150 CORNER GUARD COLOR: PEPPERDUST 0119 INSTALL ABOVE WALL BASE SIZE: 3" WINGS TO 4'-0" AFF LOCATION: WHERE NOTED

MISC

NUMBER	TYPE	DETAIL DESCRIPTION
SS-1	SOLID SURFACE COUNTERTOP MATERIAL	MANUFACTURER: CORIAN STYLE: DEEP CLOUD LOCATION: GENERAL COUNTERTOPS
SS-2	SOLID SURFACE COUNTERTOP MATERIAL	MANUFACTURER: CORIAN STYLE: LAGUNA TERRAZZO LOCATION: RECEPTION DESK TRANSACTION & WORKSURFACE
PL-1	PLASTIC LAMINATE	MANUFACTURER: WILSONART STYLE/ COLOR: RALEIGH WALNUT 1701SK-67 LOCATION: RECEPTION DESK & WHERE SCHEDULED
PL-2	PLASTIC LAMINATE	MANUFACTURER: LAMINART STYLE/ COLOR: 2466 T / MIDNIGHT BLUE TEXTURED FINISH LOCATION: RECEPTION DESK
TS-1	TACKABLE SURFACE	MANUFACTURER: CARNEGIE XOREL STYLE/ COLOR: 6557W/80 FLUX LOCATION: RECEPTION

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FINISH SCHEDULE AND LEGEND

A8.03

STATE of ALABAMA
Jay W Purkey
9063
Owen Gross Roads, Alabama
REGISTERED ARCHITECT
2-15-2024

3/18/2024 1:02:57 PM

HVAC DUCTWORK & PIPING LEGEND

- NEW DUCTWORK
- NEW PIPING
- CEILING RETURN GRILLE 24X24 CUBE CORE
- LOUVERED FACE CEILING DIFFUSER
- CEILING RETURN OR EXHAUST, REGISTER OR GRILLE
- LAY-IN LOUVERED FACE CEILING DIFFUSER
- SR — SIDEWALL SUPPLY REGISTER
- SUPPLY AIR DUCT SECTION
- RETURN OR EXHAUST AIR DUCT SECTION
- ROUND, 90° ELBOW
- ROUND, 45° ELBOW
- RECTANGULAR, 90° ELBOW WITH TURNING VANES
- RECTANGULAR, 45° ELBOW
- DUCT TURNING DOWN
- DUCT TURNING UP
- RISE OR DROP IN DUCT
- FD — FIRE DAMPER (RATING EQUAL TO WALL RATING) (PROVIDE ACCESS DOOR IN DUCT) (RUSKIN DIBD2 OR EQUAL)
- MD — MANUAL DAMPER (RECT. = RUSKIN MD25 OR EQUAL, RND. = RUSKIN MDRS25 OR EQUAL)
- AD — AUTOMATIC DAMPER (RUSKIN CD50 OR EQUAL)
- MD — RECTANGULAR BRANCH OFF RECTANGULAR DUCT WITH MANUAL DAMPER
- FLEXIBLE DUCT

GENERAL NOTES:

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND SUBJECT TO REQUIREMENTS OF ARCHITECTURAL DRAWINGS AND CONDITIONS EXISTING IN THE FIELD. MECHANICAL DRAWINGS INDICATE GENERALLY THE LOCATION OF COMPONENTS AND ARE NOT INTENDED TO SHOW ALL FITTINGS OR ALL DETAILS OF THE WORK TO BE PERFORMED.
2. FOLLOW THE DRAWINGS CLOSELY, COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. DO NOT SCALE MECHANICAL DRAWINGS FOR LOCATIONS OF SYSTEM COMPONENTS.
3. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
4. MAKE NO CHANGES WITHOUT THE ARCHITECT'S WRITTEN PERMISSION. IN CASE OF DOUBT, OBTAIN ARCHITECT'S DECISION BEFORE PROCEEDING WITH WORK. FAILURE TO FOLLOW THIS INSTRUCTION SHALL MAKE THE CONTRACTOR LIABLE FOR DAMAGE TO OTHER WORK AND RESPONSIBLE FOR REMOVING AND REPAIRING DEFECTIVE OR MISLOCATED WORK IN PROPER MANNER.
5. DO NOT SCALE DRAWINGS TO LOCATE DIFFUSERS AND EQUIPMENT. COORDINATE WITH NEW AND EXISTING LIGHTING, ELECTRICAL CONDUIT, AND ALL EXISTING FIELD CONDITIONS.
6. VERIFY ALL EQUIPMENT VOLTAGES WITH ELECTRICAL DRAWINGS AND REPORT ANY INCONSISTENCIES TO THE ARCHITECT PRIOR TO ORDERING EQUIPMENT.
7. PROTECT MECHANICAL EQUIPMENT FROM DAMAGE DURING CONSTRUCTION. WHEN INSTALLATION IS COMPLETE, CLEAN EQUIPMENT AS REQUIRED.
8. INSTALL ALL EQUIPMENT TO PROVIDE NORMAL SERVICE ACCESS TO ALL COMPONENTS. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. IF MANUFACTURER'S INSTRUCTIONS CONFLICT WITH CONTRACT DOCUMENTS, OBTAIN ARCHITECT'S DECISION BEFORE PROCEEDING.
9. FURNISH ACCESS DOORS FOR VALVES, FIRE DAMPERS, DAMPERS, CONTROLS, AIR VENTS, TRAP CLEAN OUTS, AND OTHER ITEMS LOCATED ABOVE NON-LIFTOUT CEILINGS OR BEHIND PARTITIONS OR WALLS. PROVIDE FIRE DAMPERS IN DUCTWORK, GRILLES, AND REGISTERS WITH FIRE RATING EQUAL TO RATING OF WALL OR CEILING. ALL FIRE DAMPERS MAY OR MAY NOT BE SHOWN ON MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL FIRE RATED WALL AND CEILING LOCATIONS AND RATINGS WITH ARCHITECTURAL DRAWINGS.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS (SEE SPECIFICATIONS).

AIR DEVICE LEGEND

MARK	DESCRIPTION	(X) SQUARE NECK SIZE		MODEL #
		NECK SIZE	ROUND RUNOUT	
LD(X)	LOUVER FACE 24"X24" LAY-IN CEILING DIFFUSER. 4-WAY THROW UNLESS NOTED OTHERWISE. CFM SHOWN.	6 X 6 9 X 9 12 X 12 15 X 15 18 X 18	6"Ø 8"Ø 10"Ø 12"Ø 14"Ø	TITUS TDC-AA
SD(X)	SAME AS LD, SURFACE MOUNTED.	SQUARE NECK SIZE		TITUS TDC-AA
E(X)	CEILING EXHAUST GRILLE. 1/2" X 1/2" X 1/2" ALUMINUM CORE	SQUARE NECK SIZE		TITUS 50F
R(X)	CEILING RETURN GRILLE. 1/2" X 1/2" X 1/2" ALUMINUM CORE	SQUARE NECK SIZE		TITUS 50F
WRR	WALL RETURN REGISTER, SIZE AND CFM SHOWN.	---		TITUS 350
DWTG	DOUBLE WALL TRANSFER GRILLE. SIZE AND CFM SHOWN.	---		TITUS 350
DL	DRUM LOUVER. SIZE AND CFM SHOWN.	---		TITUS DL

INDOOR - DUCTLESS SPLIT SYSTEM

MARK	AREA SERVED	TYPE	OUTDOOR UNIT	CFM	CAPACITY (MBH) COOLING @ 95°F	CAPACITY (MBH) HEATING @ 47°F	ACCESSORIES	SEER	DESIGN BASIS MODEL
AC-1A	LOBBY ENTRY- 100	C	HP-1	775	29.4	22.3	1 2	17.0	TRANE TPEADA0301AA80A
AC-1B	LOBBY ENTRY- 100	C	HP-1	775	29.4	22.3	1 2	17.0	TRANE TPEADA0301AA80A
AC-2	OFFICE - 102	C	HP-2	270	8.9	6.8	1 2	18.8	TRANE NTXDKS09A112AA
AC-3	WOMEN - 103	B	HP-3	800	23.7	16.2	1 2	24.7	TRANE TPLA0A0241EA80A
AC-4	MEN - 105	B	HP-4	460	11.9	8.7	1 2	26.9	TRANE TPLA0A0121EA80A
AC-5	CONCESSION STORAGE - 115, CONCESSION - 116	C	HP-5	270	11.9	8.5	1 2	20.5	TRANE NTXDKS12A112AA
AC-6	MULTI-PURPOSE ROOM - B - 112	B	HP-6	770	23.7	16.2	1 2	24.7	TRANE TPLA0A0241EA80A
AC-7	MULTI-PURPOSE ROOM - A - 111	B	HP-7	700	23.7	16.2	1 2	24.7	TRANE TPLA0A0241EA80A
AC-8	KITCHEN - 110	B	HP-8	400	11.9	8.7	1 2	26.9	TRANE TPLA0A0121EA80A
AC-9	STORAGE - 108	B	HP-9	400	11.9	8.7	1 2	26.9	TRANE TPLA0A0121EA80A
AC-DATA	DATA - 118	A	CU-ELEC	775	23.7	---	1 2	21.3	TRANE TPKA0A0241KA80A
AC-ELEC	ELECTRICAL - 104	A	CU-ELEC	775	23.7	---	1 2	21.3	TRANE TPKA0A0241KA80A

TYPES:
- A WALL MOUNTED CASSETTE UNIT
- B CEILING MOUNTED CASSETTE UNIT
- C CEILING-CONCEALED DUCTED UNIT

ACCESSORIES:
- 1 WIRED THERMOSTAT
- 2 SINGLE POINT POWER CONNECTION AT OUTDOOR UNIT

OUTDOOR - DUCTLESS SPLIT SYSTEM

MARK	COOLING TOTAL MBH	HEATING TOTAL MBH	UNIT TYPE	CIRCUIT BREAKER CAPACITY (AMPS)	MIN. CIRCUIT AMPS	MOTOR V/Φ/Hz	DESIGN BASIS MODEL
HP-1	59.6	44.5	HEAT PUMP	55	46	208/1/60	TRANE NTXMSM60A182BA
HP-2	8.9	6.8	HEAT PUMP	16	9	208/1/60	TRANE NTXSKS09A112AA
HP-3	23.7	16.2	HEAT PUMP	26	19	208/1/60	TRANE TRUZA0241HA70NA
HP-4	11.9	8.7	HEAT PUMP	28	11	208/1/60	TRANE TRUZA0121KA70NA
HP-5	11.9	8.5	HEAT PUMP	16	9	208/1/60	TRANE NTXSKS12A112AA
HP-6	23.7	16.2	HEAT PUMP	26	19	208/1/60	TRANE TRUZA0241HA70NA
HP-7	23.7	16.2	HEAT PUMP	26	19	208/1/60	TRANE TRUZA0241HA70NA
HP-8	11.9	8.7	HEAT PUMP	28	11	208/1/60	TRANE TRUZA0121KA70NA
HP-9	11.9	8.7	HEAT PUMP	28	11	208/1/60	TRANE TRUZA0121KA70NA
CU-DATA	23.7	---	COOLING ONLY	26	19	208/1/60	TRANE TRUYA0241HA70NA
CU-ELEC	23.7	---	COOLING ONLY	26	19	208/1/60	TRANE TRUYA0241HA70NA

NOTES:
- SINGLE POINT POWER.
- MOUNT OUTDOOR UNIT ON MANUFACTURER RECOMMENDED PLATFORM STANDS.
- PROVIDE ALUMINUM JACKET ON OUTDOOR REFRIGERANT PIPING.
- PROVIDE A 1-YEAR MANUFACTURER LABOR WARRANTY.

AIR HANDLING UNITS

MARK	TYPE	SUPPLY FAN CFM	SUPPLY FAN "W.G. TOT. S.P.	SUPPLY FAN TYPE	SUPPLY FAN MAXIMUM OSA CFM	SUPPLY FAN MOTOR HP	SUPPLY FAN MOTOR V/Φ/Hz	COOLING COIL CFM	AIR ENT. °FDB	AIR ENT. °FWB	AIR LVG. °FDB	AIR LVG. °FWB	MBH TOTAL	MBH SENS.	MAX. F.V. FPM	ELECTRIC HEATING CFM	MBH	KW	AIR ENT °F	V/Φ/Hz	MCA	MOCP	FILTERS	ACCESSORIES	DESIGN BASIS TRANE
AHU-1	B	18,700	3.860"	FC FAN	1,870	25	460/3/60	18,700	77.04	63.74	53.53	53.45	544.7	458.4	500	18,700	359.9	108	64.6	460/3/60	170	175	A	1 2 3 4	TEH600
AHU-2	B	19,400	3.976"	FC FAN	1,940	25	460/3/60	19,400	77.04	63.74	53.88	53.80	547.6	468.6	500	19,400	356.0	108	64.6	460/3/60	170	175	A	1 2 3 4	TEH600

TYPES:
- A FACTORY FABRICATED, DOUBLE WALL, VARIABLE VOLUME, HORIZONTAL DRAW THROUGH WITH INTERNAL FAN ISOLATION.
- B FACTORY FABRICATED, DOUBLE WALL, CONSTANT VOLUME, HORIZONTAL DRAW THROUGH WITH INTERNAL FAN ISOLATION.
- C FACTORY FABRICATED, DOUBLE WALL, VARIABLE VOLUME, VERTICAL DRAW THROUGH WITH INTERNAL FAN ISOLATION.
- D FACTORY FABRICATED, DOUBLE WALL, CONSTANT VOLUME, VERTICAL DRAW THROUGH WITH INTERNAL FAN ISOLATION.

FILTERS: (SEE SPECS.)
- A 2", HIGH EFFICIENCY MERV 8 FILTERS

ACCESSORIES:
- 1 VARIABLE SPEED DRIVE WITH INVERTER DUTY RATED MOTOR.
- 2 INSULATED DOUBLE CONSTRUCTION DRAIN PANS WITH TYPE 304 STAINLESS STEEL INNER PAN.
- 3 MIXING BOX WITH OPPOSED BLADE AUTOMATIC DAMPERS.
- 4 MARINE LIGHTS IN ALL ACCESSIBLE SECTIONS (FACTORY MOUNTED SWITCH).

NOTES:
- A SCHEDULED SUPPLY FAN PRESSURE DROPS INCLUDE THE FOLLOWING AIR PRESSURE DROP IN "WG":
  COOLING COIL: 1.0"
  HEATING COIL: 0.25"
  FILTER: 1.00" (CHANGEOUT)
- B MAXIMUM COOLING COIL WATER PRESSURE DROP = 15 FT.
- C MAXIMUM HEATING COIL WATER PRESSURE DROP = 10 FT.
- D SCCR RATING: 5000 AMPS

BRANCH CONTROLLERS - VRF SYSTEM

MARK	UNIT TYPE	BRANCH QUANTITY	ELECTRICAL V/Φ/Hz	ELECTRICAL MCA	ELECTRICAL MOCP	ESTIMATED WEIGHT	DESIGN BASIS MODEL
BC-1	HEAT PUMP	3	208/1/60	1.0	15	15 LBS.	TRANE TAC-MKA32BC

NOTES (APPLIES TO ALL CONTROLLERS)
1. PROVIDE AND INSTALL FACTORY BALL VALVES ON ALL PORTS.
2. ALL UNITS SHALL FULLY INTEGRATE TO CENTRAL CONTROLLER AND BUILDING DDC CONTROLS SYSTEM.
3. ALL PORTS OF BRANCH CONTROLLER SHALL BE LABELED AND IDENTIFIED WITH CONNECTED AC UNIT.
4. INSTALL BRANCH CONTROLLERS AS REQUIRED TO PROVIDE ALL RECOMMENDED CLEARANCES.

ELECTRIC WALL HEATERS

MARK	CAPACITY (kW)	QUANTITY	AMPS	ELECT. V/Φ/Hz	ACCESSORIES	DESIGN BASIS
EWH-1	5.0	2	18.1	277/1/60	1	MARKEL - SERIES 3420

HEATER ACCESSORIES:
- 1 PROVIDE WALL MOUNTED THERMOSTAT, MOUNTING FRAME, DISCONNECT, HORIZONTAL LOUVERS, CONTACTORS, FUSING, AND CONTROL TRANSFORMER. ALL ELECTRICAL COMPONENTS SHALL BE WIRED TO A SINGLE POINT POWER CONNECTION.

HEATER NOTES:
1. CONTRACTOR TO PROVIDE ALL CONTROL WIRING IN CONDUIT AND CONTROL ACCESSORIES AS REQUIRED FOR CONNECTING WALL MOUNTED THERMOSTATS.

ENERGY RECOVERY UNIT (ERU)

MARK	SUPPLY FAN CFM	SUPPLY FAN E.S.P. W.G.	SUPPLY FAN H.P.	EXHAUST FAN CFM	EXHAUST FAN E.S.P. W.G.	EXHAUST FAN H.P.	SUMMER PERFORMANCE OSA ENT. °FDB	OSA ENT. °FWB	EXHAUST AIR °FDB	EXHAUST AIR °FWB	SUPPLY AIR °FDB	SUPPLY AIR °FWB	EFFECTIVENESS	WINTER PERFORMANCE OSA ENT. °FDB	EXHAUST AIR °FDB	SUPPLY AIR °FDB	EFFECTIVENESS	DX COOLING TOTAL MBH	DX COOLING SENS. MBH	DX COOLING ENT. TEMP °FDB/°FWB	DX COOLING LVG. TEMP °FDB/°FWB	HOT GAS REHEAT TOTAL MBH	HOT GAS REHEAT LVG. TEMP °FDB	ELECTRIC HEATING V/Φ/Hz	ELECTRIC HEATING AIR ENT.	ELECTRIC HEATING MBH	ELECTRIC HEATING KW	ELECTRIC HEATING MCA	ELECTRIC HEATING MOCP	BASIS OF DESIGN
ERU-GYM	11,210	1.0	2 @ 5	11,210	0.5	2 @ 3	95	78.5	88.1	71.4	81.9	70.9	51.4%	19.6	37.6	54.0	60.5%	589.1	322.5	81.9 / 70.9	55.8 / 55.2	223.9	74.2	460/3/60	54°F	273.4	80	128.8	150	VALENT VXC-352-PH-50I-1-D2

NOTES:
1. UL-LISTED
2. 2" THICK MERV 8 FILTER
3. LOW LEAKAGE DAMPER
4. ECONOMIZER BMS CONTROL (BACNET INTEGRAL MTSP)
5. VFD FOR FAN BALANCING SUPPLY AND EXHAUST FANS
6. SINGLE POINT POWER CONNECTION
7. FUSED DISCONNECT
8. PROVIDE HOT GAS REHEAT
9. ENERGY RECOVERY UNIT TO HAVE ENTHALPY CORE (1)

DEDICATED OUTDOOR AIR SYSTEM (100% OSA)

MARK	TYPE	CFM	SUPPLY FAN IN WG E.S.P.	SUPPLY FAN MOTOR HP	OSA CFM	COOLING COIL TOT CAP	COOLING COIL SENS CAP	COOLING COIL ENT AIR DB/WB	COOLING COIL LVG AIR DB/WB	ACCESSORIES	ELECTRICAL HEATING MBH	ELECTRICAL HEATING KW	ELECTRICAL HEATING MCA	MOCP	V/Φ/Hz	BASIS OF DESIGN AAON
DOAS-1	A	1,000	0.8	1.0	1,000	83.3	44.3	95°F/78°F	52.9°F/52.2°F	1 2	47.8	14.0	23	25	460/3/60	V3-BRB-3-0-162C-7BS

UNIT TYPES:
- A MODULAR, CONSTANT VOLUME, VERTICAL DRAW THROUGH WITH INTERNALLY ISOLATED FAN

ACCESSORIES:
- 1 POWERED CONVENIENCE OUTLET.
- 2 PROVIDE HOT GAS REHEAT
- 3 VARIABLE SPEED DRIVE WITH INVERTED DUTY RATED MOTOR FOR FAN BALANCING

GENERAL NOTES:
- 1 MAXIMUM COIL AIR PRESSURE DROP = 1.0" WGSP.
- 2 FAN TO BE INTERNALLY ISOLATED.
- 3 MAX. COIL FACE VELOCITY = 500 FPM.
- 4 ESP DOES NOT INCLUDE PRESSURE DROP FOR INTERNAL UNIT COMPONENTS. SELECT FILTER PRESSURE DROP AT MID-LIFE CONDITION.
- 5 2" THICK PLEATED FILTERS

CONDENSING UNITS (AIR COOLED)

MARK	SERVES	ACCESSORIES	ELECT. V/Φ/Hz	MCA	MOCP	NOMINAL TONS	BASIS OF DESIGN AAON
CU-1	DOAS-1	1 2 3 4 5	460/3/60	23	30	9	CFA-009-B-A-3-DJ00L

NOTES
- A CAPACITY TO BALANCE RESPECTIVE TO DOAS-1.
- B CAPACITY BASED ON 95°F AMBIENT AND 2°F SUCTION LINE LOSS.
- C MINIMUM SEER/EER AT ARI CONDITIONS.

ACCESSORIES
- 1 HOT GAS BY-PASS
- 2 HEAD PRESSURE CONTROL TO 10°F AMBIENT.
- 3 ANTI-CYCLE RELAY
- 4 50% CAPACITY REDUCTION CONTROL
- 5 CONDENSER COIL GUARD

FANS

MARK	SERVES	TYPE	CFM	E.S.P. (IN. WG)	MIN. WHEEL SIZE (IN.)	MOTOR HP	MOTOR V/Φ/Hz	ACCESSORIES	INTERLOCK W/	DESIGN BASIS
EF-1	MEN - 105	F	500	0.5	10	1/6	120/1/60	5	LIGHT SWITCH	LOREN COOK - SQN-D
EF-2	WOMEN - 103	F	950	0.5	13.5	1/6	120/1/60	5	LIGHT SWITCH	LOREN COOK - SQN-D
EF-3	JANITOR - 106	H	75	0.5	N/A	36.7w	120/1/60	6	LIGHT SWITCH	LOREN COOK - GC-148
EF-4	CONCESSION - 116	H	250	0.5	N/A	90.3w	120/1/60	6	LIGHT SWITCH	LOREN COOK - GC-542
EF-5	KITCHEN - 110	F	500	0.5	10	1/6	120/1/60	5	LIGHT SWITCH	LOREN COOK - SQN-D

FAN TYPES:
- A CENTRIFUGAL ROOF EXHAUSTER DIRECT DRIVE
- B CENTRIFUGAL ROOF EXHAUSTER BELT DRIVE
- C PROPELLER EXHAUST FAN DIRECT DRIVE
- D PROPELLER EXHAUST FAN BELT DRIVE
- E CENTRIFUGAL VENT SET, BELT DRIVE
- F IN-LINE CENTRIFUGAL DIRECT DRIVE
- G IN-LINE CENTRIFUGAL BELT DRIVE
- H CENTRIFUGAL CEILING EXHAUST FAN

FAN ACCESSORIES:
- 1 BIRDSCREEN, ROOF CURB (MINIMUM 8" ABOVE INSULATION), BACKDRAFT DAMPER, DISCONNECT SWITCH.
- 2 MOTOR SIDE GUARD, GRAVITY SHUTTER.
- 3 SPRING ISOLATORS, TWO SPEED (1800/900 RPM) MOTOR, QUICK OPENING ACCESS DOOR DRAIN, GRAVITY DISCHARGE SHUTTER, MOTOR AND DRIVE WEATHER HOOD.
- 4 FLEXIBLE CONNECTORS, RUBBER-IN-SHEAR ISOLATORS, SOLID STATE SPEED CONTROL, DISCONNECT SWITCH AND BACKDRAFT DAMPER.
- 5 FLEXIBLE CONNECTORS, SPRING ISOLATORS, DISCONNECT SWITCH, AND BACKDRAFT DAMPER.
- 6 REMOVABLE ALUMINUM CEILING GRILLE, BACKDRAFT DAMPER, SPEED CONTROLLER, RUBBER-IN-SHEAR ISLOATORS, DISCONNECT SWITCH.

MW / Davis Dumas & Associates, Inc.
CONSULTING ENGINEERS
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Hoover, Alabama 35244
Phone: (205) 252-0246
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Project # 223184

GMC
Goodwyn Mills Cawood, LLC
117 Jefferson Street North
Huntsville, AL 35801
T 256.539.3431
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Morgan County, Alabama

ISSUE	DATE
ISSUED FOR BID	2.16.24
Addendum #3	3/20/2024
1	

DRAWN BY: BE
CHECKED BY: JSD

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEYS SPRING, ALABAMA 35754

GMC AHUN230008

ALABAMA No. 14178 PROFESSIONAL JAMES S. DAVIS III ENGINEER
2/16/24 223184

HVAC SCHEDULES, NOTES, AND LEGENDS

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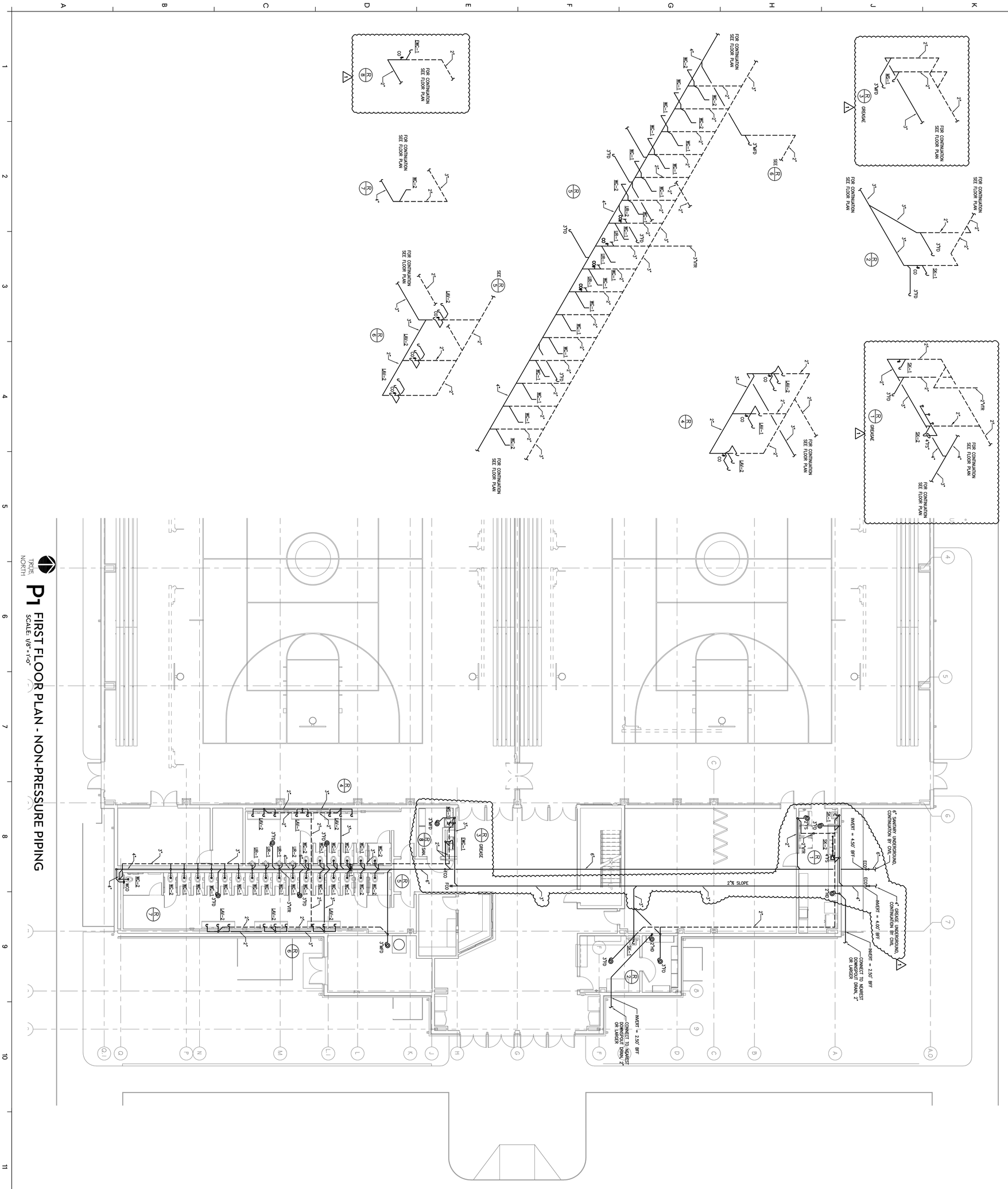
3/20/2024 9:27:27 AM

1/23/2024 6:46:47 AM



P1 FIRST FLOOR PLAN - NON-PRESSURE PIPING

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

TRUE NORTH

FIRST FLOOR PLAN- NON-PRESSURE PIPING

P1.01

GMC AHUN230008

MORGAN COUNTY EVENT CENTER
382 UNION HILL RD
LACEYS SPRING, ALABAMA 35754

ISSUE	DATE
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1 ADDENDUM 3	3.20.24
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Project # 223184

SECTION 011000
SUMMARY

PART 1 GENERAL

1.01 PROJECT

A. The Project consists of the construction of a free-standing gymnasium with associated site development of approximately 28,280 SF ground footprint with approximately 6,347 of elevated track surface above the gymnasium space.

1.02 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on Lump sum (fixed price, stipulate sum.)

1.03 OWNER OCCUPANCY

A. Owner intends to occupy the Project upon Substantial Completion.

B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.

END OF SECTION

SECTION 012500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.

C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.

D. Limit each request to a single proposed substitution item.

3.02 RESOLUTION

3.03 ACCEPTANCE

END OF SECTION

SECTION 014000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Testing and inspection agencies and services.
B. Contractor's construction-related professional design services.
C. Contractor's design-related professional design services.
D. Control of installation.
E. Mock-ups.
F. Tolerances.
G. Manufacturers' field services.
H. Defect Assessment.

1.02 REFERENCE STANDARDS

A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2023).
B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2024.
C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2023.
D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2023.
E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2023.
F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2021.
G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components; 2016.
H. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2021.

1.03 TESTING AND INSPECTION AGENCIES AND SERVICES

A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
C. Contractor Employed Agency:

PART 3 EXECUTION

2.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
B. Comply with manufacturers' instructions, including each step in sequence.
C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
E. Have work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

2.02 MOCK-UPS

A. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Architect will use accepted mock-ups as a comparison standard for the remaining Work.

D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Architect.

2.03 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

2.04 TESTING AND INSPECTION

A. Testing Agency Duties:
   1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
   2. Perform specified sampling and testing of products in accordance with specified standards.
   3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
   4. Promptly notify Architect and Contractor of observed irregularities or non-compliance of Work or products.
   5. Perform additional tests and inspections required by Architect.
   6. Submit reports of all tests/inspections specified.

B. Limits on Testing/Inspection Agency Authority:
   1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
   2. Agency may not approve or accept any portion of the Work.
   3. Agency may not assume any duties of Contractor.
   4. Agency has no authority to stop the Work.

C. Contractor Responsibilities:
   1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
   2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
   3. Provide incidental labor and facilities:
      a. To provide access to Work to be tested/inspected.
      b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
      c. To facilitate tests/inspections.
      d. To provide storage and curing of test samples.

4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.

D. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect.

E. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

2.05 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

2.06 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

END OF SECTION

SECTION 016000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 RELATED REQUIREMENTS

A. Section 012500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.

B. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

C. Section 017419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.02 SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. Use of products having any of the following characteristics is not permitted:
   1. Made using or containing CFC's or HCFC's.
   2. Containing lead, cadmium, or asbestos.

C. Where other criteria are met, Contractor shall give preference to products that:
   1. If used on interior, have lower emissions, as defined in Section 016116.
   2. If wet-applied, have lower VOC content, as defined in Section 016116.

2.02 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

A. See Section 012500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 017419.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

I. Prevent contact with material that may cause corrosion, discoloration, or staining.

J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 017419
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

A. Owner requires that this project generate the least amount of trash and waste possible.

B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.

C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

D. Contractor Reporting Responsibilities: Submit periodic Waste Disposal Reports; report landfill disposal, incineration, recycling, salvage, and reuse regardless of to whom the cost or savings accrues; use the same units of measure on required reports.

E. Methods of trash/waste disposal that are not acceptable are:
   1. Burning on the project site.
   2. Burying on the project site.
   3. Dumping or burying on other property, public or private.
   4. Other illegal dumping or burying.

F. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

1.02 RELATED REQUIREMENTS

A. Section 013000 - Administrative Requirements: Additional requirements for project meetings, reports, submittal procedures, and project documentation.

B. Section 015000 - Temporary Facilities and Controls: Additional requirements related to trash/waste collection and removal facilities and services.

C. Section 016000 - Product Requirements: Waste prevention requirements related to delivery, storage, and handling.

D. Section 017000 - Execution and Closeout Requirements: Trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

1.03 DEFINITIONS

A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.

D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.

F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include

burning, incinerating, or thermally destroying waste.

I. Return: To give back reusable items or unused products to vendors for credit.

J. Reuse: To reuse a construction waste material in some manner on the project site.

K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.

L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.

M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.

O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
   1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
   2. Submit Report on a form acceptable to Owner.
   3. Landfill Disposal: Include the following information:
      a. Identification of material.
      b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
      c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   4. Incinerator Disposal: Include the following information:
      a. Identification of material.
      b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project delivered to incinerators.
      c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   5. Recycled and Salvaged Materials: Include the following information for each:
      a. Identification of material, including those retrieved by installer for use on other projects.
      b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
      c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
      d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
      e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
   6. Material Reused on Project: Include the following information for each:
      a. Identification of material and how it was used in the project.

b. Amount, in tons or cubic yards (cubic meters).
c. Include weight tickets as evidence of quantity.

7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

PART 3 EXECUTION

2.01 WASTE MANAGEMENT PROCEDURES

A. See Section 013000 for additional requirements for project meetings, reports, submittal procedures, and project documentation.

B. See Section 015000 for additional requirements related to trash/waste collection and removal facilities and services.

C. See Section 016000 for waste prevention requirements related to delivery, storage, and handling.

D. See Section 017000 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

2.02 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.

C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

D. Meetings: Discuss trash/waste management goals and issues at project meetings.
1. Prebid meeting.
2. Preconstruction meeting.
3. Regular job-site meetings.

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
1. Provide containers as required.
2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.

G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.

I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

END OF SECTION

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

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. Standard and custom hollow metal doors and frames.
2. Louvers installed in hollow metal doors.
3. Light frames and glazing installed in hollow metal doors.

B. Related Sections:

1. Division 01 Section "General Conditions".
2. Division 04 Section "Unit Masonry" for embedding anchors for hollow metal work into masonry construction.
3. Division 08 Section “Flush Wood Doors”.
4. Division 08 Section "Glazing" for glass view panels in hollow metal doors.
5. Division 08 Section "Door Hardware".
6. Division 09 Sections "Exterior Painting" and "Interior Painting" for field painting hollow metal doors and frames.

C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI/SDI A250.8 - Recommended Specifications for Standard Steel Doors and Frames.
2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
10. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
11. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
12. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
13. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
14. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
15. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 QUALITY ASSURANCE

A. Source Limitations: Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.

B. Quality Standard: In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".

C. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to UL10C (neutral pressure at 40" above sill) or UL 10C.

1. Oversize Fire-Rated Door Assemblies Construction: For units exceeding sizes of tested assemblies, attach construction label certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.
2. Temperature-Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
3. Smoke Control Door Assemblies: Comply with NFPA 105.

a. Smoke "S" Label: Doors to bear “S” label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.

D. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.

1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.6 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide steel doors and frames from a SDI Certified manufacturer:

1. CECO Door Products (C),www.assaabloydss.com/#sle
2. Curries Company (CU). www.curries.com/en
3. Republic Doors, www.republicdoor.com/#sle
4. Substitutions: See Section 016000 – Product Requirements

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 HOLLOW METAL DOORS

A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.

B. Exterior Doors: Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard polystyrene. Where indicated, provide doors fabricated as thermal-rated assemblies with a minimum R-value of 2.8 or better.

3. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), Minimum 16 gauge (0.053-inch - 1.3-mm) thick steel, Model 2.
4. Vertical Edges: Vertical edges to have the face sheets joined by a continuous weld extending the full height of the door. Welds are to be ground, filled and dressed smooth. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel that complies with ASTM A 1008/A 1008M. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard kraft-paper honeycomb, or one-piece polystyrene core, securely bonded to both faces.

    a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.

3. Level/Model: Level 2 and Physical Performance Level B (Heavy Duty), Minimum 18 gauge (0.042-inch - 1.0-mm) thick steel, Model 2.
4. Vertical Edges: Vertical edges to have the face sheets spot welded and filled full height with an epoxy filler. Welds are to be ground, filled and dressed smooth. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet.
6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9" or minimum 14 gauge continuous channel with pierced holes, drilled and tapped.
7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Manufacturers Basis of Design:

1. Curries Company (CU) - Honeycomb Core - 707 Series.

2. Curries Company (CU) - Polystyrene Core - 707 Series.
3. Substitutions; See Section 016000 – Product Requirements

2.4 HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.

1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Frames: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
3. Manufacturers Basis of Design:

    a. Curries Company (CU) – M CM Series.

4. Substitutions: See Section 016000 – Product Requirements

C. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A 1008/A 1008M.

1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
2. Frames: Minimum 16 gauge (0.053-inch -1.3-mm) thick steel sheet.
3. Manufacturers Basis of Design:

    a. Curries Company (CU) - C CM Series.
    b. Curries Company (CU) - M Series.

4. Substitutions: See Section 016000 – Product Requirements

5. Fire rated frames: Fabricate fra Substitutions: See Section 016000 – Product Requirements

D. Frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

E. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
2. Stud Wall Type: Designed to engage stud and not less than 0.042 inch thick.
3. Compression Type for Drywall Slip-on (Knock-Down) Frames: Adjustable compression anchors.

B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042 inches thick.

C. Mortar Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.6 LOUVERS

A. Metal Louvers: Unless otherwise indicated provide louvers to meet the following requirements.

1. Blade Type: Vision proof inverted V or inverted Y.
2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

B. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.

1. Manufacturers: Subject to compliance with requirements, provide louvers to meet rating indicated.
2. Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish. Match pre-finished door paint color where applicable.

2.7 LIGHT OPENINGS AND GLAZING

A. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lites each to be

removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.

B. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.

C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames.

D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.

2.8 ACCESSORIES

A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inches thick.

2.9 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.

C. Hollow Metal Doors:

1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
2. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
3. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.

4. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".

D. Hollow Metal Frames:

1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

    a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.

3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
7. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
8. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
9. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

        1) Two anchors per jamb up to 60 inches high.
        2) Three anchors per jamb from 60 to 90 inches high.
        3) Four anchors per jamb from 90 to 120 inches high.

4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.

b. Stud Wall Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:

1) Three anchors per jamb up to 60 inches high.
2) Four anchors per jamb from 60 to 90 inches high.
3) Five anchors per jamb from 90 to 96 inches high.
4) Five anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 96 inches high.
5) Two anchors per head for frames above 42 inches wide and mounted in metal stud partitions.

10. Door Silencers: Except on weather-stripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".
11. Bituminous Coating: Where frames are fully grouted with an approved Portland Cement based grout or mortar, coat inside of frame throat with a water based bituminous or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow-up service procedure.

E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.10 STEEL FINISHES

A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.

C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."

D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

E. Verify tolerances against manufacturers installations instructions for tornado and hurricane storm shelter openings.

3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
4. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.

C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:

a. Jambs and Head: 1/8 inch plus or minus 1/16 inch.
b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

D. Field Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of

compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

3.5 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

END OF SECTION 081113

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.
2. Sliding doors.
3. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 01 Section "Closeout Procedures"
2. Division 08 Section "Operations and Maintenance".
3. Division 08 Section "Door Schedule".
4. Division 08 Section "Hollow Metal Doors and Frames".
5. Division 08 Section "Flush Wood Doors".
6. Division 08 Section "Aluminum-Framed Entrances and Storefronts".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.
4. UL 305 - Panic Hardware.
5. ANSI/UL 437- Key Locks.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:

    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Please note that ASSA ABLOY is transitioning the Yale Commercial brand to ASSA ABLOY ACCENTRA. This affects only the brand name; the products and product numbers will remain unchanged. The brand transition is expected to be complete in or about May of 2024, and products shipping after that time will be branded ASSA ABLOY ACCENTRA.

D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 BUTT HINGES

A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

   a. Two Hinges: For doors with heights up to 60 inches.
   b. Three Hinges: For doors with heights 61 to 90 inches.
   c. Four Hinges: For doors with heights 91 to 120 inches.
   d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

   a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
   b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

   a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

   a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

   a. Hager Companies (HA) - BB Series, 5-knuckle.
   b. McKinney (MK) - TA/T4A Series, 5-knuckle.
   c. dormakaba Best (ST) - F/FBB Series, 5-knuckle.

2.3 FLOOR CLOSERS AND PIVOTS

A. Pivots: ANSI/BHMA A156.4, Grade 1; space intermediate pivots equally not less than 25 inches on center apart or not more than 35 inches on center for doors over 121 inches high. Pivot hinges to have oil impregnated bronze bearing in the top pivot and a radial roller and thrust bearing in the bottom pivot with the bottom pivot designed to carry the full weight of the door. Pivots to be UL listed for windstorm where applicable.

1. Manufacturers:

a. Architectural Builders Hardware (AH).
b. Dorma Products (DO).
c. Norton Rixson (RF).

2.4 SLIDING AND FOLDING HARDWARE

A. Sliding and Folding Door Hardware: Hardware is to be of type and design as specified and should conform with ANSI/BHMA A156.14.

1. Sliding Bi-Passing Pocket Door Hardware: Provide complete sets consisting of track, hangers, stops, bumpers, floor channel, guides, and accessories indicated.
2. Cascading: Provide a bi-parting or single direction telescoping system as required with a minimum 200 lb. per door capacity.
3. Bi-folding Door Hardware: Rated for door panels weighing up to 125 lb.
4. Pocket Sliding Door Hardware: Rated for doors weighing up to 200 lb.
5. Manufacturers:

a. Hager Companies (HA).
b. Pemko (PE).
c. Dormakaba Best (ST).

2.5 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
5. Manufacturers:

a. Door Controls International (DC).
b. Rockwood (RO).
c. Trimco (TC).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.

2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Pulls, where applicable, shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
6. Manufacturers:

    a. Hiawatha, Inc. (HI).
    b. Rockwood (RO).
    c. Trimco (TC).

2.6 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

1. Manufacturers:

    a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA).
    b. Corbin Russwin Hardware (RU).
    c. Sargent Manufacturing (SA).

B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:

1. Threaded mortise cylinders with rings and cams to suit hardware application.
2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
4. Tubular deadlocks and other auxiliary locks.
5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
6. Keyway: Manufacturer's Standard.

C. Keying System: Each type of lock and cylinders to be factory keyed.

1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

D. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

E. Construction Keying: Provide construction master keyed cylinders.

F. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.7 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:

a. Lund Equipment (LU).
b. MMF Industries (MM).
c. Telkee (TK).

2.8 MORTISE LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all functions and features as specified herein.

1. Manufacturers:

a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 8800FL Series.
b. Corbin Russwin Hardware (RU) - ML2000 Series.
c. Sargent Manufacturing (SA) - 8200 Series.

2.9 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.10 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. Exit devices shall have a five-year warranty.
2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

    a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed exit devices. Listed manufacturers shall meet all functions and features as specified herein.

1. Manufacturers:

a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 7000 Series.
b. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
c. Sargent Manufacturing (SA) - 80 Series.

2.11 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, institutional grade door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide non-handed units standard.

1. Manufacturers:

a. ASSA ABLOY ACCENTRA, formerly known as Yale (YA) - 3500 Series.
b. Corbin Russwin Hardware (RU) - DC6000 Series.
c. Norton Rixson (NO) - 8500 Series.
d. Sargent Manufacturing (SA) - 1431 Series.

2.12 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:

    a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:

    a. Hager Companies (HA).
    b. Rockwood (RO).
    c. Trimco (TC).

2.13 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

    a. Hager Companies (HA).
    b. Rockwood (RO).
    c. Trimco (TC).

2.14 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. National Guard Products (NG).
2. Pemko (PE).
3. Reese Enterprises, Inc. (RE).

2.15 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.16 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and

verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.

1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:

1. MK - McKinney
2. RF - Rixson
3. PE - Pemko
4. RO - Rockwood
5. RU - Corbin Russwin
6. OT - Other

Hardware Sets

Set: 1.0

Doors: 01, 02, 03, 04, 10, 25, 26, 30, 34
Description: EXT PR - GYM

6	Hinge, Full Mortise, Hvy Wt	T4A3386 NRP 4-1/2" x 4-1/2"	US32D	MK	087100
1	Mullion	CR972BKM 7'2"		RU	087100
2	Rim Exit Device, Classroom	ED5200 N955ET M52	630	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
2	Rim Cylinder	as required	630	RU	087100
2	Surface Closer	DC6200 A11 M54	689	RU	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	303AV		PE	087100
1	Rain Guard	346C		PE	087100
1	Mullion Gasketing	5110BL		PE	087100
2	Sweep	3452AV		PE	087100
1	Threshold	2005AV		PE	087100

Set: 2.0

Doors: 05
Description: EXT PR - MECHANICAL

6	Hinge, Full Mortise	TA2314 NRP 4-1/2" x 4-1/2"	US32D	MK	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Flush Bolt	555	US26D	RO	087100
1	Storeroom Lock	ML2057 NSA	626	RU	087100

1	Mortise Cylinder	as required	626	RU	087100
2	Surface Closer	DC6200 A11 M54	689	RU	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Astragal	18061CNB		PE	087100
1	Gasketing	303AV		PE	087100
1	Rain Guard	346C		PE	087100
2	Sweep	3452AV		PE	087100
1	Threshold	2005AV		PE	087100

Set: 3.0

Doors: 13, 14, 15, 16
Description: PR - GYMNASIUM

6	Hinge, Full Mortise, Hvy Wt	T4A3786 4-1/2" x 4-1/2"	US26D	MK	087100
2	Surface Vert Rod Exit, Passage	ED5400 N910ET M52	630	RU	087100
2	Rim Cylinder	as required	630	RU	087100
2	Surface Closer	DC6200 M54	689	RU	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Wall Stop	409 / 446 as required	US32D	RO	087100
2	Silencer	608-RKW		RO	087100

Set: 4.0

Doors: 11
Description: PR - ELECTRICAL

6	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Fire Rated Surf Vert Rod, Storeroom	ED5400A N959ET	630	RU	087100
1	Fire Rated Surf Vert Rod, Exit Only	ED5400A EO	630	RU	087100
1	Rim Cylinder	as required	630	RU	087100
2	Surface Closer	DC6200 M54	689	RU	087100
2	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2	Wall Stop	409 / 446 as required	US32D	RO	087100
1	Astragal	18061CNB		PE	087100
1	Gasketing	S88BL		PE	087100

Set: 5.0

Doors: 27, 29
Description: PR - STORAGE

6	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Flush Bolt	555	US26D	RO	087100
1	Storeroom Lock	ML2057 NSA	626	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
2	Wall Stop	409 / 446 as required	US32D	RO	087100
2	Silencer	608-RKW		RO	087100

Set: 6.0

Doors: 12, 28

Description: PR DOUBLE ACTING - GYMNASIUM

2	Pivot Set	147	626	RF	087100
2	Intermediate Pivot	M19	626	RF	087100
4	Push Plate	70C-RKW	US32D	RO	087100
2	Wall Stop	409 / 446 as required	US32D	RO	087100

Set: 7.0

Doors: 31

Description: SGL - RATED - STAIR

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Fire Rated Rim Exit, Classroom	ED5200A N955ET	630	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
1	Surface Closer	DC6200 M54	689	RU	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 8.0

Doors: 17

Description: SGL - RATED - STAIR

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Fire Rated Rim Exit, Classroom	ED5200A N955ET	630	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
1	Surface Closer	DC6200 A11 M54	689	RU	087100

1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 9.0

Doors: 21, 32, 36

Description: SGL - STOREAGE, DATA, OPEN ATTIC

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Storeroom Lock	ML2057 NSA	626	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 10.0

Doors: 09

Description: SGL - JANITOR

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Storeroom Lock	ML2057 NSA	626	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
1	Surface Closer	DC6200 M54	689	RU	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Mop Plate	K1050 4" high CSK BEV	US32D	RO	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 11.0

Doors: 06

Description: SGL - OFFICE

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Storeroom Lock	ML2057 NSA	626	RU	087100
1	Mortise Cylinder	as required	626	RU	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 12.0

Doors: 18, 20, 22

Description: SGL - MULTI-PURPOSE ROOM, KITCHEN

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Passage Latch	ML2010 NSA	626	RU	087100
1	Surface Closer	DC6200 M54	689	RU	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 13.0

Doors: 23, 24

Description: SGL - MULTI-PURPOSE ROOM, KITCHEN

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Passage Latch	ML2010 NSA	626	RU	087100
1	Surface Closer	DC6200 A11 M54	689	RU	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 14.0

Doors: 07, 08

Description: SGL - PUBLIC RESTROOM

3	Hinge, Full Mortise	TA2714 4-1/2" x 4-1/2"	US26D	MK	087100
1	Pull Plate	107x70C	US32D	RO	087100
1	Push Plate	70C-RKW	US32D	RO	087100
1	Surface Closer	DC6200 M54	689	RU	087100
1	Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1	Mop Plate	K1050 =4",6",Spec Hgt	US32D	RO	087100
1	Wall Stop	409 / 446 as required	US32D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 15.0

Doors: 35

Description: POCKET - OFFICE

1	Sliding Door Hdwe	PF134KIT		PE	087100

1	Sliding Door Hdwe	PF28200A7284		PE	087100
1	Pocket Door Latch	890	US26D	RO	087100

Set: 16.0

Doors: 19

Description: OVERHEAD DOOR

1	Balance of Hardware	by door manufacturer		OT

END OF SECTION 087100

SECTION 096500
RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient tile flooring.

B. Resilient base.

C. Installation accessories.

D. Waterjet cutting of resilient flooring.

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Section 033000 - Cast-in-Place Concrete: Restrictions on curing compounds for concrete slabs and floors to receive adhesive-applied resilient flooring.

C. Section 090561 - Common Work Results for Flooring Preparation: Removal of existing floor coverings, cleaning, and preparation.

1.03 REFERENCE STANDARDS

A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2019a, with Editorial Revision (2020).

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.

C. ASTM F1861 - Standard Specification for Resilient Wall Base; 2021.

D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2023.

E. ASTM F2169 - Standard Specification for Resilient Stair Treads; 2015 (Reapproved 2020).

F. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.

G. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene minimum of one week before starting work of this section.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Shop Drawings: Indicate seaming plans and floor patterns.

D. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

E. Verification Samples: Submit one sample, 9 by 9 inch (____by____ mm) in size illustrating color and pattern for each resilient flooring product specified, and two 3 by 3 inch samples.

F. Certification: Prior to installation of flooring, submit written certification by flooring manufacturer and adhesive manufacturer that condition of subfloor is acceptable.

G. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 016000 - Product Requirements, for additional provisions.
   2. Extra Flooring Material: Provide minimum of 5% of each type and color.
   3. Extra Wall Base: Provide minimum of 5% of each type and color.
   4. Extra Stair Materials: Quantity equivalent to 5 percent of each type and color.

I. Waterjet cutting company will supply approval drawings indicating:
   1. Design
   2. Color Specifications
   3. Tolerance
   4. Revisions to line integrity
   5. Area for approval signature and date
   6. Installation map to include telephone number of waterjet company
   7. Installation map to include these sentences:
      a. Removal of low tack tape is to take place prior to the drying of the adhesive.
      b. Success of this project is predicated on a smooth, flat floor.

1.06 QUALITY ASSURANCE

A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

B. Pre-Installation Testing: Conduct pre-installation testing as follows: Moisture tests, Bond test, and pH test.

C. Approved Waterjet Company:
   1. Waterjet Works! Philip Einsohn, 2621 Nova, Texas 75229. Phone 972-991-0972. Toll Free: 1-800-856-0972. Email: service@waterjetworks.com. Fax: 972-387-0484; Toll Free: 1-800-844-1443. OR Approved Equal.
   2. Hand cutting is not considered an option, and is not permitted.
   3. List prior history with resilient flooring.

1.07 DELIVERY, STORAGE, AND HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
   1. Material should be stored in areas that are fully enclosed and weathertight. The permanent HVAC should be fully operational, controlled and set at a minimum of 68º F (20º C) for at least 48 hours prior to the installation.

1.08 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

1.09 WARRANTY

A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

C. Warranty Period: Five (5) year limited warranty commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 RESILIENT TILE FLOORING

A. Luxury Vinyl Tile (LVT):
1. Minimum Requirements: Comply with ASTM F 1700 Class III, Type B - Embossed Surface.
2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
3. Smoke Developed: 450 or less, when in accordance with ASTM E 662.
4. Static Load Limit: 250 psi, when tested in accordance with ASTM F 970 (modified).
5. Size: See Finish Legend.
6. Wear Layer Thickness: 0.020 inch (nominal) minimum.
7. Total Thickness: See finish legend.
8. Durability: 0.125 inch - Very Good.
9. Maintainability: 0.125 inch - Excellent.
10. Resilience: 0.125 inch - Excellent.
11. Manufacturer/ Style/ Color: See Finish Legend.
    a. Substitutions: Reference Section 01 6000

2.02 STAIR COVERING

A. Stair Treads with Integral Risers: Rubber; full height of riser, full width and depth of tread in one piece; tapered thickness.
1. Manufacturers: See Finish Legend
    a. Substitutions: See Section 016000 - Product Requirements.
2. Minimum Requirements: Comply with ASTM F2169, Type TS, rubber, vulcanized thermoset.
3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
4. Nominal Thickness: 0.1875 inch (4.75 mm).
5. Nosing: Square.
6. Striping: 2 inch (24 mm) wide contrasting color abrasive strips.
7. Color: As indicated on drawings.

2.03 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TS, rubber, vulcanized thermoset; style as scheduled.
1. Height: See Finish Legend.
2. Thickness: 0.125 inch (3.2 mm).
3. Finish: As selected by Architect.
4. Length: Roll.
5. Manufacturers:
    a. Johnsonite, a Tarkett Company: www.johnsonite.com.
    b. Roppe Corporation; Basis of Design: www.roppe.com
    c. Substitutions: See Section01 6000-Product Requirements.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
   1. Test in accordance with Section 090561.
   2. Test as Follows:
      a. Alkalinity (pH): ASTM F710.
      b. Internal Relative Humidity: ASTM F2170.
      c. Moisture Vapor Emission: ASTM F1869.
   3. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
   4. Follow moisture and alkalinity remediation procedures in Section 090561.

D. Verify that concrete sub-floor surfaces are dry enough and ready for resilient flooring installation by testing for moisture emission rate and alkalinity in accordance with ASTM F710; obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

E. Verify that required floor-mounted utilities are in correct location.

F. Confirm tiles are square and true. Cull all non-conforming tiles.

3.02 PREPARATION

A. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

B. Prohibit traffic until filler is fully cured.

C. Clean substrate.

D. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's instructions. See finish plans for pattern and tile layout.

C. Fit joints tightly. Window panes in tiles are not acceptable.

3.04 INSTALLATION - TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.

C. General Requirement: All resilient tile shall be from one manufacturer.

D. Cutting of resilient tile:
   1. All cutting is to be done with waterjet technology.
   2. Tolerance between cuts is to be 0.002” (2/1000th of an inch).
   3. Waterjet cutting company is to be supplied an electronic file of the design.
   4. Includes cutting and assembly of the designs, and the field that surrounds.
   5. Waterjet machine must be “water only” cutting process. No abrasives in tank,

E. Preparation for shipping of resilient tile:
   1. Each design shall be reassembled back into 16” x 16” square.
   2. Entire project shall be checked for accuracy prior to boxing which includes verifying that each assembled piece fits correctly.

3. Tiles shall be packed in an appropriate 18” x 18” box with padding. No loose tiles on pallets.
4. Each box shall have labels indicating contents of box.
5. First box to be opened shall be clearly marked.
6. Boxes shall be palletized and shrink wrapped.
7. Waterjet cutting company shall be available in case of emergency.
8. Installer to be notified in writing of the importance of having a smooth, flat surface.
9. Shipment shall be insured by shipper.

F. Installation of resilient tile:
1. Installer shall dry lay all waterjet designs prior to final installation.
2. Installer shall notify waterjet company of any concerns prior to final installation.
3. Install according to manufacturer’s recommendations.

3.05 INSTALLATION - RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 72 inches (____ mm) between joints.

B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scribe and fit to door frames and other interruptions.

3.06 INSTALLATION - STAIR COVERINGS

A. Install stair coverings in one piece for full width and depth of tread.

B. Adhere over entire surface. Fit accurately and securely.

3.07 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean, seal, and wax resilient flooring in accordance with manufacturer's instructions, and also upon coordination with manufacturer's representative and Architect.

3.08 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

3.09 SCHEDULE

A. See Drawings.

END OF SECTION

SECTION 102800
TOILET ACCESSORIES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes surface preparation and the application of paint systems on interior substrates.
   1. Public-use washroom accessories
   2. Childcare accessories
   3. Underlavatory guards
   4. Custodial accessories

1.03 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.04 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
   2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
   3. Include electrical characteristics.

B. Samples: Full size, for each exposed product and for each finish specified.
   1. Approved full-size Samples will be returned and may be used in the Work.

C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
   1. Identify locations using room designations indicated.
   2. Identify products using designations indicated.

1.05 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's special warranty.

1.06 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.

1.07 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from a single source from a single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.08 WARRANTY

A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, visible silver spoilage defects.
   2. Warranty Period: 15 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.02 MANUFACTURER

A. Basis-of-Design Products: Subject to compliance with requirements, provide the listed Basis-of-Design Products.
   1. Bobrick Washroom Equipment, Inc. (Basis-of-Design Product Manufacturer)

2.03 SLOAN VALVE COMPANY (SOAP DISPENSERS ONLY)

A. Koala (Childcare Accessories Only)

B. Plumberex (Underlavatory Guards Only)
   1. Or comparable products by one of the following:
      a. American Specialties, Inc.
      b. Bradley Corporation.
   2. Alternate products submitted for consideration (from one of the manufacturers listed above) must show an itemized comparison with each product named below.

2.04 PUBLIC-USE WASHROOM ACCESSORIES

A. Toilet Tissue Dispenser (Standard Roll): **TA01**
   1. Basis-of-Design Product: Bobrick B-2840
      a. Description: Double-roll dispenser with utility shelf.
      b. Mounting: Surface mounted.
      c. Operation: Non-control delivery with theft-resistant spindle.
      d. Capacity: Up to 5 1/2-inch diameter tissue rolls.
      e. Material and Finish: Stainless steel, No. 4 satin finish, with high impact, black, polystyrene spindles.

B. Paper Towel Dispenser (Folded, High-Capacity): **TA03**
   1. Basis-of-Design Product: Bobrick B-262
   2. Mounting: Surface mounted.
   3. Minimum Capacity: 400 C-fold or 525 multifold towels.
   4. Material and Finish: Stainless steel, No. 4 satin finish.
   5. Lockset: Tumbler-type.
   6. Refill Indicators: Pierced slots at sides or front.
   7. Optional Accessories: “Towel Mate”. Device that allows single towel dispensing without bulging, sagging, or falling through towel tray opening.

C. Combination Towel Dispenser/Waste Receptacle (Folded): TA16
   1. Basis-of-Design Product: Bobrick B-43944
   2. Description: Combination unit for dispensing C-fold or multifold towels, with removable trash liner holder and “towel mate” device that allows single towel dispensing without bulging, sagging, or falling through towel tray opening
   3. Mounting: Recessed with projecting receptacle.
   4. Mounting Depth: 4 inches, minimum (6 inch stud space required).
   5. Minimum Capacity
      a. Towel Dispenser: 600 C-fold or 800 multifold paper towels.
      b. Waste Receptacle: 15 gallon.
      c. Material and Finish: Stainless steel, No. 4 satin finish.
      d. Waste Receptacle Profile: Arc-front.
      e. Trash Liner Holder: Removable holding device designed to facilitate installation and removal of disposable trash liners and to retain liner inside waste receptacle. Device

shall have a molded plastic sleeve with a stainless steel U-shaped support strap.
f. Locking: Two keyholes over studs on bottom and two tamper resistant screws at top.

D. Soap Dispenser, Liquid Type, Manual: TA18
1. Basis-of-Design Product: Bobrick B-4112
2. Description: Manually Operated Liquid Soap Dispenser.
3. Mounting: Wall mount, surface.
4. Capacity: 40 oz.
5. Body Construction: Drawn, one-piece, seamless construction.
6. Materials: Stainless steel, No. 4 satin finish.
7. Valve Assembly: Black molded plastic push button. Soap head-holding mushroom valve. Stainless steel spring. U-packing seal and duckbill.
8. Lockset: Locking device requiring special key to open.
9. Refill Indicator: Window type.

E. Grab Bar (short): TA23
1. Basis-of-Design Product: Bobrick B-6806 x 18
2. Mounting: Flanges with concealed fasteners.
3. Material and Finish:
a. Material: Stainless steel, 0.05 inch thick.
b. Finish: Smooth, No. 4 satin finish on ends and slip-resistant texture in grip area.
c. Outside Diameter: 1-1/2 inches.
d. Configuration and Length: Straight, 18 inches long.

F. Grab Bar (medium): TA24
1. Basis-of-Design Product: Bobrick B-6806 x 36
2. Mounting: Flanges with concealed fasteners.
3. Material and Finish:
a. Material: Stainless steel, 0.05 inch thick.
b. Finish: Smooth, No. 4 satin finish on ends and slip-resistant texture in grip area.
c. Outside Diameter: 1-1/2 inches.
d. Configuration and Length: Straight, 36 inches long.

G. Grab Bar (long): TA25
1. Basis-of-Design Product: Bobrick B-6806 x 42
2. Mounting: Flanges with concealed fasteners.
3. Material and Finish:
a. Material: Stainless steel, 0.05 inch thick.
b. Finish: Smooth, No. 4 satin finish on ends and slip-resistant texture in grip area.
c. Outside Diameter: 1-1/2 inches.
d. Configuration and Length: Straight, 42 inches long.

H. Mirror, Framed, without Shelf: TA30
1. Basis-of-Design Product: Bobrick B-166-1836
2. Frame: Stainless steel channel.
3. Corners: Mitered, welded, and ground smooth.
4. Hangers: Produce rigid, tamper and theft-resistant installation, using one-piece, galvanized steel, wall hanger device with spring action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
5. Size: 18 inches wide x 36 inches high.

I. Robe Hook: TA33
1. Basis-of-Design Product: Bobrick B-6717
2. Mounting: Surface mounted.
3. Material and Finish: Stainless steel, No. 4 satin finish.

J. Sanitary Napkin Disposal Unit, Surface-mount: TA36

1. Basis-of-Design Product: Bobrick B-35139
2. Mounting: Surface mounted.
3. Door or Cover: Self-closing disposal opening cover and hinged face panel.
4. Receptacle: Removable.
5. Material and Finish: Stainless steel, No. 4 satin finish.

2.05 CHILDCARE ACCESSORIES

A. Diaper-Changing Station: TA85
   1. Basis-of-Design Product: Koala KB110-SSWM
   2. Description: Horizontal unit that opens by folding down from stored position and with child-protection strap.
      a. Engineered to support a minimum of 250-lb static load when opened.
      b. Mounting: Surface mounted, with unit projecting not more than 4 inches from wall when closed.
      c. Operation: By pneumatic shock-absorbing mechanism.
      d. Material and Finish: Stainless steel, No. 4 satin finish.
      e. Liner Dispenser: Built in.

2.06 UNDERLAVATORY GUARDS

A. Underlavatory Guard: TA58
   1. Basis-of-Design Product: Plumberex Soft Guard Plus
   2. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.
   3. Material and Finish: Antimicrobial, molded plastic, white.

2.07 CUSTODIAL ACCESSORIES

A. Mop and Broom Holder: TA95
   1. Basis-of-Design Product: Bobrick B-224 x 36
   2. Description: Unit with shelf, hooks, holders, and rod suspended beneath shelf.
   3. Length: 36 inches.
   4. Hooks: Three.
   5. Mop/Broom Holders: Four, spring-loaded, rubber hat, cam type.
   6. Material and Finish: Stainless steel, No. 4 satin finish.
      a. Shelf: Not less than nominal 0.05 inch thick stainless steel.
      b. Rod: Approximately 1/4-inch-diameter stainless steel.

2.08 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) minimum nominal thickness unless otherwise indicated.

B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch (0.9-mm) minimum nominal thickness.

D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 (Z180) hot-dip zinc coating.

E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.09 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of ____ keys to Owner's representative.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

3.02 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer’s written recommendations.

END OF SECTION 102800

SECTION 104400
FIRE PROTECTION SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Fire extinguishers.

B. Fire extinguisher cabinets.

C. Accessories.

1.02 RELATED REQUIREMENTS

A. Section 061000 - Rough Carpentry: Wood blocking product and execution requirements.

B. Section 099123 - Interior Painting: Field paint finish.

1.03 REFERENCE STANDARDS

A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.

B. NFPA 10 - Standard for Portable Fire Extinguishers; 2022.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide extinguisher operational features.

C. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.

D. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.

E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.05 FIELD CONDITIONS

A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Fire Extinguishers:
   1. Activar Construction Products Group, Inc. - JL Industries; Cosmic Extinguisher - Multipurpose Chemical: www.activarcpg.com/#sle.
   2. Ansul, a Tyco Business; ____: www.ansul.com/#sle.
   3. Nystrom, Inc; _____: www.nystrom.com/#sle.
   4. Pyro-Chem, a Tyco Business; _____: www.pyrochem.com/#sle.
   5. Substitutions: See Section 016000 - Product Requirements.

B. Fire Extinguisher Cabinets and Accessories:
   1. Activar Construction Products Group, Inc. - JL Industries; Ambassador Series: www.activarcpg.com/#sle.
   2. Nystrom, Inc; _____: www.nystrom.com/#sle.
   3. Substitutions: See Section 016000 - Product Requirements.

2.02 FIRE EXTINGUISHERS

A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.

B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
   1. Class: A:B:C type.
   2. Temperature range: Minus 40 degrees F (Minus 40 degrees C) to ___ degrees F (___ degrees C).

2.03 FIRE EXTINGUISHER CABINETS

A. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.

B. Cabinet Construction: Non-fire rated.
   1. Formed primed steel sheet; 0.036 inch (0.9 mm) thick base metal.

C. Fire Rated Cabinet Construction: One-hour fire rated.

D. Cabinet Configuration: Recessed type.
   1. Size to accommodate accessories.
   2. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim and door stiles.

E. Door: 0.036 inch (0.9 mm) metal thickness, reinforced for flatness and rigidity with nylon catch. Hinge doors for 180 degree opening with two butt hinges.

F. Door Glazing: Float glass, clear, 1/8 inch (3 mm) thick, and set in resilient channel glazing gasket.

G. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.

H. Fabrication: Weld, fill, and grind components smooth.

I. Finish of Cabinet Exterior Trim and Door: No.4 - Brushed stainless steel.

J. Finish of Cabinet Interior: White colored enamel.

2.04 ACCESSORIES

A. Extinguisher Brackets: Formed steel, chrome-plated.

B. Lettering: “FIRE EXTINGUISHER” decal, or vinyl self-adhering, prespaced black lettering in accordance with authorities having jurisdiction (AHJ).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Secure rigidly in place.

C. Place extinguishers in cabinets.

3.03 MAINTENANCE

A. See Section 017000 - Execution and Closeout Requirements, for additional requirements relating to maintenance service.

B. Provide a separate maintenance contract for the service and maintenance of _____ for _____ years from Date of Substantial Completion.

END OF SECTION

SECTION 10530

EXTRUDED ALUMINUM WALKWAY COVERS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, shall apply to work specified in this section.

1.02 GENERAL DESCRIPTION OF WORK:

A. Work in this section shall include design, fabrication and installation of a complete flat, gable, or pitched extruded aluminum canopy system with welded drain beams and trusses in accordance with the drawings and this specification.

1.03 REFERENCES:

A. Aluminum Design Manual 2000, Specifications & Guidelines for Aluminum Structures.
B. ASCE 7, Minimum Design Loads for Buildings and Other Structures.
C. American Architectural Manufacturers Association (AAMA)
D. American Society for Testing and Materials (ASTM)

1.04 RELATED SECTIONS:

A. Concrete Work – Section 03300
B. Masonry Work – Section 04200
C. Miscellaneous Metals – Section 05500
D. Flashing and Sheet Metal – Section 07600
E. Sealants – Section 07900

1.05 SUBMITTALS

A. Product Data: Submit manufacturer's product information, specifications and installation instruction for components and accessories.
B. Shop Drawings: Submit complete erection drawings showing attachment system, column and gutter beam framing, transverse cross indicate proper assembly of components, sealed by State Registered Structural Engineer in the state in which the work is being performed.
C. Certification: Submit written Certification prepared and signed by a State Registered Structural Engineer verifying that framing design will safely resist wind uplift as computed by ANSI A58.1, IV=150, Exposure C, as well as meet

indicated loading requirements of the Standard Building Code, latest edition as reference din State Requirements for Educational Facilities 1999 and wind loading requirements of ANSI/ASCE 7-98, live and dead loads and other load requirements.

D. Design and engineering of canopy footings and attachment surfaces are not covered in this specification and scope of work.

1.06 QUALITY ASSURANCE

A. Codes and standards: Comply with provisions of the following except as otherwise indicated: Standard building code, latest addition with amendments, if any. AWS (American Welding Society) standards for structural aluminum welding.

B. Manufacturer: Obtain aluminum covered walkway system from only one (1) manufacturer, although several may be indicated as offering products complying with requirements.

C. Installer Qualifications: Firm with not less than three (10) years experience in installation of aluminum walkway covers of type, quantity and installation methods similar to work of this section.

D. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication where possible, to insure proper fitting of work.

E. Coordination: Coordinate work of this section with work of other sections which interface with covered walkway system (sidewalk, curbs, building fascias, etc.)

1.07 Warranty

A. Provide manufacturer's standard one-year warranty that shall include, but not limited to, coverage for structural, water tightness and finish beginning the day of Substantial Completion of Installation.

PART 2 – PRODUCT

2.01 Manufacturers

A. BASIS OF DESIGN:

- **Tennessee Valley Metals, Inc.**
  190 Industrial Park Road, Oneonta, AL 35121
  205.274.9500, fax 205.274.9501
  800.551.2579,
  sales@tvmetals.com, www.tvmetals.com

B. Austin Mohawk, Inc.; www.austinmohawk.com

C. Ballew's Aluminum Products, Inc; https://ballews.com

D. Interested manufacturers will be considered for substitution only when the follow conditions are met: Complete details, including connections and structural calculations showing loads applied in accordance with the specification, must be submitted to the architect for review. Submit complete details with structural properties (moment of inertia, section modules, modules of elasticity, etc.) for all proposed sections (bents, columns, decking and other structural members.)

2.02 Materials

A. Aluminum Extrusions: All sections shall be extruded aluminum 6063 alloy, heat treated to T-6 temper.

B. Finishes: For factory baked enamel finish, specify AAMA 603.8 standard or custom color. For fluoropolymer (Kynar) finish, AAMA 605.2, two or three coats. For satin anodized finish, specify 204,R1 meeting Aluminum Association specification AA-M-10C-22A21.

2.03 Components

A. Columns: Columns shall be radius-cornered tubular extrusion of size shown on drawings with cutout and internal diverter for drainage where indicated. Circular downspout opening in column is not acceptable. Provide a small weep hole at the bottom of all non-draining columns to allow for the escape of condensation.

B. Deck Construction: Deck shall be manufactured of extruded modules that interlock in a self-flashing manner. Interlocking joints shall be positively fastened at 18" O.C., creating a monolithic structural unit capable of developing the full strength of the sections. The fastenings must have minimum shear strength of 350 pounds each. Deck shall be assembled with sufficient camber of offset dead load deflection.

PART 3 – EXECUTION

3.01 Preparation

A. Erection shall be performed after all concrete, masonry, and roofing work in the vicinity is complete and cleaned.

3.02 Installation

A. Column sleeves: Column sleeves (styrofoam block-outs) or anchor bolts (if required) shall be furnished by Tennessee Valley Metals and installed by the General Contractor.

B. Erection: Protective cover shall be erected true to line, level and plumb.

3.03 Cleaning

A. All protective cover components shall be cleaned promptly after installation.

3.04 Protection

A. Extreme care shall be taken to protect materials during and after installation.

END OF SECTION

Project #: AHUN230008
Project: Morgan County Event Center
Location: Lacey Springs, AL

Updated: 3/11/24

REQUEST FOR INFORMATION LOG

No.	Scope	Sheet or Spec	Note or Detail	Date Sent	Comment	Source	Discipline (Structural, Interior Design, etc..)	Architect / Owner Response	Addendum & Date
BID SET (2/15/23)									
1				2/29/2024	Will Simplex Fire Alarm System be allowed for this project? Please advise.	Dominguez Design-Build	Electrical	No. You can submit a substitution to be considered.	
2				3/1/2024	The following items are missing from the Specification Manual Section 2.01- General Requirements G-01 3010: RFI Form G- 01 3020: Transmittal Form Section 2.07- Openings 08- Door Hardware Specs Section 2.13- Special Construction 13- Pre-Engineered Metal Building Specs	Carmon Construction	Architecture	See Addendum #1 for Div 13. You can submit RFIs on your own form. See Addendum #3 for Door Hardware Specification	
3				3/1/2024	After taking a look through the spec's, it looks like General Shale is a listed manufacturer (see 2.02 BRICK UNITS). Do you know if the architect has a specific face style in mind besides it being a velour?	General Shale	Architecture	No. You can submit a substitution to be considered.	
4				3/1/2024	We have only made a quick review of the specs, but it appears that there are a few sections missing. Can you provide a spec on Door Hardware, Bleachers and Pre-Engineered Metal Building. These are not in our set. Also, our printer is having issues with printing the specs. There are numerous blank pages in the set. We don't want to miss a page. Normally if a page is left blank, theres a note saying that. I'll follow this up with an official RFI **NO Official RFI as of 03/01/24	Consolidated Construction Company	Architecture	See Addendum #1 for PMB Spec See Addendum #3 for Hardware Spec	
5				3/4/2024	Sitework not included with Proposal Will the building pad will be ready at the proper elevation when we mobilize?	Dominguez Design-Build		The Owner will bring the site/pad to subgrade. After that it is the responisbility of the bidder.	
6				3/4/2024	1. Is there an official RFI Form to be used for Pre-Bid RFI's? The specs Table of Contents lists one but we are unable to locate the form in the specs. 2. Please provide specfications for Pre-Engineered Metal Building. 3. Please provide specfications for Metal Canopy. 4. Please provide Finish Hardware specfication. 5. Please provide detailed description of NIC sitework and what sitework is in the contract. 6. Spec section 064000 – can the AWI certifications be waived? 7. Please provide detail and/or elevation specification for vinyl HVAC fence shown on sheet A1.01.	Limestone Building Group	Architecture	You can send RFIs on your form or by email. See Addendum 1 for PMB spec and site work clarification. The fence spec and detail is in Addendum 2. See Addendum 3 for Metal Canopy Spec and Door Hardware No on waiving AWI See Addendum #2 for fence detail	
7				3/4/2024	Any idea if they would want stormwater monitoring and monthly aerial progress photography included?	GTEC Corp		No.	
8				3/6/2024	On sheet E101 there is a box with designation "S3" in the middle of the primary electrical conduit path. There is no detail o schedule with that symbol in it. Please advise.	Dominguez Design-Build	Electrical	Elec Eng: This is an s3 sectionizing cabinet. (Basically a utility box.) It would usually be by the utilitiy company but installed by contractor. This utility company has not coordinated yet. So it could not be needed.	
9				3/6/2024	• Sheet C-101 shows 18' Curb & Gutter around perimeter of project as well as parking islands and next to the building. Which curbs & gutters will be part of this bid package? • Sheets C-101 and C-102 indicate concrete paving at handicap parking spaces only. Is that concrete paving to be included in the previous bid package or this package? If it's part of this package, will asphalt paving be completed up to the areas shown as concrete paving? • Downspout boots are specified in Section 05500 Metal Fabrications but splash blocks are shown throughout Architectura plans. Please advise. • Steel Bollards are specified in Section 05500 Metal Fabrications but the location is unclear. Please advise. • Fabric- Covered Sound- Absorbing Units are specified in Section 098430 but we are unable to locate. Please advise. • Protective Wall Covering is specified in section 102600 but we are unable to located. Please advise. • There is some uncertainty regarding application and location of Weather Barriers 072500 and Air Barriers 072700. Please clarify locations for each. • Please provide specifications for Vinyl Fencing. • Please provide base plate size for columns at 3/4/5-G on sheet S2.01	Carmon Construction		All curb and gutters shown shall be in the bid. **Civil Eng:** The plans have been updated to show 24" curb and gutter. All curb and gutter shown will be included in this bid package. The concrete paving will be included in this bid package. Concrete for sidewalks and HC parking is the responsibility of the bidder. Weather and air barriers shall be at masonry walls. Other walls are responsiblily of the PMB Mfr. Protective wall coverings are required between the exit doors in the lobby. Metal Building Manufacturer will provide base plate sized for thei columns at 3/4/5-G. Fencing spec is in addendum 2 See revised sheet C1-02 -Addendum #3 for bollard locations See Addendum #2 for fence spec and detail Base plate size shall be by metal building designer .	2 3/15/2024
				3/7/2024	Please confirm the height of the Exterior Signage. It is scaling at 14" Please confirm the dimensions of the dedication plaque. The specs reference to see details in Conditions of the Contract, we can not find any information in the general conditions of the contract.	Building Construction Association		Plaques shall be cast bronze 20"x30", information for the plaques will be provided during the shop drawing phase Exterior letters shall be 12' from finished sidewalk to B.O.L.	
13				3/7/2024	Please provide spec section for the Pre-Engineered Metal Building.	Dominguez Design-Build		See Addendum 1	
14				3/7/2024	Please provide specification for Bleachers.	Limestone Building Group		See Addendum 2	
				3/7/2024	Is spec section 098430 applicable to this job? None found on drawings.	Limestone Building Group		Not Applicable	
				3/7/2024	Sheet A8.01 calls out EPX-1 in restrooms. Finish Legend on sheet A8.03 does not show and EPX-1. Please advise.	Limestone Building Group		Change all EXP1 to EF-1 , see Addendum #3	
15				3/7/2024	Sheet A1.01 Keynote 10 indicates 8.5" metal studs. Metal stud standard sizes are 8" and 10". Is 8.5" correct? Will the PEMB components take care of this wall type? Please clarify.	Limestone Building Group		It is 8. See revised wall type sheet Addendum 2	
				3/7/2024	Sheet A1.01 Keynote 11 – where brick veneer occurs full height at the entrance of the building, are we to assume that these walls will be built using 8" metal stud framing? Drawings show what looks to be infill framing in between the PEMB purlins. Please clarify.	Limestone Building Group		No infill framing between purlins. Masonry walls shall be constructed with 8" studs. See revised partition type Addendum #3	
				3/7/2024	Sheet A1.01 Detail H2 shows brick approximately 4' tall along the front of the building. Is metal stud framing required for this, or will the brick be tied off of the metal building wall sheets? If metal framing is required, will a revised wall section be provided?	Limestone Building Group		Tie off of metal building wall	
				3/7/2024	What finish will go behind the safety pads at OL-1 column wrap framing?	Limestone Building Group		**RFI 15, #4 – PNT-3 wraps columns per elevations on sheets A7.04 & A7.05**	
16				3/8/2024	Please provide documentation A101-2017, Exhibit A, Insurance and Bonds.	Dominguez Design-Build		An AIA101 -2017 Owner/General Contractor document will be provided as a draft to the accepted low bidder for review. Insurance requirements shall be as required by the State of Alabama	
17				3/11/2024	What bid bond form are we to use?	Lee Builders		The Bid Bond/Security is a portion of the proposal form on pages 3 & 4	
18				3/12/2024	I couldn't find any specification section for the Pre-Engineered metal building	Alliance Steel, Inc.		See Addendum 1	
19				3/12/2024	Provide elevation/frame/glazing type for interior glazed unit tagged as "36" at 102 *Office*. Ref Docs: A1.01	Cooper Construction		See Addendum #3 Door Hardware spec	
21				3/12/2024	Provide pre-engineered building spec, including a spec for the interior liner panels	Cooper Construction		The PMB spec is in Addendum #1.	
22				3/12/2024	Provide a fire proection specialties spec	Cooper Construction		See Addendum #3	
23				3/12/2024	Provide a Basis of Design for paper towel dispenser TA-03. Ref Docs: 10 2800	Cooper Construction		See revised specification in Addendum #3	
25				3/12/2024	Fabric-wrapped acoustical panels are not called out on the drawings. Is spec 098430 applicable to this project? If yes, provide locations. Ref Docs: 09 8430	Cooper Construction		Section is not applicable	
26				3/12/2024	Clarify the scope of section 2.04, *Floor Mounted Equipment* , including the quantity of nets, posts and floor sleeves (for both volleyball and pickleball), as well as the quantity of floor anchors for portable gymnasium equipment. Ref Docs: 11 6623	Cooper Construction		4 Volley ball nets with appropriate anchors & sleeves for each. 4 pickle ball nets with anchors	
28				3/12/2024	Provide a spec for the sliding pocket door called out at opening 36	Cooper Construction		See Addendum #3 Door Hardware	
29				3/12/2024	Provide a vinyl fence spec	Cooper Construction		See Addendum #2	

30				3/12/2024	Review/Revise Attachment A to align with this project: Items 1-11 are assumed to be by Morgan County. Subs for these trades would not be engaged by the GC	Cooper Construction		The Owner will bring the site to subgrade. Any additional requirments for the building pad would be responsibility of the bidders including repair of subgrade due to the bidders work.		
				3/12/2024	Review/Revise Attachment A to align with this project: Item 13: Provide basis-of-design for VCT (does not appear in the base bid scope of work)	Cooper Construction		There is no VCT on this project		
				3/12/2024	Review/Revise Attachment A to align with this project: Items 22-23: Clarify interior or exterior door and frames	Cooper Construction		Doors and frames should be part of the base bid		
31				3/12/2024	Review/Revise Attachment A to align with this project: Items 24-25: Need more info or basis-of design (these do not appear in the base bid scope of work)	Cooper Construction		Items 24 & 25 are not applicable		
32				3/12/2024	Review/Revise Attachment A to align with this project: Items 26-27: Need a minimum quantity to base this off of (these do not appear in the base bid scope of work)	Cooper Construction		Items 26 & 27 are not applicable		
34				3/13/2024	Provide wood species, book/end-matching requirements, construction parameters, and field-finishing requirements (i.e. painted or stained?) for wood doors	Cooper Construction		Provide flat cut stain grade birch. Stain color TBD		
35				3/13/2024	Per Sheet C-101, Mass Grading, Utilities, Asphalt Pavement, and Striping are under separate contract. Confirm whether or not Erosion Control BMPs per Sheet C-601 will also be under separate contract.	Cooper Construction		BMPs are still required		
36				3/13/2024	Drawings call out RB-1 rubber base at courts. Specs call for Robbins 3" x 4" vented base. Which is correct? Ref Docs: A8.03 Per Finish Note on Sheet A8.03, wall base is to be installed on all walls….U.N.O. Per sheet A7.02, elevations B1, D6, F6, J6, and B9 shall receive wall tile, and all remaining walls in 103 *Women* and 105 *Men* will reveive tile base only. Confirm if this is correct and, if only tile base is needed, confirm requirement of a matching tile base, or else to utilize cut field tile/ Schluter	Cooper Construction		Courts to receive VB-1. 103 Women and 105 Men are to receive Epoxy Base on all walls per finish legend and schedule.		
37				3/13/2024	Spec 01 4000 refers to individual spec sections for mock up requirements, but Tiling spec 09 3000 refers back to spec 01 4000. Confirm to what extent (i.e. size) wall and/or floor tile mock-ups are required, and whether or not these will be in-place mock ups	Cooper Construction		4' x4'		
38				3/13/2024	Provide Resilient Flooring spec	Cooper Construction		See Addendum #3		
39				3/13/2024	Provide an AIA Additions/Deletions report for the altered AIA A101 and AIA A201 provided in the project manual	Cooper Construction		Clean, unedited, and updated documents will be provided to the accepted bidder as a draft for review		
41				3/14/2024	Note 15 references tap, meter, connection fees by contractor. Confirm this is by utility contractor (under separate contract). If this is required to be carried by the GC, provide either an allowance to cary, or provide a site utility drawing	Cooper Construction				
42				3/14/2024	Provide geotech report, or provide an allowance for the presence of rock for footing excavation	Cooper Construction		See report in Addendum #3		
43				3/14/2024	Daikin Applied (Distech Controls) is requesting permission to bid the Split-System 100% Outside Air Unit & controls on the Morgan County Event Center job. The specifications that go over each system type is listed below: • Spec Section 23 5000 – Split-System 100% Outside Air Units (All Electric)	Mechanical Davis Dumas				
				3/15/2024	Please provide a specification on the pre-engineered metal building insulation.	Consolidated Construction Company		By the metal building manfacture/supplier		
				3/15/2024	Section 05500 calls for downspout boots. Sheet A3.01 appears to call for splash blocks (SB). We do not have in our sets a storm plan that shows any downspout boots or what they tie to. Please clarify.	Consolidated Construction Company		Downspout boots are required and all down spouts shall be tied to subgrade storm. You will have to coordinate with the Owner		
				3/15/2024	There are no details of the exterior set of stairs. Are they a pan type filled with concrete or a grating type tread? Are they to be galvanized or painted?	Consolidated Construction Company		Pan filled concrete and metal stairs are delegated design and will be reviewed during the shop drawing phase		
46				3/15/2024	The wood floor specifications call for Bio Channel SB (anchored resilient system) and the plans call for Bio Cushion Class (floating, double layer plywood). Can you please confirm which one we should price? We would recommend Bio Channel SB since it is anchored.	Greer Building Contractors		Bio Channel SB-See revised sheets Addendum #3		
				3/19/2024	Unit prices do not match Scope of Work.	Chase Building Group				
				3/19/2024	List of Substitutions does not match Scope of Work.	Chase Building Group				
				3/19/2024	Please allow for steel companies to bid on this project that follows AISC requirements but are not AISC certified. This will help with more competetive pricing for the steel.	Dominguez Design-Build				
				3/19/2024	Request for Daikin Applied to be approved to bid controls (HVAC) on this project.	Daikin Applied		Mech. Eng: We are ok with Daiken Applied bidding controls for Morgan County Center.		
47				3/20/2024	Here is another question regarding utility taps and meters. Please advise if this is you or reposibility of the GCs.	Morgan County Engineering Dept.		County will pay fees for utility taps and meters.		
48				3/20/2024	In the RFI log, item 43, you answered your question regarding downspout boots. We will provide the downspout boots as specified. But without a storm layout drawing with pipe sizes, no piping from the boot to the pipe provided by the County will be included. We will assume the County will bring the piping up to the boot.	Morgan County Engineering Dept.		GMC Civil is supposed to do daylight sownspouts through sidewalk turndown or curb to parking lot. Would probably be a good idea to have a several extra capped pipes in case water issues develop. The county will not be providing a storm drain pipe.		
49				3/20/2024	Note on A2.01 at the center wall says, "Divider Curtain". Please clarify.	Morgan County Engineering Dept.		Don't think that's our question.		
50				3/20/2024	Is the County providing the topsoil replacement? If not, are they stockpiling topsoil onsite or should we figure offsite topsoil?	Morgan County Engineering Dept.		County is not providing topsoil. Any usable onsite topsoil will be used for the septic field.		
51				3/20/2024	The only landscaping shown is on sheet C-601 that notes, "permanent seeding". Please provide specification.	Morgan County Engineering Dept.		GMC Civil provided that note. The county would prefer emerald zoysia sod. Assume there are exterior water faucets.		
52				3/20/2024	Is the County obtaining ADEM permit since they are providing the site work?	Morgan County Engineering Dept.		County is getting the ADEM permit.		
53				3/20/2024	Should they provide the erosion control since they will be starting work before a contract is obtained by the GC?	Morgan County Engineering Dept.		County will provide exterior erosion control. Contractor is responsible for erosion control and maintenance for their construction area.		
54				3/20/2024	Is it likely that the County will compete the sitework before a GC starts work?	Morgan County Engineering Dept.		Unlikely that all work in the parking area will be completed.		
55				3/21/2024	Is testing by the GC or the Owner?	Greer Building Contractors				
56				3/21/2024	Spec Section 012100 says that there is an allowance for testing but there isn't.	Greer Building Contractors				
57				3/21/2024	Spec Section 014000 says that the Contractor shall employ and pay for testing services. Spec Section 014100 says that the Owner will engage the special inspectors and testing agencies. Which is correct?	Greer Building Contractors				
58				3/21/2024	Per Spec section 3.01, how many Procore user licenses are the GC required to carry?	Cooper Construction				
59				3/21/2024	Per spec section 2.04, is a plaque required? If yes,what size?	Cooper Construction				
60				3/22/2024	Please provide chain link and gates spec section.	Dominguez Design-Build				
61										