



THE PRESERVE
AT EISENHOWER GOLF COURSE

The Preserve at Eisenhower Clubhouse

1576 Generals Highway, Crownsville, Maryland 21032

Contract Number: P570205

Project Number: P570200



Schematic Design Phase Submission

November 14, 2022

Updated 12-13-2022



Contents

❖	1 – Overview	4
❖	2 – Architectural	7
❖	3 – Site Work	10
❖	4 – Structural	16
❖	5 – Mechanical/Electrical/Plumbing	18
❖	6 – Sustainability/LEED Silver	33
❖	7 – Fire Protection & Hazards	37
❖	8 – Food Service	43

Attachments

- A. Site, Architectural, and Structural SD Phase Drawings

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1 - Overview

Overview

The current design project builds on the space program, site plans, and floor plans developed from the 2018 Feasibility Study. The new clubhouse will be designed and construction to be sequenced to minimize disruptions to golf course operations and allow the facility to remain open and viable for patron play.

Codes & Hazards

The following codes are applicable to this project:

- 2018 International Building Code (IBC)
- 2018 International Energy Conservation Code (IECC)
- 2018 International Mechanical Code (IMC)
- 2018 International Plumbing Code (IPC)
- 2018 Fire Code (NFPA 1)
- 2018 Standard for Portable Fire Extinguishers (NFPA 10)
- 2016 Standard for the Installation of Sprinkler Systems (NFPA 13)
- 2016 Standard for the Installation of Stationary Pumps for Fire Protection (NFPA 20)
- 2017 National Electrical Code (NFPA 70)
- 2016 National Fire Alarm and Signaling Code (NFPA 72)
- 2018 Life Safety Code (NFPA 101)
- 2016 Standard for Emergency and Standby Power Systems (NFPA 110)
- 2009 ICC/ANSI A117.1 Accessible and Useable Buildings and Facilities
- 1993 AA County Plumbing Code - Chapters 16 & 17
- LEED v4.0 and 4.1 requirements

It is envisioned at this time the project will be permitted as a mixed occupancy Assembly, Mercantile, and Storage Uses. The anticipated construction type will be 5B, 3B and 2B construction types will also be evaluated in the design development phase.

Sustainability

As required by County ordinance, the project and associated site work will be designed and construction to achieve a minimum of LEED Silver certification. This will include the building and the surrounding site as best determined by our Sustainability/LEED consultants Lorax Partnerships, LLC.

Program

The following program was finalized and approved by the client on 9/1/2022.

<u>Golf Operations</u>					
Key: PO = Private Office; SHO = Shared Office; WS = Workstation/Cubicle					
SPACE	QTY	SPACE TYPE	PROGRAM SF	GROSS SF	NOTES
100 - Golf Operations - Public					
a. Pro Shop Retail			750	1,073	
b. General Manager's Office		PO	140	200	
c. Golf Professional's Office		PO	120	172	
d. Staff Workroom		SHO	150	215	
e. Storage			150	215	
f. Indoor Golf Simulator			375	536	
g. Men's Restroom			180	257	
h. Women's Restroom			180	257	
i. Custodian			20	29	
<i>Subtotal</i>			2,065	2,953	
<i>Net to Gross Factor</i>			888		
100 GROUP TOTAL			2,953	GSF	
200 - Golf Operations - Staff Only					
a. Cart Fleet Storage	84		2,520	3,604	80 Electric Carts + 4 Utility (gas) Carts
b. Beverage Cart Storage			150	215	Secure Storage for Inventory & Ice Maker
c. Golf Cart Tire Storage & Misc. Maintenance			150	215	Secure Storage for tires, jack, parts, compressor
d. General/Seasonal Storage			200	286	
g. Cart & Range Ball Cleaning Equipment & Storage			120	172	Secure Outside Sto. for pressure washer, etc
<i>Subtotal</i>			3,140	4,490	
<i>Net to Gross Factor</i>			1,350		
200 GROUP TOTAL			4,490	GSF	
<u>Food & Beverage Operations</u>					
300 - Food & Beverage					
a. Grille Room "19th Hole" with Bar	48		1,200	1,716	12 bar seats & 36 table seats
b. Snack Bar for Golfers "At the Turn"			150	215	walk-up service window with outdoor seating
c. Restrooms			440	629	
d. F&B Mgr. & Event Mgr. Offices	2	PO	250	358	2 private offices
e. Admin Support Spaces	2	WS	100	143	2 support staff with copier and printer stations
f. Multi-Purpose Room	150		2,250	3,218	
g. Table & Chair Storage			250	358	
h. General Storage			250	358	
i. Outdoor Storage			150	215	
j. Entrance & Coat Room			200	286	
k. Kitchen			1,700	2,431	includes 48SF for Chef's workstation
l. Beverage Locker/Cooler			150	215	
m. Deliveries			150	215	
n. Custodian			50	72	
o. Water Conditioning			0		in the net to gross factor
p. Fire Sprinkler Room			0		in the net to gross factor
q. Electrical / OIT Room			0		in the net to gross factor
<i>Subtotal</i>			7,290	10,425	
<i>Net to Gross Factor</i>			3,135		
300 Group Total			10,425	GSF	
Totals					
<i>100 Group Total</i>			2,953	GSF	
<i>200 Group Total</i>			4,490	GSF	
<i>300 Group Total</i>			10,425	GSF	
Building Total			17,868	GSF	

2 - Architecture

Architecture

The architecture and general massing of the new Clubhouse building will be informed by the overall programmatic requirements and multilevel site conditions. A two-story building is proposed with the restaurant and banquet spaces on the main level, accessed from the upper parking lot and the Pro Shop, snack bar & cart storage on the lower level with frontage on the practice areas and cart staging. The building has been located to minimize disruption to the existing golf course design and operations.

Key elements for the new building appearance:

- ❖ Clearly identifiable Grille and Banquet Entries
- ❖ Cementitious shiplap siding and large-format rain-screen panels
- ❖ Split face masonry block retaining and exterior walls at high traffic/abuse areas
- ❖ Windows oriented south and west to make the best use of dramatic views
- ❖ Standing seam roofs sloped toward the golf course.
- ❖ Reverse shed roof features at building entries and to maximize glazing in dining spaces.

General Exterior Envelope

The building will be two-stories with the main level accessed from the upper parking lot and the lower level partially below grade and accessed from the golf practice and cart staging area. The lower level will be slab-on-grade with cast-in-place concrete retaining walls, masonry bearing walls, and steel-framing supporting the main level. The main level will be precast concrete plank with 2-4" concrete topping slab. Exterior dining terraces will be precast solid plank on masonry bearing walls and galvanized steel framing. The deck surfaces will be finished with a traffic coating on topping slab and sloped to the perimeter to drain. Exterior walls will be cementitious siding on FRT sheathing on light gage exterior walls and steel-framing as required. Windows and glass doors are incorporated into the exterior of the building to make the best use of expansive views. Windows will be aluminum storefront systems with UV coating on insulated glazing units.

The roof will be light gauge or wood truss and steel joists bearing at about 10'-0" above finished floor. The roof over dining, kitchen, and multipurpose areas will be primarily low slope membrane roof sloped towards the north and west. The kitchen and multipurpose roof areas will carry the roof load and the weight of the HVAC equipment. Parapet walls of varying heights will surround the low slope roof to create a recessed mechanical equipment well. It is envisioned the roof structure will be sloped to internal roof drains with thru-wall overflow scuppers. Standing seam metal roofing sloped at 2"/12" will face the golf course at the south and west walls of the dining spaces.

General Interior

Directly inside the grille entrance is a small lobby with administrative offices. Directly inside the event/multipurpose entrance is a small lobby with coat storage along one wall and an event support space. The Grille room and Multi-purpose room are connected internally by a corridor that provides access to shared restroom facilities. The Kitchen is sized and equipped to serve both dining spaces and located for optimal service of both spaces. The lower level golf pro shop, snack bar, and restroom facilities are accessed from the exterior of the building at grade.

Flooring

Except as noted below, all floors will be 5' thick concrete or concrete topping with carpet tile.

- ❖ Multi-purpose entry & Grille Entry will be LVT with 100 SF minimum modular walk-off mat.
- ❖ Pro Shop will be carpet tile with 100 SF minimum modular walk-off mat.
- ❖ Kitchen: all floor slabs will be 5" thick concrete or 2-4" thick topping sloped to area drains with resinous coating
- ❖ Restrooms: all floor slabs will be 5" thick concrete or 2-4" thick topping with ceramic tile
- ❖ Cart Storage & Mechanical/Electrical Rooms: all floor slabs will be 5" thick sealed concrete

Walls and Ceilings

Except as noted below, all walls will be 4 5/8" GWB metal stud partitions painted with sound batts and will penetrate the ceiling level for acoustical separation.

- ❖ Kitchen walls to be FRP.
- ❖ Pro shop, offices, and golf simulator will have GWB on metal stud furring at exterior masonry walls and slatwall display panels.
- ❖ Restrooms to have ceramic wall tile.
- ❖ Cart Storage, storage and mechanical rooms to be painted CMU with block-filler primer.

Except as noted below, all ceilings will be 2x2 or 2x4 ACT with metal grid set at 8'-0" above finished floor on the lower level and 9'-0" on the main level (10'-0" for Grille and Multipurpose rooms with GWB bulkheads at 9'-0"):

- ❖ Kitchen ceiling to be washable ACT ceiling tiles.
- ❖ Golf Simulator to be painted exposed concrete plank or GWB on metal furring to provide +/- 9'-10" clear as required for golf simulator installation.
- ❖ Restrooms to have GWB on metal stud ceilings
- ❖ Cart Storage GWB on metal studs with insulation hung from plank above.)

FF&E (Furniture, Fixtures & Equipment)

The Capital Budget carries certain costs for FF&E. For this project, the Capital Budget includes the FF&E for the following:

- ❖ Administration Offices & Support
- ❖ Kitchen/Food Service Equipment including the Grille Room Bar Equipment and "The Turn" Snack Bar which are all subject to AACo Health Department Regulations.
- ❖ The Grille Room, The Multi-Purpose Room and Terraces
- ❖ OIT Equipment & Wi-Fi Connectivity
- ❖ Security Systems/CCTV

The Capital Budget does not include the FF&E budgets for the following Golf Operations*:

- ❖ The Golf Pro Shop Retail Fixtures & Reception Counter, the General Manager Office, the Golf Professional Office & the Staff Work Room.
- ❖ The Indoor Golf Simulator Equipment (SD Phase was based on Trackman dimensions).
- ❖ The New Electric Golf Cart Fleet (SD Phase was based on Club Car Tempo Lith-ion Cart).
- ❖ The Golf Operations Loose FF&E (Bag Racks, Cart Wash Equipment, Range Ball Dispensing & Washing Equipment, Etc.).

**Note-Final Golf Operations Equipment Selections, Specifications & Cut Sheets are needed to be provided by the Owner to the A/E by the start of the Design Development Phase for necessary coordination of dimensional clearances, M/E/P connections, Etc.*

3 – Site Work

CIVIL – SCHEMATIC NARRATIVE

EXISTING CONDITIONS & BACKGROUND

The Preserve at Eisenhower Clubhouse project is located at 1576 Generals Highway in Crownsville, Maryland 21032 on Tax Map 44, Block 4, Parcel 45. The site is approximately 208.7 acres (per SDAT) and is zoned OS (Open Space District). The property is located outside of the Chesapeake Bay Critical Area. It is bordered by the Anne Arundel County Fairgrounds to the west, Generals Highway (MD Route 178) to the north, a single-family subdivision to the east, and residential land and the Indian Creek School to the southwest.

The property is currently developed with an 18-hole golf course and practice range (recently updated under Project #P570200, Contract #P570202, a clubhouse, golf cart storage, a maintenance facility, a covered pavilion, and two parking areas, with access provided off of Generals Highway md 178, a principal arterial roadway and a State Highway Administration (SHA) road also classified as a “Scenic and Historic Roadway”. The primary parking area, located near the clubhouse, provided parking for approximately 61 vehicles, and an overflow parking lot is located at a lower level for approximately 60 additional vehicles. The building is served by a well located to the southeast of the existing clubhouse and a septic system located to the southwest of the existing clubhouse. Storm drain is located in the lower overflow parking lot, the paved area surrounding the existing cart storage, and the grassed area surrounding the existing pavilion. No stormwater management is provided within the area of existing development.

The proposed development is to occur in the area of the existing clubhouse, entrance drive, and parking lots. Steep slopes (in excess of 15%) are located throughout the area of development. The one-way entrance into the site off of Generals Highway is sloped as much as 13%, while the one-way exit from the parking to Generals Highway is sloped at nearly 20%. Parking areas range from relatively flat to over 7%. Steep slopes that are located in much of the green area surrounding the existing development, including areas between the paved area behind the existing clubhouse and the adjacent course and putting green.

The goal of this project is to replace the existing clubhouse and cart storage structures with one clubhouse serving multiple purposes and upgrading the existing upper and lower parking area and access to the site. Details follow.

CIVIL DESIGN

Proposed Development

The proposed development occurs across less than 4 acres of the 208.7-acre site. This includes the demolition of the existing club house structure and cart storage structure and the construction of one multi-level building housing a retail pro shop, offices, the Grill, a kitchen, restrooms, storage, an event space with terrace, a deck, cart storage, and a cart return area. In order to work with the existing topography, the building is two levels. The upper level is at elevation 144.0, whereas the lower level varies from elevation 131.5 to 133.5 to better work with existing elevations behind the building. Proposed details of the development follow:

Access

Existing access to the site is off of Generals Highway MD 178 and will remain for the proposed improvements. Where the access drive splits, the one-way entrance (to remain one-way) will be widened to 20' and the slope will be increased from 13% to 16% in order to level the upper parking area to less than 5%. The one-way exit drive will be made a two-way drive and the width widened to 24'. The slope will remain at just under 20% at its steepest. At this stage of the development no improvements are anticipated within MD 178, however, further discussions with the State Highway Administration to determine if any widening and/or restriping is needed to provide additional queuing for vehicle turning left into the golf course.

Parking

Changes are proposed to the existing upper and lower-level parking lots in order to increase parking at the site and bring the parking areas to current Anne Arundel County code so that standard parking space size is 9' by 18', drive aisle width is 24', accessible parking is provided per ADA Standards, and islands are located in accordance with the county code. Additionally, the parking areas are regraded so that all slopes within parking spaces do not exceed 5%, except within the accessible spaces, where slopes do not exceed 2%.

With the proposed program of the improvements, a parking calculation is provided below showing the requirements for parking and ADA spaces and with the facility being a joint use operation with uses operating during overlapping time periods required parking spaces for the project are 179 spaces and the provided parking is 202 spaces.

PARKING TABULATIONS BASED ON ANNE ARUNDEL COUNTY CODE ARTICLE 18, SECTION 2-104

PROPOSED PARKING TABULATIONS

USES	# SEATS/# HOLES	PARKING REQUIREMENT	PARKING SPACES REQUIRED	
GOLF COURSE	18	8 SPACES/HOLE	144.0	144.0
BANQUET HALL	150	1 SPACE/3 SEATS	50.0	25.0 ←-----See Note 1
SNACK BAR	60	1 SPACE/3 SEATS	20.0	10.0 ←-----See Note 1
TOTALS			214	179 REQUIRED SPACES PER CO. CODE
				202 TOTAL PARKING SPACES PROVIDED
				TOTAL ADA SPACES REQUIRED 7 SPACES (2 OF WHICH MUST BE VAN ACCESSIBLE)
				TOTAL ADA SPACES PROVIDED 9 SPACES (4 OF WHICH MUST BE VAN ACCESSIBLE)

NOTE:

1. Per AA Co Code Article 18-3-1105(b) joint use parking is allowed if the uses operate during overlapping time periods and the parking spaces provide 100% of the number required for the greater generator plus 50% of the number required for the secondary generators

Fire Department Access

Fire department access is provided from Generals Highway to the front of the building via the one-way entrance and through drive aisles in the parking lot nearest the building. Access to the rear of the building is provided through the lower-level parking lot and a 20' paved fire lane that runs from the lower-level parking lot to the paved area behind the building. This fire lane will provide 150-foot hose drag length to all points of the building exterior from a vehicle as required by the Fire Departments coverage requirements and vehicle circulation. Since the site is served by a private well Two underground fire suppression tanks are being proposed to provide water supply for fire protection.

Water

The site is served by an existing well located to the southeast of the existing clubhouse. Due to the need for additional flows for the new facility it is expected that the existing well will be abandoned per Health Department requirements and a new well is proposed outside of the cart wash area in close proximity to the fire tanks and mechanical areas for the new facility.

Sewer

The existing on-site septic system is to be abandoned. Since this is a proposed commercial use with anticipated daily sewer flows greater than 1,500 gallons per day (GPD) with actual flows anticipated at 5,750 gpd the septic system will require an engineered treatment system in lieu of a conventional septic system to meet COMAR regulation 26.04.02. For the engineered septic system, it will be reviewed by the local Health Department and Maryland Department of Health (MDE) for approval and permitting. This site is considered by the Health Department as a wet season percolation testing area and will require septic percolation to be tested during the open season (typically Feb – March/April each year). Currently the wet season has not yet opened for 2022 as of the date of this proposal, however, it likely will be a short open wet season and it will be important for the County to schedule these tests this year otherwise have to wait until next year for the next season of testing. As noted on the site plans it is anticipated that the septic testing will take place in the driving range area to minimize the daily operation of the golf course pending passing percolation tests in the spring of 2023

Anticipated Sewage Flow for the facility:

<u>Use</u>	<u>#Seats</u>	<u>Flow Factor Requirement</u>	<u>Flow</u>
Golf Course		3,500 gpd /golf Course	3,500 gpd
Snack Bar	60	25 gpd/seat	1,500 gpd
Banquet Hall	150	5 gpd/seat	<u>750 gpd</u>
		Total Sewage Flow	5,750 gpd

Grading

Steep slopes are located throughout much of the existing green area within the area of development, and the majority of the perimeter slopes are steep slopes. Additionally, much of the existing paved areas within the area of development exceed 5%. The upper parking area was regraded to reduce the overall parking areas to 5% or less and provide accessible parking at 2% or less. Access is also provided from accessible spaces to the building and the bag drop area and from the bag drop area to the building. An accessible path is provided from the front of the building and upper parking area to the lower level via a path located behind the bag drop area. The lower parking area is expanded to increase parking, with the parking lot graded out at 5%.

As a result of existing steep slopes and proposed grading, multiple retaining walls are required throughout the site. A total of four retaining walls are anticipated with varying types (modular block, poured in place and a Strong Stone product which will not require geotextiles reinforcement). The existing steep slopes and proposed grades also impacted the feasibility of proposed stormwater management practices at the site (see Stormwater Management Section below).

Since the limit of disturbance (LOD) is anticipated during permitting for the facility to be more than 1.0 acres, a Notice of Intent NPDES permit from MDE will be required.

Storm Water Management

The proposed development occurs over less than 4 acres of the 208.7-acre site. Additionally, the 18-hole golf course was recently improved under a separate contract. Therefore, stormwater management requirements for the proposed development are based on the limit of disturbance. Using the limit of disturbance as the site area and given that existing impervious area within the site area exceeds 40%, the development is classified as “redevelopment” for stormwater management purposes.

No stormwater management exists at the site for the existing development. Stormwater management is proposed at the site as follows.

ESD Volume

Impervious area is increased within the limit of disturbance by approximately 0.7 acres. As a result, ESDv requirements are as follows:

- 1.0 inch of runoff is to be treated from 50% of the existing impervious area within the limit of disturbance.
- 2.3 inches of runoff is to be treated for the increased/new impervious area (approximately 0.7 acres)
- In total, approximately 9,000 CF of ESDv is required for this redevelopment.

Proposed stormwater management practices are largely dictated by the existing topography, steep sloped throughout the area of development, and the priority to minimize impact to the adjacent golf course. ESDv requirements will be met through a combination of ESD microscale practices (micro-bioretenion areas, enhanced filters, and Filterra bioretention systems) and structural practices (StormFilter underground cartridge filtration systems). In total, these practices meet all ESDv requirements.

Channel Protection Volume

Channel protection volume is not required for redevelopment projects.

Management of the 10- and 25-Year Storm Events

Overbank Flood Protection Volume, or management of the 10-year storm, is not required for redevelopment. However, adequate capacity and stability of the receiving waterways or drainage systems must be shown. Runoff from the majority of improvements drains onto the golf course and to an existing swale that parallels the eastern property line. Drainage patterns will be maintained with the development, and storage within ESD practices proposed within the area of development will reduce runoff so that the proposed development does not have a negative impact on the receiving areas of the site. A detailed analysis will be performed at each site outfall from the area of development to ensure that there will be no negative impact as a result of the development at each site outfall.

Under both existing and post-development conditions, the front of the site sheet flows into the SHA right-of-way (Generals Highway). Therefore, it must be shown that there is no increase in the 25-year storm event to the SHA right-of-way resulting from the proposed development. The proposed development does result in an increase in impervious area draining to the SHA right-of-way. This is to be managed through storage within a proposed micro-bioretenion area. A hydrologic analysis, including modeling of the 25-year storm event, must be performed.

Erosion and Sediment Control and Temporary Stormwater Management (TSWM)

In addition to the stormwater management requirements mentioned above, it should be noted that temporary stormwater management (TSWM) will be required during construction so that the 1-year flows leaving the site during the interim conditions do not exceed the existing 1-year flows. If this occurs at any of the site outfalls, TSWM will be provided in dry storage within sediment traps and/or behind temporary stone outlet structures.

Landscaping

Little to no landscaping exists within the existing parking areas. Landscaping will be provided in accordance with latest Anne Arundel County landscape manual and will include proposed trees and plantings within parking lot islands, along building foundations, and within the micro bioretention areas. Maximizing forest preservation along the southern boundary and adjacent to the existing residential lots will be a priority.

Forest Conservation and Specimen Trees

Forest Conservation requirements with the project are exempt per County Code Article 17-6-301(b)(7)(i) since this project will not result in the cumulative cutting, clearing or grading of more than 20,000 sq. ft. of forest. A declaration of intent will be filed for exemption prior to final plan approval.

Construction Phasing

Construction phasing will be a large part of a successful project for this golf course improvement. In summary, timing of the initial phase of development will involve the construction of the inbound and outbound lane improvements to allow separation of construction vehicles from the daily golf traffic. The upper most parking lot will be constructed to provide a bag drop for the public and allow the existing upper parking area to be cordoned off for the construction of the clubhouse. Expansion of the lower parking lot should be performed as early as possible to accommodate general public in keeping the golf course operating during the construction phase.

4 - Structural

Structural Systems

Prepared by Watkins Partnership

General Project Description

Design Loading: Building Code IBC 2018

Roof	Live: 30 psf	Dead: 20 psf
Elevated Floor	Live: 100 psf	Dead: 60 psf
Lower Level	Live: 100 psf	Dead: 60 psf

Description of General Structural Systems

Roof Framing:

The roof will be a mixture of steel bar joists and light gauge or wood trusses. 30K8, 28K7, and 16K3 steel bar joists at 5'-0" OC max for 30'-0" to 40'-0" large spans at the grille, kitchen, and multipurpose rooms. The main frame will be primarily steel framed W8x18 beams at exterior glazing to the south and west and W16x31 at interior and exterior solid walls. Light gauge or wood trusses on light gauge or wood bearing walls at short 16'-0" to 22'-0" spans at the restrooms and buffer spaces adjacent to the parking lot.

Floor Framing – Upper Level:

The floor framing will be 10" precast concrete plank with 2" concrete topping slab at the grille and multipurpose rooms and 8" precast concrete plank with 4" concrete topping slab at the kitchen. The main support for the floor will be poured-in-place concrete retaining walls, 8" exterior masonry bearing walls with 4" masonry veneer, and steel frames spaced to optimize plank spans to between 20ft and 30ft. Lintels will be precast concrete at rough openings up to 8'-0" and steel at openings over 8'-0".

Exterior Elevated Decks:

Exterior decks to be 8" or 10" solid precast concrete plank system with 2" topping on masonry bearing walls and galvanized steel frame at exterior conditions.

Floor Framing – Lower Level:

Lower-level floors to be 5" reinforced slab on grade.

Foundation:

The foundation will be concrete spread footings, both continuous and isolated foundation. The foundation wall will be 12" poured in place reinforced concrete. 16"x16" masonry piers will carry point loads from roof and floor framing to the foundation.

Stairs:

Exterior stairs to be powder-coated galvanized steel stringers with concrete treads.

5 – Mechanical/ Electrical/ Plumbing

Mechanical, Electrical & Plumbing Narrative

Prepared by Century Engineering

This narrative is an overview of the anticipated mechanical, electrical and plumbing (MEP) systems of the building. The design of the fire protection and fire alarm systems is by others.

DIVISION 20

20 00 00 – MECHANICAL GENERAL PROVISIONS

The work under this Division shall include materials and labor to furnish complete mechanical and plumbing systems as specified. Items shown and not specifically called for, or items specified and not specifically indicated or detailed on the drawings, or items neither specified nor shown, but which are reasonably incidental to and commonly required to make a complete job, shall be provided.

Work shall conform to the requirements of the codes, laws and ordinances of Anne Arundel County, MD, National Fire Protection Association, American Society of Mechanical Engineers, and other authorities having jurisdiction.

Comply with the standards of good practice as outlined in all applicable ASHRAE Standards and Guidelines, the Sheet Metal and Air Conditioning Contractor's Association's "Duct Manual", and the Apprentice Training Manual of the Steam Fitters Union.

The requirements of the authorities having jurisdiction shall take precedence over these Specifications and changes required by the authorities shall be made after review by the Architect.

Shop Drawings: Shop drawings shall be submitted to the Architect/Engineer for review for all major pieces of equipment and material.

Supports and Vibration Isolation: Provide foundations, supports, curbs and bases, vibration isolation for equipment, as indicated or necessary for satisfactory installation and operation of equipment. Furnish and set anchor bolts.

Electrical Work: Interlock wiring, and the provision of pilot devices such as push buttons, thermostats, flow switches and similar items and their related wiring associated with the Automatic Control System, shall be provided in accordance with the applicable requirements of Division 26. For ease of servicing, permanently identify both ends of conductors with W. H. Brady Co. self-sticking Perma-Code wire markers. Mark control diagrams accordingly.

Record Drawings: Keep at the site one (1) set of black and white prints for the express purpose of showing changes from the contract Drawings made during construction. Mark up the prints with red pencil during construction and deliver the prints, before final inspection, to the Architect as a final set of "Record Drawings". Refer to Division 1 for additional requirements.

Testing: Before concealing piping and before insulating piping, test piping and prove tight in accordance with the specifications. The air distribution system and water shall be balanced and adjusted by an independent organization specializing in this type of work to distribute the quantities noted on the drawings. The balancing agency shall be a member of the Associated Air

Balance Council or the National Environmental Balancing Bureau. Certified reports shall be provided to Architect/Engineer and Owner.

Sterilization: The domestic water piping system shall be sterilized by methods approved by local plumbing codes or the Health Department.

Field Instructions: Upon completion of work, furnish services of a competent representative to instruct Owner's operating staff in the proper operation and preventative maintenance of elements of the mechanical systems.

Warranty: During the warranty period, make the proper adjustments of systems, equipment and devices installed and perform work necessary to ensure the efficient and proper operation of the systems, equipment, and devices.

The general contractor is required to have a minimum of five (5) years' experience on projects of similar size and scope. They shall also obtain permits and pay associated fees.

22 00 00 – PLUMBING

Codes and Standards

This project shall follow the following codes and standards:

- 2018 International Building Code (IBC)
- 2018 International Energy Conservation Code (IECC)
- 2018 International Plumbing Code (IPC)
- 2018 Fire Code (NFPA 1)
- 2018 Life Safety Code (NFPA 101)
- 2009 ICC/ANSI A117.1 Accessible and Useable Buildings and Facilities
- 1993 AA County Plumbing Code - Chapters 16 & 17
- LEED v4.0 and 4.1 requirements

Temporary clubhouse relocation

All piping shall be disconnected from fixtures and demolished to a point below the floor. After the temporary clubhouse relocation is completed, all below-grade piping shall be demolished to a point 5'-0" beyond the temporary building's former footprint.

Incoming Services and Piping Connections

In general, all utility services shall be coordinated with the civil engineer and site connections.

Domestic water shall be provided from a new well which is drilled on site. A domestic cold-water main will be extended from 5 feet beyond the building to the mechanical room.

Sanitary mains shall discharge into a new septic tank which is installed on site. The mains shall be routed from a point at 5'-0" beyond the building into the building. The mains within the building shall be run below the slab with risers up to plumbing stacks to serve each plumbing fixture and kitchen fixture

A separate grease main serving the commercial kitchen shall be provided below grade to a point 5'-0" beyond the building, where it will be extended by the Civil Engineer to connect to the grease interceptor.

In roof areas pitched at 2/12, storm water mains shall be individualized roof drains which run down the exterior of the building via downspouts, connect to a boot at grade, and continue below grade to be picked up at a point 5 feet beyond the building. In areas with alternate slope, drainage shall be provided by internal roof drains, with scuppers or an alternative secondary. Scuppers shall exit by a downspout with hinged cover to discharge to daylight. In total, there is approximately 9,750 SF of roof area. Roof drains shall be Zurn Z199 or equal by J.R. Smith, Josam or Woodford.

A foundation drain system will be provided along the building perimeter if required, and then tie into the storm water system.

Provide domestic hot/cold water, sanitary, vent, and condensate connections to plumbing fixtures.

Condensate from the HVAC units will discharge with air gap fittings into 2" condensate risers. A backwater valve shall serve each riser at the base prior to being connected to the storm water main.

Frost-proof wall hydrants with wheel handles will be provided at each of the building facades to facilitate landscaping and lawn maintenance. Wall hydrants shall be Zurn Z-1321, J.R. Smith, Josam or Woodford.

Vent riser piping shall extend in stacks parallel to the sanitary stack piping and extend thru the roof. Where possible, vent lines shall collect in the highest-level ceiling to reduce the number of roof penetrations.

The trash room shall be provided with a hose bibb for wash down.

Plumbing Equipment

A duplex domestic water booster pump shall be located in the mechanical room to provide adequate pressure to all plumbing fixtures and kitchen appliances. The domestic booster pump shall be ITT Bell and Gossett, Synchroflash, Econophase or Taco. In addition, a water treatment system will be provided to address the conditions of the local ground water.

Domestic hot water shall be generated by a tank-type water heaters with electric heating elements, sized for 100% of the total load. A recirculation pump, along with its associated piping, shall be provided to maintain temperature in the distribution piping system.

Provide insulation and self-regulating hot water temperature maintenance tape (HWMT) on the hot water lines to comply with the 2018 International Energy Conservation Code. The maximum allowable pipe length from the nearest source of heated water to the termination of the supply pipe shall be in accordance with Table C404.5.1 of the code, utilizing the largest size of piping within the plumbing system to determine the maximum allowable length.

An oil and grit separator shall be provided for the cart washing area. The interceptor shall be located and specified by the civil engineer. There is no work under division 22 associated with this equipment.

Piping Materials, Insulation, and Plumbing Fixtures

Sanitary and storm water drain piping shall be schedule 40 polyvinyl chloride sewer pipe with solvent sealed plastic fittings. Piping above and below any food service areas shall be service weight cast iron "no hub" pipe with neoprene and stainless-steel connectors.

Drain piping from air conditioning unit condensate pans above the ground shall be schedule 40 PVC piping with solvent sealed plastic fittings.

Water service underground outside the building shall be cement lined ductile iron ASA 21.6 or ASA 21.8 made up with Tyton joints. Provide proper bedding for piping and concrete buttresses at all fittings according to AWWA standards.

Water piping mains shall be type "L" hard drawn copper water tube, ASTM B88 with solder type wrought copper fittings, ANSI A40.3. Brass solder joint valves shall be used with copper tubing. Solder shall be 95-5 tin antimony type. Protect piping from materials which may cause corrosion of copper. Exposed piping at plumbing fixtures shall be IPS red brass, chromium plated.

Where lines pass under or through footings, encase them in concrete to uniform thickness as directed.

Insulate new cold-water piping, hot water piping, and risers except chrome plated piping exposed at each plumbing fixture.

At the roof drain insulate from the drain including the drain body to the first fitting in the vertical riser. Insulation shall be heavy density long strand fiberglass, sectional insulation with all service vapor barrier jacket and double side adhesive self-sealing lap, Owens Corning fiberglass 25ASJ/SSLII. Insulation shall comply with ASTM E84 with a flame spread rating of 25 or less and smoke developed rating of 50 or less. Insulation thickness shall be 1 inch.

Fittings, valve bodies, etc., shall be covered with Zeston type precut vinyl insulation jackets with pre-shaped fiberglass insert. Sanitary and storm water risers that are located adjacent to bedrooms, dining rooms, or living rooms shall be insulated for sound attenuation.

Plumbing fixtures, faucets and accessories shall be touchless residential/light commercial grade manufactured by Crane, American Standard, Kohler, Grohe, Moen, Zurn, J.R. Smith, Sloan, Brass Craft or Central Brass. Toilets shall be flush-valve type. Waterless urinals shall not be used without written approval from the owner. Flowrates for all restroom fixtures shall be selected based on LEED criteria.

23 00 00 - HEATING, VENTILATING AND AIR CONDITIONING (HVAC)

Codes and Standards

This project shall follow the following codes and standards:

- 2018 International Building Code (IBC)
- 2018 International Energy Conservation Code (IECC)
- 2018 International Mechanical Code (IMC)
- 2018 International Plumbing Code (IPC)
- 2018 Fire Code (NFPA 1)
- 2017 National Electrical Code (NFPA 70)
- 2018 Life Safety Code (NFPA 101)
- 2009 ICC/ANSI A117.1 Accessible and Useable Buildings and Facilities

1993 AA County Plumbing Code - Chapters 16 & 17
LEED v4.0 and 4.1 requirements

Temporary clubhouse relocation

There is no HVAC work associated with this relocation, as all equipment is integral to the building.

Design Conditions

Outside Air Design values:

Winter Design Dry Bulb: 0°F

Summer Design Dry Bulb: 95°F

Summer Design Wet Bulb: 78°F

Indoor Air Design values:

Winter Design Dry Bulb: 70 °F

Summer Design Dry Bulb: 75 °F

Summer Design Wet Bulb: 50% RH

HVAC Equipment

The HVAC approach shall focus on dividing the building into two components: the Multi-Purpose Room, and all other conditioned spaces.

Due to the high but variable occupant load of the multipurpose room, a dedicated single-zone variable air volume (VAV) rooftop unit shall be provided to serve that room only. The unit shall be a heat pump, and shall contain a direct-expansion coil, an auxiliary electric heating coil, an energy recovery wheel (sensible and latent heat), compressors, a heat rejection section, supply fans and exhaust fans, MERV 8 prefilters and MERV 13 final filters. The unit shall also have hot gas reheat for dehumidification control. Approximately 4,000 CFM is anticipated for the DOAS unit.

The unit will connect to carbon dioxide sensors in the room to permit a demand-controlled ventilation strategy, reducing ventilation in response to occupant load.

Conditioning for the remainder of the building shall consider one of the following options:

Preferred Option 1: ventilation shall be provided via a dedicated outside air system (DOAS) that will deliver neutral air directly to each occupied space. A variable refrigerant flow (VRF) system shall be provided to condition the spaces. The VRF system shall use a condensing unit to handle heat rejection. An energy recovery 3- pipe system shall connect to each VRF terminal unit, which shall be provided with a branch selector. Each VRF terminal unit shall be provided with a secondary drain pan with water level detector.

Option 2: ventilation shall be provided via a dedicated outside air system (DOAS) similar to that in option 1. Room heating and cooling shall be provided by water source heat pumps. The water loop temperature shall be maintained by a cooling tower and a boiler. Each heat pump shall have hot gas reheat coil, and a waterside economizer coil with a diverting valve. Each heat pump unit shall be provided with a secondary drain pan with water level detector.

Option 3: a VAV rooftop unit, similar to the one described for the multi-purpose room above, except multi-zone, shall ventilate and provide conditioned primary air to all terminal units. VAV terminal units shall contain electric heating coils.

For options 1 and 2, approximately 3,400 CFM is anticipated for the DOAS unit.

Stand-alone DX split systems shall be provided for the IT room and Cooler room to avoid having to run the overall building system during unoccupied hours.

Ventilation for the electrical rooms, water room, sprinkler room, and other unoccupied storage and utility rooms shall be achieved using ceiling mounted exhaust fans discharging to the exterior. These rooms shall be ventilated at a rate of 1 CFM per SF. Ceiling mounted exhaust fans shall be Greenheck SP series or equal by Penn, Cooke, or Carnes.

The electric golf cart storage area shall be provided with exhaust fans to maintain hydrogen levels within acceptable limits.

Electric unit heaters shall be provided for each of the mechanical, electrical, sprinkler, water, cart storage, and other unoccupied storage and utility rooms. Unit heaters shall be Qmark MUH, or equal by Berko or Marley. Exhaust fans shall be controlled by reverse-acting thermostats and timer to initially run for 20 minutes per hour (adjustable). Electric unit heaters shall be controlled by an integral thermostat.

5.0 kW electric wall heaters shall be provided in the entry vestibules. Electric wall heaters shall be Qmark AWH, or equal by Berko or Marley.

A 3.0 kW electric wall heater shall be provided in the "Circulation" space adjacent to the door that leads to the deck. The electric wall heater shall be Qmark AWH, or equal by Berko or Marley.

A make-up air unit shall be provided for the commercial kitchen hood. The unit shall be packaged with a supply fan, exhaust fan, DX cooling coil, electric heating coil, and supply air filters of at least MERV 8.

Duct insulation, connections, and sealant

Project ductwork shall be galvanized steel of sizes indicated on the drawings with sheets shaped and constructed as noted in the SMACNA Manual.

Flexible ductwork shall consist of a coated spring steel wire helix, polymeric liner, fiberglass insulation and fiberglass reinforced metallized film vapor barrier. Flexible ductwork shall be listed by Underwriters Laboratories under UL 181 standards as Class I flexible Air Duct Material and shall comply with NFPA Standards 90A and 90B. Flexible duct shall be rated for two inches positive and negative pressure and 2500 fpm maximum velocity. Flexible ducts shall be Thermoflex M KE, Wiremold or General. Flexible ductwork shall be limited to branch run outs to air devices concealed above ceilings and a maximum length of 5 feet.

Duct joints shall be sealed using 3M model 900 duct sealer. Excess sealer shall be removed from ductwork and joints. Paint sealed joints to match finish of ductwork.

Duct connections to AHUs and elsewhere as required to compensate for expansion and contraction and noise reduction shall be made with UL approved glass fabric such as Ventglas as manufactured by Vent Fabrics, Inc.

Where ducts are noted to be acoustically lined, they shall be lined with one-inch thickness of a non-porous sealed lining system. Liner and insulation shall meet requirements of UL 181 and NFPA 90A. Liner shall meet bacteriological standards of ASTM C665. As a minimum, supply and return ducts from heating, ventilating and air conditioning units for 10 feet from the units shall be acoustically lined.

Exposed supply ductwork and return air ductwork except where ductwork located in the room supplied and exposed outside air ductwork, shall be insulated with a minimum 1-1/2-inch thickness of 3 PCF density, a minimum R-Value of 6.0 for attic/concealed spaces and R 8.0 for exterior use fiberglass board with reinforced foil faced ASJ vapor barrier jacket secured to duct with Graham weld pins or perforated base stick clips set in Moneco M46420 adhesive. Pins shall be covered with finish cap to match insulation. Butt joints and seams and cover with vapor barrier mastic. Finish with a coat of lagging adhesive such as Benjamin Foster 30-35.

Ductwork that is internally lined with energy code compliant liner is required to be insulated externally as indicated herein.

Ductwork exposed to outdoor elements shall be covered with a minimum 1-1/2-inch thickness of 6 PCF density and minimum R-Value 8.0 rigid fiber board with vapor barrier jacket, applied to duct with stick pins and adhesive.

Joints shall be lapped and sealed. Slope insulation to drain by providing insulation blocking underneath of insulation board. Finish with emulsified aluminum paint containing asphalt and glass fiber binder. Finish with 2 coats of lagging weatherproof adhesive imbedded with glass cloth using corner beads on edges. Paint with weatherproof paint suitable for the installation. Top of duct and extending 2 inches down sides of duct shall additionally be covered with 22-gauge galvanized sheet metal cover which shall be sloped for positive drainage.

Air devices, testing and balancing

Square supply air devices shall be Titus model TDC, louvered face, with opposed blade dampers. TDC diffusers shall be used in all areas except for the multi-purpose rooms, which shall utilize Titus Model Omni diffusers.

Return air devices shall be Titus Model 350 with opposed blade dampers. Exhaust grilles shall be the same without opposed blade dampers. Devices shall be steel.

Control Systems

An Automatic Temperature Control (ATC) system shall be provided to serve the entire building. The system shall allow for remote monitoring and control of all HVAC equipment. Each piece of equipment shall be provided with an independent occupied/unoccupied schedule and occupied/unoccupied temperature setpoints. The ATC must utilize a non-proprietary protocol to facilitate changes in management companies. It shall utilize BacNet or LonWorks.

DIVISION 26

26 00 00 - GENERAL ELECTRICAL REQUIREMENTS

Electrical work shall be provided and installed in accordance with the following codes:

- 2018 International Building Code (IBC)
- 2018 International Energy Conservation Code (IECC)
- 2017 National Electrical Code (NFPA 70)
- 2016 National Fire alarm and Signaling Code (NFPA 72)
- 2018 Life Safety Code (NFPA 101)
- 2016 Standard for Emergency and Standby Power systems (NFPA 110)
- 2009 ICC/ANSI A117.1 Accessible and Useable Building and Facilities
- LEED v4.0 and 4.1

Obtain permits and pay associated fees.

Provide labor, tools, materials, equipment, and fixtures and perform operations required for the installation of electrical work and related systems ready for continuous and satisfactory operation. This shall include labor and materials not specifically mentioned but necessary for the completion of the work and the successful operation of the system.

The Contractor shall warrant the workmanship, materials, equipment, and systems against mechanical and electrical defects for a period of one (1) year after the date of acceptance by the Developer.

Items shown and not specifically called for, or items specified and not specifically indicated or detailed on the drawings, or items neither specified nor shown, but which are reasonably incidental to and commonly required to make a complete job, shall be provided.

The requirements of the authorities having jurisdiction shall take precedence over these Specifications and changes required by the authorities shall be made after review by the Architect.

Shop Drawings: Shop drawings shall be submitted to the Architect for review for all major pieces of equipment and material.

Record Drawings: Keep at the site one (1) set of black and white prints for the express purpose of showing changes from the contract Drawings made during construction. Mark up the prints with red pencil during construction and deliver the prints, before final inspection, to the Architect as a final set of "Record Drawings". Refer to Division 1 for additional requirements.

Field Instructions: Upon completion of work, furnish services of a competent representative to instruct Owner's representative in the proper operation and maintenance of elements of the electrical systems.

Warranty: During the warranty period, make the proper adjustments of systems, equipment and devices installed and perform work necessary to ensure the efficient and proper operation of the systems, equipment and devices.

Temporary power and lights shall be provided for and installed in accordance with the requirements of Division 1. Materials installed on the project shall be new and shall be UL listed.

Equipment shall be provided with permanently attached engraved nameplates. Panels shall be equipped with typed written directories. Junction boxes and pull boxes in concealed locations shall be marked to indicate system and circuit wiring installed within.

Branch circuits and connections shall be provided for all mechanical equipment.

Where ceilings are not removable, access panels shall be provided for access to pull boxes, junction boxes, devices and equipment.

26 05 00 - ELECTRICAL MATERIALS AND METHODS

Branch circuit conductors shall be copper with 75°C, 600 volt, THWN insulation. Feeder conductors 100A and above shall be STABILOY aluminum with 75°C, 600 volt, XHHW insulation. Minimum conductor size shall be #12 AWG. Conductors #12 and less shall be solid. Conductors greater than #12 shall be stranded. Provide alternate pricing for copper feeder conductors. The use of MC cable will be acceptable for use as branch circuit wiring concealed in ceilings and walls. Circuits routed exposed shall be in conduit. Feeders shall be installed in conduit. Each branch circuit and feeder shall be equipped with its own separate insulated ground conductor.

Conduit types and applications shall be as follows:

Schedule 40 PVC: In or under slab or direct buried in ground.

Electrical Metallic Tubing: Exposed interior locations.

Rigid Steel Conduit: Interior locations subject to physical damage, exterior, damp or wet locations.

Flexible Metal Conduit: In short lengths for connection of vibrating equipment. Liquid-Tite flexible metal conduit shall be used for the connection of vibrating equipment in exterior, damp or wet locations.

MC and/or NM cable: Branch circuit wiring concealed in ceilings and walls. Branch circuits routed exposed shall be in conduit.

Outlet boxes used for installing wiring devices flush in walls of dry interior locations shall be metal. Outlet boxes used for installing wiring devices flush in walls of wet locations and where devices are to be surface mounted shall be cast aluminum. Sheet steel type boxes shall be installed where needed to facilitate the pulling, splicing and vertical support of branch circuit and feeder conductors.

Receptacles in common areas shall be rated 20A, 120V and shall be commercial specification grade type. Wiring terminals shall be screw type. Acceptable manufacturers are Hubbell, Leviton, and Pass & Seymour. Receptacles shall be provided as follows:

Offices: minimum one outlet per wall with a maximum spacing of 12' along each wall.

Vestibules: one outlet.

Lobby: one outlet every 12'-0" on center, one outlet every 2'-0' on center at front desk area.

Corridors: horizontal spacing of receptacles shall not exceed 50' on center.

Restrooms: one GFI outlet per two sinks, minimum one GFI outlet in single sink restrooms, one general GFI non-counter outlet in gang restrooms.

Storage and Utility rooms: minimum 2 outlets.

Kitchen: GFI outlets as required for equipment.

Electrical rooms: one outlet per wall.

Mechanical rooms: one outlet every 12'-0" on center.

Provide receptacles on roofs within 25' of rooftop mounted heating and air conditioning equipment.

Provide GFI type receptacles within elevator machine rooms, on roofs, in wet locations and elsewhere as required by the NEC.

Finish of wiring devices shall be white, or as otherwise indicated by Architect. Device plates in dry interior locations shall be satin finished stainless steel. Device plates in exterior locations shall be weatherproof cast aluminum type. Switches in common areas for control of lights shall be low voltage, momentary-contact pushbutton type.

Single-phase motors rated one (1) horsepower or less shall be equipped with thermal manual type starters. Three-phase motors not part of packaged HVAC equipment shall be controlled by full voltage, non-reversing, combination magnetic motor starters with circuit breaker disconnects. Enclosures for motor starters within interior dry locations shall be NEMA type 1. Enclosures for motor starters within exterior, damp, or wet locations shall be NEMA type 3R.

Safety switches shall be provided where required by the National Electrical Code. Switches shall be general duty fused or non-fused type with a minimum interrupting capacity of 100,000 amperes. Switches shall have NEMA 1 enclosures for dry interior locations and NEMA 3R enclosures for exterior, damp or wet locations.

Final connections to electrical equipment provided under this or other Divisions shall be made under this Division. Final connections to Owner installed equipment shall be made under this Division.

Each branch circuit and feeder shall be equipped with an individual green color insulated ground conductor.

Pull cords shall be provided in empty raceway systems.

Where conduit, wire, or cables pass through openings in fire rated walls, openings shall be fire stopped per code.

26 05 01 - POWER DISTRIBUTION

The existing site and temporary clubhouse are energized via an existing 150kVA, 208Y/120V secondary utility transformer. The existing service is comprised of a pad mounted utility transformer, a utility meter, a CT cabinet, and a 600A bus main distribution panel (MDP) with main service disconnect. The items listed above other than the utility transformer are rack mounted and free standing behind landscape screening. The existing MDP services (3) load centers within the temporary clubhouse, (1) well pump, (1) unknown motor starter, and the storage barn.

Prior to work associated with the new clubhouse, the temporary clubhouse will be relocated. In order to limit the amount of down time to the existing clubhouse, a new temporary service shall be installed near the new location for the temporary clubhouse. This new service will mimic the existing service in size and equipment. Once the relocated clubhouse is re-energized via this new temporary service, the existing service shall be demolished so that work can begin for the new clubhouse.

Utility power for the new clubhouse building shall be obtained from a transformer located on the ground outside the building near the main electrical room. The exact location of the transformer will be coordinated with the utility. Provide underground concrete encased duct banks to distribute secondary power from the transformer into the building's main electrical room. Concrete encased duct banks for both primary and secondary cables shall be by the contractor and per the requirements of the utility company. The concrete encased duct bank for the primary cable shall be run below grade from the transformer out to the street, which can be in excess of 350'.

It is anticipated that the building will be served by one 2500A switchboard at 480Y/277. The switchboard will have circuit breakers feeding subpanels and step-down transformers throughout the building.

Electrical panelboards shall be installed within electrical rooms on several floors for the purposes of supplying power, via branch circuits, to receptacles, lights, and HVAC equipment within common areas such as corridors, utility rooms, lobbies and service areas.

The fire pump, well pump, EV chargers, and a selection of food service and HVAC equipment shall utilize the 480Y/277V, 3-phase, 4-wire distribution.

Electrical panelboards used to serve other common area electrical loads shall be 208Y/120V, 3-phase, 4-wire and shall be fed via dry type step down transformers. Panelboards shall be provided with copper bussing and bolt on style circuit breakers. Panelboards may be either surface mounted or flush mounted and will utilize microprocessor-based load monitoring to comply with LEED requirements.

A dedicated panelboard shall be supplied within the golf cart storage area for electric cart charging.

Once permanent service has been supplied to the new clubhouse and operation is switched over from the existing clubhouse, the existing service temporarily installed shall be removed.

Electrical vehicle charging stations shall be designed for the project. Anticipate (10) level 2 electrical vehicle charging spaces located within parking area. Chargers shall each be 40A-2P circuits and shall be provided with both power and telecommunication pathways.

26 05 26 GROUNDING

The main grounding system begins at the Main Ground Bus (MGB), located at the main service entrance electrical room. This bus is the reference for all grounding in the facility. The MGB must be effectively connected to an external ground rod and all available earth and building grounds (structural steel, water pipe, concrete-encased rebar, etc.).

The measured resistance to ground shall be less than 5 ohms.

The main electrical service equipment shall be connected to the MGB.

Telecommunications grounding consists of a Telecom Main Ground Bar (TMGB) located in the Telco Demarc Room. The TMGB shall be bonded to the MGB. A grounding conductor shall be routed up through comms closets for communication system grounding.

26 32 13 – EMERGENCY POWER DISTRIBUTION

An emergency power distribution system shall be installed to serve emergency lighting, the fire pump, and the building's fire alarm system. Additionally, the emergency power system shall power any well pumps, water heater controls, stormwater/sewage pumps, communications demarc equipment, front desk lights/receptacles, security/access control system, cold food storage, and any other owner specified loads.

In general, the emergency power distribution system shall consist of diesel generator set to be located on the exterior of the building near the pump room / lower parking lot. The diesel generator set shall be equipped with an above ground belly fuel tank with a 48-hour runtime at full load. At least three automatic transfer switches (one emergency, one optional standby, and one for the fire pump) and a network of distribution panelboards and feeders will be required. The generator is estimated at a rating of 200KW / 250kVA.

At a minimum, the generator shall be equipped with 480/277V, 3-phase, 4-wire alternator critical silencer, block heater, NFPA 110 compliant control/monitoring panel, weatherproof housing, and vibration isolators depending on the final location.

26 41 13 - LIGHTNING PROTECTION AND SURGE SUPPRESSION

A lightning protection system shall be provided for the building. The system shall be designed to NFPA 780 by a qualified Lightning Protection professional and shall obtain a UL Master Label. The system design shall include all air terminals, wiring, grounding, equipment bonding and mounting means as necessary. 1-1/4" PVC conduits shall be installed from the roof to grade for downleads.

Surge Protective Devices (SPDs) shall be installed in the main service equipment, to protect against voltage transients caused by lightning strikes and utility line switching

26 41 19 – EARLY WARNING LIGHTNING DETECTION SYSTEM

An early warning lightning detection system shall be provided for the golf course. The system shall be designed to NFPA 780 by a qualified Lightning Protection professional and shall obtain a UL Master Label.

Provide all connectors, fittings, fasteners, clamps, guards, lugs, exothermic connections, pathways, etc. as required to install all parts of the protection system. All material shall be listed where applicable. All equipment shall be fabricated from copper, bronze, or aluminum material for the use intended. All connections between dissimilar metals shall be executed with tinned copper or tinned bronze equipment and treated with Penetrox A.

The system shall include a steel lightning protection mast of appropriate height, an early streamer emission air terminal, and appropriately sized anchor base manufactured to AASHTO code.

Early detection air terminal shall be provided with (2) pathways to ground from the base plate of the mast. Air terminal shall be certified to NF C 17-102 and shall release stored energy based upon rapid variation of ambient field strength in phase with the approaching down leader. The air terminal shall have a standard deviation value 40% lower than the requirements in NF C 17-102 section C.3.5.2.5 and shall utilize independent synchronized modules. Modules shall include on

for neutralization of space charge at the tip of the air terminal prior to triggering the upward streamer. Modules shall be replaceable.

26 50 00 – LIGHTING

Lighting for the facility will be designed to meet applicable codes and standards as they apply to specific areas, as well as designed to meeting LEED criteria for the project. In general, lighting illumination levels will comply with the standard recommendations developed by the Illuminating Engineering Society.

Lighting fixtures throughout the building and site will be LED.

Recessed LED lighting fixtures will be installed within ceilings. Decorative LED ceiling fixtures and wall sconces will also be provided in throughout.

Fixtures in offices and other administrative areas will be either 2'x2' architectural volumetric troffers or 2'x2' flat panels. Surface mounted wraparound fixtures with acrylic lens will be provided in storage areas. Lensed LED strips will be used in mechanical, electrical, and other utility rooms.

Bathroom lighting will contain wall mounted vanity lights and ceiling mounted or recessed down lighting.

Decorative LED fixtures may also be used in the building for highly decorative common areas including the multipurpose space and will be selected by the interior designer or architect.

Exterior stair lighting shall be via LED tread mounted fixtures. Stair lighting shall be controlled via exterior lighting timeclock with UL924 relay via the generator.

LED pole mounted fixtures with concrete bases will be used for parking lot lighting. Light poles shall be aluminum. Exterior pedestrian and façade lighting shall be provided as selected by the Architect, and shall be controlled via electronic time clocks, photocell, and a multi-pole contactor, with local override. Exterior lighting shall be full cutoff, dark sky compliant.

Emergency lighting shall be provided in all public spaces, stairs, egress corridors, electrical rooms, and exterior egress doors. Emergency lighting shall be accomplished via generator backup.

Exit signs shall be installed along paths of egress as required. Exit signs shall be LED edge-lit type. Lighting fixtures shall be specified to provide 3000K color temperature light.

Automatic controls shall be utilized throughout the building. Most spaces will utilize ceiling mounted low voltage occupancy sensors, low voltage dimming wall stations, and day light sensors in day light harvesting zones. All lighting controls will be compliant with project's LEED criteria. Occupancy sensors shall be manufactured by Sensor Switch, Wattstopper, Leviton or Hubbell.

27 05 00 - TELECOMMUNICATIONS

Telecommunications service shall be extended to the temporary pro shop's new location prior to relocation of the building. Once relocated, telecommunication service shall be restored to the pro shop, which shall remain functional until operations are switched over to the clubhouse.

Telecommunications service for the clubhouse shall be extended into the building via four 4" conduits to a demarc location in the main telephone room. A 120V-20A receptacle shall be provided at each backboard location.

Telecommunication wall plates shall be thermoplastic type with 1 to 6 ports and modular snap-in jacks per plate. Modular jacks for telephone shall be four (4) conductor RJ-45 type. Modular jacks for TV shall be threaded F-type.

The voice distribution infrastructure shall consist of Category 6 UTP cables from each modular RJ-45 jack back to the telecommunications closet.

The video distribution infrastructure shall consist of RG-6 shielded coaxial cables from each modular F-type jack back to the telecommunications closet.

27 50 00 - IN-BUILDING EMERGENCY RESPONDER RADIO SIGNAL BOOSTERSYSTEM

A distributed antenna system (DAS) shall be provided throughout the building to ensure reliable radio communications in the building for emergency responders. A DAS Integrator, experienced in the design and installation of in-building Public Safety amplification systems, shall perform a site survey to determine the RF signal strength on or near the project site, to determine the level of amplification necessary to provide clear and reliable radio communications over 95% of the overall area inside the building. The integrator shall also review the buildings' architectural floor plans and propose a DAS specifically designed for the building. The DAS Integrator shall propose, design and deploy a DAS system in accordance with the Authority Having Jurisdiction (AHJ). It shall be the Integrator's responsibility to coordinate with the Fire Marshall's office and obtain the exact frequencies and other information necessary to deploy a complete and fully operational DAS at this location.

28 05 00 – LOW VOLTAGE SYSTEMS

CCTV, Access Control, Intercom, and AV systems shall be by the owner via system vendors. Coordinate system installations with system vendors. Provide necessary raceway distribution systems and power for system components.

6 – Sustainability and LEED Silver

- LEED Scorecard

Sustainability

As required by County ordinance, the project and associated site will be designed and construction to achieve a minimum of LEED Silver certification. This will include the building and the surrounding site as best determined by our Sustainability/LEED consultants Lorax Partnerships, LLC. The project has been registered with GBCI under LEED version 4.0

- A. The Eisenhower Golf Course Clubhouse was registered with USGBC through LEED online on September 29, 2022. The project ID is 1000166217.
- B. The EGC Clubhouse is targeting a BD+C: New Construction v4 Silver certification per the Anne Arundel County green building requirements. The scorecard currently is not showing points achieving LEED Silver. Many of the credits are in the “Maybe Yes” category. These points will likely be achieved but still need to be verified for compliance. The building is still in the early stages of design, and the team is working on developing the best LEED strategy.
- C. LEED project boundary: We will review possible LEED boundaries and evaluate site conditions to maximize the number of points that are achievable. Once the LEED Boundary is established, the project team will have a better idea of which site credits will be achievable.
- D. The Energy & Atmosphere category will have the most significant impact on points. The team will review options for maximizing energy efficiency onsite, including renewable energy sources.
- E. LEED v4.1 is a beta rating system with updated credit language for v4 credits. We have chosen to register the project under LEED v4 and substitute specific credits for the v4.1 beta requirements. This allows us to maximize points and use the most helpful version of each credit. Eisenhower Golf Course Clubhouse will be substituting the following credits to meet the v4.1 requirements:
 - a. Site Development – Protect or Restore Habitat
 - b. Rainwater Management
 - c. Building Product Disclosure and Optimization credits (Environmental Product Declarations, Material Ingredients, and Sourcing of Raw Materials)
 - d. Construction and Demolition Waste Management
 - e. Low-Emitting Materials
 - f. Interior Lighting
 - g. Daylighting.

On the pages that follow, please find these exhibits:

- ❖ Preliminary LEED Scorecard



LEED-BD+C: NC v4/v4.1 Project Scorecard

Eisenhower Golf Course Clubhouse

Date:

Credit Strategy Phase

Possible	Yes	Y?	N?	No	Project Information	RP	v4.1	Assignee	Credit Requirements	Notes and Action Items	LEED Phase	Compliance	Verified	LEED Online	Status	Quality	Control	GRCI	Response	
Required	0	0	0	0	PI			Team			Design									
Required	1	0	0	1	0	Integrative Process		Team			Design									
Required	1	0	1	0	1	Integrative Process		Team			Design									
Required	16	3	0	1	12	Location and Transportation		Team			Design									
Required	16	3	0	1	12	LEED for Neighborhood Development Location		Team			Design									
Required	1	1	0	0	1	Sensitive Land Protection	x	Lorax	Land does not meet any sensitive land definitions	Confirmed.	Design	x								
Required	2	1	1	0	1	High Priority Site		Team		DDA confirmed.	Design	x								
Required	5	5	0	0	5	Surrounding Density and Diverse Uses		Lorax			Design									
Required	5	5	0	0	5	Access to Quality Transit	x	Lorax			Design									
Required	1	1	0	0	1	Bicycle Facilities	x	Arch./Civil			Design									
Required	1	0	0	1	1	Reduced Parking Footprint	x	Civil	Do not exceed local code and achieve 20% reduction from baseline ratios.		Design									
Required	1	0	0	1	1	Green Vehicles		Owner	Provide EV charging stations for 5% of parking capacity (at least 2 spaces) OR Provide EV ready infrastructure for 10% of parking capacity (at least 6 spaces)		Design									
Required	10	3	2	5	0	Sustainable Sites														
Required	1	1	0	0	1	Construction Activity Pollution Prevention		Civil/CM			Constr									
Required	2	2	0	0	2	Site Assessment		Civil	Complete worksheet		Design	x								
Required	1	1	0	0	1	Site Development - Protect or Restore Habitat Open Space	x	Civil			Design									
Required	3	1	2	0	2	Rainwater Management	x	Civil	Manage 90th percentile storm event (1.20in storm) for 3pt; 85th (0.91in storm) for 2pts; 80th (0.74in storm) for 1pt	Design to 1.2in storm for 3pts + 1pt for RP	Design									
Required	2	1	1	0	2	Heat Islands Reduction		Civil/Arch.			Design									
Required	1	1	0	0	1	Light Pollution Reduction		MEP			Design									
Required	11	3	3	3	2	Water Efficiency														
Required	6	1	1	0	4	Outdoor Water Use Reduction		Landscpe			Design									
Required	6	1	1	0	4	Indoor Water Use Reduction		MEP			Design									
Required	2	1	1	0	2	Building-Level Water Metering		Owner			Design									
Required	6	1	2	3	2	Outdoor Water Use Reduction 50% / 100%	x	Landscpe			Design									
Required	2	2	0	0	2	Indoor Water Use Reduction	x	MEP			Design									
Required	1	1	0	0	1	Cooling Tower Water Use	x	MEP			Design									
Required	1	1	0	0	1	Water Metering		Owner			Design									
Required	33	6	11	16	0	Energy & Atmosphere														
Required	6	3	3	0	3	Fundamental Commissioning and Verification		CxA			Constr									
Required	18	6	6	6	6	Minimum Energy Performance 2% minimum above ASHRAE 90.1-2010		EM			Design									
Required	6	3	3	0	3	Building-Level Energy Metering		Owner			Design									
Required	6	3	3	0	3	Fundamental Refrigerant Management		MEP			Design									
Required	18	6	6	6	6	Enhanced Commissioning	x	CxA	Option 1 - path 1.		Constr									
Required	1	1	0	0	1	Optimize Energy Performance		EM			Design									
Required	2	2	0	0	2	Advanced Energy Metering		MEP			Design									
Required	3	3	0	0	3	Demand Response		Owner			Constr									
Required	1	1	0	0	1	Renewable Energy Production		MEP			Design									
Required	2	2	0	0	2	Enhanced Refrigerant Management		Owner			Constr									
Required	2	2	0	0	2	Green Power and Carbon Offsets		Owner			Constr									



LEED-BD+C: NC v4/v4.1 Project Scorecard

Eisenhower Golf Course Clubhouse

Date:

Credit Strategy Phase

Possible Yes Y? NP? No

RP v4.1 Assignee

Credit Requirements

Notes and Action Items

Compliance

Verified

LEED Online

Status

Quality

Control

GBCI Response

13	4	1	3	5	Materials & Resources	Architect	LEED Phase	GBCI
Required					Storage & Collection of Recyclables	Architect	Design	
Required					Construction and Demolition Waste Management Planning	CM	Constr	
5		5			Building Life-Cycle Impact Reduction	Architect	Constr	
2	1	1			Building Product Disclosure and Optimization - EPD	Arch./CM	Constr	
2	1	1			Building Product Disclosure and Optimization - Sourcing of Raw Materials	Arch./CM	Constr	
2	1	1			Building Product Disclosure and Optimization - Materials Ingredients	Arch./CM	Constr	
2	1	1			Construction and Demolition Waste Management 50% / 75%	CM	Constr	
16	4	7	4	1	Indoor Environmental Quality			
Required					Minimum Air Quality Performance (ASHRAE 62.2 2010)	MEP	Design	
Required					Environmental Tobacco Smoke Control	Architect	Design	
2	1	1			Enhanced Indoor Air Quality Strategies	MEP	Design	
3	2	1			Low-Emitting Materials	Arch./CM	Constr	
1	1				Construction IAQ Management Plan	Contractor	Constr	
2		2			Indoor Air Quality Assessment	Contractor	Constr	
1		1			Thermal Comfort (ASHRAE 55-2010)	MEP	Design	
2		2			Interior Lighting	MEP	Design	
3		3			Daylighting	Architect	Design	
1		1			Quality Views	Architect	Design	
1		1			Acoustic Performance	Architect	Design	
6	3	3	0	0	Innovation in Design			
1		1			Innovation: Exemplary - TBD	Team	Innovation	
1		1			Innovation: Exemplary - TBD	Team	Innovation	
1		1			Innovation: Purchasing, Lamps	Team	Innovation	
1		1			Innovation: TBD	Team	Innovation	
1		1			Pilot: Integrative Analysis of Building Materials	Team	Innovation	
1		1			LEED™ Accredited Professional	Lorax	Innovation	
4	0	4	0	0	Regional Priority Credits			
1		1			Regional Priority: Indoor Water Use Reduction, (3pts)		RP	
1		1			Regional Priority: Reduced Parking Footprint, (1pt)		RP	
1		1			Regional Priority: Rainwater Management, (3pts)		RP	
1		1			Regional Priority: Enhanced Commissioning, (5pts)		RP	
110	26	31	33	20	LEED Certified			
Color Key:					40-49 LEED Certified Silver			
Not Pursuing					50-59 LEED Certified Gold			
					60-79 LEED Certified Platinum			
					80+ LEED Certified Platinum			

General Project Info:

Project Address: 1576 Generals Hwy, Crownsville, MD 21032

Awarded Point Summary

Design: 0
 Construction: 0
 Innovation: 0
 Regional: 0

Project Team:

Owner: AACO
 Architect: WGM
 Civil: Bay Engineering
 MEP: Kleinfelder
 Energy Modeler:
 Commissioning:
 General Contractor:

Project Schedule:

Planning
 Schematic Design 10.1.2022
 Design Development
 Construction Docs
 Bid
 Construction
 Occupancy

requisites	Design	Constr.	Innov.	RP
Anticipated	0	0	0	0
Clarification	0	0	0	0
Approved	0	0	0	0
Awarded	0	0	0	0
Denied	0	0	0	0
Deferred	0	0	0	0
Total Points Awarded: 0				

7 – Fire Protection and Hazards

FIRE PROTECTION DESIGN

Prepared by EBL Engineers

FIRE SUPPRESSION SYSTEMS

The new fire sprinkler system shall be designed and specified in accordance with the following codes and standards, as amended by Anne Arundel County:

- 2018 International Building Code (IBC)
- 2018 International Mechanical Code (IMC)
- 2018 NFPA 1 Fire Code
- 2016 NFPA 13: Standard for the Installation of Sprinkler Systems
- 2016 NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection
- 2017 NFPA 70: National Electrical Code (NEC)
- 2016 NFPA 72: National Fire Alarm and Signaling Code
- 2018 NFPA 101: Life Safety Code
- ADAAG

The building will be protected throughout by supervised automatic fire sprinkler systems per *National Fire Protection Association (NFPA) 13*, Standard for the Installation of Sprinkler Systems, and *International Building Code (IBC)*®. Per IBC, a standpipe system will not be required throughout the building since the finished floor elevation of the highest floor is not greater than 30 ft above the lowest level of fire department vehicle access.

Water supply to the site is currently provided by an existing ground well which does not provide adequate flow or pressure to meet the anticipated demand of the proposed fire sprinkler systems. Therefore, the proposed new fire sprinklers will need to be supplied by a water storage tank installed at the site with a dedicated fire pump. Final sizing of the water storage tank(s) and fire pump assembly will be determined during the design phase. However, based on our preliminary analysis, we are estimating that the water storage tank(s) will have a minimum capacity of 40,000 gallons and the electric-driven horizontal centrifugal fire pump will have a rated capacity of 500 gpm at 60 psi. It is proposed that a new pump house structure be constructed adjacent to the main building with a fire pump installed at the same elevation as the underground storage tank(s). The proposed new wet pipe fire sprinkler systems serving the lower and upper levels of the building and the dry pipe system serving the exterior cart wash area will be supplied by a new water service piping extending from the fire pump house to the main building. The fire sprinkler system hydraulic design criteria will be specified according to the occupancy hazard classification requirements of NFPA 13. Additional hose stream allowances will be included in the hydraulic design. s

The fire sprinkler system zoning will match the fire alarm system zones. A Fire Department Connection, Storz, will be specified to be located on the building exterior in a location approved by the local fire department.

All the fire sprinkler system components will be specified to be UL Listed or FM Approved as follows:

- Sprinkler heads will be specified to be positioned symmetrically with the ceiling layout.

- Sprinklers be specified in finished ceiling areas quick response type, concealed pendent, with a white finish and uncoated brass sprinklers will be specified in exposed construction areas.
- Sprinkler heads in areas where heads may be damaged (i.e. closets, underneath mechanical equipment, etc.) will be specified to have sprinkler head guards.
- All pipe will be specified to be black steel per *NFPA 13*.
- Piping 2-1/2" and larger will be Schedule 10 per *NFPA 13* and piping 2" and smaller will be threadable piping, minimum schedule 30, per *NFPA 13*.
- Sprinkler piping will be specified to be concealed in all finished ceiling areas and exposed in exposed construction areas.
- A new backflow prevention assembly will be provided at the sprinkler riser.
- The fire pump monitoring points, fire protection water storage tank monitoring points and sprinkler systems will be monitored for sprinkler flow and valve supervisory functions by the building fire alarm system. System status will be annunciated on the building fire alarm control panel.

FIRE ALARM AND DETECTION SYSTEM

The new fire alarm system shall be designed and specified in accordance with the following codes and standards, as amended by Anne Arundel County:

- 2018 International Building Code (IBC)
- 2018 International Mechanical Code (IMC)
- 2017 NFPA 70: National Electrical Code (NEC)
- 2016 NFPA 72: National Fire Alarm and Signaling Code
- 2018 NFPA 90A: Standard for the Installation of Air Conditioning and Ventilating Systems
- 2018 NFPA 101: Life Safety Code
- ADAAG

A new digital addressable fire alarm system with voice evacuation (Manufacturer: Silent Knight, Model 6820-EVS) will be provided, per the *International Building Code (IBC)*, *National Fire Protection Association (NFPA) 101 – Life Safety Code®*, *(NFPA) 72 - National Fire Alarm and Signaling Code®*, *NFPA 70 – National Electrical Code®*, *the ADA*, and local jurisdiction requirements. The system shall include the ability to transmit alarms to the designated UL Central Station who is currently under contract with AACO DPW. In addition, the system shall incorporate the monitoring of all initiating and notification appliance devices throughout the building:

The system shall be designed and specified, at minimum, to include the following devices/equipment:

- The new system shall be tested and accepted in accordance with the equipment manufacturer's listing criteria, *Article 760 – NFPA 70, NFPA 72*, and the *IBC®*.

- The fire alarm control panel (Silent Knight, Model 6820), and fire alarm addressable and conventional power booster panels shall be located, as necessary, in Main Electrical Room. These panel(s) shall control the following sub-systems:
 - Notification appliance (combination horn/strobe, and strobe) devices.
 - Smoke Detection, Carbon Monoxide Detection, and Control System to monitor initiation devices; annunciate the alarm location; and send alarm, supervisory, and trouble signals to the remote monitoring station.
- Fire pump monitoring points and fire protection water storage tank monitoring points shall be included in the fire alarm annunciator panels.
- Fire sprinkler valve tamper supervisory switch and waterflow switch displays shall be included in the fire alarm annunciator panels.
- Emergency generator monitoring points shall be included in the fire alarm annunciator panels.
- Smoke sensors (detectors) shall be provided in areas where doors are held open, as required, with magnetic door hold open devices.
 - Smoke sensors (detectors) shall be in areas that contain control unit(s) to provide notification of fire at that location. Smoke sensors (detectors) with sounder bases shall be in Bunk Rooms to provide notification of fire at that location.
- Duct smoke detectors shall be provided in HVAC systems over 2,000 cfm capacity to detect the presence of smoke and to automatically stop the HVAC fan as well as release fire/smoke dampers. The duct smoke detectors shall be electrically interconnected to the fire alarm system and located as follows:
 - In the return air system prior to the connection to a common return and prior to any recirculating or fresh air inlet connection in air return systems having a capacity greater than 15,000 cfm.
 - In the return and supply system in HVAC systems having a capacity greater than 15,000 cfm.
 - Within 5 feet of fire/smoke dampers.
- Manual pull stations shall be located as follows:
 - Manual pull stations shall be located at each story not more than 5 ft. from each exit.
 - Manual pull stations shall be mounted on the wall and located not more than 4 ft. above finished floor.
- Initiating or Activation:
 - Activation of the fire alarm system shall occur by any or all of the following means of initiation:

- Manual pull stations.
- Automatic detection of heat, smoke and/or carbon monoxide.
- Extinguishing system operation (sprinkler water flow/pressure switch alarm, first responder radio amplification system monitoring points etc.).
- The activation of any detector shall initiate the notification appliance devices in all areas of the building to place into operation any equipment installed to prevent the re-circulating of smoke.
 - Duct smoke detectors used for HVAC systems shall shut down associated units and annunciate the building fire alarm system as a supervisory alarm.
 - The operation of any carbon monoxide detector shall annunciate the building fire alarm system as a supervisory alarm.
 - The operation of any first responder radio amplification system monitoring points shall annunciate the building fire alarm system as a supervisory condition.
 - The operation of any sprinkler waterflow device, smoke sensor (detector), or manual pull station shall automatically activate the audio/visual and visual (speaker/strobe, speaker, and strobe) alarm system, and release all magnetically operated door hold-open devices.
 - The fire alarm devices (manual pull stations and building evacuation devices) shall be flush-mounted with conduit to be concealed in walls and above ceilings.
- Occupant Notification:
 - ADA-compliant fire alarm occupant notification and signaling devices, connected to the fire alarm circuits, shall be provided per *NFPA 72*.
- Annunciation:
 - The remote fire alarm LCD annunciator panel as well as a remote fire alarm graphic annunciator panel shall be in the Main Entrance.
- Fire Alarm Wiring:
 - All new fire alarm system wiring will be minimum 14 AWG THHN solid installed in 3/4-inch conduit minimum.
 - The following wiring color code will be used in accordance with AACO DPW Fire Alarm Requirements:
 - SLC Loop: Red (+), Black (-)
 - Notification appliance (strobe) circuits:

Circuit #	(+)	(-)
1	Blue	White
2	Blue/Black tracer	White/Black tracer
3	Blue/Yellow tracer	White/Yellow tracer
4	Blue/Red tracer	White/Red tracer

5	Blue/Green Tracer	White/Green Tracer
6	Blue/Orange tracer	White/Orange tracer
7	Blue/Grey tracer	White/Grey tracer

- Voice evacuation Red (+) Black (-) with red jacket notification appliance circuits (speaker) circuit: West Penn Model 60990BS cable
 - Resettable Power (duct smoke detectors and CO detectors): Purple (+), Brown (-)
 - Door holders: Yellow (+), Yellow/black tracer (-)
 - Use S-BUS Grey (A) Orange (B) Pink (+) Green (-) for the S-Bus.
 - Duct Detector Test Switches Grey (test) Green (grd) pink (pilot led) Orange (Alarm Led)
- Distributed Antenna System for Public Safety/First Responder Radio
 - In compliance with the 2018 International Fire Code (IFC) 510.2 and 1103.2, and 2016 NFPA 72-24.5.2, a two-way radio communications enhancement system for emergency responder radio coverage will be provided in the form of a distributed antenna system (DAS) First Responder Radio Amplification System will be specified for the entire building and monitored by the fire alarm system. The distributed antenna system for public safety radio will include a head-end repeater, booster, or combiner, taps, splitters, couplers, or filters as required, ceiling mounted interior antennas, roof mounted exterior antenna with lightning/surge protection, and associated coaxial or fiber optic cabling.

8 – Food Service

Food Service

Prepared by Nyikos Garcia

OVERVIEW

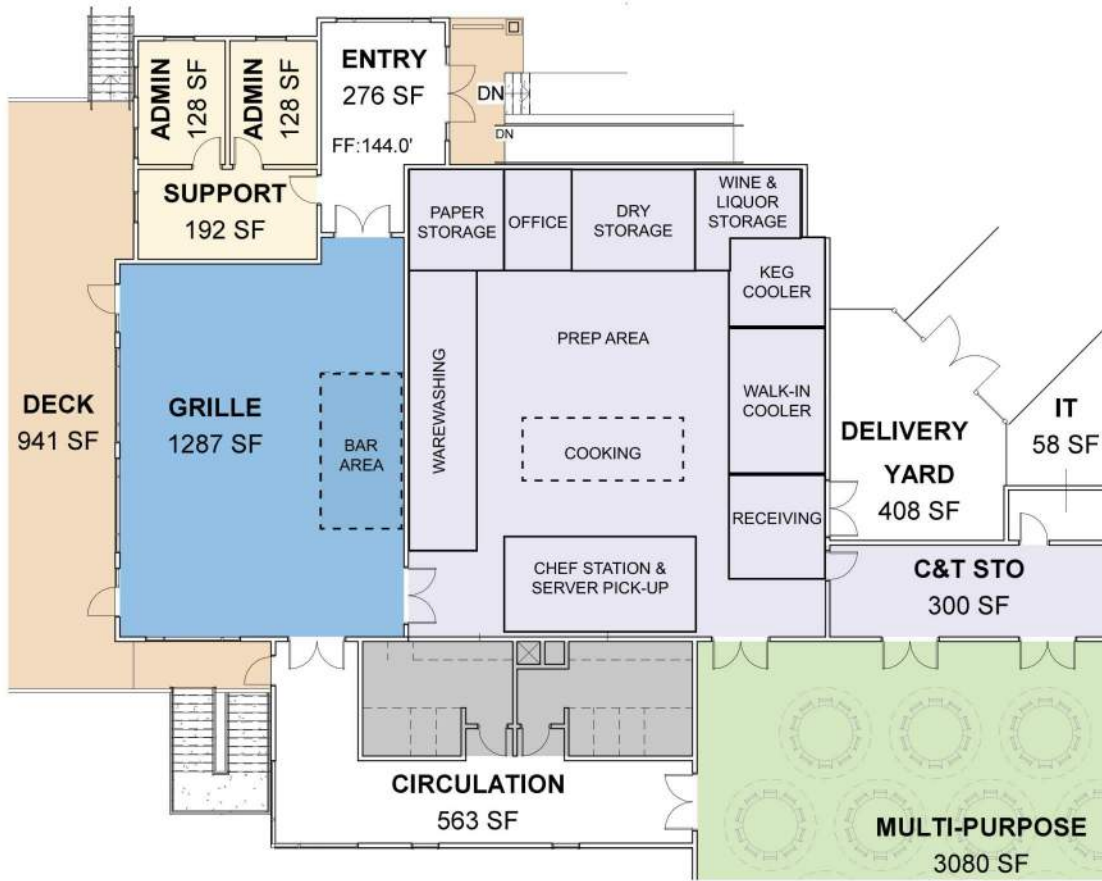
Food and beverage supplies will be received into the building through a central loading dock. Food supplies will be stored in cold, freezer & dry storage. Beer kegs, cans & bottles will be stored in a dedicated walk-in beer cooler. Beer kegs will be equipped with dispensing pumps to pump beer to the bar located in the dining room. Adjacent will be secure wine & Liquor storage. A storage room dedicated for non-food & paper supplies will be adjacent to cold & dry storage.

The new kitchen will be equipped to operate as an on-site full-service preparation/cooking facility capable of serving lunch and dinner meals to their customers as well as catered events. Meals will be served on re-usable dinnerware. Plates and utensils will be washed and sanitized through a high-temperature dish machine with a condensate removal hood. The facility will be equipped with all-new commercial-grade appliances meeting current N.S.F. requirements and installed according to local governing health code agencies. Appliances include reach-in refrigerator/freezer, fry station, range, griddle, salamander, combi-ovens, sandwich prep-station, ice machine, walk-in cooler and a beer cooler. All countertops and work surfaces will be of durable stainless-steel finishes and mounted on legs or swivel casters to promote sanitation and ease of cleaning in the kitchen area. The bar area will be U-shape with glass washing, under-counter refrigeration, beer and soda dispensers. Bar finishes will be chosen by the architect. Bulk refrigerated food will be stored on wire shelving in a walk-in cooler/freezer. Cooking equipment will require a grease style exhaust hood with fire suppression system.

A possible dumbwaiter located at this level will provide vertical transport of supplies from the main floor down to The Turn (Snack Bar) on the lower level. The Turn will provide members and guests with quick access to food, beverage and snacks. Alcoholic beverages will be available to adults only.

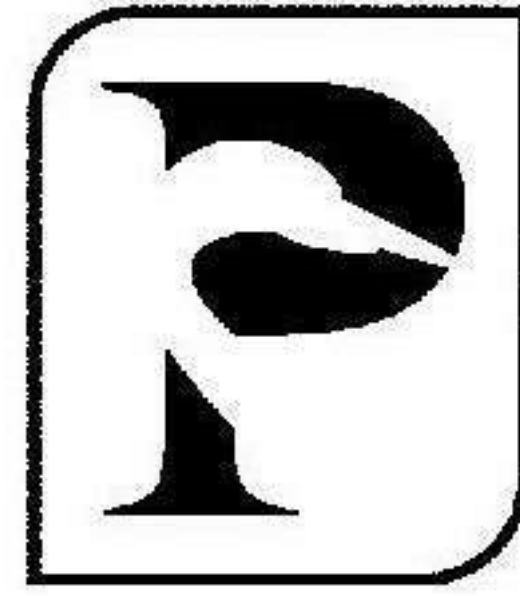
MAIN KITCHEN & BAR AREAS

- Receiving
- Dry Storage
- Walk-in Cooler/Keg Cooler Combo Storage
- Paper Storage
- Secure Wine/Liquor Storage
- Food Service Manager/Chef's Office
- Main Preparation/Cooking Area
- Dish Machine & Pot Washing Area
- Staff Locker Area
- Staff Toilet (Unisex)
- Janitor Closet
- Bar Area (The Grille Room)
- The Turn (Snack Bar)



EISENHOWER KITCHEN CONCEPT

A. Site, Architectural, & Structural SD Phase Drawings



THE PRESERVE
AT EISENHOWER GOLF COURSE

The Preserve at Eisenhower Clubhouse

1576 Generals Hwy Crownsville, MD 21032

P570205 - SCHEMATIC DESIGN SUBMISSION



Architects/Interiors/Prime Consultant
Wheeler Goodman Masek & Associates, Inc.
165 Log Canoe Circle, Suite B1
Stevensville, MD 21666

Structural Engineers
Watkins Partnership, Inc.
3032 Mitchellville Rd,
Bowie, MD 20716

Fire Protection Engineers
EBL Engineers, LLC
8005 Harford Road
Baltimore, MD 21234

Sustainability & Commissioning
Lorax Partnerships, LLC
16 W. Hamilton Street
Baltimore, MD 21201

Site Engineers/Environmental
Bay Engineering, Inc.
2661 Riva Road, Building 800
Annapolis, MD 21401

Construction Cost Estimating
CostCon Construction Services, Inc.
1502 Wild Cranberry Drive
Crownsville, MD 21032

M/E/P Engineers
Century Engineering
10710 Gilroy Road
Hunt Valley, MD 21031

Food Service Consultant
Nyikos Garcia
7146 Starmount Ct
New Market, MD 21774

NOT FOR CONSTRUCTION

SHEET LIST	
SHEET NO.	SHEET NAME
GENERAL	
CS	COVER SHEET
CIVIL	
C1	EXISTING PLAN
C2	SITE PLAN
C3	CONCEPT STORMWATER MANAGEMENT PLAN
C4	RENDERED SITE PLAN
ARCHITECTURE	
A1.1	FLOOR & ROOF PLANS
A2.1	ELEVATIONS, SECTIONS & 3D VIEWS
STRUCTURAL	
S1.0	STRUCTURAL DIAGRAMS

No.	Description	Date	BY	DATE
NO	REVISION DESCRIPTION			



REVISED		APPROVED		DATE		DATE		DATE		DATE		DATE	
DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY	DATE	BY
		CHIEF ENGINEER		PROJECT MANAGER		CHECKED BY:		DRAWN BY:		SHEET: OF		COVER SHEET	
		APPROVED		APPROVED		PROJECT #:		PROJECT #:		CONTRACT #:		The Preserve at Eisenhower Clubhouse	
		ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY		1576 Generals Hwy		1576 Generals Hwy		Crownsville, MD 21032		Crownsville, MD 21032	

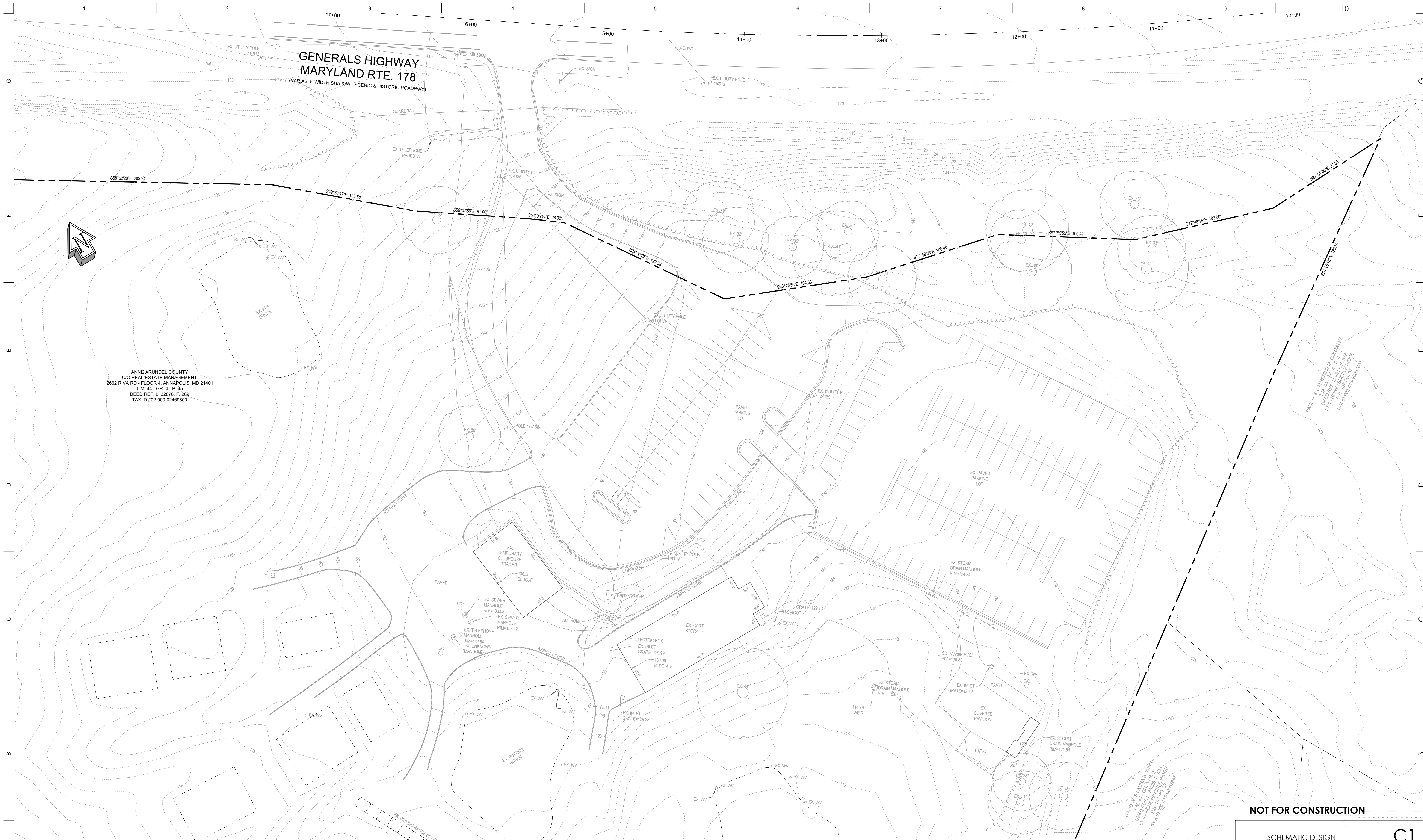
SCHEMATIC DESIGN

CS

11/14/22
202211.1

The Preserve at Eisenhower Clubhouse
1576 Generals Hwy
Crownsville, MD 21032

PLOTTED: Nov 10, 2022 - 3:25pm



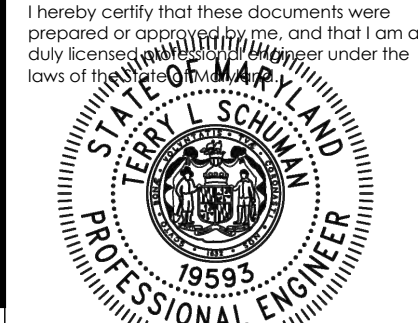
NOT FOR CONSTRUCTION

NO		REVISION DESCRIPTION	BY	DATE	ANNE ARUNDEL COUNTY		DEPARTMENT OF PUBLIC WORKS		SCHEMATIC DESIGN		C1
					11/14/22		22-8449				
					SCALE: 1"=30'		DRAWN BY: SCN		EXISTING PLAN		
					CHECKED BY: TS		SHEET: 1 OF 1		THE PRESERVE AT EISENHOWER CLUBHOUSE		
					PROJECT # : P570200		CONTRACT # : P570205		TAX MAP 44, GRID 4, PARCEL 45 1576 GENERALS HIGHWAY CROWDVILLE, MARYLAND 21032 SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS		

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 2641 Riva Road, Building 800
 Annapolis, Maryland 21401
 410.897.9290
 email: info@bayengineering.com
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 ARCHITECTURE + INTERIORS
 165 LOG CANOE CIRCLE - SUITE B1
 STEVENSVILLE, MARYLAND 21166
 410.263.6787 www.wgm-arch.com



I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.
 Terry Schuman Date 3/31/24
 19593 Exp. Date
 License No.

REVISED DATE	APPROVED BY	DATE	APPROVED	DATE
	CHIEF ENGINEER		PROJECT MANAGER	
	APPROVED		APPROVED	
	ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY	

SCALE: 1"=30'	DRAWN BY: SCN
CHECKED BY: TS	SHEET: 1 OF 1
PROJECT # : P570200	CONTRACT # : P570205

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F:\22-8449 Eisenhower CC - New Clubhouse\Drawing Files\Concepts\22-8449 EISENHOWER-GOLF-BASE-CONCEPTS.dwg

**GENERALS HIGHWAY
MARYLAND RTE. 178**
(VARIABLE WIDTH SHA.R/W - SCENIC & HISTORIC ROADWAY)

**UPPER PARKING LOT
60 SPACES**

**LOWER PARKING LOT
142 SPACES**

PARKING SUMMARY

PARKING SUMMARY PER A.A. COUNTY CODE ARTICLE 18-3-104

USE	# SEATS / HOLES	PARKING REQ.	PARKING REQ.	* JOINT USE PARKING REQ.
GOLF COURSE	18 HOLES	8 SP / HOLE	144 SPACES	144
BANQUET HALL	150 SEATS	1 SP / 3 SEATS	50 SPACES	25 *
SNACK BAR	60 SEATS	1 SP / 3 SEATS	20 SPACES	10
			214 SPACES	179 SPACES

TOTAL PARKING PROVIDED = 202 SPACES
 TOTAL ADA PARKING REQUIRED = 7 SPACES (1 OF WHICH MUST BE VAN ACCESSIBLE)
 TOTAL ADA PARKING PROVIDED = 9 SPACES (4 OF WHICH ARE VAN ACCESSIBLE)

* PER A.A. COUNTY CODE ARTICLE 18-3-105(B) JOINT USE PARKING IS ALLOWED IF THE USES OPERATE DURING OVERLAPPING TIME PERIODS AND THE PARKING SPACES PROVIDED ARE 100% OF THE NUMBER REQUIRED FOR THE GREATER GENERATOR PLUS 50% OF THE NUMBER REQUIRED FOR THE SECONDARY GENERATORS

202 TOTAL SPACES

NOT FOR CONSTRUCTION

NO	REVISION DESCRIPTION	BY	DATE

Bay Engineering Inc.
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 2641 Riva Road, Building 800
 Annapolis, Maryland 21401
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 410.897.9295 fax
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WGM
 ARCHITECTURE
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 165 LOG CANOE CIRCLE - SUITE B1
 STEVENSVILLE, MARYLAND 21666
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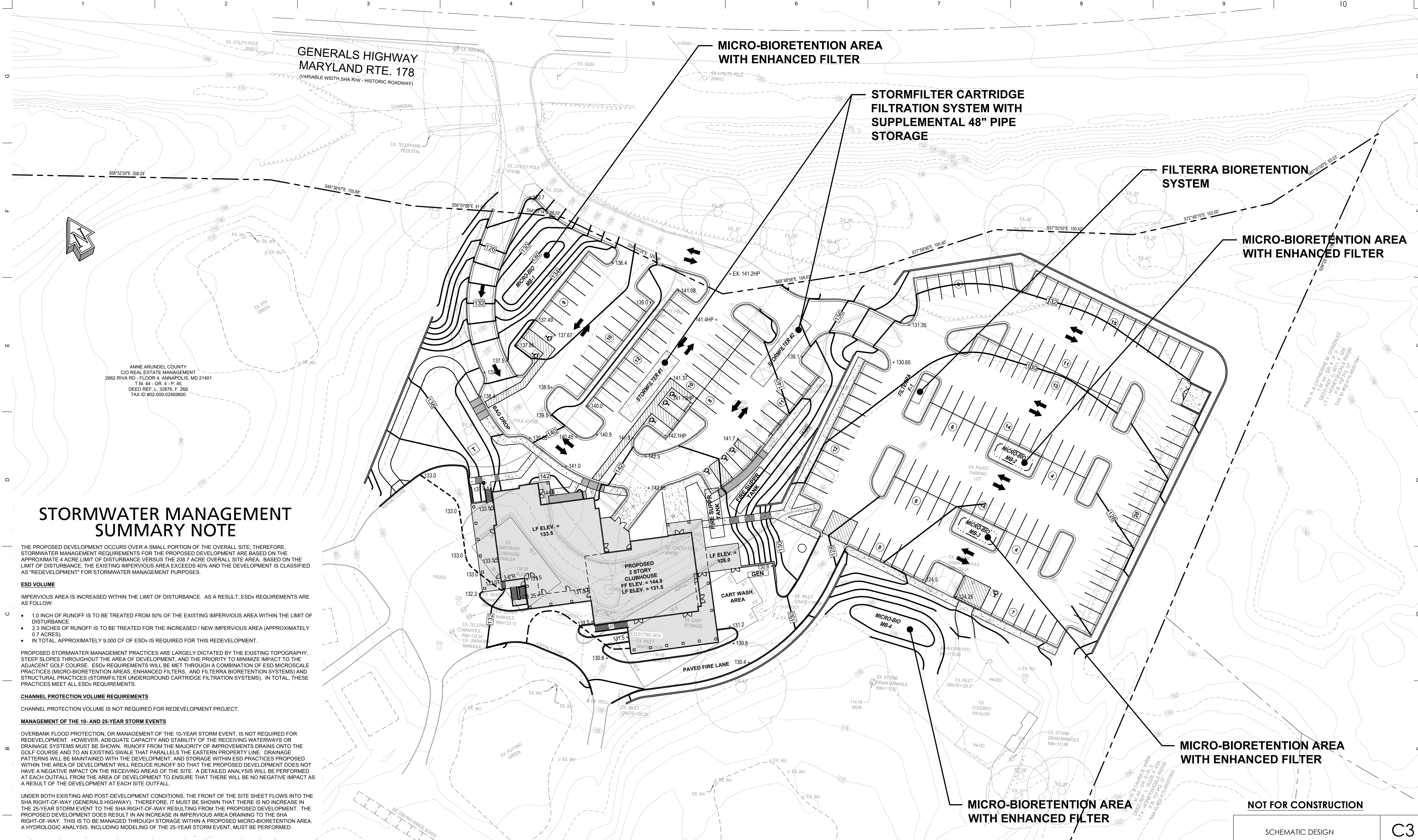
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

 Terry Schuman Date 3/31/24
 License No. 19593 Exp. Date 3/31/24

REVISED DATE		APPROVED BY	DATE	APPROVED DATE		APPROVED DATE		SCALE: 1"=30'	SITE PLAN
		CHIEF ENGINEER APPROVED		PROJECT MANAGER APPROVED				DRAWN BY: SCN	
		ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY				CHECKED BY: TS SHEET: 1 OF 1 PROJECT #: P570200 CONTRACT #: P570205	
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS								11/14/22	C2
THE PRESERVE AT EISENHOWER CLUBHOUSE								TAX MAP 44, GRID 4, PARCEL 45 1576 GENERALS HIGHWAY CROWNSVILLE, MARYLAND 21032 SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS	22-8449

PLOTTED: Nov 08, 2022 - 11:24am

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STORMWATER MANAGEMENT SUMMARY NOTE

THE PROPOSED DEVELOPMENT OCCURS OVER A SMALL PORTION OF THE OVERALL SITE, THEREFORE, STORMWATER MANAGEMENT REQUIREMENTS FOR THE PROPOSED DEVELOPMENT ARE BASED ON THE APPROXIMATE 4 ACRE LIMIT OF DISTURBANCE VERSUS THE 208.7 ACRE OVERALL SITE AREA. BASED ON THE LIMIT OF DISTURBANCE, THE EXISTING IMPERVIOUS AREA EXCEEDS 40% AND THE DEVELOPMENT IS CLASSIFIED AS "REDEVELOPMENT" FOR STORMWATER MANAGEMENT PURPOSES.

ESD VOLUME

IMPERVIOUS AREA IS INCREASED WITHIN THE LIMIT OF DISTURBANCE. AS A RESULT, ESDv REQUIREMENTS ARE AS FOLLOWS:

- 1.0 INCH OF RUNOFF IS TO BE TREATED FROM 50% OF THE EXISTING IMPERVIOUS AREA WITHIN THE LIMIT OF DISTURBANCE.
- 2.3 INCHES OF RUNOFF IS TO BE TREATED FOR THE INCREASED / NEW IMPERVIOUS AREA (APPROXIMATELY 0.7 ACRES).
- IN TOTAL, APPROXIMATELY 9,000 CF OF ESDv IS REQUIRED FOR THIS REDEVELOPMENT.

PROPOSED STORMWATER MANAGEMENT PRACTICES ARE LARGELY DICTATED BY THE EXISTING TOPOGRAPHY, STEEP SLOPES THROUGHOUT THE AREA OF DEVELOPMENT, AND THE PRIORITY TO MINIMIZE IMPACT TO THE ADJACENT GOLF COURSE. ESDv REQUIREMENTS WILL BE MET THROUGH A COMBINATION OF ESD MICROSCALE PRACTICES (MICRO-BIORETENTION AREAS, ENHANCED FILTERS, AND FILTERRA BIORETENTION SYSTEMS) AND STRUCTURAL PRACTICES (STORMFILTER UNDERGROUND CARTRIDGE FILTRATION SYSTEMS). IN TOTAL, THESE PRACTICES MEET ALL ESDv REQUIREMENTS.

CHANNEL PROTECTION VOLUME REQUIREMENTS

CHANNEL PROTECTION VOLUME IS NOT REQUIRED FOR REDEVELOPMENT PROJECT.

MANAGEMENT OF THE 10- AND 25-YEAR STORM EVENTS

OVERBANK FLOOD PROTECTION, OR MANAGEMENT OF THE 10-YEAR STORM EVENT, IS NOT REQUIRED FOR REDEVELOPMENT. HOWEVER, ADEQUATE CAPACITY AND STABILITY OF THE RECEIVING WATERWAYS OR DRAINAGE SYSTEMS MUST BE SHOWN. RUNOFF FROM THE MAJORITY OF IMPROVEMENTS DRAINS ONTO THE GOLF COURSE AND TO AN EXISTING SWALE THAT PARALLELS THE EASTERN PROPERTY LINE. DRAINAGE PATTERNS WILL BE MAINTAINED WITH THE DEVELOPMENT, AND STORAGE WITHIN ESD PRACTICES PROPOSED WITHIN THE AREA OF DEVELOPMENT WILL REDUCE RUNOFF SO THAT THE PROPOSED DEVELOPMENT DOES NOT HAVE A NEGATIVE IMPACT ON THE RECEIVING AREAS OF THE SITE. A DETAILED ANALYSIS WILL BE PERFORMED AT EACH OUTFALL FROM THE AREA OF DEVELOPMENT TO ENSURE THAT THERE WILL BE NO NEGATIVE IMPACT AS A RESULT OF THE DEVELOPMENT AT EACH SITE OUTFALL.

UNDER BOTH EXISTING AND POST-DEVELOPMENT CONDITIONS, THE FRONT OF THE SITE SHEET FLOWS INTO THE SHA RIGHT-OF-WAY (GENERALS HIGHWAY). THEREFORE, IT MUST BE SHOWN THAT THERE IS NO INCREASE IN THE 25-YEAR STORM EVENT TO THE SHA RIGHT-OF-WAY RESULTING FROM THE PROPOSED DEVELOPMENT. THE PROPOSED DEVELOPMENT DOES RESULT IN AN INCREASE IN IMPERVIOUS AREA DRAINING TO THE SHA RIGHT-OF-WAY. THIS IS TO BE MANAGED THROUGH STORAGE WITHIN A PROPOSED MICRO-BIORETENTION AREA. A HYDROLOGIC ANALYSIS, INCLUDING MODELING OF THE 25-YEAR STORM EVENT, MUST BE PERFORMED.

ANNE ARUNDEL COUNTY
 CO REAL ESTATE MANAGEMENT
 2662 RIVA RD - FLOOR 4, ANNAPOLIS, MD 21401
 T.M. 44 - GR. 4 - P. 45
 DEED REF. L. 32876, F. 269
 TAX ID #02-000-02498800

SCHEMATIC DESIGN	C3
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NO	REVISION DESCRIPTION	BY	DATE

Bay Engineering Inc.
 Engineers, Planners and Surveyors
 2641 Riva Road, Building 800
 Annapolis, Maryland 21401
 410.897.9200
 410.897.9295 fax
 email: info@bayengineering.com
 www.bayengineering.com

WGM
 ARCHITECTURE
 + INTERIORS
 WHEELER GOODMAN MASEK
 165 LOG CANOE CIRCLE - SUITE B1
 STEVENSVILLE, MARYLAND 21666
 410.263.6787 www.wgm-arch.com

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.

 Terry Schuman Date 3/31/24
 19593 Exp. Date
 License No.

REVISED DATE	APPROVED BY	DATE	APPROVED DATE	DATE

ANNE ARUNDEL COUNTY
 DEPARTMENT OF PUBLIC WORKS
 SCALE: 1"=30'
 DRAWN BY: SCN
 CHECKED BY: TS
 SHEET: 1 OF 1
 PROJECT #: P570200
 CONTRACT #: P570205

ANNE ARUNDEL COUNTY	11/14/22
DEPARTMENT OF PUBLIC WORKS	22-8449
CONCEPT STORMWATER MANAGEMENT PLAN	
THE PRESERVE AT EISENHOWER CLUBHOUSE	
TAX MAP 44, GRID 4, PARCEL 45 1576 GENERALS HIGHWAY CROWNOVILLE, MARYLAND 21032 SECOND DISTRICT ANNE ARUNDEL COUNTY ZONED OS	

PLOTTED: Nov 07, 2022 - 9:22am

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GENERALS HIGHWAY
MARYLAND RTE. 178
(VARIABLE WIDTH SHA R/W - SCENIC & HISTORIC ROADWAY)



EX. 9TH GREEN

LF ELEV. = 133.5

PROPOSED 2-STORY CLUBHOUSE
FF ELEV. = 144.0
LF ELEV. = 131.5

LF ELEV. = 128.0

CART WASH AREA

PAVED FIRE LANE

EX. PUTTING GREEN

EX. 18TH GREEN

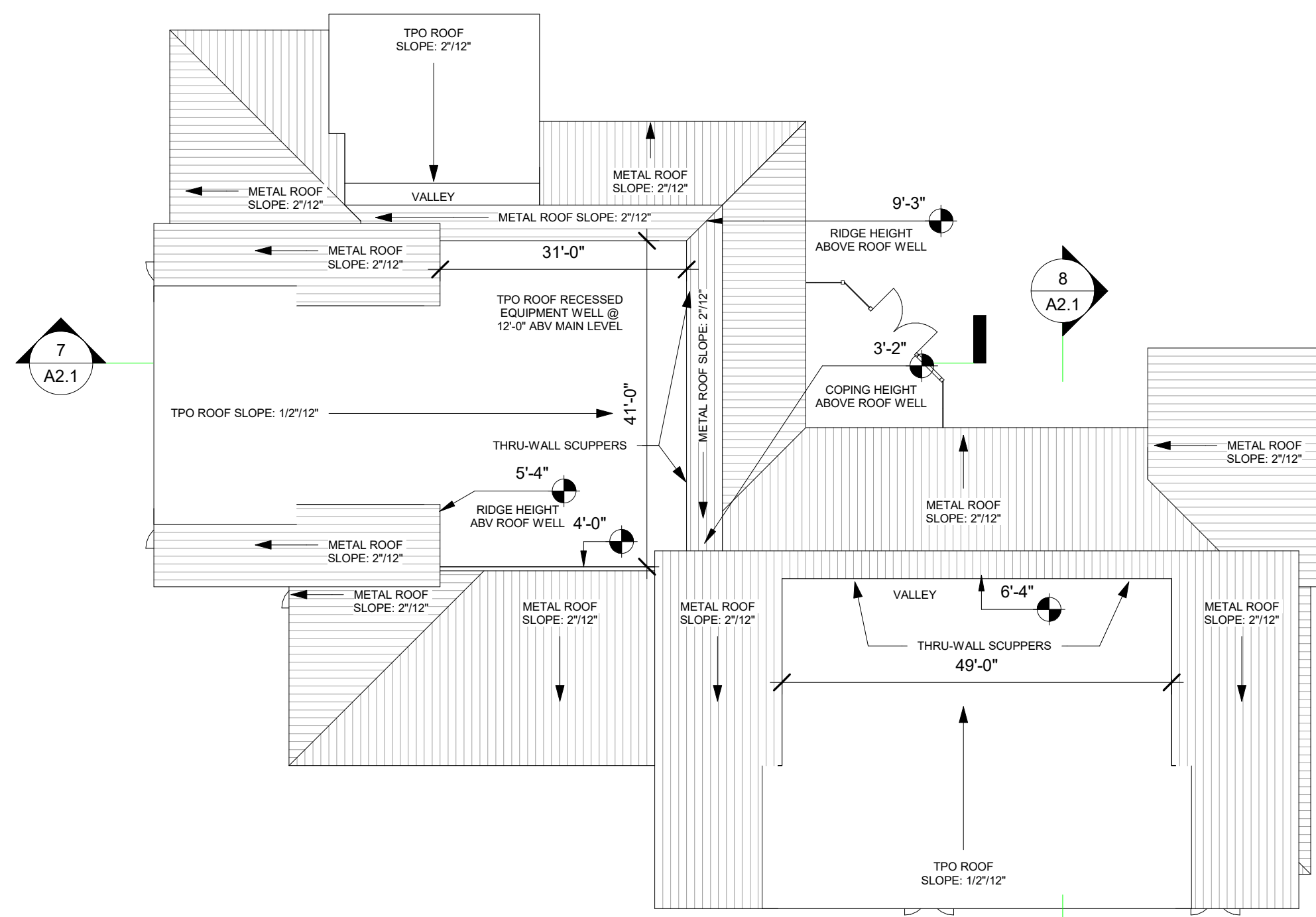
EX. COVERED PAVILION

PATIO

EX. DRIVING RANGE BOXES



THE PRESERVE
AT EISENHOWER GOLF COURSE



3 ROOF
1/16" = 1'-0"

BUILDING CODES
 ANNE ARUNDEL COUNTY BUILDING CODES
 2018 INTERNATIONAL BUILDING CODE (IBC)
 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 2018 INTERNATIONAL MECHANICAL CODE (IMC)
 2018 INTERNATIONAL PLUMBING CODE (IPC)
 1993 AA COUNTY PLUMBING CODE - CHAPTERS 16 & 17
 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
 2018 FIRE CODE (NFPA 1)
 2018 STANDARD FOR PORTABLE FIRE EXTINGUISHERS (NFPA 10)
 2016 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (NFPA 13)
 2017 NATIONAL ELECTRIC CODE (NFPA 70)
 2016 NATIONAL FIRE ALARM & SIGNALING CODE (NFPA 72)
 2018 LIFE SAFETY CODE (NFPA 101)
 2016 STANDARD FOR EMERGENCY & STANDBY POWER SYSTEMS (NFPA 110)
 2009 ICC/ANSI A117.1 ACCESSIBLE & USEABLE BUILDINGS & FACILITIES
 2010 AMERICAN WITH DISABILITIES ACT (ADA STANDARDS)

PROJECT DESCRIPTION
 THIS PROJECT INCLUDES A TWO-STORY MIXED OCCUPANCY GOLF COURSE CLUBHOUSE BUILDING. THE UPPER LEVEL IS ASSEMBLY (A-2) RESTAURANT & BANQUET SPACE WITH SUPPORT KITCHEN. THE LOWER LEVEL IS MERCANTILE (M) PRO SHOP & STORAGE (S-1) ELECTRIC GOLF CART STORAGE. THE LOWER LEVEL IS PARTIALLY BELOW GRADE. THE BUILDING IS SERVED BY WELL & SEPTIC AND SPRINKLERED VIA BELOW GRADE WATER TANKS AND EMERGENCY FIRE PUMP ON A DIESEL BACKUP GENERATOR.

CONSTRUCTION TYPE
 THE CONSTRUCTION TYPE SHALL BE VB (5B), NON-PROTECTED (TABLE 602).

FIRE PROTECTION
 BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH IBC SECTION 903.3.1.1

BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC SECTION 907.5.2.2 AND NFPA 101, 12.3.4.3.

GENERAL BUILDING STATISTICS

MIXED-OCCUPANCY, ONE-STORY, UNSEPARATED
 A-2 - ASSEMBLY
 M - MERCANTILE
 S1 - STORAGE

HEIGHT
 ALLOWABLE: 60 FT AND 2 STORIES
 ACTUAL: 35 FT AND 2 STORIES

AREA
 506.2 - ALLOWABLE AREA (PER EQUATION 5-1)

OCCUPANCY	A _g	A _t	NS	I _f
A-2 - ASSEMBLY	28,500 SF =	24,000 + (6,000 x .75)		
M - MERCANTILE	42,750 SF =	36,000 + (9,000 x .75)		
S-1 - STORAGE	42,750 SF =	36,000 + (9,000 x .75)		
ACTUAL AREA:	14,000 SF GROSS FLOOR AREA			

OCCUPANT LOAD - IBC TABLE 1004.5, NFPA TABLE 7.3.1.2

RESTAURANT	15 SF NET	1,287 SF/15 =	86 OCC
OUTDOOR	15 SF NET	941 SF/15 =	63 OCC
BANQUET	15 SF NET	4,616 SF/15 =	206 OCC
OUTDOOR	15 SF NET	1,536 SF/15 =	103 OCC
KITCHEN	200 SF GROSS	2,912 SF/200 =	15 OCC
OFFICE	150 SF GROSS	723 SF/150 =	5 OCC
WAREHOUSE (STO)	500 SF GROSS	4,260 SF/500 =	9 OCC
MERCANTILE	60 SF GROSS	1,771 SF/60 =	30 OCC
STO/STOCK/MECH	300 SF GROSS	1,162 SF/300 =	4 OCC
TOTAL:			521 OCC

MEANS OF EGRESS
 MINIMUM NUMBER OF EXITS - 2
 EXITS PROVIDED - 9 TOTAL

EXITS PER SPACE PER PER SPACE PER TABLE 1006.2.1
 PRO SHOP - 2 EXITS LOCATED 17'-8" APART PER 1/3 x 53' OVERALL

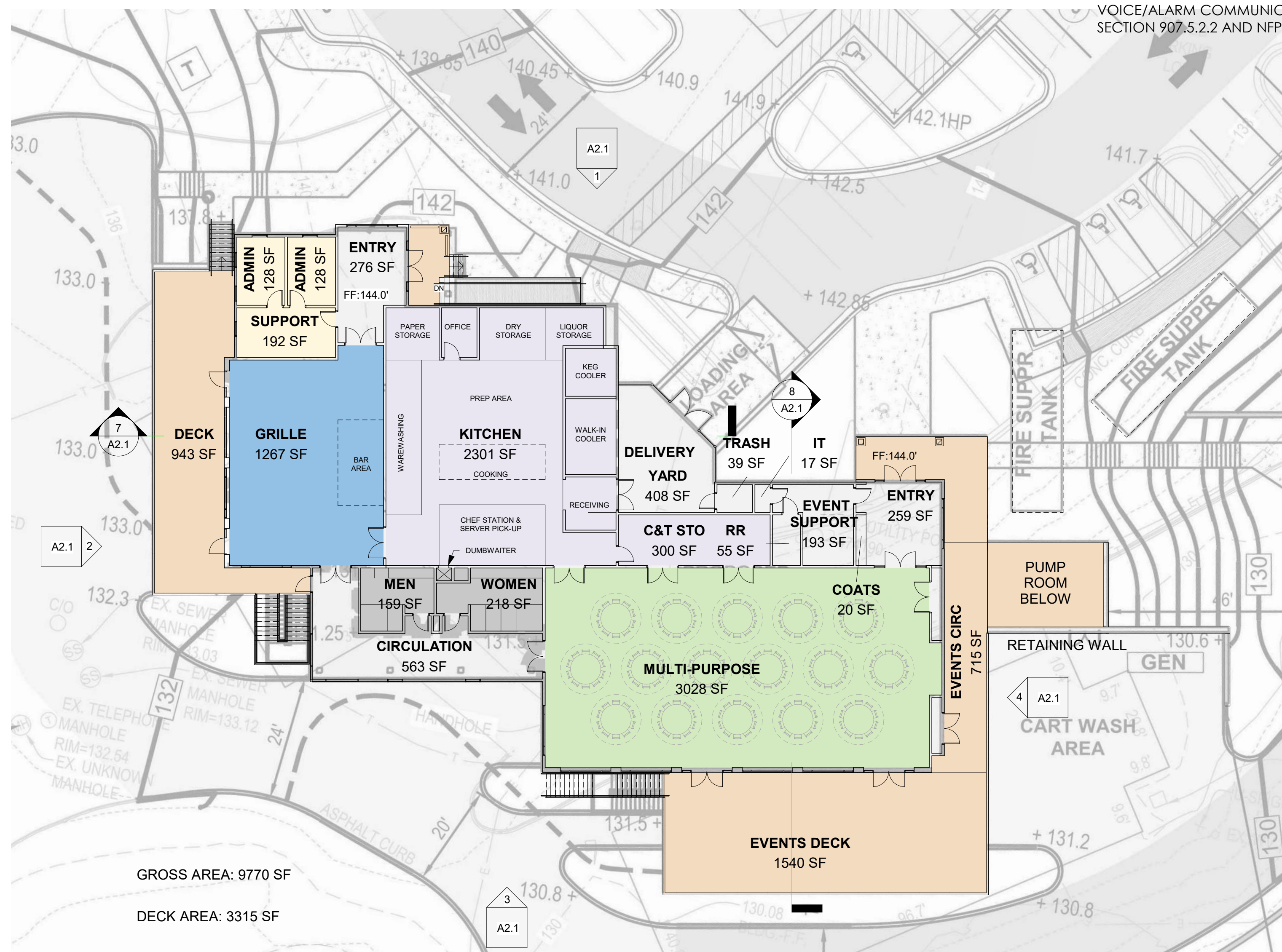
EGRESS CAPACITY (IBC 1005.1, 1008.1.1; NFPA 7.2.1.2.3.2, 7.3.3.1)

DOORS (SECTION 1010)
 32" MIN PER EXIT
 OCCUPANTS X .15" = " REQUIRED
 RESTAURANT
 86 x .15 = 13" REQUIRED **96" PROVIDED**
 BANQUET
 206 x .15 = 32" REQUIRED **128" PROVIDED**
 OVERALL BUILDING
 521 x .15 = 79" REQUIRED **352" PROVIDED**

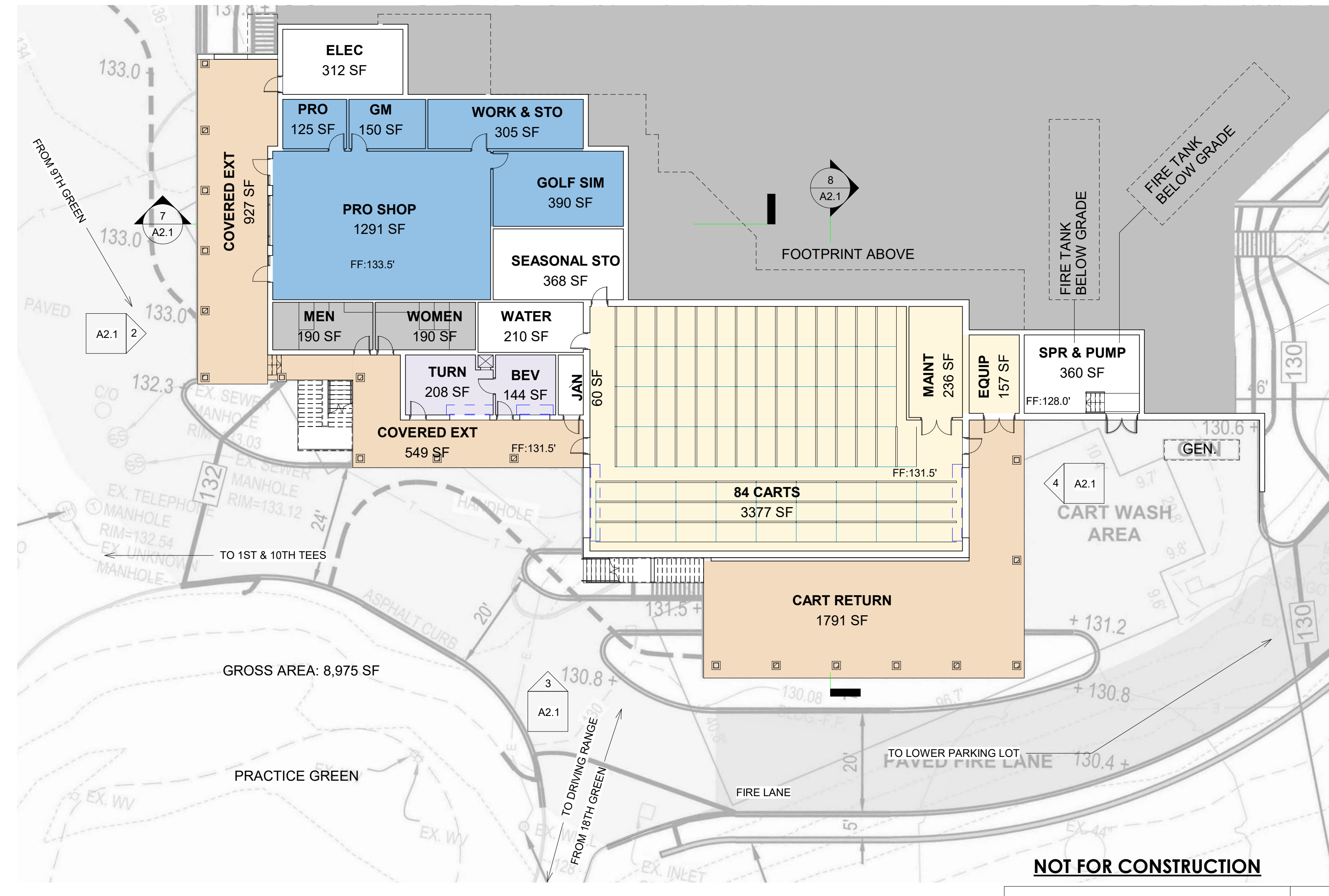
STAIRWAYS (1011) AND EXIT ACCESS STAIRWAYS (SECTION 1019)
 OCCUPANTS X .2" = " REQUIRED
 RESTAURANT 50% INDOOR EGRESS & 100% OUTDOOR
 106 x .2 = 22" REQUIRED **96" PROVIDED**
 BANQUET 50% INDOOR EGRESS & 50% OUTDOOR
 155 x .2 = 1" REQUIRED **48" PROVIDED**

MINIMUM PLUMBING FACILITIES

Occupants	Required	Provided
A-2 & office - 476	4(M)+4(F)WC/4Lav	7WC/2UR/6Lav
M & office - 36	1WC/1Lav	5WC/2UR/4Lav
S-1 - 9	1WC/1Lav	incl. abv.
Total = 521	10WC/6Lav	12WC/2UR/10Lav



1 MAIN LEVEL
1/16" = 1'-0"



2 LOWER LEVEL
1/16" = 1'-0"

No.	Description	Date
NO	REVISION DESCRIPTION	BY DATE

WGM ARCHITECTURE + INTERIORS
 WHEELER GOODMAN MASEK
 165 LOG CANOE CIRCLE - SUITE B1
 STEVENSVILLE, MARYLAND 21666
 410.263.6787 www.wgm-arch.com

CERTIFICATION: I certify that these documents were prepared or approved by me, and that I am a duly licensed architect under the laws of the State of Maryland, license number 13833, expiration date 08-28-2022.

REVISED DATE		APPROVED BY		DATE		ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS		11/14/22	
CHIEF ENGINEER APPROVED		PROJECT MANAGER APPROVED		DATE		SCALE: AS NOTED		202211.1	
ASSISTANT CHIEF ENGINEER		CHIEF, RIGHT OF WAY		DATE		DRAWN BY:		FLOOR & ROOF PLANS	
						CHECKED BY:		The Preserve at Eisenhower Clubhouse	
						SHEET: OF		1576 Generals Hwy	
						PROJECT #: P570200		Crownsville, MD 21032	
						CONTRACT #: P570205			

