RFQ # 121-042224DD

DESIGN-BUILD: REQUEST FOR QUALIFICATIONS (RFQ) ADVERTISEMENT FOR OWNER

Adopted by the State Building Commission on June 25, 2019
Amended by the State Construction Office August 8, 2022

Department/Agency	**Rowan-Cabarrus Community College**
Project Title	**North Campus Driver Training Range**
Design-Build Services	**Design-Build Services**
Scope of Work	This request is for Qualifications for Design-Build Services for the design and construction of the Rowan-Cabarrus Community College (RCCC) Driver Training Range to be located at the North Campus, 1333 Jake Alexander Blvd, S., Salisbury, NC. This project would provide a home for RCCC's Truck Driver Training Program, as well as driver/operator training components for public safety programs. The range will be located on the 24.59 acre parcel of land located just south of the Fire Training Center on North Campus. The complete project is conceptualized as: 3.2-acre driver training pad, 1/3 mile long track to support Firefighting, Law Enforcement, Emergency Medical, and Commercial Truck vehicle operator training programs, 10,000 sf masonry, modular multipurpose building housing two classrooms, administrative offices, garage space, storage, and restrooms, an outdoor training pavilion (with two (2) restrooms and a small storage area). A 3,600-foot-long extension of Navigation Way is included, linking the facility to the campus and to Julian Road. This roadway includes one stream crossing and a traffic circle at the intersection of Navigation Way and College Drive. This will be a formal project overseen by College staff in conjunction with the State Construction Office. It is anticipated that the project would take nine (9) months to design, and an additional eight (8) months to construct it. The project is proposed to be funded with State Capital Improvement Funds (SCIF). It is anticipated that the project will be designed and constructed through the Design-Build delivery method. Specific project goals are listed in the Owner's Design Criteria dated April 19, 2024. The scope of work will include conceptual, schematic, design development, and construction documents, along with construction administration, construction and close out services. The contractor will seek all approvals, handle bidding, and construction administration in design/bid/build delivery method. This project will be designed and administered under North Carolina State Construction Office requirements. Rowan-Cabarrus Community College received approval from the State Construction Office on January 23, 2024, for use of Design-Build delivery method on this project.
Project Site	Parcel ID: 402 089, Pin: 5658-02-98-9152, Rowan-Cabarrus Community College 1333 Jake Alexander Blvd. S., Salisbury, NC 28146
Schedule	October 2025, 18 months
Contact	Ronda Holland
Telephone	704-216-3455
Email	ronda.holland@rccc.edu
Total Project Budget	$9,000,000
Source of Funds	State Capital Improvement Funds (SCIF)
Approved OC-25 #	NCCCS No. 2800 Approved October, 2023, SCO Project 27254
Publish Date	Monday, April 22, 2024
Closing Date	Tuesday, May 21, 2024, 2:00 pm
Submit Electronic your Electronic Submittal (Adobe.pdf format) to:	Ronda Holland ronda.holland@rccc.edu Please identify the Project Title in the subject line of your e-mail
Physical Location for Fed Ex/UPS Delivery (Delivery Address):	***Hard copies are not accepted at this time.***

NC Licensing Statement	In order to offer Construction Services (General Contracting, Electrical Contracting, Plumbing, Heating and Fire Sprinkler Contracting, or Landscape Contracting) and Design Services (Architecture, Engineering, or Landscape Architecture) as part of the response to this RFQ, the proposing firms must be properly licensed to provide Construction Services and Design Services in the State of North Carolina. More information on the North Carolina state boards may be found at the following websites: **CONSTRUCTION:** **NC Licensing Board for General Contractors**: https://nclbgc.org **NC State Board of Examiners of Electrical Contractors**: https://www.ncbeec.org **NC State Board of Examiners of Plumbing, Heating and Fire Sprinkler Contractors**: https://www.nclicensing.org **NC Landscape Contractors' Licensing Board**: https://nclclb.com **DESIGN:** **NC Board of Architecture:** (http://www.ncbarch.org) **NC Board of Examiners for Engineers & Surveyors:** (http://www.ncbels.org) **NC Board of Landscape Architects:** (http://www.ncbola.org) **HUB Contractors are encouraged to submit for this RFQ.**

SUBMITTAL CRITERIA

Proposing firms must submit an electronic copy of the complete submittal package in Adobe.pdf format to the email address provided: ronda.holland@rccc.edu ***Hard copies are not accepted at this time***.

Firms must be registered and active with the North Carolina Electronic Vendor Portal prior to submitting a proposal. https://evp.nc.gov/ Failure to register may result in disqualification.

Each package shall include:

1. Profile of each key firm on the team (design-builder, contractor(s), designer(s), etc.). Include firm history, ownership, description of services, location, staff size and record of successfully completed projects without major legal or technical problems.

2. Resume of each key personnel represented on the team (design-builder, contractor(s), designer(s), etc.). Identify licenses (with numbers) and qualifications.

3. Examples of experience in each of these areas:

    a. Projects with scope similar to proposed project, successfully completed by team members (firms and/or personnel).

    b. Design-Build projects successfully delivered by team members (firms and/or personnel).

    c. Collaboration between team members (firm and/or personnel).

4. Examples of recent experience with estimating project cost. Include examples of design-build projects with comparison between initial design-build estimate and final cost.

5. Examples of recent experience with adhering to project schedules. Include examples of design-build projects with comparison between initial schedule and final delivery date.

6. Understanding of the project location as exhibited by past experience in the geographic area and/or with the client. Indicate team's proximity to the project area.

7. Quantifiable description of current workload and available resources to successfully complete this project.

8. Description, with examples if applicable, of process for successfully delivering this proposed project. Address each phase of project (design, pre-construction and construction). Include explanation of project team selection; practices and procedures to ensure quality; and other factors that may be applicable. The following project team selection options are permitted. The governmental entity may specify which option shall be used. If the governmental entity does not specify, the project team selection shall consist of either of the following:

    a. A list of the licensed contractors, licensed subcontractors, and licensed design professionals whom the design-builder proposes to use for the project's design and construction. If this project team selection option is used, the design-builder may self-perform some or all of the work with employees of the design-builder and, without bidding, also enter into negotiated subcontracts to perform some or all of the work with subcontractors, including, but not exclusively with, those identified in the list. In submitting its list, the design-builder may, but is not required to, include one or more unlicensed subcontractors the design-builder proposes to use. If this project team selection option is used, the design-builder may, at its election and with or without the use of negotiated subcontracts, accept bids for the selection of one or more of its first-tier subcontractors.

    b. A list of the licensed contractors and design professionals whom the design-builder proposes to use for the project's design and construction and an outline of the strategy the design-builder plans to use for open subcontractor selection based upon the provisions of Article 8 of Chapter 143 of the General Statutes. If this project team selection option is used, the design-builder may also self-perform some of the work with employees of the design-builder but shall not enter into negotiated contracts with first-tier subcontractors.

9. Certifications:

    a. A letter, dated within the last 30 days, from your surety company, signed by their Attorney in Fact, verifying their willingness to issue sufficient payment and performance bonds for this project, on behalf of your firms or its agent licensed to do business in North Carolina, and verifying your company's capability and capacity based on your current value of work. Surety company bond rating shall be rated "A" or better under the A.M. Best Rating system or The Federal Treasury List.

    b. HUB Participation: Describe the program (plan) that your company has developed to encourage participation by HUB firms to meet or exceed the goals set by North Carolina General Statute 143-128.2. Please explain how the firm will address minority participation in the management levels of the company. Include a HUB plan in the proposal. Provide documentation of HUB participation that the firm achieved over the past three (3) years on both public and private construction projects. Outline specific outreach efforts that your firm will take to notify HUB firms of opportunities for participation. Indicate the minority participation goal that you expect to achieve on the project.

    c. Written certification by the design-builder that each licensed design professional included as part of the team was selected based solely on qualifications without regard to fee. Include evidence that a qualifications-based selection (QBS) process was utilized.

10. Additional information as requested by the Owner or deemed appropriate by the Design-Builder.

11. A Letter of Interest – no more than two (2) pages.

12. Two (2) letters of recommendation from prior public sector clients, on their letterhead, for similar projects. These letters should include a current phone number where this individual can be reached for comment.

13. Signed copies of all addendums issued to this advertisement.

14. A completed and signed W-9 form.

SELECTION CRITERIA

In selecting the Design-Build Firm, the College's Selection Committee will take into consideration qualifying factors addressed below with their relative weighting:

1. Specialized or appropriate expertise in the specific type of project. 25%
2. An understanding of the Owner's Project Requirements and the location in which the project will be executed. 25%
3. Past performance on similar projects. 10%
4. Qualifications and experience of proposed staff and consultant team. 10%
5. Quality of the Design-build qualifications (short list) and presentation, and answers to questions during any interviews (final interview). 20%
6. Demonstrated understanding of the College's Facilities Design Manual. 10%
7. One (1) additional point will be awarded to Historically Underutilized Business (HUB) certified proposers with an additional one half (1/2) point for each HUB certified subconsultant necessary to support the effort of this contract. A maximum of two (2) additional points may be granted under this criterion.

Rowan-Cabarrus Community College

DRIVER TRAINING RANGE

Design Criteria

04/19/2024

Rowan-Cabarrus Community College

DRIVER TRAINING RANGE

Design Criteria

04/17/2024

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College Environment Division
Department of Planning and Capital Projects
2024

Rowan-Cabarrus Community College

DRIVER TRAINING RANGE

Design Criteria

04/17/2024

Introduction

This RCCC Design Criteria document is to capture, in writing, the initial concept for the roughly $9,000,000 State-funded **North Campus Driver Training Range** to be constructed on the College's North Campus in Salisbury, NC. These Owner's Project Requirements shall inform prospective Design-Build Firms on the goals and requirements the Owner has created for the project. They should use this document to evaluate their interest in the project, select their proposed teams, and guide the writing of their proposals in response to the Design-Build Request for Proposals (RFP) to show their alignment with the Owner's stated goals, and guide the design of the project. This document will be included by reference in any future contracts for this project.

The Complex is envisioned to include the construction of the following in Priority Order:

1. Driver Training Pad –training pad of approximately 600ft x 600ft.
2. Outdoor Classroom Pavilion – training area with two restrooms, storage area and vending.
3. Roadway – a 3,600 lineal foot extension of Navigation Way linking the facility to the campus to the north and to Julian Road to the south. This roadway includes one stream crossing and a traffic circle at the intersection of Navigation Way and College Drive. Final configuration of the roadways will be determined as a part of the programming effort.
4. Utilities - Water, sewer, power, and data will be extended. The final routing of utilities will be determined as part of the programming effort.
5. Driver Training Building – housing 2 classrooms, Administrative Offices, Storage and Garage Space. This is envisioned to be a roughly 10,000 SF facility.
6. Driving Track – 1/3 mile-long track

Specific goals for the project and individual buildings are addressed in this document. The scope of work will include conceptual design budget, and schedule development, schematic design, design development, construction documents, construction administration, project close-out, warranty period management (1 year), and performance verification.

General guidelines for design and standards are included in the College's Facility Design Manual, February 2024 edition. This Manual is available on the College's website under About Rowan-Cabarrus/Divisions of the College/College Environment/Planning & Capital Projects: https://www.rccc.edu

The project will include site development, building construction, and fit-out yielding fully functional facilities. The Design-Builder shall seek all required approvals, handle bidding, and administer the construction under a design-build delivery model. The project will be designed and administered as a formal project under State Construction Office requirements with monitoring oversight by State Construction.

Rowan-Cabarrus Community College

DRIVER TRAINING RANGE

Design Criteria

04/17/2024

Project Budget:

Soft Costs:	$900,000
Construction Costs:	$7,400,000
Contingency:	$400,000
Other Contracts	$200,000
Other Fees	$100,000
Total	$9,000,000

1. General Project Requirements

1.1. Owner Directives

1.1.1. All aspects of the project design shall comply with the College's Facilities Design Manual, February 2024 edition.

1.1.2. The project will be conceptualized and designed in a highly integrated approach, with the Owner, Tenant, Design-Builder, and Commissioning Agent as equal partners in the effort.

1.1.3. As a formal project and over $2,000,000 the project will be administered under State Construction Office (SCO) requirements, however, the following will be required:

1.1.3.1. Standard SCO Design-Build Contract will be utilized, with scope requirements of the Owner, beyond those of SCO, carried as Additional Services.

1.1.4. Full third-party enhanced commissioning will be required for the Driver Training Building, including the building envelope water testing, and building air pressure test.

1.1.5. The construction of the project will be accomplished by the Design-Build delivery method.

1.1.6. Standards: The design, construction, commissioning, and performance verification of the buildings will follow two particular sustainable design programs and the FEMA Emergency Shelter Guidelines. Key components of which will be considered for inclusion are:

1.1.6.1. WELL Building v2 will guide the design of the building, without the intent of seeking certification under their program. This will include:

1.1.6.1.1. Air
1.1.6.1.2. Water
1.1.6.1.3. Light
1.1.6.1.4. Movement
1.1.6.1.5. Thermal Comfort
1.1.6.1.6. Sound
1.1.6.1.7. Materials

1.1.6.2. The 2021 PHIUS Passive Building Standard will guide the design of all buildings, without the intent of seeking Certification under that standard. This will include meeting the following:

1.1.6.2.1. Passive Conservation Requirements.
1.1.6.2.2. Airtightness Requirements.
1.1.6.2.3. Active Conservation Requirements.
1.1.6.2.4. Renewable Energy Requirements.
1.1.6.2.5. Moisture Design Criteria.

1.1.6.3. ICC 500 ICC/NSSA Standard for the Design and Construction of Storm Shelters shall guide the design of a multi-use space (or spaces) within the building as a Tornado Shelter, capable of providing shelter space for the anticipated number of occupants of the building, and driver training pad during a normal teaching day. The spaces(s) shall be labeled in the documents as such and shall have appropriate signage.

1.2. Approvals

1.2.1. The project is located within the City Limits and Extraterritorial Jurisdiction of the City of Salisbury, NC, and will require the city's development approval.

1.2.2. Rowan County is the Authority Having Jurisdiction (AHJ) and will issue Building Permits and perform building inspections.

1.2.3. Due to the proximity to the Gravel Pit Branch stream, it is anticipated the Corps of Engineers and NC Department of Environmental Protection approvals will be required.

1.2.4. Other Permits as required by AHJ.

1.2.5. SCO will perform plan review in addition to that performed by the local AHJ.

1.3. Drawing Requirements: RCCC will require AutoCAD/vector-based editable copies of drawing files as well as PDF copies of all stages of project development from schematic design through project closeout.

1.4. Basis of Design

1.4.1. The Project will be designed using the February 2024 RCCC Design Manual. Any discrepancies between this document and the guidelines within the Design Manual shall be noted and discussed with the owner for verification.

1.4.2. Door hardware to use Allegion family of products (Schlage, Von Duprin, LCN, etc.) as the basis of design and as the Owner's Preferred Alternate in Bid Documents. Keying system to be Schlage Everest "R" Small Format. Coordinate with Scott Adamczak with Allegion at (704.894.0728) to develop the door hardware schedule.

1.4.3. Electronic Access Control system shall be Avigilon, with installation by an authorized integrator. All associated hardware will be approved by Avigilon for integration into their system. Coordinate with Tommy McColgan at Magnum Security (803.566.3301) to develop the door hardware schedule.

1.4.4. Video Surveillance system will be IP Configure, and all cameras and associated hardware will be approved by IP Configure for integration into that system.

1.4.5. Fire Alarm and Mass Notification system will be an expansion of the North Campus Notifier voice annunciated fire alarm system, with installation by an authorized Notifier integrator.

1.4.6. Interior and Exterior Wayfinding Signage will use the College Standard APCO Arcadia Signs as basis of design and as Owner's Preferred Alternate in Bid Documents.

1.4.7. Campus ID Monument Sign will use the Rite-Lite Signs standard used elsewhere on campus as the basis of design as basis of design and as Owner's Preferred Alternate in Bid Documents.

1.4.8. Site furnishings (benches, trash cans, bollards, etc.) will use the College Standard LeisureCraft, High Point Series as basis of design and as Owner's Preferred Alternate in Bid Documents.

1.4.9. Emergency Phone/Camera Poles will use Talk-A-Phone Exterior Emergency Phone/Camera Poles as the basis of design and as the Owner's Preferred Alternate in Bid Documents.

1.4.10. Dual Level 2 (220V) Electric Vehicle Charging Stations will use the EVSE 3704 Series Dual Pole as the basis of design and as the Owner's Preferred Alternate in Bid Documents.

1.4.11. Single Level 2 (220V) Electric Vehicle Shop and Fleet Vehicle Charging Stations will use the EVSE 3704 Series Single Pole as the basis of design and as the Owner's Preferred Alternate in Bid Documents.

2. DRIVER TRAINING BUILDING – 10,000 SF

2.1. General Description: The project includes a new roughly 10,000-square-foot building to support the various driver training programs and modules offered by the college. It is envisioned to be a single-story, slab-on-grade structure. This building will include traditional classrooms, office space, student/faculty/staff support spaces, as well as garage space for associated vehicle maintenance.

2.2. Project Specific Elements

2.2.1. Space Program

Count	Description	Section Capacity	NSF/ Occupant	Item Area (SF)	Total Area (SF)	Notes
Building Core						
1	Lobby	100	5	500	500	
2	Unisex Public Restroom	1	80	80	160	
1	Open Office Suite	5	70	350	350	Reception Counter, Cubicles
1	Directors Office	1	125	125	125	
1	Work/Break Room	4	40	160	160	Printer, Counter, Microwave, Refrigerator, Coffee, Table, Chairs
2	Classroom	25	30	750	1,500	At least one with reinforced masonry walls to

						act as a Best Available Refuge Area for use in high wind emergencies
1	Student Lounge	4	40	160	160	Counter, Stools, Vending, Table, Chairs, Lounge Grouping
2	Garage Bays	1	2000	2000	4000	Drive Through
	Garage Equipment Storage	1	400	400	400	
1	Garage Tool Storage	1	200	200	200	
1	Mechanical/Electrical Room	1	300	300	300	Space for air compressor
1	Data/Telephone Closet (MDF)	1	60	60	60	
1	Custodial	1	200	200	200	
Subtotal					9000	
Circulation and Walls		18%			1000	Include corridors
Gross Area Total					10,000	

2.3. Building Requirements

2.3.1. Building Aesthetic

2.3.1.1. The Building will be constructed in the simple, utilitarian aesthetic, utilizing rectangular block form, and flat roof.

2.3.2. Concept

2.3.2.1. We believe this building may be a candidate for a pre-engineered panelized system manufactured offsite, trucked to the site and erected on a poured slab. To achieve a 50 year plus anticipated useful life, masonry structure and envelope is preferred. To achieve the ICC-500 Standard for the Design and Construction of Storm Shelters we

believe pre-engineered masonry roof panels will be required over portions of the building.

2.3.2.2. The Driver Training Building will be designed with the goal to achieve total (including site) energy utilization of less than 20 Energy Use Intensity (EUI), with a goal for completely offsetting energy utilization with onsite PV generated electrical energy.

2.3.2.3. The building should be designed with expansion in mind, with site space reserved for future expansion to double classroom and garage space.

2.3.2.4. Space Program

2.3.2.4.1. Classrooms and Offices should be configured to provide access to Driving area and Garages.

2.3.3. Structure

2.3.3.1. Vertical Structure

2.3.3.1.1. Preferred precast insulated concrete panels on a structural steel or precast concrete skeleton.

2.3.3.1.2. Slabs

2.3.3.1.3. Slab on Grade: Cast-in-place concrete over moisture barrier membrane.

2.3.3.2. Roofs

2.3.3.2.1. Preferred low slope roof decks shall be precast insulated concrete panels, hollow core concrete plank (w/ topping), or precast double "T" (w/ topping).

2.3.3.2.2. Highly sloped roof areas, which are to be utilized only in building entry elements to assist in wayfinding, may be metal deck.

2.4. Envelope

2.4.1. Walls: Masonry, preferably in a natural (unpainted) finish with architectural enhancement to blend with the North Campus aesthetic.

2.4.2. Highly insulated and sealed at the perimeter to control the movement of heat, vapor, air, and free water.

2.4.3. Fenestration:

2.4.3.1. Windows – Thermally broken aluminum window system with insulated, low E glass.

2.4.3.2. Storefront – Thermally broken, insulated, Low E glass.

2.4.3.3. Storefront Doors – Wide Stile, Insulated, Low E Glass, configured for electric hardware, piano hinges, power transfer, and stainless steel hardware.

2.4.3.4. Steel Doors – Insulated, galvanized, morticed hardware, configured for electric hardware, anti-tamper hardware.

2.4.3.5. Doors and windows which, when broken out, could provide easy access into the building will have shatter-resistant glazing.

2.4.4. Roofs

2.4.4.1. Highly insulated and sealed to control the movement of heat, vapor, air, and free water.

2.4.5. Factor passive bird deterrents into the design of all potential nuisance areas.

2.5. Interior

2.5.1.Walls

2.5.1.1. GWB walls in general classrooms, offices, and corridors. Painted

2.5.1.2. CMU or Masonry Walls for garage spaces. Sealed and Painted

2.5.1.3. Glazed Ceramic Tile on restroom walls to the ceiling. These walls should be patterned with no less than two colors.

2.5.2.Ceilings – Shall be appropriate for the use of the space and shall consider:

2.5.2.1. Sound Control

2.5.2.2. Maintainability

2.5.2.3. Cost Efficiency

2.5.2.4. Aesthetics

2.5.3.Floors

2.5.3.1. Colored, Polished Concrete –For high traffic public spaces, Classrooms, and Break Rooms and Labs. This system shall be designed and constructed by an experts in these systems.

2.5.3.2. Carpet Tiles - Office Spaces.

2.5.3.3. Porcelain Tile - Restrooms will receive this tile with an appropriate underlayment to avoid cracking.

2.5.3.4. Sealed Concrete – shall be used in back-of-house spaces such as Custodial Closets, Storage Rooms, Mechanical Rooms, Electrical Rooms, Data Facilities, Garages, etc.

2.5.4.Interior Fenestration

2.5.4.1. Doors: Shall be hollow metal, painted

2.5.4.1.1. Doors to labs and associated storage rooms shall be a minimum of 40” wide.

2.5.4.2. Door Frames: Shall be hollow metal.

2.5.4.2.1. To include sidelights on all Classroom, Lab, Conference, and Office Spaces. Sidelights shall be no more than 12” in width and should have panes no larger than 200 square inches. Panes located such that they could be broken out to open the door should be shatter resistant.

2.5.4.2.2. Where appropriate, doors should have transom lights to move natural daylight from the perimeter into interior spaces.

2.5.4.3. Interior Windows: Interior Windows are to have hollow metal frames. Where appropriate to mitigate sound, double-paned glass shall be utilized.

2.5.4.4. Window Shading systems: Windows between classrooms, conference rooms, etc., and labs will be provided with window blinds.

2.5.5.Fit Out

2.5.5.1. All classrooms to receive chair rails.

2.5.5.2. All countertops are to be a solid surface material.

2.5.5.3. Window Shading Systems

2.5.5.3.1. Classrooms and Conference Rooms will be provided with college standard roll-down, dual translucent and black-out shades.

2.5.5.3.2. Other spaces will be provided with college standard roll-down translucent shades.

2.6. Systems

2.6.1.General:

2.6.1.1. Install individual metering into all utilities servicing each building. Meters should tie into the Campus BAS.

2.6.2.Lighting

2.6.2.1. LED lighting throughout.

2.6.2.2. LED area wall packs and floodlights on building exterior.

2.6.2.3. Consider lighting temperatures that are appropriate to the needs of the application.

2.6.3.Electric:

2.6.3.1. A percentage of electrical receptacles in public spaces shall include USB charging.

2.6.3.2. The building shall have rooftop and adjacent parking lot canopy PV solar installations. Ideally, these will be sized to completely offset the electrical power requirements for the entire facility, including a battery system to store power for nighttime.

2.6.3.3. A centralized emergency power battery system will be installed to provide for all emergency lighting and power needs. This system may also store PV generated power for night time use.

2.6.3.4. Electric Vehicle Charging Stations: A duel, Level 2 (220V) Electric Vehicle Charging Station shall be installed in close proximity to the building.

2.6.4.HVAC System

2.6.4.1. Will be a packaged geothermal heat pump system with heat recovery hot water heating.

2.6.4.2. The Mechanical Room(s) will be located on the exterior wall of the building and designed to facilitate the maintenance and replacement of equipment.

2.6.4.3. Ventilation

2.6.4.3.1. Provide appropriate zones based on anticipated usage.

2.6.4.3.2. Controls to be Tridium Niagara integrated into the existing North Campus Building Management System.

2.6.4.3.3. Classrooms and Office Spaces should be serviced by a displacement method ventilation designed to ensure CO2 levels do not exceed 750ppm at the occupied level through the prescriptive application goal of no less than 15 CFM per person in each discrete space.

2.6.4.3.4. High Volume Low-Speed Fans will be considered for efficient movement of air in the Garage spaces. These shall be equipped with occupancy sensors and other controls to ensure they only operate when needed.

2.6.4.3.5. Garage spaces shall have controls which automatically shut down HVAC supply and return when the garage doors are open.

2.6.4.3.6. Ensure the differing exhaust ventilation requirements for all spaces are addressed very carefully.

2.6.4.3.7. Ensure ductwork systems are designed to ensure ambient airflow noise levels in the classroom spaces do not exceed designer-approved decibels at the occupiable level.

2.6.5. Plumbing

2.6.5.1. Provide appropriate floor drains with associated grease traps for garage spaces.

2.6.5.2. Provide hose bibs at strategic locations on the exterior of each building.

2.6.5.3. Provide interior hose bibs in the Garage and other spaces where appropriate.

2.6.5.4. Eye wash stations shall be installed in Garage spaces, where appropriate. Sloped flooring and floor drains shall be installed to support eye wash stations.

2.6.6. Life Safety:

2.6.6.1. Fire Alarm: Provide a fully functional voice annunciated Fire Alarm System with Mass Notification to comply with State Construction Office Requirements. The system shall fully integrate (all points and sensors) into the existing campus-wide system.

2.6.6.2. Mass Notification: Provide a fully functioning Emergency Mass Notification System integrated into the existing campus-wide system. Ensure system is fully legible throughout the facility (including driving pad, track, etc.). Include one central dispatch/control station to be located at the Owner's direction.

2.6.6.3. Fire Sprinkling: Building will be fire sprinkled. System to comply with State Construction Office Requirements.

2.6.7. Data/Telecommunications:

2.6.7.1. Data Network: Provide extension from the nearest existing main (not branch) fiber-optic data trunk into a Main Distribution Facility (MDF) strategically located within the building.

2.6.7.2. Provide all data conduits, cabling, terminations, racks, and associated permanently installed equipment (UPS, etc.).

2.6.7.3. Provide fully functioning Electronic Access Control integrated into the existing campus-wide system for

2.6.7.3.1. The following doors will be provided with card readers:

2.6.7.3.1.1. Front door;

2.6.7.3.1.2. Exterior door leading to track;

2.6.7.3.1.3. Office suite door

2.6.7.3.1.4. Interior Door from the Classroom/Office area to the Garage.

2.6.7.3.2. All exterior doors leading into the building shall be equipped with open/closed sensors tied into the Electronic Access Control System.

2.6.7.4. Provide fully functioning Video Surveillance integrated into the existing campus-wide system.

2.6.7.4.1. All interior access points to the building will be observed from within public spaces (lobbies, corridors) and the garage.

2.6.7.4.2. The exterior of the building will be viewed, with a particular emphasis on routes leading to building entrances.

2.6.7.5. Provide Emergency Phone/Camera/Speaker Poles, strategically located in ADA accessible curbed islands in the parking lot adjacent to the building. Infrastructure should include power and data from the building, ideally within 300 feet of the MDF so that standard copper data cable may be used.

3. Outdoor Classroom Pavilion – 1,300 SF

3.1. General Description: The project includes a new roughly 1,300 square foot Outdoor Classroom Pavilion to support driving activities. This building will include:

3.2. Project Specific Elements

3.2.1. Space Program

Count	Description	Section Capacity	NSF/ Occupant	Item Area (SF)	Total Area (SF)	Notes
Core						
1	Classroom	25	35	875	875	
2	Unisex Public Restroom	1	80	80	160	
1	Vending	1	60	60	60	Protected by reach-thru steel security gate
1	Storage Room	1	100	100	100	Shelving, Cone Storage
1	Electrical/Data Room	1	100	100	100	Data/Telephone Cabinet, Power Panels,
				Subtotal	**1,295**	
				Circulation and Walls	**5**	1%
				Gross Area Total	**1,300**	

3.3. Building Requirements

3.3.1.Structure: CMU or Cast Masonry

3.3.2.Envelope: CMU or Cast Masonry

3.3.3.Interior

3.3.3.1. Walls

3.3.3.1.1. CMU or Cast Masonry. Painted

3.3.3.1.2. Knee walls shall have a precast capstone suitable for sitting, and incorporating anti-skate features.

3.3.3.1.3. Floors

3.3.3.1.3.1. Troweled smooth colored concrete

3.3.3.1.4. Interior Fenestration

3.3.3.1.4.1. Doors: Shall be insulated, galvanized, hollow metal. Painted.

3.3.4.Systems

3.3.4.1. General:

3.3.4.2. Lighting

3.3.4.2.1. LED lighting throughout.

3.3.4.2.2. LED area wall packs and floodlights on building exterior.

3.3.4.2.3. Consider lighting temperatures that are appropriate to the needs of the application.

3.3.4.3. Electric:

3.3.4.3.1. A percentage of electrical receptacles in public spaces shall include USB charging.

3.3.4.3.2. The building shall have a rooftop solar PV array fed in behind the meter to offset electrical costs. Ideally, this will be sized to completely offset the daytime electrical power requirements for the building.

3.3.4.4. Ventilation

3.3.4.4.1. A High Volume Low-Speed Fan will be installed to provide efficient movement of air in the open classroom. This shall be equipped with occupancy sensors and other controls to ensure they only operate when needed.

3.3.4.4.2. Restrooms will be provided with electric resistance heaters.

3.3.4.4.3. Ensure the differing exhaust ventilation requirements for all spaces are addressed very carefully.

3.3.4.5. Plumbing

3.3.4.5.1. Provide appropriate floor drains.

3.3.4.5.2. Provide hose bibs at strategic locations on the exterior of the building.

3.3.4.6. Life Safety:

3.3.4.6.1. Fire Alarm: Provide a fully functional (all points and sensors) voice annunciated Fire Alarm System with Mass Notification. System to comply with State Construction Office Requirements. System shall integrate into the existing campus-wide system.

3.3.4.6.2. Mass Notification: Provide a fully functioning Emergency Mass Notification System integrated into the existing campus-wide system. Ensure system is fully legible throughout the facility (including driving pad, track, etc.). Include one communication control station to be located at the Owner's direction.

3.3.4.6.3. Fire Sprinkling: If required, the building will be fire sprinkled. System to comply with State Construction Office Requirements.

3.3.4.7. Data/Telecommunications:

3.3.4.7.1. Data Network: Provide extension from the Driver Training Building.

3.3.4.7.2. Provide all data conduit, cabling, terminations, racks, and associated permanently installed equipment (UPS, etc.).

3.3.4.7.3. Provide fully functioning Video Surveillance of the classroom space, and entrances to restrooms and vending area, as well as the surrounding site.

3.3.4.7.4. Provide Emergency Phone/Speakers attached to the building.

4. Driver Training Facilities

4.1. General Description:

4.1.1. The project includes all the elements required to achieve fully accredited driver/operator training courses for
- 4.1.1.1. Commercial Truck Driving Course (CDL A, B, and C)
- 4.1.1.2. Police Driving Course
- 4.1.1.3. Fire Driving Course
- 4.1.1.4. EMS Driving Course

4.1.2. Course layouts will be included in the drawing set for each accredited use, including location of striping, cones, etc.

4.2. Driver Training Pad:

4.2.1. Driver Training pad, which is conceptualized at approximately 600 ft x 600 ft, will be sized to meet all driver training accreditation requirements. This pad will be substantially level, and shall be devoid of light poles, curbs, fencing, bushes, trees or other obstructions.

4.2.2. All asphalt paving will be heavy-duty and designed with an appropriate number of trips.

4.2.3. To accommodate anticipated unsuitable soils, sub-base stabilization is anticipated.

4.2.4. Include 8” min reinforced concrete 12,000 sf section to facilitate basic vehicle operation training (back and forth).

4.2.5. The Pad will be marked with color-coded marks to facilitate accreditation for:
- 4.2.5.1. Commercial Truck Driving Course
- 4.2.5.2. Police Driving Course
- 4.2.5.3. Fire Driving Course
- 4.2.5.4. EMS Driving Course
- 4.2.5.5. Fairgrounds parking

4.2.6. No lighting poles shall intrude into the driver training pad. Pad will be lit to meet appropriate standard for nighttime driver training as well as parking for Fair Events. As a minimum, Lighting illumination levels will meet Illuminating Engineering Society (IES) guidelines for parking lots.

4.2.7. Ensure the entire pad site is observed by video surveillance.

4.3. Driving Track

4.3.1. Designed and marked to accommodate accreditation for:
- 4.3.1.1. Police Driving Course
- 4.3.1.2. Fire Driving Course
- 4.3.1.3. EMS Driving Course

5. Roadways/Drives/Parking

5.1. General Requirements:

5.1.1. All traffic signage shall meet NC DOT requirements.

5.1.2. A Sidewalk will be constructed along one side of every roadway and drive. This sidewalk shall connect to the sidewalk/path network on the campus.

5.1.3. As a minimum, lighting illumination levels will meet Illuminating Engineering Society (IES) guidelines.

5.1.4. Construct necessary storm water handling/retention/detention structures.

1.1.1. Carefully consider the use of heavy-duty pavement to support the anticipated traffic through the campus.

5.2. The Navigation Way Extension Roadway

5.2.1. Will be constructed to connect from the existing Navigation Way intersection with College Drive on Campus to Julian Road. Configuration should consider the most cost effective solution that maximizes the area available for the driver training pad and associated buildings.

5.2.2. Roadway cross-section and specification will be:

5.2.2.1. From the Gravel Pit Branch crossing to the intersection with Julian Road, utilize standard DOT design criteria with roadside swales for handling run-off, and treatment/retention/detention pond(s).

5.2.2.2. From the intersection with College Drive to the Gravel Pit Branch crossing standard DOT design criteria should duplicate those used on College Drive including curb, gutter, piped stormwater system, and treatment/retention/detention pond(s).

5.2.3. Provide sidewalks to facilitate pedestrian movement from the Driver Training Range to a designated location on the Fairgrounds.

5.3. Navigation Way/College Drive Traffic Circle

5.3.1. Traffic Circle will be designed to NC DOT design criteria, and accommodate large delivery and training vehicles.

5.3.2. Create a public art location with electrical service for lighting within a planting area at the center of the circle.

5.4. Gravel Pit Branch Crossing

5.4.1. Construct the most cost effective solution for the roadway and sidewalk stream crossing while meeting NC DOT standards.

5.5. Driveways

5.5.1. Drives will be constructed from heavy-duty pavement designed for the appropriate number of daily trips. Drives will have sidewalks leading from the campus network of sidewalks to those serving the parking area and nearest building.

5.6. Parking

5.6.1. Parking space count shall be per the local development ordinance for commercial buildings.

5.6.2. Parking shall be divided into Standard, Handicapped, and Electric Vehicle Parking.

5.6.3. Parking lot lighting shall be served and controlled from the adjacent building with over-riding light level sensors.

5.6.4. Permeable paving will be considered where appropriate to reduce required stormwater systems.

5.6.5. Provide sidewalks leading to the nearest building or campus network of sidewalks.

6. Site Requirements

6.1. Development

6.1.1. Any slopes exceeding that which can be maintained with traditional lawnkeeping mowers, etc. should be provided with retaining walls.

6.1.2. Grass areas shall be minimized, particularly where maintenance will be a challenge. Drought tolerant, native, ground covering plant materials are preferred.

6.1.3. Stabilization of Gravel Pit Branch adjacent to any site development will be a priority to avoid future erosion.

6.2. Landscaping:

6.2.1. Include a minimal, diverse, native-focused, landscaping package around the Driver Training site.

6.2.2. Landscaping should be focused on the front of the building, the building parking lot, and street frontage.

6.2.3. The Navigation Way Extension and Reconfiguration areas will receive spaced canopy trees.

6.2.4. The Campus Julian Road and Rowan Tech Road entrances will be bermed at the Monument ID Sign which will receive enhanced plantings.

6.2.5. The landscaping package should blend with existing campus landscaping.

6.3. Fencing:

6.3.1. Site:

6.3.1.1. Recognizing it potential as an attractive nuisance, the perimeter of the Driver Training site shall be fenced with a four-foot-tall chain link fence.

6.3.1.2. Gates:

6.3.1.2.1. Provide lockable roll-back gates across vehicle drives

6.3.1.2.2. Provide lockable gates at pedestrian access points.

6.3.1.2.3. Provide strategically placed, lockable, emergency access gates to provide access for emergency vehicles to the driving pad and track.

6.3.2. Retention/Detention Ponds

6.3.2.1. Driver Training site pond shall be fenced with a six foot-tall chain link fence., with a 12’ wide vehicle accessible gate to facilitate maintenance of the pond.

6.3.2.2. The Navigation Way Extension and Reconfiguration ponds will be constructed as campus amenities.

6.4. Signage

6.4.1. Campus ID Monument Sign: A backlit monument sign will be placed at the Julian Road campus entrance. Sign shall match examples at the Old Concord Road intersection with College Drive.

6.4.2. Install a roughly 3’ x 4’ electronic digital wayfinding sign in the vicinity of the intersection with Rowan Tech Road.

6.4.3. The Driver Training Range will receive campus standard fixed wayfinding sign identifying the facility and building names.

6.5. Dumpster Enclosure

6.5.1. A dumpster enclosure, sufficiently sized to accommodate two dumpsters will be constructed adjacent to the Driver Training Building.

6.6. Utility Extensions: Utility extensions shall be located to minimize the impact on future roadways and structures, while providing necessary access points and pull boxes for shutoffs, maintenance, and new installations. Except where noted, all utilities shall follow the NC DOT-constructed roadway from Julian Rad. to the Site.

6.6.1. Electrical Power: The site will be served by its own electrical transformer and will be separately metered.

6.6.2. Sewer: The Driver Training site will be served from either the Julian Road sewer main or the new Gravel Pit Branch extension.

6.6.3. Potable Water: The site will be served by a separately metered connection from the water main at Julian Road.

6.6.4. Fire Main: The Site will be served by a separately metered connection on Julian Road.

6.6.5. Irrigation Water: No irrigation is envisioned for this site.

6.6.6. Storm Water

6.6.6.1. All stormwater generated on the site will be treated onsite before being introduced into waterways.

6.6.6.2. Stormwater systems should be sized to retain the first 1.5 inches of runoff from the site.

6.6.7. Gas - None Anticipated. Prefer electric water heating offset by solar PV installations.

6.6.8. Data: The Fiber Optic Data Backbone will be extended down the Navigation Way Extension from the intersection of Navigation Way and College Drive to the Driver Training site.