EXHIBIT 1 TO THE DESIGN-BUILD SERVICES AGREEMENT

New Service Center Program
Phase III

San Antonio Water System

Design Criteria Package (DCP)
RFP

March 2021

Program Manager Construction Management
Central Area Office
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I. OVERVIEW

This Design Criteria Package (DCP) sets forth a comprehensive and definitive description of SAWS' design criteria for the Project to be completed in Phase III of SAWS' New Service Center Program. Definitions throughout this DCP shall be as defined in the Design-Build Services Agreement, of which this DCP is an Exhibit.

Please refer to the Supporting Requirements, beginning on page 8, for the criteria describing the Scope of Work for which the successful Design-Build Firm is to prepare its design. This DCP contains sufficient information to specify the criteria SAWS considers necessary to describe the Project, including the legal description of the site (a Preliminary Site Concept), survey information concerning the site, interior space requirements, special material requirements, material quality standards, conceptual criteria for the project, special equipment requirements, cost or budget estimates, time schedules, quality assurance and quality control requirements, site development requirements, applicable codes and ordinances, provisions for utilities, parking requirements, and any other requirements for the Project, as required by the Texas Government Code, Chapter 2269.306. The facility assessment reports, space program, and design performance requirements for each facility are functionality essential to SAWS' operations and must be met by the successful Design-Build Firm.

A. STANDARD ABBREVIATIONS

AR – Architectural Representative
CCB - Change Control Board
CD – Construction Document
DB – Design Build
D&C – SAWS' Distribution and Collections Department
DCP – Design Criteria Package
DD – Design Development
DPOR - Design Professional of Record
ESOC – East Side Operations Center
FF&E – Furniture, Fixtures, and Equipment
GMP - Guaranteed Maximum Price
NEOC – Northeast Operations Center
NESC – SAWS' Existing Northeast Service Center
PMP - Project Management Plan
POV – SAWS' employee Personal Owned Vehicles
SAWS – San Antonio Water System
SD – Schematic Design

B. PROGRAM GOALS/OVERVIEW OF SCOPE

This Project (Phase III of the Service Center Program) includes one (1) new service center site in Bexar County, which is referred to as the New Northeast Operations Center (NEOC). At the completion of all new work at the NEOC site, the selected DB Firm will demolish and remediate Fuel and Pumps, and the old Admin Building (circa 1980) at SAWS existing Northeast Service Center (NESC) at SAWS' Naco Pump Station site at 13655 O'Conner Rd. SAWS will award the design and construction for this work in a single contract to one (1) DB firm to design and construct all items at both sites. The location of the New Northeast Operations Center (NEOC) is on unplatted property, just north of 1604, using the temporary address of 18000 Judson Road, just north of Hwy 1604.
The detailed scope of services and work at the NEOC is contained in this document and shall include:

Three new buildings and site work at a green field site. New buildings include: Administration, Fleet, and Supply Buildings. The Administration Building is the only facility in this Project that shall be designed and constructed in accordance with the current USGBC LEED standards to achieve EQUIVALENCY to a LEED Silver rating. In addition to building works, the NEOC site also has civil works in its scope to provide for multiple modes of ingress/egress, primary drive lanes, employee parking (personal owned vehicles-POVs), SAWS Fleet and SAWS Operations parking, outdoor supply areas, Ice and Water refilling station, outdoor bulk material storage bins, an area designated for concrete silo, contractor will be required to design this area and place the pad, utility hookups, truck scale, site drainage and fuel areas (for pumps and AGTs), as required.

The detailed scope of services and work for the demolition and remediation at the existing site (Naco pump Station) is contained in this document. In summary this shall include:

At the existing NESC, located at the Naco Pump station at 13655 O'Conner Rd.: Demolition of two below grade diesel UGT tanks in accordance with all codes and TCEQ, and all associated utilities, pumps, diesel fuel island, and the installation of clean backfill and complete replacement of all pavement. Demolition of existing administration building and all lean to shed structures and canopies adjacent to or connected to the building, and demo of concrete bulk material bins, and complete replacement of all pavement, restoration of any retaining walls that may be compromised during the demo. The installation of guardrails, bollards, railing and any other safety items and associated signage and traffic striping as required, as well as the demo of the existing 2 marquee signs and the installation of a new marquee with signage designating the site as the Naco Pump Station to match the marquee signage at the existing Phase 1 NSOC site, including lighting and landscaping.

As each building or facility at each site is completed, SAWS along with the SAWS' Program Manager Consultant, will coordinate and relocate personnel and equipment from SAWS' other Operation Center sites, as required. This may result in staff being relocated while the DB firm is still onsite completing another building. DB shall accommodate and cooperate with such moves, as well as staff that are currently located at the existing site that will be present throughout construction (Refer to item G. below). The DB firm shall coordinate and update the Project Schedule with the Owner's Program Manager Consultant to provide for tasks related to the relocation and eventual occupancy of the facilities, this may require that the DB firm acquire temporary C of O as needed for the buildings completed first, and occupied, while other construction is completed on site. Relocation of staff and equipment will provide for a more efficient response of SAWS operations to their customers. Timely completion of each design and construction milestone is important: time is of the essence.

C. ESTABLISHED SPACE PROGRAM

A space program has been developed for each site using standard room sizes and efficiency factors. This space plan has been internally reviewed by SAWS. Therefore, the count and area requirements of each room may not be changed or revisited by the DB firm's Design Professional of Record (DPOR) without review meetings and Approval by SAWS. These are the minimum count and space requirements. SAWS' reserves the right to interchange rooms, area square footages, and spaces during the design phase, as it develops as long as the total square footage is not exceeded.
As the DB firm further develops the design, each site and associated buildings, the Design –Build Firm must ensure that the

Project meets the Approved scope, and that the Project Schedule, and GMP are not exceeded, as required by the Design Build Services Agreement.

D. FACILITY TEMPLATE/ PRELIMINARY SITE CONCEPT

An Operations Center "campus" layout, of 3 buildings and a spine road, as well as the room adjacencies, palette of materials/colors/exteriors has been developed and approved by SAWS. This template was established in the Phase I and Phase 2 Construction Documents for the site concept, arrangement of buildings, egress/parking, general building plan layout, hardware, trim, and a template and color palette established for both the exterior facades and the interior finishes. These previously completed operations centers and the template and concepts developed as part of the Service Center Program, shall be utilized by the DB Firm and their Design Professional of Record (DPOR) for all of the Phase III Project. The goal is to provide a presentable, clean, functional appearance from the street, but one of efficiency and functionality and is also economical to maintain and operate over time. The DB firm must also provide common finishes, fixtures and product selections to allow SAWS to maintain the buildings efficiently. In order to achieve this goal, the DB firm shall thoroughly investigate the Phase I NSOC facilities and As-Built construction documents, specifications and submittals, as well as all concepts developed to date for the Phase 3 Project, including the Preliminary Site Concept, to familiarize themselves with the previously utilized floorplan and site plan arrangements of spaces, room adjacencies, equipment, materials, and finish selections. The DB Firm may recommend deviations from these, but in doing so any deviations and recommendations shall be clearly communicated to SAWS. While these building standards are in place from previous Phases,the DB firm shall nonetheless, participate, and complete according to industry best practices, the Schematic Design and Design Development Phases in order to adjust floorplans in order to meet SAWS' operational needs for Phase 3. The DB firm must also establish aesthetic review presentations of the exterior facades and interior spaces to ensure that the materials and color palette aligns with the previously specified materials from previous phases and must present/highlight any deviations from such. These presentations shall include colored site and floor plans, elevations, as well as perspective and 3D renderings and material boards that adequately represent the materials and aesthetics as required to communicate to SAWS.

SAWS intends to use the Phase 1 NSOC building plans as a template with no increase to the square footage however, there may be office/ usage changes within the footprint of each building. For example, Phase 1 did not have a Fitness Room but instead had a bullpen area that is not needed for Phase 3, so these rooms have been interchanged for Phase 3. The room counts are listedin the Established Space program.

SAWS intends to provide the CAD and Revit files from the previous Phases of the Service Center Project, to the DB Firm. These files are subject to the language of the Contract regarding use of item provided by SAWS. The Design Build Firm can incorporate and use these files for reference only, and at their own risk. While prior design information may be useful, Design-Build Firm shall exercise its independent professional judgment to fulfill its responsibility to prepare a total and independent design for this Project. The DPOR of the DB firm/team will be required to develop and provide all design deliverables drawings utilizing a BIM model environment for the architectural, civil grading and MEP engineered drawings, The technology sheets, landscape, and fuel drawings may be in a 2D CAD environment , as well as have the ability to convert such BIM models into AutoCAD (*.dwg) format for SAWS' facilities use.

E. FURNITURE, FIXTURES, AND EQUIPMENT (F&FE)

These items are defined within this DCP. Each item is clearly indicated whether it is Owner Furnished Owner Installed (OFOI), Owner Furnished Contractor Installed (OFCI) or Contractor Furnished Contractor Installed (CFCI). The DB firm will coordinate the delivery of these items with the Project Schedule and identify these items on FF&E sheets produced by the DPOR and included in the final set of Construction Documents. The DB firm shall ensure that all drawings have been coordinated with the SAWS furniture vendor and the DB firm shall run all data and electrical to adjacent hard walls or floors (power poles are not acceptable) and shall provide voice-data/electrical support onsite during Owner FFE install. At a minimum this shall include furniture and shelving.

F. UTILITY SERVICES

The DB firm shall confirm adequacy and shall locate all available utilities and shall provide connections to the site and to each building accordingly. All utilities must be installed underground. Any and all associated fees must be included within the GMP. The DB firm must also consider and coordinate any impacts to the existing utility conditions and neighboring customers who could be impacted, such as storm water and drainage, electrical, and water and sewer.

G. INTERFACE WITH EXISTING/ONGOING SAWS OPERATIONS

SAWS will continue operations during construction activities at all sites. SAWS Operations is currently using the New NEOC site on Judson Road for pipe supply, material storage, and heavy equipment training. SAWS may continue operations at this site during construction activities.

The Naco Pump Station is a significant water Production site in Northeast Bexar County. Remediation of the fuel and demolition of the existing administration building (circa 1980) at this location will only occur after all SAWS staff at this location have been completely relocated to the New Northeast Operation Center on Judson Road. Once the staff has been relocated and the building is vacant, the Naco Pump Station will remain an active water Production site. SAWS production staff may occasionally be present on the pump station side of the site for ongoing pump station activities and operations.

The DB firm shall develop and include appropriate staging plans, working in conjunction with SAWS' Project Manager and Program Manager Consultant to finalize an approach that will allow continuing operations. The DB firm shall show access, work zone perimeters, and other site limitations for each stage clearly on work staging drawings on their submittals and shall show milestones in their accompanying Project Schedule showing move-in/out dates with allowances for move and turnover events subject to SAWS acceptance. The DB firm shall also allow for staggered occupancy and partial occupancy where SAWS may

need to occupy a structure and portions of the site that have been completed and accepted, prior to the overall site being complete.

H. PROJECT MANAGEMENT PLAN

The Project Management Plan (PMP) is an overall management plan for the Project, developed by the Program Manager, which describes all protocols, processes, and plans Design-Build Firm shall use on this Project. The PMP defines the stakeholders' methods for data transmission and issue communication, as well as the process for change management. which is implemented when the DB Firm submits a Proposal Request, at the Owner's request, for such adjustment to an Owner directed scope change. Following consideration and Approval of the Proposal Request by SAWS internal Change Control Board, Owner shall issue a written Construction Change Directive (CCD) signed by Owner directing a change in the scope of the Services and/or Work or granting an equitable adjustment to the Project Schedule and/or the GMP .

I. PHASE III PROGRAM SCHEDULE

2021 3rd Quarter

- **SAWS staff takes selection of DB Firm and GMP to SAWS Board for approval. Pending Board approval:**
- **Notice to Proceed (NTP) into Design Phase issued (including New NEOC and Existing NESC items)**

2022 2 n d Quarter

- **SAWS staff briefs SAWS Board on Project status, Project schedule, and any reduction to the previously approved GMP.**
- **Notice to Proceed (NTP) into Construction phase issued for the new NEOC**

2023 3rd Quarter

- **Anticipated Final Completion of the new NEOC and SAWS staff relocation.**

2023 4th Quarter

- **Notice to Proceed (NTP) into Construction phase Issued for the NESC Demolition/Remediation at the Naco Pump Station Site**

**** Note SAWS reserves the right to adjust proposed schedule in coordination with selected DB Firm, length of procurement process and SAWS' Board available dates**

II. SUPPORTING REQUIREMENTS

The supporting requirements are provided in the following pages of this section.

Northeast Operations Center

SCOPE SHEET

OVERVIEW:

The existing SAWS property will become known as the Northeast Operations Center location and will be a completely new facility. The site is approximately 36 acres and will include a 10,640 SF Administration Building, a 6,862 SF Fleet Building, and a 6,088 SF Supply Building.

DEPARTMENTS:

The following departments will be located at the new NEOC:

- Distribution and Collection Department:
  Twenty (20) - four person D C crews
  Two (2) - four-person Construction and Maintenance Crews
  Two (2) - two-person Line Cleaning crews

  Director, Managers, Admin, Superintendents, Forepersons, Field staff & Tool room technicians

- Supply Department:
  2 Supply warehouse technicians

- Fleet:
  Manager and up to 4 mechanics
  2 Parts Technicians
  2 Techs in the Office/Lobby space

FACILITY NEEDS:

10,640 SF Admin building
D&C Director, Manager, Superintendent Offices Training, Safety, and HR
Security, IT, Elec, and Mech and Fire riser room
Crew Quarters, Locker Rooms, and Showers and janitor
Multi-Purpose Rooms and storage rooms
Fitness room and breakroom

6,862 SF Fleet (4 bays) + office/ restrooms/tool/supply room/roof will extend to provide outdoor covered area at each end for equipment and wash bay. Parts room will be bisected to allow for door for light duty inspection bay
6,088 SF Supply + office/ restrooms / tool room/ roof will extend to provide outdoor covered storage area

SITE PARKING REQUIREMENTS:

POV, Ops and Fleet parking (see attached spreadsheet and summary this page)

Primary Spine road
Ice and water refilling building in Ops Parking
Two points of vehicular Ingress and Egress
"Main "entry with:

Lighted monument sign, separate visitor/ employee entry lanes, access pedestals, electric gates, pedestrian gate with card reader, designated area for future guard station with all required utilities at main entry, landscaping, and POV parking in close proximity to main entry (immediately after gate access)

Fuel island with canopy (air, water, grease, DEF, diesel and unleaded) – in close proximity to Fleet and to the Main entry (immediately after gate access)
Area designated as D&C Ops yard with bulk material bins. This area must include water and power and be well lit with a minimum of 1 foot candle in the evening.
Area designated as D&C concrete yard. This area must include water and power provided by the DB Firm, and be well lit. The concrete silo in this area will be provided and installed by SAWS. Pad designed, located, and built by the DB firm
Truck scale with easy on/off from spine road and visibility to Tool Room office/ window
Area designated for AGTs to include proper spill containment and access for fuel truck delivery – in close proximity to Fleet and to the Main entry (immediately after gate access)
Area designated for trash bins/ dumpsters with access and concrete approach aprons – a minimum of 2 dumpsters located near each building – walkable by Janitorial staff
Area designated for recycle metal containers with access and concrete approach aprons – near Supply and Ops Bulk yard to be well lit and within view of security cameras

NEOC PARKING AND STAFF COUNT

Staff Counts	Totals
Admin building	126
Supply building	6
Fleet Building	7
Total staff	139

SAWS Owned Equipment and Vehicle Parking Counts					
				Space size: 10'x20'	Space size: 16'x55'
SAWS Primary Operations Parking Area (Ops Parking)				90	39
SAWS Fleet garage parking area (for vehicles under repair)				14	15
SAWS Supply				6	2

Personal Owned Vehicle Parking Counts (POVs)						
				Space size: 10' x 20'	Space size: 3’ x 18'	
Employee parking				**140**		
Visitor parking				**5**		
Employee motorcycle parking					**6**	

SAWS Fleet Heavy Equipment Info - TRUCKS	
Description	**Size**
Honey Wagon	69' L w/Trailer
Lo Boy #1	65' L w/Trailer
Lo Boy #2	74' L w/Trailer
Combo	38' L
Pressure cleaner	24'L
10 yard Dump truck	38' - 6" L w/Trailer
7 yard Dump truck	53' - 9" w/Trailer
F550 crew truck	25' 10"

* DB firm to confirm all equipment sizes, axle dimensions, and turn radii prior to design and in coordination with Civil design.

Northeast Service Center at SAWS' Naco Pump Station

SCOPE SHEET

OVERVIEW:

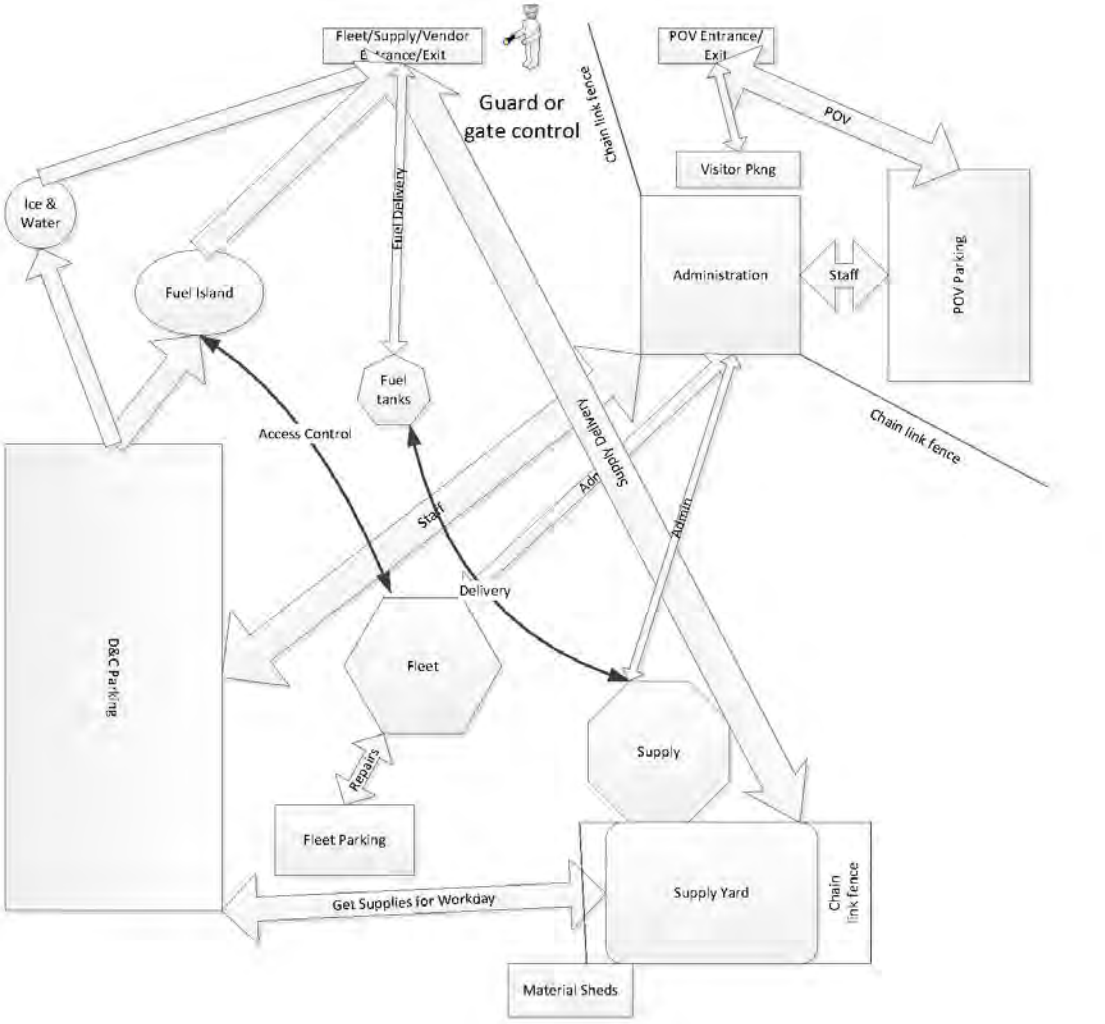
This is the existing Northeast service center at the SAWS Naco Pump Station. The existing admin building, and fuel tanks and pumps will be taken out of service and demolished once the new NEOC is complete. The existing Administration Building attached shed/structures, material storage bins, and fuel shall be completely demolished and removed. The fuel facility shall be remediated as required by all AHJ's. Pavements shall be replaced and installed in the footprint of the Admin Bldg. and at removed fuel pumps. A new retaining wall and railing shall also be installed in the footprint of the Admin. Bldg. and installation of guardrails, bollards, railing and any other safety items and associated signage and traffic striping as required, as well as the demo of the existing 2 marquee signs and the installation of a new marquee with signage designating the site as the Naco Pump Station.

III SITE LAYOUT

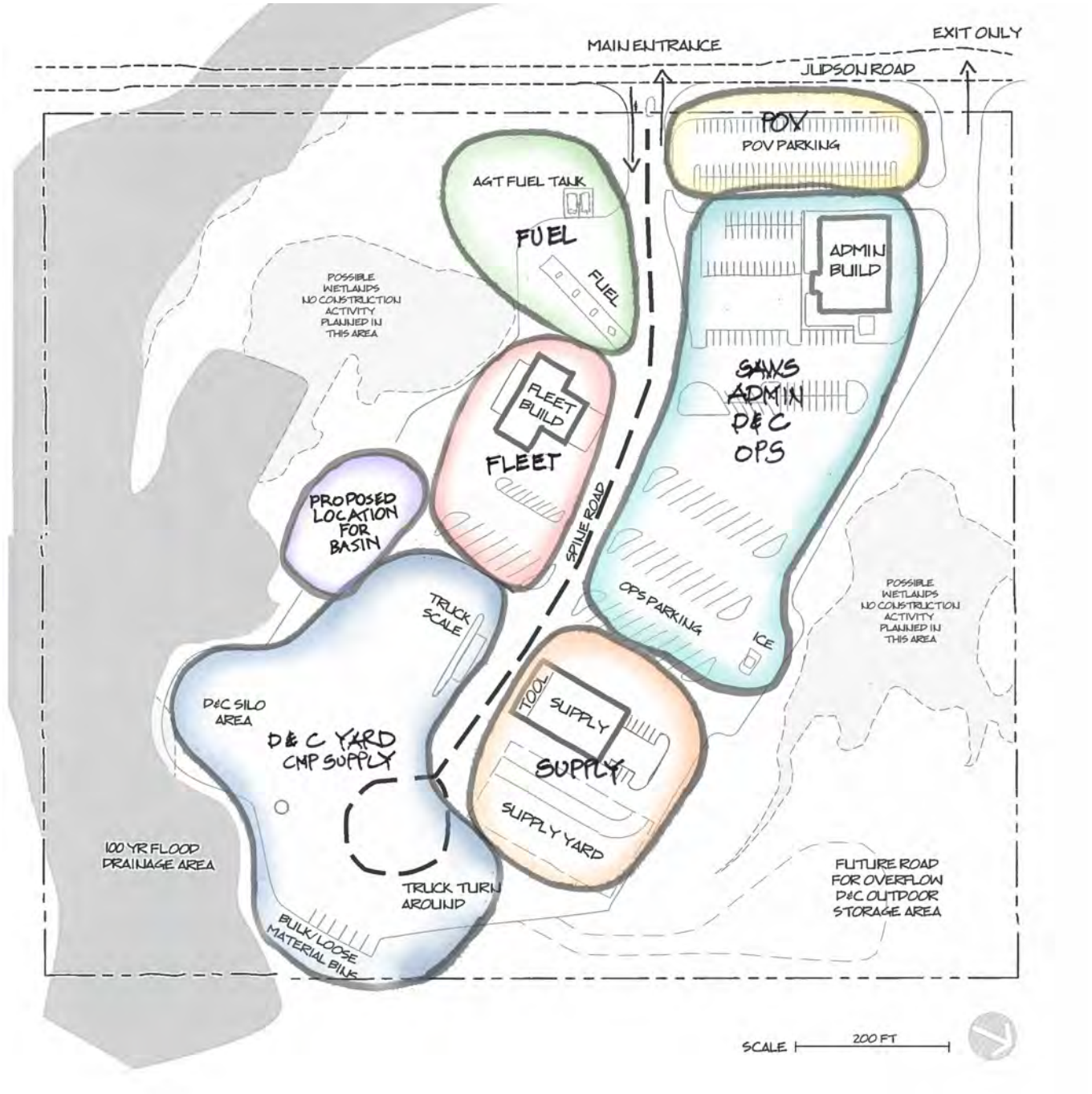
A. NORTHEAST OPERATIONS CENTER AERIAL IMAGE (NEW FACILITY)
B. NORTHEAST OPERATIONS CENTER AFFINITY DIAGAM (NEW FACILTY)
C. NORTHEAST OPERATIONS CENTER BUBBLE DAIGRAM (NEW FACILITY)
D. NACO PUMP STATION AERAIL IMAGE (EXISTING NESC SITE)

NEOC - AERIAL VIEW OF SITE

NEOC – AFFINITY DIAGRAM



NEOC – BUBBLE DIAGRAM



The DB firm is free to arrange the buildings, drives, and site features subject to review meetings and Approval by SAWS and change the building massing or flow patterns as per their professional practice. Any deviations shall be done with consideration and with adherence to the adjacencies as represented on this bubble diagram. However, the Operations Center must stay within the Approved scope, Project Schedule, and GMP. SAWS will not allow an overrun of the GMP, in accordance with the Design-Build Services Agreement.

NESC AERIAL IMAGE

IV. BUDGET LIMIT

SAWS has established a budget limit of $27,286,906 for this project.

“The established budget is for the DB Contract, which includes all Design and Construction required to complete the Project under the Agreement, and includes DB Contingency, Profit, Overhead, Insurance and Bonds, and all line items, as shown on the Pricing Schedule-Exhibit 3 to the Contract.”

V. DESIGN PERFORMANCE REQUIREMENTS

A. DESIGN NARRATIVES

GENERAL SITE PLAN NOTES

GENERAL INFORMATION

1. The following preliminary studies and reports have been performed and are included herein for informational purposes for reference only. In accordance with eh Design-Build Services Agreement, the DB Firm shall not rely upon any information provided by the Owner and shall independently develop the design for this Project and perform all surveys, investigations, studies and reports as part of their proposal as appropriate to complete final design.
    a. Topographic Survey performed by Ford Engineering; Inc. dated October 23, 2016.
    b. Geotechnical Engineering Report performed by Professional Service Industries, Inc. (PSI) dated July 26, 2019.
    c. Desktop Threatened and Endangered Species Assessment, Desktop Edwards Aquifer Transition Zone Requirements Assessment & Desktop Cultural Resources Assessment dated August 5, 2019
    d. Judson Road Infrastructure Improvement 100% Plans – prepared by KCI Technologies dated October 2020.
    e. Affinity Diagram – showing the conceptual relative traffic between different areas of the proposed facility. These drawings are qualitative in nature and may be used by SAWS in review of the proposed site layout.
2. The NEOC site has not be platted. SAWS will complete that process in coordination with the selected Design-Build firm.
3. When there is a discrepancy between design criteria stated herein and regulatory/permitting agencies, the of the two design criteria will apply.

PAVING/PARKING/SITE ELEMENTS

1. Fence at perimeter of site to be modified as necessary which could include relocation of a portion of existing fencing and will include adding automatic vehicular access gates at a main entry/exit and at a secondary entry/exit, as well as pedestrian gates and 2 maintenance access gates. All fencing shall be in accordance with SAWS Fencing Standard.
2. Personal Occupancy Vehicle (POV) parking to be separated from SAWS' Fleet parking and Operations' area which may include fencing if required to separate from SAWS fleet parking. Provide concrete mow strip under all fencing as required by SAWS Fencing Standard.
3. Concrete wheel stops at POV parking and at all parking against fences, sidewalks, curbs, buildings, ditches or swales, landscaped areas, or other site elements.
4. POV standard parking sizes for employees shall be 10ft x 20ft minimum. All proposed parking layouts shall be reviewed by Owner.
5. SAWS Fleet and equipment parking sizes vary and are as shown in this DCP. Design-Build Firm shall be required to design all lanes, turns, egress, ingress, and parking to accommodate the Fleet vehicles, equipment, and delivery trucks intended for use at this facility.
6. Primary drive lanes to be concrete pavement with concrete "throats" into asphalt parking areas. Areas surrounding fuel island, AGT basin and tanks, ice/water station, truck scale and dumpster/recycle bin areas shall be concrete. All other yards and parking to be asphaltic pavement.
7. The Civil engineer shall propose a design in the Ops parking with minimal amount of raised curbs. Flat ribbon curbs to transition from the perimeter of the asphalt to other surfaces or grade may be preferred to avoid damage to SAWS vehicles. All proposed curb conditions and pavement transitions shall be reviewed with Owner.
8. All routes with the exception of POV areas shall be designed to accommodate AASHTO WB-67 vehicles. Provide turning template exhibits at all driveways, internal circulation areas, turn arounds, and loading

docks showing the adequacy of the site design to accommodate the design vehicle. Exhibits shall be generated by use of turning template software (i.e. Autoturn, MSTurn, etc.). Exhibits shall be provided for review at all milestone submittals.

9. Ensure front entry drive has adequate throat for queuing vehicles, at least four vehicles deep into site with two entry lanes and one exit lane.
10. All four bays of the Fleet Garage must be accessible by SAWS largest vehicles/equipment.
11. All routes to be traversed by heavy vehicles shall have a maximum 6% longitudinal slope. Maximum grade breaks without a vertical curve shall be 4%. Cross slopes of all routes shall be 2% desirable and 4% maximum.
12. Landscape Areas similar to the Phase I NSOC plans. Provide topsoil, plantings and irrigation per specifications. DGG pathways through landscaping to connect any parking areas, or sidewalks.
13. At both the Primary Entry and secondary entry gates there will be electrically operated gates with 2 tier pedestals for SAWS employee card swipe and 4 button intercoms for visitors. Pedestrian gates shall have a magnetic lock with 2-way card readers and an automatic closer. Supply yard shall be fenced and have 2 manual cantilever gates– Refer to specs for gate sizes/details.
14. Pedestrian paths, sidewalks and striped pavement, to all buildings to provide as safe and visible pedestrian path and shall be designed in compliance with all applicable codes. Heavy duty crosswalks in pavement.
15. Pedestrian signage throughout for safe path to/from items on site. Vehicular and SAWS signage on gates and speed limit signs, SAWS specific safety signs, and SAWS muster signs throughout drives and parking.
16. Pavement markings shall include directional arrows at entries, each parking aisle, and on all drives every 50 feet.

GRADING/DRAINAGE/WATER QUALITY

1. All drainage analysis and design shall follow applicable City of San Antonio and SAWS design criteria. All water quality considerations shall comply with applicable City of San Antonio, State of Texas, and Federal guidelines.
2. Site plan shall be designed such that all flows leaving site are returned to the predeveloped flow rate and character (i.e. sheet flow or point discharge) at each outfall location. Detention ponds with appropriate outlet structures will likely be required and are included in the scope of this project. No channelized discharges will be allowed where there is sheet flow discharge in the existing condition.
3. Minimum slopes for asphalt paving shall be 1.0%.
4. Minimum slopes for concrete paving and curbs shall be 0.5%.
5. It is the intent to balance cut and fill quantities to the maximum extent possible to minimize costs. Refer to GEOTECHNICAL ENGINEERING REPORT provided herein for requirements for use of on-site materials as fill. Side slope protection requirements are as follows:
    a. 4:1 or flatter – revegetate with approved seed mixture
    b. Between 4:1 and 3:1 – revegetate and armor with soil retention blanket equivalent to TxDOT Item 161 Type A
    c. Steeper than 3:1 – Not allowed
6. Site Preparation to include all grading, hauling, landscape, paving, and utilities as per spec.
7. Utilize surface drainage where possible. Small runs of pipe and area drains may be required. Final design shall have positive drainage, no low spots and no ponding and no “streams” of water or swales deeper than 6” in a 500-year event.
8. All building finished floor elevations shall be set such that they are high enough above the adjacent surface such that 100-year (Atlas 14) design storms will not enter buildings. Adjacent ground and paving areas shall be graded to drain away from buildings.
9. All on-site inlets and storm sewer systems shall be sized for a minimum 5-year design storm.
10. All point discharge from paved/improved areas shall be to an adequately sized channel with suitable erosion protection. Design plans shall show design flows, velocities and channel capacity calculations. All drainage

discharge locations shall be reviewed by Owner.

11. Demolition- Any surface items, abandoned water wells, slabs or structure found within site to be developed.
12. Site is located in close proximity to the EARZ, and within the COSA ERZD Overlay District. Site design shall comply with all TCEQ and COSA requirements for water quality BMP's.
13. Construction activities shall comply with the Texas Pollution Discharge Elimination System (TPDES) requirements. This will include any sedimentation basins required if site clearing disturbs 10 acres or more as well as any other BMP's required under the TPDES General Permit. An approved Stormwater Pollution Prevention Plan (SWPPP) and notifications are included in the project scope.
14. Note that the site likely contains areas of low water that could be USACE jurisdictional wetlands and Waters of the US (WOTUS). SAWS expects the limits of construction to exclude and avoid these areas. If the DB Firm chooses to engage these areas, then any wetlands mitigation and permitting shall be included in the cost proposal provided in this procurement. Site design shall be configured to avoid any impacts to wetlands and WOTUS which would trigger USACE permitting.
15. It is the intent to utilize site grading and the civil design in the development of the site, to provide to provide containment for leaks and spills from petroleum and tanks. All containment areas shall drain to filtration or treatment BMP's as required by regulatory agencies.

SITE UTILITIES * **all utility tie ins and extensions must include all fees by AHJs**

1. Water – Refer to JUDSON ROAD INFRASTRUCTURE IMRPOVEMNET PLANS for water main information. Contractor's proposal shall include adequate provision to route all project related waterlines to the proposed new water main. Project pricing shall include all pipe, fittings, valves, connections, thrust blocking, backflow preventers, hydrants, testing, and disinfection to provide a complete connection to the water main extension.
2. Water - Backflow preventer - Installed, as required by code, on all domestic water, dedicated fire protection loops and irrigation lines. Contractor to install below grade in concrete vault with aluminum lids for the fire protection mains. Contractor to adhere to all codes and regulations and shall not depend on SAWS Project manager to coordinate any permits or reviews required by the AHJs.
3. Fire Line – size as required by the San Antonio Fire Prevention Code and currently adopted edition of the International Fire Code. Design phase shall include a hydraulic analysis and hydrant pressure testing of the fire protection main based on actual residual pressures at the point of connections and anticipated fire flows in accordance with the International Fire Code. In the event required flows and pressures cannot be achieved with the connection to the system, Contractor shall either coordinate with SAWS to determine if residual pressure in the area can be increased to meet the requirements OR install booster pumps as necessary to achieve required pressures at buildings and hydrants and shall not depend on SAWS Project manager to coordinate any permits or reviews required by the AHJs.
4. Fire hydrants –Refer to COSA and NFPA and verify that every point on exterior of building is within the minimum required by code of hose-lay distance from a hydrant and provide hydrants accordingly.
5. Sewer – Refer to JUDSON ROAD INFRASTRUCTURE IMRPOVEMNET PLANS for wastewater connection information. Contractor's proposal shall include adequate provision to route all project related wastewater to the proposed lift station.
6. Vehicle wash down concrete pad with grating and area drain - concrete pad should be formed to drain to the center to contain all flows into a grate inlet submerged precast sludge pit with removable grate for easy cleanout. Should be designed to accommodate cleanout by hand and by compact excavator and by Combo Vac truck. A separate pit with Grate inlet would need to include an oil/water separator and discharge into a sanitary sewer manhole. **DB-Firm to perform a site visit to SAWS WSOC to review the revised condition for this installation as SAWS did need to revise the work from the original Phase I design.** Grate inlet covers to be easily removable and drain accessible for cleaning.
7. Gas- Extend existing gas line(s) to site from an adjacent structures or R.O.W. Include CPS gas meter fee.
8. Electric- All on-site power to be designed to be underground. All existing to be rerouted accordingly.

Allow for Transformer /All CPS Fees as required including to relocate poles to perimeter of site. Provide underground cable/conduit/duct bank. Provide for additional extra conduits for future additional SAWS IT/ Security. No overhead utility lines on site. (Remove existing overhead lines and power poles and relocate as required by CPS). All pull boxes/hand holes/utility vaults shall be and at an elevation below any of the building Finished floor elevations, and the conduits sealed.

9. Emergency Generator – At the NEOC match the Phase I NSOC design/requirements and confirm it will provide power to all three new buildings.
10. Phone service to be brought into building MDF room. Use underground cable/conduit. Demark at building for POTS
11. Cable TV to be brought into building. Use underground cable/conduit and provide CATV cable pulls throughout all buildings to appropriate TV locations. Coordinate with Spectrum through the SAWS account manager.
12. AT&T Fiber Optic Data service to be brought into Admin Bldg. MDF room. 4" steel tube to be mounted at roof of Admin building above MDF room for OFOI Wi-Fi antenna.
13. Tree protection required for any trees to be preserved. Coordinate w/ COSA requirements for any tree to be removed. Site shall be surveyed by DPOR and all heritage trees within the LOC to be preserved. Minimum of 40' of depth into the site, from the property line, of existing trees to remain at all perimeters
14. Signage: Low monument Entry signage – one (1) low brick freestanding flanking sign walls at entry with metal letters, low landscaping and landscape lighting to match NSOC marquee sign.
15. Include general way finding signage around site and building designations.
16. Bollards at OH door openings and building corners. Provide guardrails at all drainage ditches and culverts.
17. Lighting- Provide pole mounted LED light fixtures at parking and drives. Flagpole light shall have a dedicated switch. Minimum of 1 foot-candle exterior lighting throughout site. Site Photometrics will be required.
18. Fuel – Provide fuel service area {diesel and gasoline} with above ground tanks, fuel island to include DEF, grease station, air and water, signage, Wi-Fi for EJ Ward system, and trash cans to match NSOC fuel islands.
19. Recycle metal bins - Provide concrete pad.
20. Dumpster Area's at Each Building - Provide concrete dumpster pad.
21. Designated areas for loose materials concrete material bins with concrete apron.
22. Truck Scale – At the NEOC provide a new Truck Scale to match the Phase I NSOC design/requirements.

FUEL

1. This project includes the installation of two above ground storage tanks (ASTs) for the storage of gasoline and diesel fuel. The gasoline tank will be 12,000 gallons in nominal capacity, and the diesel tank will be 15,000 in nominal capacity. Both ASTs will be UL-2085 listed.
2. All electrical work will be completed in accordance with City of San Antonio codes and regulations, NFPA 30, and the NEC.
3. It shall be the Contractor's responsibility to submit the Texas Commission on Environmental Quality (TCEQ) 30-day construction notification, to notify the appropriate Fire Marshal having jurisdiction, and to obtain any and all permits for the construction of the system.
4. This facility is located on the Contributing Zone to the Edwards Aquifer. The Contractor shall be especially careful to prevent the loss of contaminates to the storm water, or into any recharge features, if found. Any recharge features that are found shall be reported to the project superintendent immediately.
5. The Contractor is solely responsible for the means and methods of construction. OSHA regulations regarding the construction activities, including but not limited to, trenches and excavations, and operations above four feet shall be strictly followed. All Site Supervisors shall be 40-hour OSHA trained.
6. A site specific Health and Safety Plan shall be prepared and kept on site in case of an emergency. All personnel shall be briefed on the plan and know its location.
7. The site will be kept clean of trash and debris. A Storm Water Pollution Prevention Plan (SWP3) has been developed for this site, and its provisions shall be followed by the fuel system contractor.

8. The Contractor installing the fuel systems shall be a TCEQ licensed contractor, and this Contractor shall have a TCEQ licensed on site supervisor on site at all times that construction activities are taking place. The licensed on-site supervisor shall sign all manifests or other documentation as required for record keeping purposes. This documentation includes, but is not limited to, the TCEQ registration form, AST warranty and installation forms, and Red Lined drawings to be used in the development of Record Drawings.
9. Pressure testing of the new piping and other gasoline and diesel system components shall be in accordance with the local Fire Marshal's requirements, or as required by PEI RP-100. In any case, pressure shall be left on all piping (both primary and secondary) until all paving has been placed over all UST system components. Any loss of pressure shall be investigated immediately.
10. An emergency stop switch shall be mounted adjacent to the electrical equipment building as indicated on the plans and specifications. When activated, this switch shall open the circuits and thus shut off all power to the fuel pumps and dispensers. This switch shall require manual resetting before pumping can continue. A sign shall be mounted above the switch, 7 feet above the ground, and shall have 2-inch red letters on a white background stating Emergency Fuel Shut Off. This switch shall be not less than 20 feet from the point of fueling, nor greater than 100 feet.
11. Upon completion of the installation of all equipment and piping, third party precision line tests shall be performed on this system. Copies of these data shall be submitted to the Engineer.
12. A project manual shall be submitted to the Owner in a three-ring binder that includes all maintenance, operations and warranty documents associated with this project. Additionally, any and all test data such as the precision line results shall be included.

Piping Specifications

1. Piping used on this project shall be UL 971 and 567 listed FRP. This includes all primary and secondary piping and fittings. One manufacturer shall be used throughout the entire project. Mixing product types is not acceptable. All fittings and glue kits will be of the same manufacturer as the piping.
2. All stainless-steel flex hoses used on this project shall be UL listed for above ground use. Flex hoses UL approved for underground use are not acceptable.
3. No FRP piping shall be visible in dispenser pans or other above ground applications. Only UL approved aboveground steel flex connectors and/or steel piping shall be visible in above ground applications.
4. Pressure testing shall be performed on both the primary and secondary piping systems.
5. Pressure shall remain on all piping until all pavement construction is completed in the vicinity of the piping.
6. The transition and dispenser sumps shall be waterproof, and shall be tested to guarantee this fact. The test shall be performed by filling the sumps with water to a point specified by the Engineer, and a mark shall be made at that level. The Engineer shall witness this test and verify that the riser is holding water.

AST Specifications

1. The ASTs used on this project shall be UL-2085 listed. The gasoline AST shall be a ten-foot nominal diameter 12,000-gallon nominal capacity tank, and the diesel AST shall be a 15,000-gallon nominal capacity ten-foot nominal diameter AST. The Contractor shall request a letter from the tank manufacturer proving that air testing has been successfully completed for both the inner and outer tank during the manufacturing process. This letter must be available for inspection by the Fire Marshall upon arrival of the ASTs to the site, and shall be made a part of the permanent records upon completion of the construction of the systems.
2. Upon arrival at the site, the ASTs shall be carefully inspected for damage. Any damage noted shall be reported to the Engineer immediately. Damaged tanks are not acceptable for use at this facility.
3. The ASTs shall be placed in the containment structure as indicated on the plans. All fittings and equipment necessary to complete the system shall be placed on the ASTs.
4. The Contractor shall complete all documentation necessary to comply with the TCEQ regulations and to cause the warranty to come into force.
5. A one-inch diameter by eight-foot-long copper clad steel ground rod shall be placed between the two ASTs. A 4/0 copper conductor shall bond the two tanks and provide a common ground plane. This grounding rod shall be in place before the placement of the concrete such that the concrete is placed around the grounding rod forming a tight seal.

Equipment Specifications

1. The pumps to be used on this project shall be Red Jacket AG submersible turbines or prior approved equal in the size specified on each detail. The dispensers to be used are as follows:

A. Double Nozzle - Single Product Dispenser

(a) Remote dispenser, 2 - GasBoy 9150KXTW1 (diesel) and 2 - Gasboy 9853KXTW1 (gasoline) with the following equipment:

1. Internal high flow filter (gasoline)
2. External Hydrosorb diesel filters (diesel)
3. High Hose Retractor
4. Light
5. Mechanical Totalizer
6. Card System Interface
7. 100: 1 VR Pulse Output (4 required per dispenser)
8. Automatic Nozzle
9. Break-away hose coupler
10. Any other equipment necessary to complete the system

2. Double poppet impact valves shall be placed under each remote dispenser. These impact valves shall be mounted such that the shear plane is flush with the surface of the fuel island. The bar on which the impact valves is mounted must be able to resist 650 ft lbs of moment for each impact valve mounted on it.

3. Flame arresting vents shall be used on each fuel tank. These vents shall be at minimum 12 feet above finished grade. A P /V cap shall be used on the gasoline AST and a rain cap shall be used on the diesel tank.

4. An above ground pressure rated overfill prevention valve shall be placed at each fill position. This fill limiter shall stop flow into the AST when the liquid level reaches 90 percent of the total volume.

5. A fuel management system shall be installed to control access and account for the fuel and DEF used at this facility. The system type shall be specified by the Owner.

6. One DEF system shall be installed as indicated on the plans. This system shall consist of a small enclosure, pump, hose reel, and nozzle. These components shall all be compatible with DEF.

7. One diesel island shall have an air, water, and grease dispenser. The Contractor shall submit cut sheets with the proposed equipment to be used in this application.

DEF Specifications

1. Commercial unit, suitable for fleets, municipalities, and other users not engaged in resale of DEF.
2. Capacity: Nominal capacity of the tank shall be at least 400 Gallons.
3. Dimensions: Overall exterior dimensions not to exceed a diameter of 64” and Height of 81”
4. Dispensers: One integrated metered dispenser required.
5. A self-retracting hose reel assembly with a 20’ hose, magnetic nozzle with auto shutoff, breakaway and swivel.
6. A self-priming pump.
7. Flow meter with volume and totalizer display, +/- 1% accuracy or better.
8. Minimum 5 gallon per minute flow rate for each dispenser.
9. 1-micron element product filter for dispenser.
10. System design must provide insulation from temperature extremes.
11. System must have adequate corrosion protection.
12. System manufacturer must offer at least a two-year warranty on all factory installed components, materials and installation.
13. Reliable automatic tank gauge system to provide accurate product levels and ullage.
14. Product management system that authorizes use and tracks product output.
15. Overfill prevention valve/system.

Leak Detection Equipment

1. The Leak detection for the piping, ASTs, and DEF at this facility shall consist of the following equipment.
a. A Veeder Root TLS-450 Plus console
b. Each AST shall have an interstitial sensor
c. Each AST shall have an in-tank probe to monitor and report fuel levels. Due to diurnal heating, inventory reconciliation cannot be performed in ASTs.
d. Each transition sump shall have a liquid sensing sensor placed in the bottom of the sump.
e. Each dispenser sump shall have a liquid sensing sensor placed in the bottom of the sump.
f. An overfill alarm with acknowledgement switch shall be mounted on the fill connection of each fuel type. This alarm shall be used to alert the truck driver to a near full level.
2. Any liquid sensed by an interstitial monitor or liquid sensor shall cause the fuel pumps to be de-energized, and all dispensers to stop pumping. The pumps shall not be re-energized until the cause of the alarm has been identified and rectified.
3. A current copy of the Veeder Root Inform program that allows remote sensing, monitoring and operation of the system shall be provided to the Owner, placed on the Owner's selected computer, and the program initiated.
4. The system shall not interfere with the fuel management system, and shall perform all functions in conjunction with the fuel management system.

Canopy

1. The canopy column locations are presented on the plan details. These column locations are indicated such that the layout of the fuel station can be completed. If the 14-foot c-c spacing is not acceptable, the Engineer shall be notified so that the fuel station layout can be modified.
2. The canopy engineer is responsible for the design of the footings, columns, and other structural components of the canopy. The outline of the canopy and the location of the columns on these plans is for planning purposes only and does not constitute a canopy design.
3. The canopy shall have LED lighting so that safe fueling operations may continue during dark periods.
Start Up Once all equipment has been installed, the Contractor shall perform a complete startup of all equipment. During this start up procedure, all meters shall be calibrated, and tests to ensure the proper operation of all equipment shall be performed. The Veeder Root system shall be programmed to the specified settings, and verification of proper operation shall occur.

Training

Training of select SAWS personnel in the proper operation of all equipment shall take place within 3 business days of startup. This training shall be sufficiently thorough so that SAWS personnel may use the equipment correctly and in compliance wit

ADMIN BUILDING NOTES

STRUCTURE

1. Concrete reinforced foundation. Base/prep per Geotech.
2. Pre-Engineered metal building structure w/ pre-engineered roofing system components.

EXTERIOR CONSTRUCTION

1. Main Façade: Brick veneer masonry and prefinished Kynar metal panels/trim with metal stud back up, 16" O.C.(l/640). Dens glass sheathing board with membrane waterproofing over entire wall surface. 1" rigid insulation board in cavity spaced adhered to sheathing board with R-19 batt insulation in metal studs. Provide galvanized loose angle lintels at window and door openings.
2. Sides and Back Facade: Prefinished Kynar metal panels/trim on metal stud back up 16" D.C. (1/640) with dens glass sheathing board/membrane waterproofing over entire wall surface. Provide a 4" high concrete curb at all exterior walls.
3. Windows: Windows will consist of punched openings. Window system equal to Kawneer Trifab® 451UT is 4-1/2" deep with a 211 sightline and 1" insulated glass. Glazing is to be tinted with low e coating. Gap between window and metal panel requiring backer rod and sealant shall not exceed 1/4".
4. Main Entry Doors: Door system equal to Kawneer with electrically operator for ADA accessibility. Door is to have access control system including a camera and voice communication. Provide a canopy over the door. **MAIN ENTRY VESTIBULE MUST BE ABLE TO ACCOMMODATE TEMPERATURE SCREENING EQUIPMENT DUE TO COVID 19.**
5. Secondary Doors: Provide insulated HM door and frames painted with a canopy over each door. All exterior doors shall have access control and "PUK" light fixtures in the canopy.
6. OH Doors: Provide electrically operated (gear drive) and insulated OH doors.
7. Louvers: louvers to be aluminum kynar finish. Provide insect/bird screens and sub-sill.
8. Roof: Low slope metal roofing panel on 8" roof purlins 4'-0" D.C. equal to Butler MR-24 roof panel with Butler Thermaliner R-23 Insulation System. Roof is to have a single slope towards back wall. Roof drainage is to be gutter and downspouts.
10. Exterior lighting is combination of wall mounted fixtures and light poles, and shall meet low-lighting requirements by US DOD, Camp Bullis
11. Provide Metal canopy at main entry and at all exterior doors.
12. Provide bird netting/control at all exposed exterior metal building structural elements: underside of canopies

INTERIOR GENERAL NOTES

Typical interior partition to be one-layer 5/8" gypsum board each side of 3 5/8" metal studs, 22 ga, 16" OC. Provide sound batt insulation at all multi-purpose rooms, conference rooms, and office spaces. All corridor walls are to go deck above and be rated. Walls around wall multi-purpose rooms, conference rooms, mechanical spaces and restrooms are to go to deck.

FINISH PACKAGE DESCRIPTIONS

FP -1: Multi Purpose/Crew Quarters/Foreperson's Room
Floor: Polished Concrete
Base: 4" rubber.
Walls: Painted gypsum board (equal to Georgia Pacific DensArmor Plus).
Ceiling: Painted gyp board and 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid
Casework: Plastic laminate with solid surface tops
Specialties: Tack board, Marker board, Chair Rail
Room to accommodate monitors and cameras as for go to meetings/training Telephone,
computer network and cable TV connections infrastructure Folding wall w/ egress door
Room to accommodate monitors and cameras as for "go to" meetings/training Telephone,

computer network and cable TV connections infrastructure Manual black out shades at windows

FP-2: Offices and Associated Support Spaces
Floor: Carpet tiles
Base: 4” Rubber
Walls: Painted gypsum board
Ceiling: 2x2 Lay-in mineral fiber acoustic ceiling panels, painted steel grid
Casework: Plastic laminate with solid surface tops

FP-3: Lobbies/Corridors
Floor: Polished Concrete
Base: 4" rubber.
Walls: Painted gypsum board (equal to Georgia Pacific DensArmor Plus to 4 ft). Chair rail and corner guards (Stainless steel corner guards at Lobbies and at any wall painted “Colonial Reed”
Base: 4" Rubber coved base
Ceiling: 2 x 2 lay-in mineral fiber acoustic ceiling panels, painted steel grid
Specialties: Directory (lockable) and Tack board in Lobby

FP -4: Restrooms/Lockers/Showers
Floor: Ceramic tile with membrane waterproofing
Base: Coved ceramic tile
Walls: Ceramic tile wainscot to 4ft aff and painted above on CMU back up. At wet wall provide ceramic tile full height. At showers provide ceramic tile full height on CMU walls and on ceiling.
Ceiling: Painted gyp board, semi-gloss finish
Casework: Solid Plastic with solid surface tops
Specialties: Solid surface toilet partitions, floor mounted. Stainless steel toilet accessories
Provide industrial grade vitreous china Fixtures/Lavatories/Water Closets, Urinals

FP-5: Mechanical Rooms
Walls: Painted CMU (Walls to Structure)
Base: NA
Floor: Sealed concrete slope to drains
Ceiling: Exposed Structure
Specialties: Equipment to be on sound isolators

FP-6: Support Spaces for Equipment/Storage
Floor: Sealed concrete
Base: 4” Rubber
Walls: Painted gypsum board
Ceiling: 2x2 mineral board lay-in acoustical ceiling, painted steel grid
Casework: Plastic laminate with solid surface tops

FP-7: IT, Electrical and Storage
Floor: Sealed concrete (anti-static coating at IT), slope to drains
Base: 4" rubber coved base
Walls: Painted gyp board (equal to Georgia Pacific DensArmor Plus) Painted steel deck
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.
Specialties: At MDF/IDF rooms provide plywood on walls and Anti-Static flooring.

FP -7: Janitor
Floor: Sealed Concrete
Base: 4" rubber coved base
Walls: Painted gyp board, 4 x 4 glazed ceramic tile wainscot to 6ft just at the two walls at the mop sink.
Ceiling: 2 x 2 mineral board lay-in fiber acoustical ceiling panels, painted steel grid.

Casework: Shelving and Mop sink with holder

MEP BUILDING SYSTEMS DESCRIPTION HVAC

1. The building will be air conditioned by a VAV (variable air volume) air handling unit (located within an enclosed Mechanical Equipment Room) with individual zone VAV terminal units (located throughout, above the ceiling). The air handling unit will consist of a chilled water-cooling coil, filters, and supply fan. Chilled water will be provided by an outdoor air-cooled packaged chiller. A chilled water pump will distribute chilled water to and from the chiller to the air handling unit via a distribution piping system (Sch. 40 black steel piping, 1.5 inches fiberglass insulation). The ducted supply air distribution system will be insulated sheet metal. The above ceiling space will be utilized as a return air plenum. Outside air will be ducted to the air handling unit via an in-line fan with an electric duct heater to maintain a minimum outdoor air temperature of 55°F entering the air handling unit. The individual VAV terminal units will be fan-powered parallel type with an electric heater. Controls will be direct digital electronic type.
2. The restrooms will be exhausted by a ducted roof-mounted exhaust fan.
3. Fitness Room to have dedicated exhaust system.

PLUMBING

1. The plumbing fixtures within the restrooms will consistof:
2. Wall mounted industrial grade vitreous china water closets with 1.6 gpf flush valves, hands-free sensor operated, electrically powered.
3. Wall mounted industrial grade vitreous china urinals with 0.5 gpf flush valves, hands-free sensor operated, electrically powered.
4. Countertop, undermount, sinks with metered faucet, hands-free sensor operated, electrically powered.
5. Pressure-balanced, thermostatic mixing valve and vandal resistant shower head.
6. Floor drains will be provided in the toilet and shower areas. The floor drains in the toilet areas will have trap primers.
7. A dual height electric water cooler will be provided adjacent to the restrooms.
8. A floor-mounted molded stone mop sink will beprovided.
9. Electric hot water heater will provide hot water to the lavatories and mop sink. A thermostatic mixing valve will provide 110-degree F hot water to the lavatories, and 140 degree F will be provided to the mop sink. A re-circulating pump loop will be provided.
10. Domestic water piping shall be Type K copper. Hot water piping shall be insulated.
11. Sanitary waste and vent piping will be hubless cast iron aboveground, hub and spigot type underground.

ELECTRICAL

1. The building lighting will consist of recessed parabolic LED fixtures. Toilet/Locker rooms shall have sconces flank at sink, and recessed cans in furr down at sink above.
2. Lighting controls will utilize occupancy sensors throughout the spaces, with a lighting relay panel to control the lighting in corridors. Integrate with BMS.
3. Exterior building lighting will consist of architectural grade, LED wall fixtures that are dark sky compliant. The lighting will be controlled through the relay panel with astronomical time clock.
4. The building will include an addressable firealarm system with the FACU in the Lobby.
5. An electronic safety and security system will be provided for the building.
6. Cable TV, CATV, infrastructure throughout the building. Design-Build Firm shall connect all TV's to the CATV system, both CFCI and OFOI.
7. A lightning protection system shall be provided for the building.
8. A voice/data system will be provided for the building. A cable tray will be routed above the corridor ceiling to provide a raceway path from the individual rooms to a telecommunications room.

AUDIO VISUAL

1. The Crew Quarters and large Multi-Purpose Rooms shall be multi-functional and used for daily crew gathering and deployment, training, and day to day presentations. The rooms shall have a laptop input from a wall plate at the front of the room, with HDMI, VGA, USB, audio inputs, and voice control/ microphones provided and integrated with the speaker system.
    a. The Audio-Visual System shall have a digital switcher and components. The switcher will allow for any input to be sent to the Projector depending on the presentation. It will also provide for future AV expansion if needed.

   b. The displays for the rooms will be one each, Owner Furnished/Owner Installed projector, ceiling mounted, projecting to, Contractor Provided/Contractor Installed, 16:10 ceiling recessed electric screens appropriately sized for the space.
   c. Ceiling recessed speakers will be installed and evenly distributed throughout both rooms. There shall be a wireless microphone system for voice lift during presentations. The mics can be used in each room individually when the rooms are combined.
   d. A digital control system shall be provided for these rooms. This shall include a wall mounted touch master control panel in which will have a customized interface allowing the end user to select the source selection (laptop, wireless presentation), volume control (program audio and microphone audio), and system on/off. Controls shall allow each room to function independently, or to be merged together into a shared presentation with the image appearing on both screens.
   e. A lockable wall mounted equipment rack will be installed in the A/V Storage Room.
2. The Small Multi-Purpose Room (aka Conference Room) shall have a, Contractor Furnished/Contractor Installed, wall mounted flat panel display appropriately sized for the space and used for daily meetings and day to day presentations. CATV shall be run and connected to the display. There shall be a Cable Cubby installed in the, Owner Furnished/Owner Installed, conference table to all for HDMI, USB, and VGA laptop connectivity. Cables will be stored in the Cable Cubby when not in use.
   a. Audio for the room shall be provided by the on-board speakers in the displays. Control for the system shall be through the display remote.
   b. Cabling shall be run from the table to the Contractor Furnished/Contractor Installed floor box. A Digital Media transmitter shall be installed under the conference table. The Digital Media receiver shall be mounted in the Contractor Furnished/Contractor Installed back box behind the flat panel display.
3. The Fitness Room shall have a, Contractor Furnished/Contractor Installed, wall mounted flat panel display appropriately sized for the space. CATV shall be run and connected to the display.

SUPPLY BUILDING NOTES

STRUCTURE

1. Concrete reinforced foundation. Base/prep per Geotech.
2. Pre-Engineered metal building structure w/ pre-engineered roofing/ system components. Eave height to be 24ft.

EXTERIOR CONSTRUCTION

1. Exterior Walls: Prefinished kynar metal panels/trim on wall girts {1/640). Interior side of office and support spaces to be painted gyp bd. (equal to Georgia Pacific DensArmor Plus) on 2 ½" furring stud 16" O.C. Metal liner panel to 8ft aff at warehouse and receiving spaces. Provide a 4" high concrete curb at all exterior walls.
2. Windows: Windows will consist of punched openings. Window system equal to Kawneer Trifab® 451UT is 4-1/2" deep with a 2" sightline and 1" insulated glass. Glazing is to be tinted with low e coating. Gap between window and metal panel requiring backer rod and sealant shall not exceed 1/4".
3. Exterior Doors: Provide insulated HM doors w/view panel and frames painted with a canopy over each door. All exterior doors shall have access control and "PUK" light fixtures in the canopy.
4. OH Doors: Provide electrically operated and insulated OH doors.
5. Louvers: louvers to be aluminum kynar finish. Provide insect/bird screens and sub-sill.
6. Roof: Low slope metal roofing panel on 8" roof purlins 4'-0" O.C. equal to Butler MR-24 roof panel with Butler Thermaliner R-23 Insulation System. Roof is to have a single slope towards back wall. Roof drainage is to be gutter and downspouts. Provide low parapet wall on front and side walls.
7. Exterior lighting is a combination of wall mounted fixtures and light poles and shall meet low-lighting requirements by US DOD, Camp Bullis.
8. Provide bird netting/control at all exposed exterior metal building structural elements: underside of canopies.

INTERIOR GENERAL NOTES

Typical interior partition to be one-layer 5/8" gyp board each side of 3 5/8" metal studs, 22 ga, 16" OC. Provide sound batt insulation at all office spaces. All corridor walls are to go deck above. Walls separating office area from warehouse rooms, mechanical spaces and restrooms are to go to deck.

FINISH PACKAGE DESCRIPTIONS

FP -1: Offices and Associated Support Spaces

Floor: Sealed Concrete
Base: 4" rubber
Walls: Painted gyp board
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.
Casework: Plastic laminate with solid surface tops
Specialties: Tack board, Marker board

FP -2: Corridors

Floor: Sealed
Concrete Base: 4" rubber.
Walls: Painted gyp board/ Chair rail
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.
Specialties: Chair Rail

FP -3: Warehouse/Support Spaces

Floor: Sealed concrete
Base: 4" rubber
Walls: Metal liner panel to 8ft aff. Painted gyp board above at partitions.
Casework: Plastic laminate on plywd with plastic laminate tops, at service counter provide stainless steel countertop.

FP -4: Restrooms

Floor: Ceramic tile with membrane
waterproofing Base: Coved ceramic tile

Walls: Ceramic tile wainscot to 4ft aff and painted above on CMU back up. At wet wall provide ceramic tile full height.
Ceiling: Painted gyp board, semi-gloss finish
Casework: Solid Plastic with solid surface tops
Specialties: Solid surface toilet partitions, floor mounted. Stainless steel toilet accessories
Provide industrial grade vitreous china Fixtures/Lavatories/Water Closets, Urinals

FP -5: Mechanical Rooms
Floor: Sealed concrete, slope to drains
Base: 4" rubber caved base
Walls: Painted gyp board
Ceiling: 2" duct liner insulation on CMU I gyp board; 2" ductliner insulation
Specialties: Equipment to be on soundisolators

FP -6: IT/Electrical Rooms
Floor: Sealed concrete (anti-static coating at IT), slope to drains
Base: 4" rubber coved base
Walls: Painted gyp board (equal to Georgia Pacific DensArmor Plus) Painted steel deck
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, paintedsteel grid.
Specialties: At MDF/IDF rooms provide plywood on walls and Anti-Static flooring.

FP -7: Janitor
Floor: Sealed Concrete
Base: 4" rubber coved base
Walls: Painted gyp board, 4 x 4 glazed ceramic tile wainscot to 6ft just at two walls at mop sink.
Ceiling: 2 x 2 mineral board lay-in fiber acoustical ceiling panels, painted steel grid.
Casework: Shelving and Mop sink with holder

MEP BUILDING SYSTEMS DESCRIPTION

HVAC

1. The Admin. Area will be air conditioned by a split-system DX air conditioning system with a gas furnace and with insulated sheet metal supply, return and outside air intake ductwork with motorized dampers.
2. The Toilet/Locker Area will be air conditioned by the same split-system DX air conditioning unit serving the Admin. Area. The area will be exhausted by a ducted roof-mounted exhaust fan.
3. The Storage Room will be heated by gas-fired radiant unit heaters and ventilated by a roof-mounted exhaust fan and intake air wall louver.
4. The Warehouse will be heated by gas-fired radiant unit heaters and ventilated by roof-mounted exhaust fans and motorized intake air wall louvers. Heating set point shall be 65 degrees. The HVAC Controls shall regulate the intake air wall louvers, so they are interlocked with the exhaust fans to automatically operate and open and trigger the fans to power on at a warm temperature set point of 75 degrees.
5. The Service Counter area of the Warehouse will be air conditioned by a split-system DX air conditioning system with a gas furnace and with insulated sheet metal supply, return and outside air intake ductwork with motorized dampers.

PLUMBING

1. The plumbing fixtures within the Toilet/Locker Area will consist of:
2. Wall mounted industrial grade vitreous china water closets with 1.6 gpf flush valves, hands-free sensor operated, electrically powered.
3. Wall mounted industrial grade vitreous china urinals with 0.5 gpf flush valves, hands-free sensor operated, electrically powered.
4. Wall mounted vitreous china lavatories with metered faucet, hands-free sensor operated, electrically powered.
5. Floor drains will be provided in the toilet areas. The floor drains in the toilet areas will have trap primers.
6. A dual height electric water cooler will be provided within the Warehouse space adjacent to the toilet/locker Area.

7. A floor-mounted molded stone mop sink will be provided.
8. An emergency shower/eyewash station is required within the warehouse space adjacent to the Receiving area.
9. A gas-fired hot water heater will provide hot water to the lavatories and mop sink. A thermostatic mixing valve will provide 110-degree F hot water to the lavatories, and 140-degree F will be provided to the mop sink. A re-circulating pump loop will be provided.
10. Domestic water piping shall be Type K copper. Hot water piping shall be insulated.
11. Sanitary waste and vent piping will be hubless cast iron aboveground, hub and spigot type underground.

ELECTRICAL

1. The lighting within the Toilet/Locker Area and the Admin area will consist of 2' x 4' recessed parabolic LED with sconces flank at sink, and recessed cans above in furr down at sink
2. The lighting controls for the Toilet/Locker Area and the Admin. Area will utilize occupancy sensors.
3. The lighting in the Warehouse and Storage will consist of suspended LED fixtures with high-output lamps.
4. The lighting controls for the Warehouse and Storage will utilize integral motion sensors at each individual lighting fixture.
5. Exterior building lighting will consist of LED wall fixtures that are dark-sky compliant. The lighting will be controlled through a relay panel with astronomical time clock.
6. The building will include an addressable fire alarm system.
7. An electronic safety and security system will be provided for the building.
8. A lightning protection system will be provided for the building.
9. A voice/data system will be provided for the building.

FLEET BUILDING NOTES

STRUCTURE

1. Concrete reinforced foundation. Base/prep per Geotech.
2. Pre-Engineered metal building structure with pre-engineered roofing/ system components. Eave height to be 24ft minimum to provide for required clear height in service bays.
3. *** THE FUNCTION OF THE PARTS ROOM MUST BE RE-EXAMAINED AS SAWS HAS BROUGHT IN AN OUTSIDE VENDOR (NAPA) SINCE THE PHASE I DESIGN. THIS SPACE MAY BE RE-PURPOSED.**

EXTERIOR CONSTRUCTION

1. Exterior Walls: Prefinished Kynar metal panels/trim on wall girts {1/640). Interior side of office and support spaces to be painted gyp bd. (equal to Georgia Pacific DensArmor Plus) on 2 ½" furring stud 16" O.C. Metal liner panel to 8ft aff at Fleet Garage. Provide a 4" high concrete curb below sill plate at all exterior walls.
2. Windows: Windows will consist of punched openings. Window system equal to Kawneer Trifab® 451UT is 4-1/2" deep with a 2" sightline and 1" insulated glass. Glazing is to be tinted with low e coating. Gap between window and metal panel requiring backer rod and sealant shall not exceed 1/4".
3. Main Entry Door: Door system equal to Kawneer Door. Door shall have access control. Provide a canopy over the door.
4. Secondary Doors: Provide insulated HM door w/view panel and frames painted with a canopy over every door. Each exterior is to have access control and "PUK" light fixtures in the canopies.
5. OH Doors: Provide electrically operated and insulated OH doors. Bollards at any exposed columns.
6. Louvers: louvers to be aluminum Kynar finish. Provide insect/bird screens and sub-sill.
7. Roof: Low slope metal roofing panel on 8" roof purlins 4'-0" O.C. equal to Butler MR-24 roof panel with Butler Thermaliner R-23 Insulation System. Roof is to have a single slope towards back wall. Roof drainage is to be gutter and downspouts. Provide low parapet wall on front and side walls.
9. Exterior lighting is a combination of wall mounted fixtures and light poles and shall meet low-lighting requirements by US DOD, Camp Bullis.
8. Provide bird netting/control at all exposed exterior metal building structural elements: underside of canopies

INTERIOR GENERAL NOTES

Typical interior partition to be one-layer 5/8" gyp board each side of 3 5/8" metal studs, 22 ga, 16" OC. Provide sound batt insulation at all office spaces. All corridor walls are to go deck above. Wall separating service bays to office and support spaces is to be 8" CMU painted. Wall at end bay is to be 8" painted CMU to 8ft. For walls separating office areas from service bays, storage rooms, mechanical spaces and restrooms are to go to deck.

FINISH PACKAGE DESCRIPTIONS

FP -1: Offices and Associated Support
Spaces Floor: Sealed Concrete
Base: 4" rubber
Walls: Painted gyp board
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.
Casework: Plastic laminate with solid surface tops.
Rubberized base with the steel edging at counter/receiving
Specialties: Tack board, Marker board

FP -2: Lobbies/Corridors
Floor: Sealed Concrete
Base: 4" rubber.
Walls: Painted gyp board/ Chair rail
Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.

FP -3: Restrooms
Floor: Ceramic tile with membrane waterproofing
Base: Coved ceramic tile
Walls: Ceramic tile wainscot to 4ft aff and painted above on CMU back up. At wet wall provide ceramic tile full height. At showers provide ceramic tile full height on CMU walls and on ceiling.
Ceiling: Painted gyp board, semi-gloss finish
Casework: Solid Plastic with solid surface tops
Specialties: Solid surface toilet partitions, floor mounted. Stainless steel toilet accessories Provide industrial grade vitreous china Fixtures/Lavatories/Water Closets, Urinals

FP -4: IT/Electrical Rooms
Floor: Sealed concrete, slope to drains
Base: 4" rubber coved base
Walls: Painted gyp board (equal to Georgia Pacific DensArmor Plus) Painted steel deck Ceiling: 2 x 2 mineral board lay-in acoustical ceiling, painted steel grid.
Specialties: At MDF/IDF rooms provide plywood on walls and Anti-Static Flooring.

FP -5: Fleet Garage
Floor: Sealed concrete w/ traffic topping
Base: 4" rubber
Walls: Metal liner panel to 8ft aff. Painted gyp board above at partitions.

FP -6: Janitor
Floor: Sealed Concrete
Base: 4" rubber coved base
Walls: Painted gyp board, 4 x 4 glazed ceramic tile wainscot to 6ft just at two walls at mop sink.
Ceiling: 2 x 2 mineral board lay-in fiber acoustical ceiling panels, painted steel grid. Casework: Shelving and Mop sink with holder

MEP BUILDING SYSTEMS
DESCRIPTION HVAC

1. The Admin. Area will be air conditioned by a split-system DX air conditioning system with insulated sheet metal supply, return and outside air intake ductwork with motorized dampers.
2. The Toilet/Locker Area will be air conditioned by the same split-system DX air conditioning unit serving the Admin. area. The area will be exhausted by a ducted roof-mounted exhaust fan.
3. The Storage Area will be heated by gas-fired radiant unit heaters and ventilated by roof mounted exhaust fans and intake air wall louvers.
4. The Vehicle/Truck Bays will be heated by gas-fired radiant unit heaters and ventilated by roof mounted exhaust fans. A vehicle tailpipe exhaust system will also be required.

PLUMBING

1. The plumbing fixtures within the Toilet/Locker Area will consist of:
2. Wall mounted industrial grade vitreous china water closets with 1.6 gpf flush valves, hands-free sensor operated, electrically powered.
3. Wall mounted industrial grade vitreous china urinals with 0.5 gpf flush valves, hands-free sensor operated, electrically powered.
4. Wall mounted vitreous china lavatories with metered faucet, hands-free sensor operated, electrically powered.
5. Pressure-balanced, thermostatic mixing valves.
6. Floor drains will be provided in the toilet areas. The floor drains in the toilet areas will have trap primers.
7. A dual height electric water cooler will be provided within the Vehicle Bay adjacent to the toilet/locker area.
8. A floor mounted stainless steel mop sink will be provided.
9. An emergency shower/eyewash is required within each of the Vehicle Bays and Truck Bay.
10. A gas-fired hot water heater will provide hot water to the lavatories, shower and mop sink. A thermostatic mixing valve will provide 110-degree F hot water to the lavatories and shower, and 140-degree F will be provided to the mop sink. A re-circulating pump loop will be provided.
11. The Vehicle and Truck Bays will have suspended water and air hose reels, stainless steel with automatic retractable hose operation (two for each bay).
12. An air compressor with a refrigerated dryer will provide shop air to various air outlet stations (with quick disconnect fittings) at each end of each bay (ie; two per bay).
13. A continuous trench drain will be provided at the exterior perimeter of the Vehicle and Truck Bays. The trench drains will be piped to an oil/water separator. The sanitary line servicing this drain shall not tie-into the Fleet Bldg. sanitary line (to avoid back-ups into the building).
14. The Wash Area will be equipped with one high pressure wash station. The drainage from the wash area shall be piped to an underground sedimentation pit with an oil separator.
16. Exterior wall hydrants will be provided for the fenced Outdoor Yard.
16. Domestic water piping shall be Type K copper. Hot water piping shall be insulated.
17. Sanitary waste and vent piping will be hubless cast iron aboveground, hub and spigot type underground.

ELECTRICAL

1. The lighting within the Toilet/Locker Area and the Admin. Area will consist of 2' x 4' recessed parabolic LED fixtures. Sconces flank sinks and cans in furr down above sinks.
2. The lighting controls for the Toilet/Locker Area and the Admin. Area will utilize occupancy sensors.
3. The lighting in the Vehicle/Truck Bays and Storage will consist of suspended LED fixtures with high-output lamps.
4. The lighting controls for the Storage Area will utilize integral motion sensors at each individual lighting fixture. The lighting controls for the Vehicle/Truck Bays will be through a lighting relay control panel.
5. Exterior building lighting will consist of metal halide wall fixtures that are dark-sky compliant. The lighting will be controlled through the relay panel with astronomical time clock.
6. The building will include an addressable fire alarm system.
7. An electronic safety and security system will be provided for the building.
8. A lightning protection system will be provided for the building.
9. A voice/data system will be provided for the building.
10. The Covered Wash Area lighting will be similar to that used in the Vehicle/Truck Bays except the fixtures will be designed for wet locations, rain tight, and constructed of PVC.