SCOPE OF WORK

Expansion of DSS Cold Storage Capacity

Distribution Center West Trenton, Mercer County, NJ

Project No. A1375-00

STATE OF NEW JERSEY

Honorable Philip D. Murphy, Governor Honorable Tahesha L. Way, Lt. Governor

DEPARTMENT OF THE TREASURY

Elizabeth Maher Muoio, Treasurer



DIVISION OF PROPERTY MANAGEMENT AND CONSTRUCTION

Christopher Chianese, Director

Date: October 3, 2023

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A.	SAMPLE PROJECT SCHEDULE FORMAT
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- D. DSS THE CONCEPT PAPER & HIGH LEVEL REQUIREMENT -VERSION 8

I. OBJECTIVE

The objective of this project is to expand DSS cold storage capacity by building an additional freezer adjacent to the current freezer and repair the current malfunctioning cold storage, within the Distribution Center in West Trenton. See **Exhibit 'B'** for the project site location map.

II. CONSULTANT QUALIFICATIONS

A. CONSULTANT & SUB-CONSULTANT PRE-QUALIFICATIONS

The Consultant shall be a firm pre-qualified with the Division of Property Management & Construction (DPMC) in the following discipline(s):

• P001 Architecture

The Consultant shall also have in-house capabilities or Sub-Consultants pre-qualified with DPMC in:

- P002 Electrical Engineering
- P003 HVAC Engineering
- P007 Structural Engineering
- P010 Fire Protection Engineering
- P025 Estimating/Cost Analysis
- P037 Asbestos Design
- P038 Asbestos Safety Control Monitoring
- P065 Lead Paint Evaluation

As well as, **any and all** other Architectural, Engineering and Specialty Disciplines necessary to complete the project as described in this Scope of Work (SOW).

III. PROJECT BUDGET

A. CONSTRUCTION COST ESTIMATE (CCE)

The initial Construction Cost Estimate (CCE) for this project is \$1,600,000

The Consultant shall review this Scope of Work and provide a narrative evaluation and analysis of the accuracy of the proposed project CCE in its technical proposal based on its professional experience and opinion.

B. CURRENT WORKING ESTIMATE (CWE)

The Current Working Estimate (CWE) for this project is \$ 2,225,000

The CWE includes the construction cost estimate and all consulting, permitting and administrative fees.

The CWE is the Client Agency's financial budget based on this project Scope of Work and shall not be exceeded during the design and construction phases of the project unless DPMC approves the change in Scope of Work through a Contract amendment.

C. CONSULTANT'S FEES

The construction cost estimate for this project *shall not* be used as a basis for the Consultant's design and construction administration fees. The Consultant's fees shall be based on the information contained in this Scope of Work document and the observations made and/or the additional information received during the pre-proposal meeting.

IV. PROJECT SCHEDULE

A. SCOPE OF WORK DESIGN & CONSTRUCTION SCHEDULE

The following schedule identifies the estimated design and construction phases for this project and the estimated durations.

PROJECT PHASE ESTIMATED DURATION (Calendar Days)

1.	Site Access Approvals & Schedule Design Kick-off Meeting	14
2.	Design Development Phase	42
	Project Team & DPMC Plan/Code Unit Review & Comment	14
3.	Final Design Phase	42
	Project Team & DPMC Plan/Code Unit Review & Approval	14
4.	Final Design Re-Submission to Address Comments	7
	Project Team & DPMC Plan/Code Unit Review & Approval	14
5.	DCA Submission Plan Review	30
6.	Permit Application Phase	7
	• Issue Plan Release	

7.	Bid Phase	42
8.	Award Phase	28
9.	Construction Phase	270
10.	. Project Close Out Phase	30

B. CONSULTANT'S PROPOSED DESIGN & CONSTRUCTION SCHEDULE

The Consultant shall submit a project design and construction schedule with its technical proposal that is similar in format and detail to the schedule depicted in **Exhibit 'A'**. The schedule developed by the Consultant shall reflect its recommended project phases, phase activities, activity durations.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Consultant.

This schedule and narrative will be reviewed by the Consultant Selection Committee as part of the evaluation process and will be assigned a score commensurate with clarity and comprehensiveness of the submission.

V. PROJECT SITE LOCATION & TEAM MEMBERS

A. PROJECT SITE ADDRESS

The location of the project site is:

Distribution Center 1620 Stuyvesant Ave. West Trenton, NJ.

See Exhibit 'B' for the project site location map.

B. PROJECT TEAM MEMBER DIRECTORY

The following are the names, addresses, and phone numbers of the Project Team members.

1. DPMC Representative:

Name:	Cristina Zozzaro, Project Design Manager
Address:	Division of Property Management & Construction
	20 West State Street, 3 rd Floor
	Trenton, NJ 08608-1206
Phone No:	(609) 777-4273
E-Mail:	Cristina.Zozzaro@treas.nj.gov

2. Department of Treasury:

Name:	Ayman Alminawi, Assistant Division Director
Address:	Division of Purchase & Property
	Distribution and Support Services
	1620 Stuyvesant Ave, Trenton, NJ 08618
Phone No:	(609) 583-9121
E-Mail:	Ayman.Alminawi@treas.nj.gov

VI. PROJECT DEFINITION

A. BACKGROUND

The State of New Jersey's Division of Purchase and Property - Distribution and Support Services (DSS) under the Department of the Treasury maintains and operates a central facility, the Distribution Center, for purchasing and distributing goods throughout the State of New Jersey and for the sale of surplus State property. The building is approximately 109,000 square feet with the majority of the space on the ground level and 9,600 square feet on a second floor with offices, breakroom and mechanical space. The building was originally constructed in 1972. A portion of the Distribution Center is equipped with drive-in cooler and freezer sections in addition to the dry storage use of warehouse and an office area. A lighting retro-fit project was completed in 2020 under DPMC Project No. A1251-04. Portions of the building have received new roofing. There is a summer condensation/ice problem in the cooler space which has a plastic strip door entrance separating it from the warehouse.

B. FUNCTIONAL DESCRIPTION OF THE BUILDING

DSS is a substantial provider of numerous food and household commodities to the using state agencies of New Jersey. DSS handles three major categories of products, namely: warehoused products, canteen products and drop shipping products.

About 50 DSS employees support three main functional units that contribute to DSS' ecosystem; namely: Acquisition, Support Operations, and Distribution Center (Warehousing & Shipping); including Front Office & Administration.

DSS includes two main parts; the Distribution Center (Side Offices, Dry Goods Warehouse & Freezer/ Cooler, & the Server Room) and the office space (the 1st floor and 2nd floor). DSS is about 109,000 square feet as follows:

Dry Storage: 67,200 square feet Freezer/Chill Box: 16,200 square feet Loading Dock: 6,400 square feet 1st Floor Office: 9,600 square feet 2nd Floor Office: 9,600 square feet

VII. CONSULTANT DESIGN RESPONSIBILITIES

A. DESIGN REQUIREMENTS

1. General:

The Consultant shall be responsible for preparing drawings and specifications to support the project performance baseline requirements in the Concept Paper & High Level Requirement - Version 8 Septembers 2023, refer to **Exhibit 'D'**.

Project Performance Baselines Project Preliminary Statement

- (S1) plan & bid—for DSS' cold storage expansion project, including all required designs, especially fire protection and freezer storage layout & efficiency plans;
- (S2) build a 5,500 SQF standalone freezer—next to DSS' existing cold storage facility that must be fully equipped with (a) foundation, (b) floor, (c) structure & walls, (d) ceiling & roof, (e) insulation, (f) security control, (g) safety control, (h) cooling, and (i) staging & storage system i.e. racking; adding 200+ standard pallet-sized storage bins to DSS' storage capacity;

- (S3) add a transitional area (breezeway)—to DSS' new refrigerated facility with two (2) automatic rollup doors; and
- (S4) repair—the existing chiller's icing condition & insulation issue; along with adding two automatic rollup doors (inside and outside), while closing up the two side middle doors.

2. Fire Suppression and Detection:

The Consultant and/or a pre-qualified Testing Lab shall conduct field tests of the nearest fire hydrants and determine the static and residual pressures and flow rates of water being supplied to the buildings. Schedule the fire hydrant testing such that representatives of the Client Agency, DPMC Code Plan Review Unit, the local fire department, the local municipal water company and the DCA code inspector may witness the test. All costs associated with the hydrant tests shall be estimated by the Consultant and the amount included in the base bid of their fee proposal.

The hydrant test results shall be used as the basis for hydraulic calculations to verify that there is adequate water pressure volume and flow for the building sprinkler systems. Signed and sealed calculations must be submitted to the DPMC Plan & Code Review Unit for record, review and approval.

A fully engineered and code approved design of the new sprinkler system shall be provided by the Consultant. The design shall include, but not be limited to a scaled layout of the new sprinkler piping and all related system components.

A statement shall be included in the specifications and on the drawings that states: "If the sprinkler Contractor prepares shop drawings that differ in design from those supplied by the Consultant, they shall submit them, **through the consultant**, to DPMC Plan & Code Review Unit for approval prior to fabrication and installation of the system".

All new piping installed in the buildings shall be sealed where it passes through the floors and walls of the structure and the material must afford the required fire rating of that floor and wall. Details of the pipe penetrations shall be included on the design drawings indicating the type of penetration, how they will be sealed and the type of material to be used.

The new sprinkler system must be integrated with the fire detection system in the building.

3. Testing:

All equipment and product testing conducted during the course of construction is the responsibility of the Contractor. However, the Consultant shall ensure the testing procedures comply with manufacturers recommendations. The Consultant shall review the final test reports

and provide a written recommendation of the acceptance/rejection of the material, products or equipment tested within seven (7) calendar days of receipt of the report.

4. Training:

The Consultant shall include in the specification that the Contractor shall schedule and coordinate all equipment training with the Project Manager and Client Agency representatives. It shall state that the Contractor shall submit the Operation and Maintenance (O&M) manuals, training plan contents, and training durations to the Consultant, Project Manager and Client Agency Representative for review and approval prior to the training session.

The Consultant shall ensure that the training session is video recorded by the Contractor. A copy of the recording shall be transmitted to the Project Manager on compact disk who will forward the material to the Client Agency for future reference.

All costs associated with the training sessions shall be borne by the Contractor installing the equipment. A signed letter shall be prepared stating when the training was completed and must be accompanied with the training session sign-in sheet as part of the project close-out package.

B. ELECTRICAL UPGRADE ALLOWANCE

The Consultant shall estimate the cost to upgrade the existing electrical capacity for the new freezer as necessary and include that amount in their fee proposal line item entitled **"Electrical Upgrade Allowance"**.

C. HAZARDOUS BUILDING MATERIALS

Consultant shall survey the building(s) and, if deemed necessary, collect samples of materials that will be impacted by the construction/demolition activities and analyze them for the presence of hazardous materials including:

- 1. Asbestos in accordance with N.J.A.C. 5:23-8, Asbestos Hazard Abatement Subcode.
- 2. Lead in accordance with N.J.A.C. 5:17, Lead Hazard Evaluation and Abatement Code.
- 3. PCB's in accordance with 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions. Consultant shall engage a firm certified in the testing and analysis of materials containing PCB's.
- 4. Mold

The Consultant shall engage the services of a Sub-Consultant, pre-qualified with DPMC in the P065 Lead Paint Evaluation/Inspection Specialty Discipline to produce a design document that

stipulates construction safety procedures that adhere to applicable Federal and State regulations and that shall be incorporated into the project design documents.

A formal lead abatement shall <u>not</u> be conducted. Rather, the design document shall deal only with proposed lead base paint as may be encountered in areas of the building that will be affected by the construction of this project. It is intended that the construction Contractor for the project shall be responsible for any and all air or swab sampling during construction as may be required by law. The Sub-Consultant shall supervise said activity and sampling.

Consultant shall document their procedure, process and findings and prepare a "Hazardous Materials Survey Report" identifying building components impacted by construction activities requiring hazardous materials abatement. Consultant shall provide three copies of the "Hazardous Materials Survey Report" to the Project Manager.

Consultant shall estimate the cost of hazardous materials sample collection, testing, analysis and preparation of the Hazardous Materials Survey Report and include that amount in their fee proposal line item entitled **"Hazardous Materials Testing and Report Allowance"**, refer to paragraph X.B.

Based on the Hazardous Materials Survey Report, Consultant shall provide construction documents for abatement of the hazardous materials impacted by the work in accordance with the applicable code, subcode and Federal regulations.

Consultant shall estimate the cost to prepare construction documents for hazardous materials abatement and include that amount in their fee proposal line item entitled **"Hazardous Materials Abatement Design Allowance"**, refer to paragraph X.C.

Consultant shall estimate the cost to provide "Construction Monitoring and Administration Services" for hazardous materials abatement activities and include that amount in their fee proposal line item entitled **"Hazardous Materials Construction Administration Allowance"**, refer to paragraph X.D.

There shall be no "mark-up" of sub-consultant or subcontractor fees if sub-consultants or subcontractors are engaged to perform any of the work defined in paragraph VII.C "Hazardous Building Materials". All costs associated with managing, coordinating, observing and administrating sub-consultants and subcontractors performing hazardous materials sampling, testing, analysis, report preparation, hazardous materials construction administration services shall be included in the consultant's lump sum fee proposal.

D. EXISTING DOCUMENTATION

Copies of the following documents will be provided to each Consulting firm at the pre-proposal meeting to assist in the bidding process.

- A0388-00 Freezer expansion to Distribution center, April 1982.
- A0493-00 Renovations to Distribution center, as-built set April 1989.
- A084-00 DSS Freezer and cooler upgrade complete as-built set, October 2001.
- A1185-00 DSS Facility assessment study report, July 2016.
- A1268-00 DSS Energy Audit & Cogeneration (CHP) Feasibility Study, June 2021.

Review these documents and any additional information that may be provided at a later date such as reports, studies, surveys, equipment manuals, as-built drawings, etc. The State does not attest to the accuracy of the information provided and accepts no responsibility for the consequences of errors by the use of any information and material contained in the documentation provided. It shall be the responsibility of the Consultant to verify the contents and assume full responsibility for any determination or conclusion drawn from the material used. If the information provided is insufficient, the Consultant shall take the appropriate actions necessary to obtain the additional information required.

All original documentation shall be returned to the provider at the completion of the project.

VIII. PERMITS & APPROVALS

A. NJ UNIFORM CONSTRUCTION CODE PLAN REVIEW AND PERMIT

The project construction documents must comply with the latest adopted edition of the NJ Uniform Construction Code (NJUCC).

The latest NJUCC Adopted Codes and Standards can be found at:

http://www.state.nj.us/dca/divisions/codes/codreg/

1. NJ Uniform Construction Code (NJUCC) Plan Review

Consultant shall estimate the cost of the NJUCC Plan Review by DCA and include that amount in their fee proposal line item entitled **"Plan Review and Permit Fee Allowance"**, refer to paragraph XI.A.

Upon approval of the Final Design Phase Submission by DPMC, the Consultant shall submit the construction documents to the Department of Community Affairs (DCA), Bureau of Construction Project Review to secure a complete plan release.

As of July 25, 2022, the Department of Community Affairs (DCA) is only accepting digital signatures and seals issued from a third party certificate authority. The DCA ePlans site can be found at:

https://www.nj.gov/dca/divisions/codes/offices/ePlans.html

Procedures for submission to the DCA Plan Review Unit can be found at:

https://www.state.nj.us/dca/divisions/codes/forms/pdf bcpr/pr app guide.pdf

Consultant shall complete the "Project Review Application" and include the following on Block 5 as the "Owner's Designated Agent Name":

Joyce Spitale, DPMC PO Box 235 Trenton, NJ 08625-0235 Joyce.Spitale@treas.nj.gov 609-943-5193

The Consultant shall complete the NJUCC "Plan Review Fee Schedule", determine the fee due and pay the NJUCC Plan Review fees, refer to Paragraph X.A. The NJUCC "Plan Review Fee Schedule" can be found at:

http://www.state.nj.us/dca/divisions/codes/forms/pdf bcpr/pr fees.pdf

2. NJ Uniform Construction Code Permit

Upon receipt of a complete plan release from the DCA Bureau of Construction Project Review, the Consultant shall complete the NJUCC permit application and all applicable technical subcode sections. The "Agent Section" of the application and certification section of the building sub-code section shall be signed. These documents, with six (6) sets of DCA approved, signed and sealed construction documents shall be forwarded to the DPMC Project Manager.

The Consultant may obtain copies of all NJUCC permit applications at the following website:

http://www.state.nj.us/dca/divisions/codes/forms/

All other required project permits shall be obtained and paid for by the Consultant in accordance with the procedures described in Paragraph VIII.B.

3. Prior Approval Certification Letters:

The issuance of a construction permit for this project may be contingent upon acquiring various "prior approvals" as defined by N.J.A.C. 5:23-1.4. It is the Consultant's responsibility to determine which prior approvals, if any, are required. The Consultant shall submit a general certification letter to the DPMC Plan & Code Review Unit Manager during the Permit Phase of this project that certifies all required prior approvals have been obtained.

In addition to the general certification letter discussed above, the following specific prior approval certification letters, where applicable, shall be submitted by the Consultant to the DPMC Plan & Code Review Unit Manager: Soil Erosion & Sediment Control, Water & Sewer Treatment Works Approval, Coastal Areas Facilities Review, Compliance of Underground Storage Tank Systems with N.J.A.C. 7:14B, Pinelands Commission, Highlands Council, Well Construction and Maintenance; Sealing of Abandoned Wells with N.J.A.C. 7:9D, Certification that all utilities have been disconnected from structures to be demolished, Board of Health Approval for Potable Water Wells, Health Department Approval for Septic Systems. It shall be noted that in accordance with N.J.A.C. 5:23-2.15(a)5, a permit cannot be issued until the letter(s) of certification is received.

4. Multi-building or Multi-site Permits:

A project that involves many buildings and/or sites requires that a separate permit shall be issued for each building or site. The Consultant must determine the construction cost estimate for *each* building and/or site location and submit that amount where indicated on the permit application.

5. Special Inspections:

In accordance with the requirements of the New Jersey Uniform Construction Code N.J.A.C. 5:23-2.20(b), Bulletin 03-5 and Chapter 17 of the International Building Code, the Consultant shall be responsible for the coordination of all special inspections during the construction phase of the project.

Bulletin 03-5 can be found at:

http://www.state.nj.us/dca/divisions/codes/publications/pdf_bulletins/b_03_5.pdf

a. Definition:

Special inspections are defined as an independent verification by a certified Special Inspector for **Class I buildings and smoke control systems in any class building**. The special inspector is to be independent from the Contractor and responsible to the Consultant so that there is no possible conflict of interest.

Special inspectors shall be certified in accordance with the requirements in the New Jersey Uniform Construction Code.

b. Responsibilities:

The Consultant shall submit with the permit application, a list of special inspections and the agencies or special inspectors that will be responsible to carry out the inspections required for the project. The list shall be a separate document, on letter head, signed and sealed.

B. OTHER REGULATORY AGENCY PERMITS, CERTIFICATES AND APPROVALS

The Consultant shall identify and obtain all other State Regulatory Agency permits, certificates, and approvals that will govern and affect the work described in this Scope of Work. An itemized list of these permits, certificates, and approvals shall be included with the Consultant's Technical Proposal and the total amount of the application fees should be entered in the Fee Proposal line item entitled, **"Permit Fee Allowance."**

The Consultant may refer to the Division of Property Management and Construction "Procedures for Architects and Engineers Manual", Paragraph "9. **REGULATORY AGENCY APPROVALS**" which presents a compendium of State permits, certificates, and approvals that may be required for this project.

The Consultant shall determine the appropriate phase of the project to submit the permit application(s) in order to meet the approved project milestone dates.

Where reference to an established industry standard is made, it shall be understood to mean the most recent edition of the standard unless otherwise noted. If an industry standard is found to be revoked, or should the standard have undergone substantial change or revision from the time that the Scope of Work was developed, the Consultant shall comply with the most recent edition of the standard.

IX. ENERGY INCENTIVE PROGRAM

The Consultant shall review the programs available on the "New Jersey's Clean Energy Program" website at: <u>http://www.njcleanenergy.com</u> as well as New Jersey electric and gas utility websites to determine if any proposed upgrades to the mechanical and/or electrical equipment and systems for this project qualify for "New Jersey Clean Energy Program" or utility approved rebates and incentives.

Consultant shall identify all rebates and incentives in their technical proposal.

The Consultant shall be responsible to complete the appropriate registration forms and applications, provide any applicable worksheets, manufacturer's specification sheets, calculations, attend meetings, and participate in all activities with designated representatives of the programs and utility companies to obtain the entitled financial incentives and rebates for this project.

All costs associated with this work shall be estimated by the Consultant and the amount included in the base bid of its fee proposal.

X. ALLOWANCES

A. PLAN REVIEW AND PERMIT FEE ALLOWANCE

The Consultant shall obtain and pay for all of the project permits in accordance with the guidelines identified below.

1. Permits:

The Consultant shall determine the various permits, certificates, and approvals required to complete this project.

2. Permit Costs:

The Consultant shall estimate the application fee costs for all of the required project permits, certificates, and approvals (excluding the NJ Uniform Construction Code permit) and include that amount in its fee proposal line item entitled **"Plan Review and Permit Fee Allowance"**, refer to Paragraph IX.A. A breakdown of each permit and application fee shall be attached to the fee proposal for reference.

NOTE: The NJ Uniform Construction Code permit is excluded since it will be paid for by the State.

3. Applications:

The Consultant shall complete and submit all permit applications to the appropriate permitting authorities and the costs shall be paid from the Consultant's permit fee allowance. A copy of the application(s) and the original permit(s) obtained by the Consultant shall be given to the DPMC Project Manager for distribution during construction.

4. Consultant Fee:

The Consultant shall determine what is required to complete and submit the permit applications, obtain supporting documentation, attend meetings, etc., and include the total cost in the base bid of its fee proposal under the "Permit Phase" column.

Any funds remaining in the permit allowance will be returned to the State at the close of the project.

B. HAZARDOUS MATERIALS TESTING AND REPORT ALLOWANCE

Consultant shall estimate the costs to complete the hazardous materials survey, sample collection, testing and analysis and preparation of a "Hazardous Materials Survey Report" noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Testing and Report Allowance"**. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include, but not be limited to, the following information:

- Description of tasks and estimated cost for the following:
 - Sample collection
 - Sample testing
 - o Preparation of an Hazardous Materials Survey Report

Any funds remaining in the Hazardous Materials Testing and Report Allowance will be returned to the State at the close of the project.

C. HAZARDOUS MATERIALS ABATEMENT DESIGN ALLOWANCE

Consultant shall estimate the costs to prepare construction documents for hazardous materials abatement noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Abatement Design Allowance"**. Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Abatement Design Allowance will be returned to the State at the close of the project.

D. HAZARDOUS MATERIALS CONSTRUCTION ADMINISTRATION ALLOWANCE

Consultant shall estimate the cost to provide Construction Monitoring and Administration Services for hazardous materials abatement as noted in paragraph VII.C and enter that amount on their fee proposal line item entitled **"Hazardous Materials Construction Administration** **Allowance**". Consultant shall attach a detailed cost breakdown sheet for use by DPMC during the proposal review and potential fee negotiations. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the Hazardous Materials Construction Administration Allowance will be returned to the State at the close of the project.

E. ELECTRICAL UPGRADE ALLOWANCE

The Consultant shall estimate the cost to upgrade the existing electrical capacity for the new freezer as necessary and include that amount in their fee proposal line item entitled **"Electrical Upgrade Allowance"**. The cost breakdown sheet shall include a description of the tasks to be performed and the estimated cost of each task.

Any funds remaining in the allowance will be returned to the State at the close of the project.

XI. SOW SIGNATURE APPROVAL SHEET

This Scope of Work shall not be considered a valid document unless all signatures appear in each designated area below.

The Client Agency approval signature on this page indicates that they have reviewed the design criteria and construction schedule described in this project Scope of Work (including the subsequent contract deliverables and exhibits) and verifies that the work will not conflict with the existing or future construction activities of other projects at the site.

Lucy Abrahim **SOW PREPARED BY:**

10/03/2023

LUCY IBRAHIM, PROJECT MANAGER **DPMC PROJECT PLANNING & INITIATION** DATE

SOW APPROVED BY: James Wright

JAMES WRIGHT, MANAGER **DPMC PROJECT PLANNING & INITIATION** DATE

10/03/2023

Ayman Alminawi 10/03/2023 **SOW APPROVED BY:** AYMAN ALMINAWI. ASSISTANT DIVISION DIRECTOR DATE DEPARTMENT OF TREASURY

SOW APPROVED BY: Cristina

10/03/2023

CRISTINA ZOZZÁRO PROJECT MANAGER DPMC PROJECT MANAGEMENT GROUP

DATE

DATE

SOW APPROVED BY:

10/04/23

CHRISTOPHER GEARY, ASST. DEPUTY DIRECTOR **CONTRACTS & PROCUREMENT**

XII. CONTRACT DELIVERABLES

The following are checklists listing the Contract Deliverables that are required at the completion of each phase of this project. The Consultant shall refer to the DPMC publication entitled "Procedures for Architects and Engineers," 3.0 Edition, dated September 2022 available at <u>https://www.nj.gov/treasury/dpmc/Assets/Files/ProceduresforArchitectsandEngineers.pdf</u> for a detailed description of the deliverables required for each submission item listed. References to the applicable paragraphs of the "Procedures for Architects and Engineers" are provided.

Note that the Deliverables Checklist may include submission items that are "S.O.W. Specific Requirements". These requirements will be defined in the project specific scope of work and included on the deliverables checklist.

This project includes the following phases with the deliverables noted as "Required by S.O.W" on the Deliverables Checklist:

- DESIGN DEVELOPMENT PHASE
- FINAL DESIGN PHASE
- PERMIT APPLICATION PHASE
- BIDDING AND CONTRACT AWARD
- CONSTRUCTION PHASE
- PROJECT CLOSE-OUT PHASE

XIII. EXHIBITS

- A. SAMPLE PROJECT SCHEDULE FORMAT
- B. PROJECT SITE LOCATION MAP
- C. DSS EXISTING COLD STORAGE FACILITY PHOTOS
- D. DSS THE CONCEPT PAPER & HIGH LEVEL REQUIREMENT VERSION 8

END OF SCOPE OF WORK

Deliverables Checklist Design Development Phase

A/E Name: _____

A/E Manual	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
Reference		Yes	No	Yes	No	Yes	No
14.4.1.	A/E Statement of Site Visit						
14.4.2.	Narrative Description of Project						
14.4.3.	Building Code Information Questionnaire						
14.4.4.	Space Analysis						
14.4.5.	Special Features						
14.4.6.	Catalog Cuts						
14.4.7.	Site Evaluation						
14.4.8.	Subsurface Investigation						
14.4.9.	Surveys						
14.4.10.	Arts Inclusion						
14.4.11.	Design Rendering						
14.4.12.	Regulatory Approvals						
14.4.13.	Utility Availability						
14.4.14.	Drawings (6 Sets)						
14.4.15.	Outline Specifications (6 Sets)						
14.4.16.	Current Working Estimate/Cost Analysis						
14.4.17.	Project Schedule						
14.4.18.	Formal Presentation						
14.4.19.	Plan Review/Scope of Work Compliance Statement						
14.4.20.	Design development Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Deliverables Checklist Final Design Phase

A/E Name: _____

A/E Manual	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
Reference		Yes	No	Yes	No	Yes	No
15.4.1.	A/E Statement of Site Visit						
15.4.2.	Narrative Description of Project						
15.4.3.	Building Code Information Questionnaire						
15.4.4.	Space Analysis						
15.4.5.	Special Features						
15.4.6.	Catalog Cuts						
15.4.7.	Site Evaluation						
15.4.8.	Subsurface Investigation						
15.4.9.	Surveys						
15.4.10.	Arts Inclusion						
15.4.11.	Design Rendering						
15.4.12.	Regulatory Approvals						
15.4.13.	Utility Availability						
15.4.14.	Drawings (6 Sets)						
15.4.15.	Outline Specifications (6 Sets)						
15.4.16.	Current Working Estimate/Cost Analysis						
15.4.17.	Project Schedule						
15.4.18.	Formal Presentation						
15.4.19.	Plan Review/Scope of Work Compliance Statement						
15.4.20.	Final Design Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements		1		1	ſ	
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This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Deliverables Checklist Permit Application Phase

A/E Name: _____

A/E Manual	Submission Item		Required by S.O.W.		iously nitted	Enclosed	
Reference		Yes	No	Yes	No	Yes	No
16.1.	N.J. UCC Permit Application						
16.4.	Drawings, Signed and Sealed (6 Sets)						
16.5.	Specifications, Signed and Sealed (6 Sets)						
16.6.	Current Working Estimate/Cost Analysis						
16.7.	Project Schedule						
16.8.	Plan Review/Scope of Work Compliance Statement						
16.9.	Permit Application Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements	·					
							<u> </u>
						1	
			1				

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC Project Manager the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Deliverables Checklist Bidding and Contract Award Phase

A/E Name: ______

A/E Manual		Required by S.O.W.		Previously Submitted		Enclosed	
Reference	Submission Item	Yes	No	Yes	No	Yes	No
17.1.1.	Notice of Advertising						
17.1.2.	Bid Proposal Form						
17.1.3.	Bid Clearance Form						
17.1.4.	Drawings (6 Sets)						
17.1.5.	Specifications (6 Sets)						
17.1.6.	Construction Schedule						
17.3	Pre-Bid Conference/Mandatory Site Visit						
17.3.1.	Meeting Minutes						
17.4	Bulletins						
17.5	Post Bid Meeting						
17.6.	Contract Award "Letter of Recommendation"						
17.8.	Bid Protests - Hearings						
17.9.	Bidding and Contract Award Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements	-					
		-					
		+					

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Deliverables Checklist Construction Phase

A/E Name: ______

A/E Manual	Submission Item	Required by S.O.W.		Previously Submitted		Enclosed	
Reference		Yes	No	Yes	No	Yes	No
18.2.	Pre-Construction Meeting						
18.3.	Submittal Log						
18.4.	Construction Schedule						
18.5.	Project Progress Meetings						
18.7.	Contractor's Invoicing and Payment Process						
18.8.	Contractor Submittals						
18.10.	Testing						
18.11.	Shop Drawings (6 Sets)						
18.12.	As-Built & Record Set Drawings (6 Sets)		1		1		
18.13.	Change Orders						
18.14.	Construction Photographs						
18.15.	Field Observations						
18.17.	Construction Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements						
		_					
							1

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

Deliverables Checklist Project Close-Out Phase

A/E Manual			red by .W.	Previ Subrr	ously nitted	Encl	osed
Reference	Submission Item	Yes	No	Yes	No	Yes	No
19.3.	Development of Punch List and Inspection						
	Reports						
19.5.	Determination of Substantial Completion						
19.6.	Correction/Completion of Punch List						
19.7.	Submission of Close-Out Documentation						
19.7.1.	As-Built and Record Sets of Drawing (6 Sets)						
19.8.	Final Payment						
19.9.1.	Contractors Final Payment						
19.9.2.	A/E's Final Payment						
19.10.	Project Close-Out Phase Deliverables Checklist						
S.O.W. Reference	S.O.W. Specific Requirements		I		I		
							<u> </u>

This checklist shall be completed by the Design Consultant and included as the cover sheet of this submission to document to the DPMC the status of all the deliverables required by the project specific Scope of Work.

Consultant Signature

February 7, 1997 **Rev.**: January 29, 2002

Responsible Group Code Table

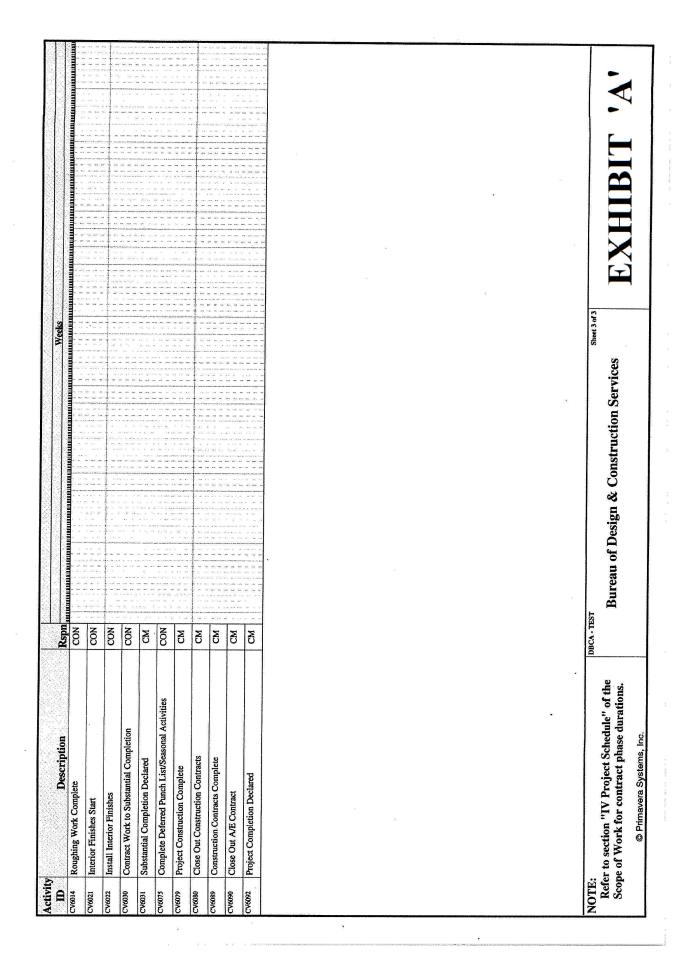
The codes below are used in the schedule field "GRP" that identifies the group responsible for the activity. The table consists of groups in the Division of Property Management & Construction (DPMC), as well as groups outside of the DPMC that have responsibility for specific activities on a project that could delay the project if not completed in the time specified. For reporting purposes, the groups within the DPMC have been defined to the supervisory level of management (i.e., third level of management, the level below the Associate Director) to identify the "functional group" responsible for the activity.

CODE	DESCRIPTION	REPORTS TO ASSOCIATE DIRECTOR OF:
CM	Contract Management Group	Contract Management
CA	Client Agency	N/A
CSP	Consultant Selection and Prequalification Group	Technical Services
A/E	Architect/Engineer	N/A
PR	Plan Review Group	Technical Services
CP	Construction Procurement	Planning & Administration
CON	Construction Contractor	N/A
FM	Financial Management Group	Planning & Administration
OEU	Office of Energy and Utility Management	N/A
PD	Project Development Group	Planning & Administration

EXHIBIT 'A'

APROJ> Design Design CV3001 Schedule/Conduct Predesign/Project Kick-Off Mig. CV3020 Prepare Program Phase Submittal CV3021 Distribute Program Submittal for Review CV3021 Distribute Program Submittal for Review CV3022 Prepare & Submit Project Cost Analysis (DPMC-38) CV3023 Review & Approve Program Submittal CV3024 Review & Approve Program Submittal		
Schedule/Conduct Predesign/Project Kick-Off Mtg. Prepare Program Phase Submittal Distribute Program Submittal for Review Prepare & Submit Project Cost Analysis (DPMC-38) Review & Approve Program Submittal Review & Approve Program Submittal Review & Approve Program Submittal		
Schedule/Conduct Predesign/Project Kick-Off Mtg. Prepare Program Phase Submittal Distribute Program Submittal for Review Prepare & Submit Pròject Cost Analysis (DPMC-38) Review & Approve Program Submittal Review & Approve Program Submittal Review & Approve Program Submittal		
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Review & Approve Program Submittal Review & Approve Program Submittal Review & Approve Program Submittal		
Review & Approve Program Submittal Review & Approve Program Submittal		
Review & Approve Program Submittal		
CV3025 Consolidate & Return Program Submittal Comments CM		
CV3030 Prepare Schematic Phase Submittal AE		
CV3031 Distribute Schematic Submittal for Review CM		
CV3037 Prepare & Submit Project Cost Analysis (DPMC-38) CM		
CV3032 Review & Approve Schematic Submittal CA		
CV3033 Review & Approve Schematic Submittal PR		
CV3034 Review & Approve Schematic Submittal CM		
CV3035 Consolidate & Return Schematic Submittal Comment CM		
CV3040 Prepare Design Development Phase Submittal AE		
CV3041 Distribute D. D. Submittal for Review CM		
CV3047 Prepare & Submit Project Cost Analysis (DPMC-38) CM		
CV3042 Review & Approve Design Development Submittal CA		
CV3043 Review & Approve Design Development Submittal PR		
CV3044 Review & Approve Design Development Submittal CM		
CV3045 Consolidate & Return D.D. Submittal Comments CM		
CV3050 Prepare Final Design Phase Submittal AE		
CV3051 Distribute Final Design Submittal for Review CM		
CV3052 Review & Approve Final Design Submittal CA		
CV3053 Review & Approve Final Design Submittal PR		
CV3054 Review Final Design Submitt for Constructability OCS		
NOTE: DBCA. TEST Refer to section "IV Project Schedule" of the	Bureau of Design & Construction Services	
Scope of Mork for Conductant pulses durations.	LA L	HIBII A

	D Description	Rspn	Weeks				
	Review & Approve Final Design Submittal	CM					(SILEN IN
	Consolidate & Return Final Design Comments						
	Prepare & Submit Permit Application Documents	AB					
CV3068	Prepare & Submit Bidding Cost Analysis (DPMC-38)	CM					
Plan Re	Plan Review-Permit Acquisition						
CV4001	Review Constr. Documents & Secure UCC Permit	K			· · · ·		
CV4010	Provide Funding for Construction Contracts	CA			· · · · · · · · · · · · · · · · · · ·		
CV4020	Secure Bid Clearance	S					
Advertis	Advertise-Bid-Award						
CV5001	Advertise Project & Bid Construction Contracts	B					
CV5010	Open Construction Bids	Ð					
CV5011	Evaluate Bids & Prep. Recommendation for Award	ß					
1	Evaluate Bids & Prep. Recommendation for Award						
CV5014	Complete Recommendation for Award						
CV5020	Award Construction Contracts/Issue NTP	A					
Construction	ction						
CV6000	Project Construction Start/Issue NTP	<u>S</u>					
CV6001	Contract Start/Contract Work (25%) Complete						
	Preconstruction Meeting	CM					
CV6003	Begin Preconstruction Submittals						
	Longest Lead Procurement Item Ordered	CON					
	Lead Time for Longest Lead Procurement Item						
CV6006	Prepare & Submit Shop Drawings	CON					
CV6007	Complete Construction Submittals	CON					
CV6011	Roughing Work Start	S					
CV6012	Perform Roughing Work	CON					
CV6010	Contract Work (50%+) Complete	CON					
CV6013	Longest Lead Procurement Item Delivered	CON					
CV6020	Contract Work (75%) Complete	CON					
NOTE		DBCA - TEST	Set 2 State			2 - 2 - 2 - 3	
Refe. Scop	Refer to section "IV Project Schedule" of the Scope of Work for contract phase durations.	Bureau of Design & Construction Services		ЕX			· \
	C Drimavera Systems Inc						



Distribution Center Location Map

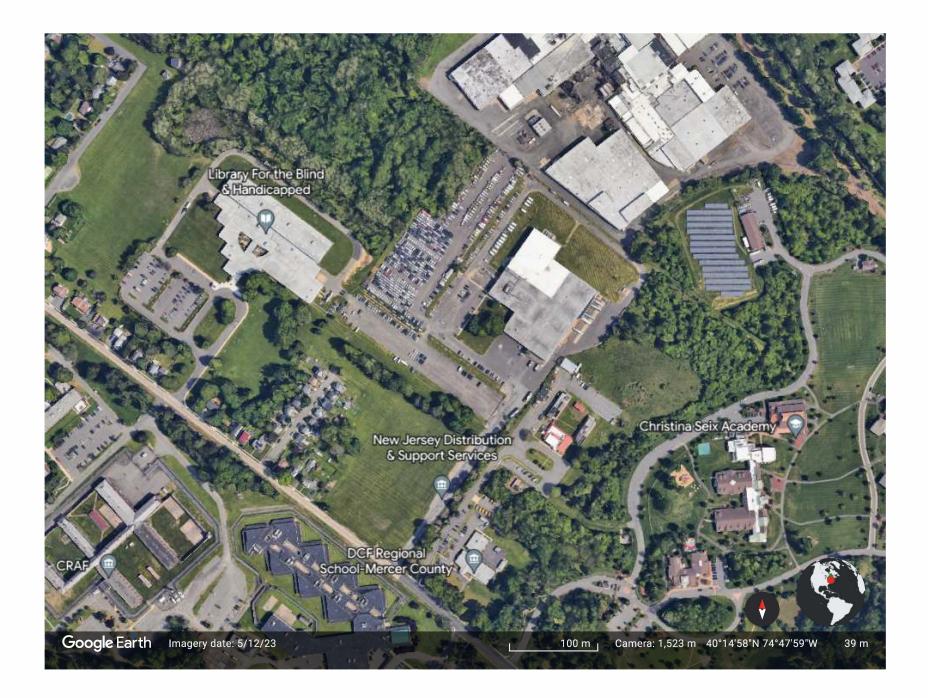


EXHIBIT 'B'

Distribution Center Location Map

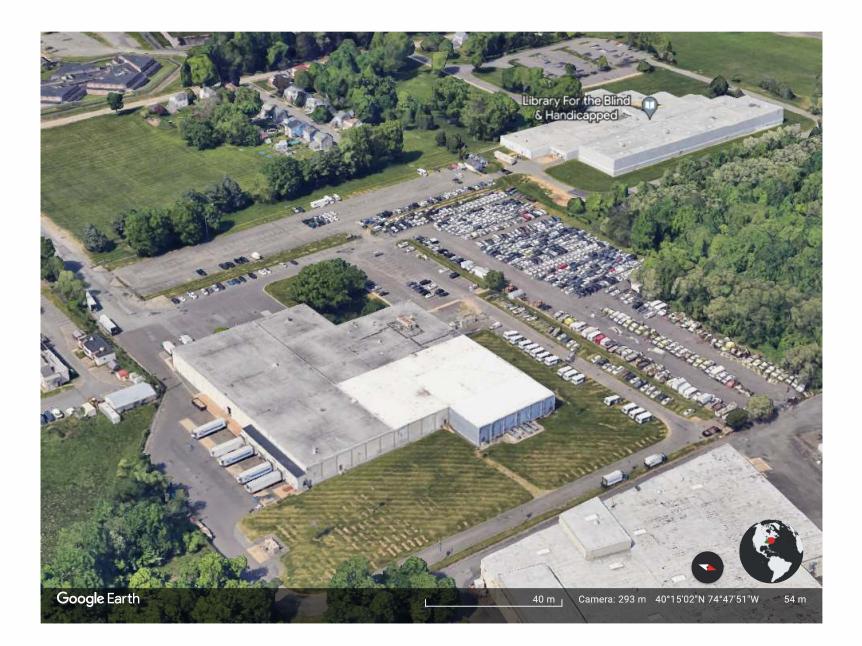


EXHIBIT 'B'

INSIDE FREEZER PHOTOS

EXHIBIT 'C'

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EXHIBIT 'C'

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EXHIBIT 'C'



EXHIBIT 'C'

Location ZE with Exit Dool



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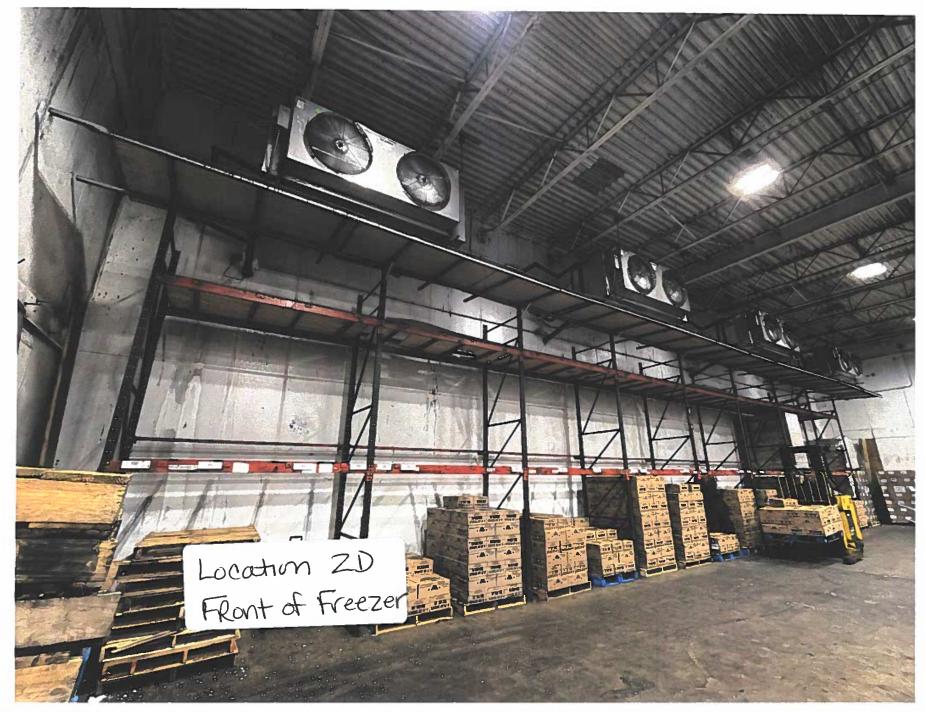
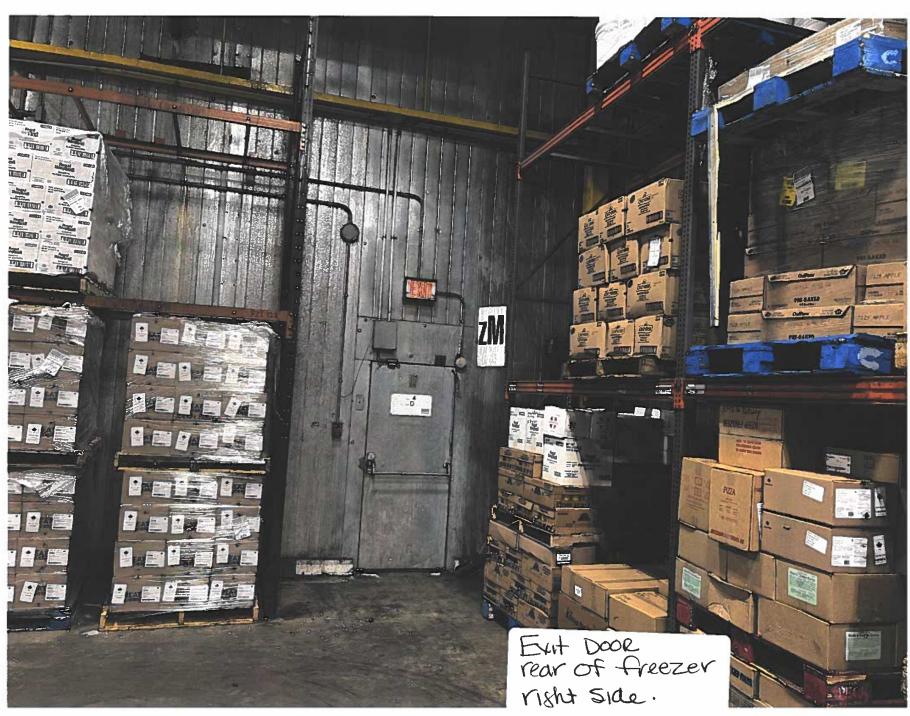
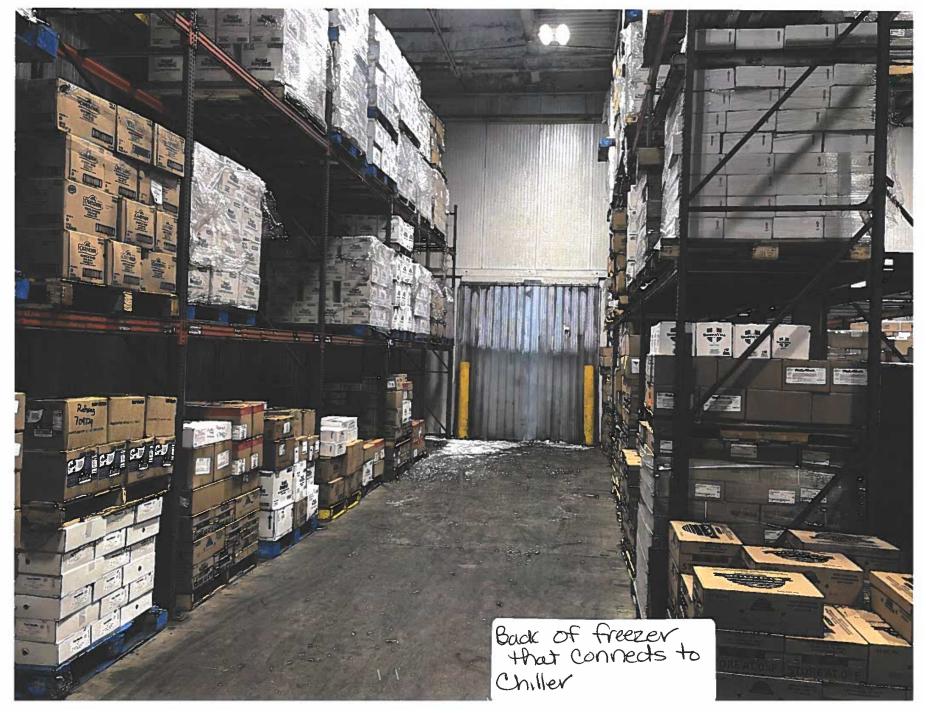




EXHIBIT 'C'









OUTSIDE FREEZER PHOTOS





Outside freezer fan units

Outside view of freezer fan Units.









EXHIBIT 'C'

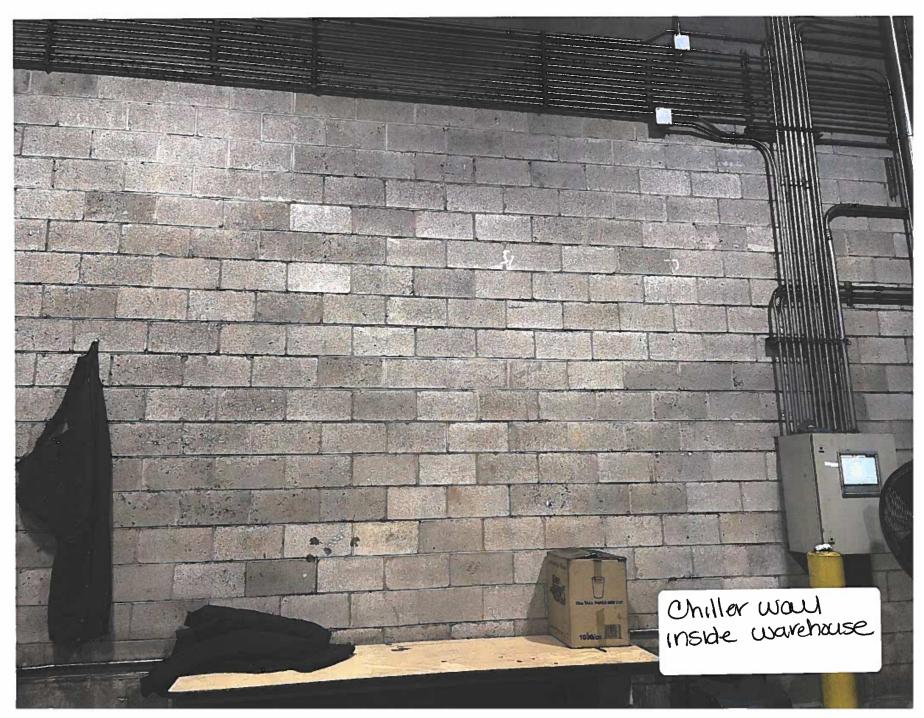


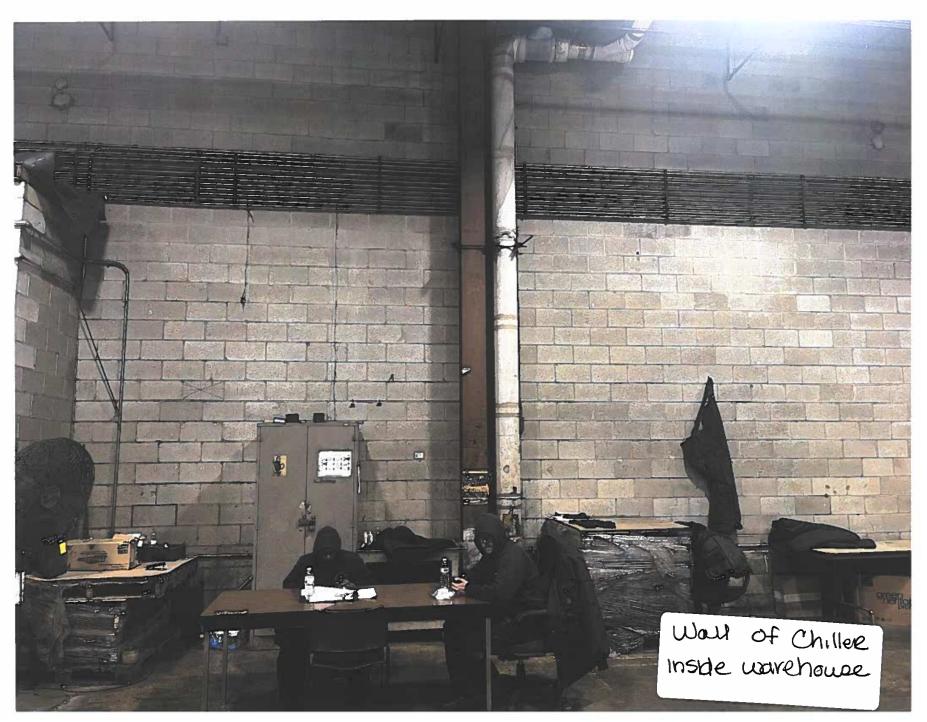


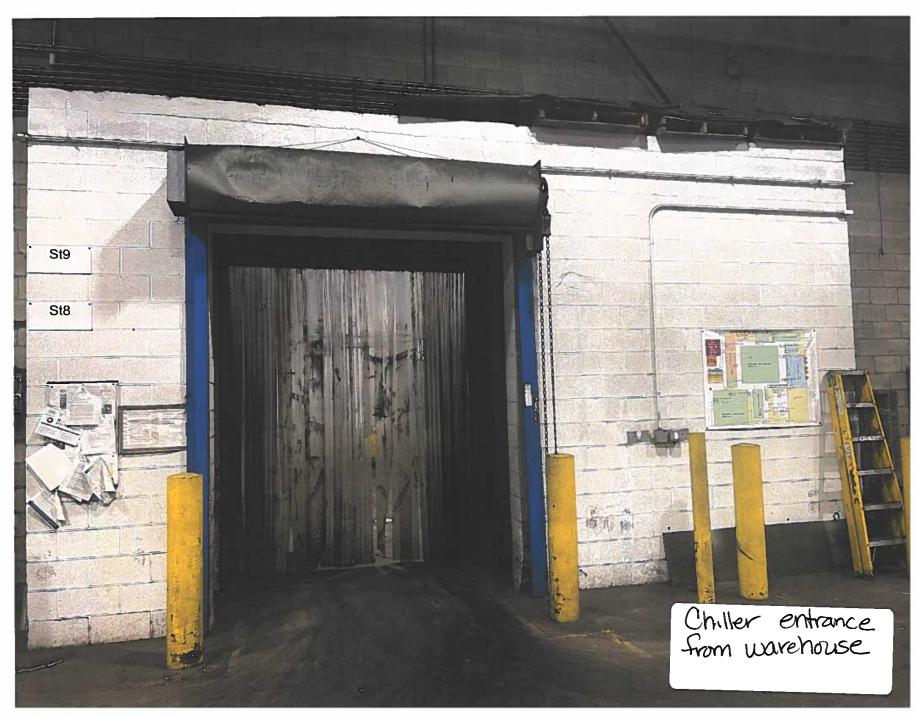


A WHITE CONTRACTOR EXIT 1_1 - 5 - E exit door outside of chiller inside warehouse

11 11 E T Panel Wall Inside warehause









841. P26, EXPANSION OF DSS COLD STORAGE CAPACITY PROJECT

CONCEPT PAPER & HIGH LEVEL REQUIREMENTS

Version 8

September 07, 2023

VERSION HISTORY

Versi on #	Contributions By	Status	Date
1	Ayman Alminawi	Done	June 10, 2018
2	Ayman Alminawi, Joe Signoretta, Russ Tavernier	Done	July 02, 2018
3	Ayman Alminawi, Joe Signoretta, Russ Tavernier, Gregg Olivera, and Jeff Kerchner	Reviewed	June 25, 2019
4	Ayman Alminawi, Joe Signoretta, Russ Tavernier	Reviewed	January 05, 2021
5	Ayman Alminawi, Joe Signoretta, Russ Tavernier	Reviewed	January 06, 2021
6	Ayman Alminawi, Joe Signoretta, Russ Tavernier, William Wolcott, Jake Olearchik, Coilean Malone	Discussed final thoughts	January 07, 2021
7	Ayman Alminawi	Reviewed	January 07, 2021
8	Ayman Alminawi	Submitted	June 10, 2022
9	Ayman Alminawi + Coilean Malone + DPM&C Team	Kick-off planned for Sep 6, 2023	August 16, 2023
10	Ayman Alminawi + Coilean Malone	Done	September 6, 2023

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1 INTRODUCTION

1.1 DOCUMENT PURPOSE

This document pertains to A1375 - 00 Expansion of DSS Cold Storage Capacity Project to be implemented at the Distribution Support Services (DSS). Showing the high-level project scope & statement of work, this concept paper—v8—may be used and project management purposes, and/or as an exhibit for soliciting future quotes and/or bids.

1.2 TERMINOLGY

- "SKU" is short for Stock Keeping Unit.
- "Cold storage", "refrigerated facility", and "refrigerated warehouse" are used interchangeably.
- "Cold storage" denotes Chiller and Freezer.

1.3 FUNDING

This project is funded through State's FY24 capital improvement budget, and may require additional funding from DSS' revolving fund.

1.4 GAP

DSS' cold storage is deficient in (a) storage capacity, (b) staging area, and (c) backup freezer.

1.5 NEED

- (a) Expand DSS' current cold storage capacity,
- (b) Add a transitional area to DSS' new refrigerated facility, &

(c) Repair the insulation issue of DSS' existing refrigerated facility.

1.6 PROJECT PURPOSE

DSS expects to upgrade its relatively limited, cold storage capability through building an additional, mainly standalone, freezer adjacent to the current one; and fixing the insulation issue of the existing cold storage facility.

1.7 PROJECT BENEFITS

This project offers four (4) potential benefits, among others, as follows:

- (a) Storage Space: DSS' relatively limited cold storage space remedied.
- (b) Efficiency: DSS' picking and staging of cold and frozen SKUs improved.
- (c) <u>Business Continuity</u>: DSS' backup refrigerated facility in regular & emergency situations relied on.
- (d) Future Demand: Future requirement for stocking frozen SKUs accommodated.

1.8 PROJECT PERFORMANCE BASELINES

1.8.1 Project Preliminary Statement of Scope

With DPM&C's support, DSS expects to:

- (S1) **plan & bid**—for DSS' cold storage expansion project, including all required designs, especially fire protection and freezer storage layout & efficiency plans;
- (S2) **build a 5,500 SQF standalone freezer**—next to DSS' existing cold storage facility—that must be fully equipped with (a) foundation, (b) floor, (c) structure & walls, (d) ceiling & roof, (e) insulation, (f) security control, (g) safety control, (h) cooling, and (i) staging & storage system i.e. racking; adding 200+ standard pallet-sized storage bins to DSS' storage capacity;
- (S3) **add a transitional area (breezeway)**—to DSS' new refrigerated facility with two (2) automatic rollup doors; and
- (S4) repair—the existing chiller's icing condition & insulation issue; along with adding two automatic rollup doors (inside and outside), while closing up the two side middle doors.

1.8.2 Expected Deliverables

Four high level requirements are needed as follows:

- <u>D1</u>, **Design & Site Supervise**: (a) Management, (b) High-level Plans, (c) HazMat & Fire Protection Assessment/Plan, (d) Freezer Storage Assessment/Layout/Plan, (e) Design & Drawings (Architectural, Electrical, Mechanical, etc.), (f) Permits, & (g) Site Supervision.
- <u>D2</u>, **Build**, **Insulate**, **& Secure**: (a) 5,500 SQ Freezer construction (Foundation, Floor, Structure & Walls, Ceiling & Roof); and (b) Insulation.
- <u>D3</u>, **Equip**: Installation of (a) Cooling System (Cooling Units, Controllers, Wires, Evaporators, Condensers, Compressors, etc.); (b) Security & Safety Control systems (Physical Access Control, Temperature Control, CCTV, Connectivity Wireless Access Points, etc.); and (c) Staging & Storage System (Racks, Shelves, Signage, etc. for 200+ standard pallet-sized storage bins.
- <u>D4</u>, **Repair Package**: (a) Repair the existing chiller's icing condition & insulation issue—along with (b) adding two automatic rollup doors (inside and outside), while (c) closing up the two side middle doors.

Key Milestone	Cross-referenced Deliverables	Start	Finish	Budget	Notes
1. Initiate & Plan	D21 @ Management (\$128k) + \$150k (sought from DSS' hedge budget)	January, 2021		\$278,000	Ongoing
2. Design & Site Supervise	D21	September, 2023	February, 2024	\$350,000	Initiated
3. Build (Construction)	D21 & D22	March, 2024	July, 2024	\$850,000	Expected
4. Equip (Construction)	D23	May, 2024	September, 2024	\$600,000	Expected
5. Repair (Construction)	D24	March, 2024	September, 2024	\$150,000	Expected
6. Monitor & Close	D21, D22, D23, & D24 @ Permits (\$24k), Affirmative Actions (\$8k), Contingency: Design (\$35k)/ Construction (\$160k)	July, 2024	December, 2024	\$227,000	Expected

1.8.3 Tentative Schedule and Budget

2 BACKGROUND & GAP ANALYSIS

2.1 STATE OF NJ DISTRIBUTION CENTER

- a. The State of NJ Distribution Center (DC) is part of the Distribution Support Services (DSS) within the Department of Purchase and Property (DPP) that falls under the Department of Treasury of the State of New Jersey. For more information, refer to:
 - <u>http://www.nj.gov/treasury/dss/</u>
 - <u>http://www.state.nj.us/treasury/</u>
 - <u>http://www.state.nj.us/treasury/purchase/</u>
- b. DSS has only one Distribution Center in Trenton.
- c. DSS is a substantial provider of numerous food and household commodities to the using state agencies of New Jersey. DSS handles three major categories of products, namely: warehoused products, canteen products and drop shipping products.
- d. About 50 DSS employees support three main functional units that contribute to DSS' ecosystem; namely: Acquisition, Support Operations, and Distribution Center (Warehousing & Shipping); including Front Office & Administration.
- e. DSS includes two main parts; the Distribution Center (Side Offices, dry Goods Warehouse & Freezer/Cooler, & the Server Room) and the office space (the 1st floor and 2nd floor). DSS is about 109,000 SQF as follows (See Annex 1):
 - Dry Storage : 67,200 SQF
 - Freezer/Chill Box : 16,200 SQF
 - Loading Dock : 6,400 SQF
 - 1st Floor Office : 9,600 SQF
 - 2nd Floor Office : 9,600 SQF

2.2 DSS' COLD STORAGE

The historical situation of DSS' Refrigerated Facility is summarized as follows:

1969	 The Distribution Center (DC) was built in 1969, including a Cooler & a Freezer. Their combined area was 7,800 SQF The original Cooler was 40' x 80' (3,200 SQF). The original Freezer was 80' x 80' (6,400 SQF). 		
1985	 The Cooler & Freezer were renovated and expanded to become 16,200 SQF as follows: The Cooler became 40' x 135' (5,400 SQF). The Freezer became 80' x 135' (10,800 SQF). 		
2002	 Remodeling: The combined Cooler & Freezer area remained the same (16,200 SQF), but was internally remodeled as follows: The Cooler's area was decreased by 2,200 SQF to 40' x 80' (3,200 SQF). The Freezer's area was increased by 2,200 SQF or 40' x 55', in addition to the 80' x 135' (10,800 SQF), totaling 13,000 SQF The usable Cooler & Freezer height is 18 ft. The rack storage configuration holds up to 170 four-foot high pallets in the Cooler, while it holds up to 1150 pallets in the Freezer. 		

	The Freezer racks are accessible by narrow aisle reach fork lift trucks thru three (3) Freezer entrances upon entering the Cooler entrance from the central warehouse.		
	Roof & Insulation:		
	• A new roof was added (new roof panels over the old roof decks).		
	• The old drop ceiling panels were removed for greater storage capacity.		
	• New insulated panels were added to reach the underside of the roof deck.		
	• New night insulated doors were added to all entrances.		
	• New lighting was also added.		
	• Upon completion of renovation, outside air infiltration formed ice accumulations and had to be addressed and fixed.		
	Freezing & Chilling System:		
	Seven (7) Kramer mechanical units with new drain lines, piping and electric		
	infrastructure were provided, and have been there until now, as follows:		
	• Each unit included two (2) evaporators for each compressor.		
	• Five (5) units were freezer-grade temp while two (2) other units were		
	refrigerated-grade temp.		
	• The Cooler/Freezer design called for a maximum temperature of -15F.		
	• Outside of the Cooler/Freezer, there are two digital panels for reading and		
	controlling the 7 unit's temperature.		
	• The 1 st panel provides only reading of the medium and low temperatures.		
2002	• The 2 nd panel is the Eurotherm 800 Temp Controller installed in 2002:		
	• The system monitors and controls, among other things, the		
	compressor cycles.		
	• It ensures that proper temperatures are maintained in a balanced		
	system; meaning that the compressors cycle on and off at varying		
	times depending on pre-determined set points.		
	• The system is obsolete. Various problems were recently discovered		
	and fixed on a temporary basis. The last repair was conducted by the		
	system's installer (Neal Systems) in Oct 2017.		
	• The system needs to be replaced or completely upgraded.		
2018	Freezer Units: Two (2) Kramer mechanical units #3 & #5 were completely replaced.		
	1.16 (2) Humer meenuneur unto no a no were compretery replaced.		

2.3 BUSINESS NEED

In sum, DSS' cold storage capacity should be expanded to support the corresponding sales. Storing and handling cold SKUs has been relatively more challenging and inefficient than warehousing the dry SKUs. In more details, DSS' cold storage capacity is relatively limited and disadvantageous. While the cold SKUs have contributed 42% and 40% of the average overall \$ Sales and Unit Sales, respectively, DSS has been able to avail and use only 28% of the Distribution Center's space for warehousing the cold SKUs.

	5-year Average (FY15-FY19)		
	Cold Storage Capacity	Capacity	Cold to DC %
\$ Sales	12,147,021	28,856,226	42%
Unit Sales	630,528	1,585,996	40%
Storage Capacity	1,152	4,049	28%

3 CONCEPTUAL DESIGN (FROM A DSS PERSPECTIVE)

