LEASE NO. GS-06P-LKS00076

This Lease is made and entered into between

EGP 10749 LENEXA LLC

(Lessor), whose principal place of business is 2101 L St NW Ste 650, Washington, DC 20037-1277, and whose interest in the Property described herein is that of Fee Owner, and

The United States of America

(Government), acting by and through the designated representative of the General Services Administration (GSA), upon the terms and conditions set forth herein.

Witnesseth: The parties hereto, for the consideration hereinafter mentioned, covenant and agree as follows:

Lessor hereby leases to the Government the Premises described herein, being all or a portion of the Property located at

10749 West 84th Terrace, Lenexa, KS 66214-3612

and more fully described in Section 1 and Exhibit **A**, together with rights to the use of parking and other areas as set forth herein, to be used for such purposes as determined by GSA.

LEASE TERM

To Have and To Hold the said Premises with its appurtenances for the term beginning upon acceptance of the Premises as required by this Lease and continuing for a period of

20 Years, 15 Years Firm,

subject to termination and renewal rights as may be hereinafter set forth. The commencement date of this Lease, along with any applicable termination and renewal rights, shall be more specifically set forth in a Lease Amendment upon substantial completion and acceptance of the Space by the Government.

In Witness Whereof, the parties to this Lease evidence their agreement to all terms and conditions set forth herein by their signatures below, to be effective as of the date of delivery of the fully executed Lease to the Lessor.

FOR THE LESSOR:

[redacted] 5 U.S.C. (b)(6)

Name: [redacted] 5 U.S.C. (b)(6)

Title:

Entity Name: EGP 10749 LENEXA LLC

Date: 4/25/2017

FOR THE GOVERNMENT:

[redacted]

Name: Kory R. Hochler 5 U.S.C. (b)(6)

Title: Lease Contracting Officer

General Services Administration, Public Buildings Service

Date: 4/27/2017

WITNESSED FOR THE LESSOR BY:

[redacted] 5 U.S.C. (b)(6)

Name: [redacted] 5 U.S.C. (b)(6)

Title:

Date: 4/25/2017

The information collection requirements contained in this Solicitation/Contract, that are not required by the regulation, have been approved by the Office of Management and Budget pursuant to the Paperwork Reduction Act and assigned the OMB Control No. 3090-0163.

SECTION 1 THE PREMISES, RENT, AND OTHER TERMS 1
1.01 THE PREMISES (SEP 2015) 1
1.02 EXPRESS APPURTENANT RIGHTS (SEP 2013) 1
1.03 RENT AND OTHER CONSIDERATION (SEP 2015) MODIFIED 1
1.04 BROKER COMMISSION AND COMMISSION CREDIT (SEP 2015) 2
1.05 TERMINATION RIGHTS (AUG 2011) 2
1.06 ~~RENEWAL RIGHTS (SEP 2013)~~ INTENTIONALLY DELETED 2
1.07 DOCUMENTS INCORPORATED IN THE LEASE (SEP 2015) 2
1.08 TENANT IMPROVEMENT RENTAL ADJUSTMENT (SEP 2015) 3
1.09 BUILDING SPECIFIC AMORTIZED CAPITAL (SEP 2012) 4
1.10 ~~BUILDING SPECIFIC AMORTIZED CAPITAL RENTAL ADJUSTMENT (SEP 2013)~~ INTENTIONALLY DELETED 4
1.11 PERCENTAGE OF OCCUPANCY FOR TAX ADJUSTMENT (JUN 2012) 4
1.12 ~~REAL ESTATE TAX BASE (SEP 2013)~~ INTENTIONALLY DELETED 4
1.13 OPERATING COST BASE (SEP 2013) 4
1.14 ~~RATE FOR ADJUSTMENT FOR VACANT LEASED PREMISES (SEP 2013)~~ INTENTIONALLY DELETED 4
1.15 ~~HOURLY OVERTIME HVAC RATES (AUG 2011)~~ SEE SECTION 7.05 - 24-HOUR HVAC REQUIREMENT 4
1.16 ~~24-HOUR HVAC REQUIREMENT (SEP 2014)~~ INTENTIONALLY DELETED 4
1.17 BUILDING IMPROVEMENTS (MAR 2016) 4
1.18 ~~HUBZONE SMALL BUSINESS CONCERNS ADDITIONAL PERFORMANCE REQUIREMENTS (MAR 2012)~~ INTENTIONALLY DELETED 4

SECTION 2 GENERAL TERMS, CONDITIONS, AND STANDARDS 5
2.01 DEFINITIONS AND GENERAL TERMS (SEP 2013) 5
2.02 AUTHORIZED REPRESENTATIVES (JUN 2012) 5
2.03 ALTERATIONS REQUESTED BY THE GOVERNMENT (SEP 2013) 6
2.04 WAIVER OF RESTORATION (APR 2011) 6
2.05 PAYMENT OF BROKER (JUL 2011) 6
2.06 CHANGE OF OWNERSHIP (APR 2015) 6
2.07 REAL ESTATE TAX ADJUSTMENT (JUN 2012) 7
2.08 ADJUSTMENT FOR VACANT PREMISES (SEP 2013) 8
2.09 OPERATING COSTS ADJUSTMENT (JUN 2012) 8
2.10 ADDITIONAL POST-AWARD FINANCIAL AND TECHNICAL DELIVERABLES (JUN 2012) 9
2.11 ~~RELOCATION ASSISTANCE ACT (APR 2011)~~ INTENTIONALLY DELETED 9

SECTION 3 CONSTRUCTION STANDARDS AND SHELL COMPONENTS 10
3.01 LABOR STANDARDS (SEP 2013) 10
3.02 WORK PERFORMANCE (JUN 2012) 10
3.03 RECYCLED CONTENT PRODUCTS (COMPREHENSIVE PROCUREMENT GUIDELINES) (SEP 2013) 10
3.04 ENVIRONMENTALLY PREFERABLE BUILDING PRODUCTS AND MATERIALS (SEP 2013) 10
3.05 EXISTING FIT-OUT, SALVAGED, OR REUSED BUILDING MATERIAL (JUN 2012) 10
3.06 CONSTRUCTION WASTE MANAGEMENT (SEP 2015) 11
3.07 WOOD PRODUCTS (SEP 2013) 11
3.08 ADHESIVES AND SEALANTS (AUG 2008) 12
3.09 BUILDING SHELL REQUIREMENTS (SEP 2013) 12
3.10 RESPONSIBILITY OF THE LESSOR AND LESSOR'S ARCHITECT/ENGINEER (JUN 2012) 12
3.11 QUALITY AND APPEARANCE OF BUILDING (JUN 2012) 12
3.12 VESTIBULES (APR 2011) 12
3.13 MEANS OF EGRESS (MAY 2015) 12
3.14 AUTOMATIC FIRE SPRINKLER SYSTEM (SEP 2013) 13
3.15 FIRE ALARM SYSTEM (SEP 2013) 13
3.16 ENERGY INDEPENDENCE AND SECURITY ACT (MAR 2016) 13
3.17 ~~ELEVATORS (SEP 2013)~~ INTENTIONALLY DELETED 14
3.18 ~~BUILDING DIRECTORY (APR 2011)~~ INTENTIONALLY DELETED 14
3.19 FLAGPOLE (SEP 2013) 14
3.20 DEMOLITION (JUN 2012) 14
3.21 ACCESSIBILITY (FEB 2007) 14
3.22 CEILINGS (APR 2015) 14
3.23 EXTERIOR AND COMMON AREA DOORS AND HARDWARE (SEP 2013) 15
3.24 DOORS: IDENTIFICATION (APR 2011) 15
3.25 WINDOWS (APR 2011) 15
3.26 PARTITIONS: GENERAL (APR 2015) 15
3.27 PARTITIONS: PERMANENT (APR 2015) 15
3.28 INSULATION: THERMAL, ACOUSTIC, AND HVAC (SEP 2013) 15
3.29 WALL FINISHES – SHELL (SEP 2015) 16
3.30 PAINTING – SHELL (JUN 2012) 16
3.31 FLOORS AND FLOOR LOAD FOR LABORATORIES (SHELL) MODIFIED 16
3.32 FLOOR COVERING AND PERIMETERS – SHELL (SEP 2013) 16
3.33 MECHANICAL, ELECTRICAL, PLUMBING: GENERAL (APR 2011) 16
3.34 BUILDING SYSTEMS (APR 2011) 16

3.35 ELECTRICAL (JUN 2012) 16
3.36 ~~ADDITIONAL ELECTRICAL CONTROLS (JUN 2012)~~ INTENTIONALLY DELETED 17
3.37 PLUMBING (JUN 2012) 17
3.38 DRINKING FOUNTAINS (APR 2011) 17
3.39 RESTROOMS (SEP 2013) 17
3.40 PLUMBING FIXTURES: WATER CONSERVATION (DEC 2011) 17
3.41 JANITOR CLOSETS (SEP 2015) 18
3.42 HEATING, VENTILATION, AND AIR CONDITIONING - SHELL (SEP 2013) MODIFIED 18
3.43 TELECOMMUNICATIONS: DISTRIBUTION AND EQUIPMENT (SEP 2015) 18
3.44 TELECOMMUNICATIONS: LOCAL EXCHANGE ACCESS (JUN 2012) 18
3.45 LIGHTING: INTERIOR AND PARKING - SHELL (SEP 2013) 19
3.46 ACOUSTICAL REQUIREMENTS (JUN 2012) 19
3.47 ~~SECURITY FOR NEW CONSTRUCTION (NOV 2005)~~ INTENTIONALLY DELETED 20
3.48 ~~SEISMIC SAFETY FOR NEW CONSTRUCTION (SEP 2012)~~ INTENTIONALLY DELETED 20
3.49 ~~FIRE PROTECTION FOR NEW CONSTRUCTION (APR 2015)~~ INTENTIONALLY DELETED 20
3.50 ~~LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN FOR NEW CONSTRUCTION (LEED NC) (SEP 2013)~~ INTENTIONALLY DELETED 20
3.51 ~~LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN FOR COMMERCIAL INTERIORS (LEED CI) (SEP 2013)~~ INTENTIONALLY DELETED 20
3.52 INDOOR AIR QUALITY DURING CONSTRUCTION (SEP 2013) 20
3.53 SYSTEMS COMMISSIONING (APR 2011) 21
3.54 DUE DILIGENCE AND NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENTS – LEASE (SEP 2014) 21
3.55 ~~NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS - LEASE (SEP 2014)~~ INTENTIONALLY DELETED 21

SECTION 4 DESIGN, CONSTRUCTION, AND POST AWARD ACTIVITIES 22
4.32 SCHEDULE FOR COMPLETION OF SPACE (SEP 2015) MODIFIED 22
4.33 CONSTRUCTION DOCUMENTS (SEP 2012) 23
4.34 TENANT IMPROVEMENTS PRICE PROPOSAL (SEP 2015) 23
4.35 ~~BUILDING SPECIFIC AMORTIZED CAPITAL (BSAC) PRICE PROPOSAL (SEP 2015)~~ INTENTIONALLY DELETED 23
4.36 GREEN LEASE SUBMITTALS (SEP 2015) MODIFED 23
4.37 CONSTRUCTION SCHEDULE AND INITIAL CONSTRUCTION MEETING (APR 2011) 24
4.38 PROGRESS REPORTS (JUN 2012) 24
4.39 CONSTRUCTION INSPECTIONS (SEP 2015) 24
4.40 ACCESS BY THE GOVERNMENT PRIOR TO ACCEPTANCE (SEP 2013) 24
4.41 ACCEPTANCE OF SPACE AND CERTIFICATE OF OCCUPANCY (SEP 2015) 24
4.42 LEASE TERM COMMENCEMENT DATE AND RENT RECONCILIATION (JUN 2012) 25
4.43 AS-BUILT DRAWINGS (JUN 2012) 25
4.44 LIQUIDATED DAMAGES (JUN 2012) 25
4.45 ~~SEISMIC RETROFIT (SEP 2013)~~ INTENTIONALLY DELETED 25
4.46 LESSOR'S PROJECT MANAGEMENT FEE (SEP 2013) 25

SECTION 5 TENANT IMPROVEMENT COMPONENTS 26
5.32 TENANT IMPROVEMENT REQUIREMENTS (SEP 2013) 26
5.33 ~~TENANT IMPROVEMENT SPECIFICATIONS (SEP 2015)~~ INTENTIONALLY DELETED 26
5.34 FINISH SELECTIONS (SEP 2015) 26
5.35 WINDOW COVERINGS (JUN 2012) MODIFIED 26
5.36 DOORS: SUITE ENTRY (SEP 2013) 26
5.37 DOORS: INTERIOR (SEP 2013) 26
5.38 DOORS: HARDWARE (SEP 2013) 26
5.39 DOORS: IDENTIFICATION (JUN 2012) 26
5.40 PARTITIONS: SUBDIVIDING (SEP 2015) 26
5.41 WALL FINISHES (JUN 2012) 27
5.42 PAINTING – TI (SEP 2013) 27
5.43 FLOOR COVERINGS AND PERIMETERS (APR 2015) MODIFIED 27
5.44 HEATING AND AIR CONDITIONING (JUN 2012) 28
5.45 ELECTRICAL: DISTRIBUTION (SEP 2015) 28
5.46 TELECOMMUNICATIONS: DISTRIBUTION AND EQUIPMENT (JUN 2012) 28
5.47 TELECOMMUNICATIONS: LOCAL EXCHANGE ACCESS (AUG 2008) 28
5.48 DATA DISTRIBUTION (JUN 2012) 28
5.49 ELECTRICAL, TELEPHONE, DATA FOR SYSTEMS FURNITURE (JUN 2012) 29
5.50 LIGHTING: INTERIOR AND PARKING – TI (SEP 2015) 29

SECTION 6 UTILITIES, SERVICES, AND OBLIGATIONS DURING THE LEASE TERM 30
6.32 PROVISION OF SERVICES, ACCESS, AND NORMAL HOURS (JUN 2012) MODIFIED 30
6.33 UTILITIES (APR 2011) 30
6.34 ~~UTILITIES SEPARATE FROM RENTAL/BUILDING OPERATING PLAN (AUG 2011)~~ INTENTIONALLY DELETED 30
6.35 HEATING AND AIR CONDITIONING (SEP 2014) 30
6.36 OVERTIME HVAC USAGE (JUN 2012) 30
6.37 JANITORIAL SERVICES (JUN 2012) 30

6.38 SELECTION OF CLEANING PRODUCTS (APR 2015) 31
6.39 ~~SELECTION OF PAPER PRODUCTS (APR 2015)~~ INTENTIONALLY DELETED 31
6.40 SNOW REMOVAL (APR 2011) 31
6.41 MAINTENANCE AND TESTING OF SYSTEMS (SEP 2013) 31
6.42 MAINTENANCE OF PROVIDED FINISHES (SEP 2013) 32
6.43 ASBESTOS ABATEMENT (APR 2011) 32
6.44 ONSITE LESSOR MANAGEMENT (APR 2011) 32
6.45 IDENTITY VERIFICATION OF PERSONNEL (SEP 2013) 32
6.46 SCHEDULE OF PERIODIC SERVICES (JUN 2012) 33
6.47 LANDSCAPING (SEP 2015) 33
6.48 LANDSCAPE MAINTENANCE (APR 2011) 33
6.49 RECYCLING (JUN 2012) 33
6.50 RANDOLPH-SHEPPARD COMPLIANCE (SEP 2013) 33
6.51 ~~SAFEGUARDING AND DISSEMINATION OF SENSITIVE BUT UNCLASSIFIED (SBU) BUILDING INFORMATION (SEP 2013)~~ INTENTIONALLY DELETED 33
6.52 INDOOR AIR QUALITY (SEP 2013) 34
6.53 RADON IN AIR (SEP 2013) 34
6.54 ~~RADON IN WATER (JUN 2012)~~ INTENTIONALLY DELETED 35
6.55 HAZARDOUS MATERIALS (SEP 2013) 35
6.56 MOLD (SEP 2013) 35
6.57 OCCUPANT EMERGENCY PLANS (SEP 2013) 36
6.58 FLAG DISPLAY (SEP 2013) 36

SECTION 7 ADDITIONAL TERMS AND CONDITIONS 37
7.01 SECURITY STANDARDS (JUN 2012) 37
7.02 LEAK-PROOF DESIGN AND CONSTRUCTION 37
7.03 THE FOLLOWING PARAGRAPHS HAVE BEEN MODIFIED IN THIS LEASE: 37
7.04 HAZARDOUS WASTE DISPOSAL 37
7.05 24-HOUR HVAC REQUIREMENT 37
7.06 OVERHEAD GARAGE DOOR 38
7.07 DISCREPANCY BETWEEN LEASE AND ATTACHMENTS TO THE LEASE 38
7.08 MECHANICAL AND ELECTRICAL ROOM 38
7.09 HAZARDOUS MATERIAL STORAGE 38
7.10 FRAMING VIBRATION AND SEISMIC REQUIREMENTS FOR LABORATORIES (SHELL) 38
7.11 SERVICES AND MAINTENANCE 38
7.12 UTILITIES AND HVAC OVERTIME 38
7.13 NIH DESIGN REQUIREMENTS CHANGE (PER RLP AMENDMENT#4) 38

SECTION 1 THE PREMISES, RENT, AND OTHER TERMS

1.01 THE PREMISES (SEP 2015)

The Premises are described as follows:

A. Office and Related Space: **53,120** rentable square feet (RSF), yielding **46,180** ANSI/BOMA Office Area (ABOA) square feet (SF) of office and related Space located on the **1st** floor, of the Building, as depicted on the floor plan(s) attached hereto as Exhibit **A**.

B. Common Area Factor: The Common Area Factor (CAF) is established as **1.1502815** percent. This factor, which represents the conversion from ABOA to rentable square feet, rounded to the nearest whole percentage, shall be used for purposes of rental adjustments in accordance with the Payment Clause of the General Clauses.

C. Unless otherwise noted, the Government accepts the Premises and tenant improvements in their existing condition, except where specifications or standards are contained elsewhere in this Lease. These standards include security improvements, Fire Protection and Life Safety requirements, ABAAS compliance, as well as compliance with all local codes and ordinances. Such acceptance by the Government of existing Premises shall not relieve Lessor of continuing obligations for cleaning, janitorial, maintenance, repair, etc. as set forth in the Lease paragraphs and attached General Clauses.

1.02 EXPRESS APPURTENANT RIGHTS (SEP 2013)

The Government shall have the non-exclusive right to the use of Appurtenant Areas, and shall have the right to post Rules and Regulations Governing Conduct on Federal Property, Title 41, CFR, Part 102-74, Subpart C within such areas. The Government will coordinate with Lessor to ensure signage is consistent with Lessor's standards. Appurtenant to the Premises and included in the Lease are rights to use the following:

A. Parking: **125** parking spaces as depicted on the plan attached hereto as Exhibit **B**, reserved for the exclusive use of the Government, of which **0** shall be structured/inside parking spaces, and **125** shall be surface/outside parking spaces. In addition, the Lessor shall provide such additional parking spaces as required by the applicable code of the local government entity having jurisdiction over the Property.

B. Antennas, Satellite Dishes, and Related Transmission Devices: (1) Space located on the roof of the Building sufficient in size for the installation and placement of telecommunications equipment, (2) the right to access the roof of the Building, and (3) use of all Building areas (e.g., chases, plenums, etc.) necessary for the use, operation, and maintenance of such telecommunications equipment at all times during the term of this Lease.

1.03 RENT AND OTHER CONSIDERATION (SEP 2015) MODIFIED

A. The Government shall pay the Lessor annual rent, payable in monthly installments in arrears, at the following rates:

	FIRM TERM	NON-FIRM TERM
	ANNUAL RENT	ANNUAL RENT
SHELL RENT[1]	[redacted]	[redacted]
TENANT IMPROVEMENTS RENT[2]	[redacted]	[redacted]
OPERATING COSTS[3]	[redacted]	[redacted]
BUILDING SPECIFIC AMORTIZED CAPITAL (BSAC)[4]	[redacted]	[redacted]
PARKING[5]	[redacted]	[redacted]
TOTAL ANNUAL RENT[6]	**$2,250,449.27**	**$2,250,449.27**

5 U.S.C. (b)(4)

[1] Shell rent calculation:
(Firm Term) $[redacted]SF multiplied by **53,120** RSF 5 U.S.C. (b)(4)
(Non-Firm Te[redacted]er RSF multiplied by **53,120** RSF 5 U.S.C. (b)(4
[2] Tenant Improvement[redacted] are amortized at a rate of [redacted]percent per annum over **20** years.
[3] [redacted] 5 U.S.C. (b)(4)
[4] Building Specific Amortized Capital (BSAC) of $[redacted]are amortized at a rate of [redacted]percent per annum over **20** years
[5] Parking costs described under sub-paragraph I below. 5 U.S.C. (b)(4)
[6] Four (4) months fully abated rent is included under sub-paragraph J below.

B. In instances where the Lessor amortizes either the TI or BSAC for a period exceeding the Firm Term of the Lease, should the Government terminate the Lease after the Firm Term or does not otherwise renew or extend the term beyond the Firm Term, the Government shall not be liable for any costs, including unamortized costs beyond the Firm Term.

C. Rent is subject to adjustment based upon a mutual on-site measurement of the Space upon acceptance, not to exceed **46,180** ABOA SF based upon the methodology outlined under the "Payment" clause of GSA Form 3517.

D. Rent is subject to adjustment based upon the final Tenant Improvement (TI) cost to be amortized in the rental rate, as agreed upon by the parties subsequent to the Lease Award Date.

E. INTENTIONALLY DELETED

F. If the Government occupies the Premises for less than a full calendar month, then rent shall be prorated based on the actual number of days of occupancy for that month.

G. Rent shall be paid to Lessor by electronic funds transfer in accordance with the provisions of the General Clauses. Rent shall be payable to the Payee designated by the Lessor in the System for Award Management (SAM). If the payee is different from the Lessor, both payee and Lessor must be registered and active in SAM.

H. Lessor shall provide to the Government, in exchange for the payment of rental and other specified consideration, the following:

1. The leasehold interest in the Property described in the paragraph entitled "The Premises."

2. All costs, expenses and fees to perform the work required for acceptance of the Premises in accordance with this Lease, including all costs for labor, materials, and equipment, professional fees, contractor fees, attorney fees, permit fees, inspection fees, and similar such fees, and all related expenses.

3. Performance or satisfaction of all other obligations set forth in this Lease; and all services, utilities, and maintenance required for the proper operation of the Property, the Building, and the Premises in accordance with the terms of the Lease, including, but not limited to, all inspections, modifications, repairs, replacements, and improvements required to be made thereto to meet the requirements of this Lease.

I. Parking shall be provided at a rate of **$0.00** per parking space per month (structured/inside), and **$0.00** per parking space per month (surface/outside).

[redacted]

1.04 BROKER COMMISSION AND COMMISSION CREDIT (SEP 2015) 5 U.S.C. (b)(4)

A. **DTZ Americas, Inc. doing business as Cushman & Wakefield U.S., Inc.** (Broker) is the authorized real estate Broker representing GSA in connection with this Lease transaction. The total amount of the Commission is [redacted] and is earned upon Lease execution, payable according to the Commission Agreement signed between the two parties. Only [redacted] of the Commission will be payable to **DTZ Americas, Inc. doing business as Cushman & Wakefield U.S. Inc.** with the remaining $[redacted] which is the Commission Credit, to be credited to the shell rental portion of the annual rental payments due and owing to fully recapture this Commission Credit. The reduction in shell rent shall commence with the first month of the rental payments and continue until the credit has been fully recaptured in equal monthly installments over the shortest time practicable. 5 U.S.C (b)(4)

B. Notwithstanding the "Rent and Other Consideration" paragraph of this Lease, the shell rental payments due and owing under this Lease shall be reduced to recapture fully this Commission Credit. The reduction in shell rent shall commence with the first month of the rental payments and continue as indicated in this schedule for adjusted Monthly Rent: 5 U.S.C. (b)(4

5 U.S.C. (b)(4) 5 U.S.C. (b)(4) U.S.C. (b)(4)

[redacted]ental Payment [redacted]inus prorated Commission Credit of $[redacted]djusted $[redacted]

[redacted]ental Payment [redacted]inus prorated Commission Credit of $[redacted]djusted [redacted]

[redacted]ental Payment [redacted]inus prorated Commission Credit of $[redacted]djusted [redacted]

[redacted]ental Payment [redacted]inus prorated Commission Credit of $[redacted]djusted [redacted]

[redacted]ental Payment [redacted]inus prorated Commission Credit of $[redacted]djusted [redacted]

[redacted]Rental Paymen[redacted]minus prorated Commission Credit of [redacted]adjusted [redacted]

Month **11** Rental Paymen[redacted]minus prorated Commission Credit of [redacted]adjusted [redacted]

* Subject to change based on adjustments outlined under the paragraph "Rent and Other Consideration."

1.05 TERMINATION RIGHTS (AUG 2011)

The Government may terminate this Lease, in whole or in part, at any time effective after the Firm Term of this Lease, by providing not less than **90** days' prior written notice to the Lessor. The effective date of the termination shall be the day following the expiration of the required notice period or the termination date set forth in the notice, whichever is later. No rental shall accrue after the effective date of termination.

1.06 ~~RENEWAL RIGHTS (SEP 2013)~~ INTENTIONALLY DELETED

1.07 DOCUMENTS INCORPORATED IN THE LEASE (SEP 2015)

The following documents are attached to and made part of the Lease:

Document Name	No. of Pages	Exhibit
Floor Plan	1	A
Parking Plan	1	B
Agency Requirements	164	C
Exterior Closure – Stucco (if applicable)	6	D
Roofing	11	E
HVAC – Humidifiers	2	F
HVAC – Boiler	5	G
HVAC – Chiller	5	H
HVAC – Chilled Water Distribution	18	I
HVAC – Hot Water Distribution	1	J
Electrical System – Grounding System	6	K
Electrical System – Lightning Protection System	5	L
Electrical Power & Distribution – Primary Power	2	M
Electrical Power & Distribution – Transformer	1	N
Electrical Power & Distribution – UPS	1	O
Emergency Power & Lighting	32	P
Building Access System Requirements	17	Q
Physical Security Requirements / Specifications for FDA Facilities (dated 07/14/2009)	11	R
Large Computer Room General Specifications with Electrical Requirements	2	S
Large Server LAN Room Layout	1	T
Computer Room BTU Worksheet	1	U
Security Requirements	7	V
Security Unit Price List	2	W
MDI Requirements (dated 12/29/2016)	16	X
Agency Comments to Program of Requirements (dated 11/30/2016)	7	Y
NIH Design Requirements Manual (version 5-13 by reference only due to size).	919	Z*
GSA Form 1217, Lessor's Annual Cost Statement	1	[redacted]
GSA Form 1217, Line 26 – Other of the Lessor's Annual Cost Statement	1	[redacted]
GSA Form 3517B General Clauses	15	[redacted]
GSA Form 3518-SAM, Addendum to System for Award Management (SAM) Representations and Certifications (Acquisitions of Leasehold Interests in Real Property)	2	[redacted]
SAM Registration	4	aa
DOL Wages for Johnson County, KS	7	bb
Lessor's Project Schedule	1	cc

* HTTPS://WWW.ORF.OD.NIH.GOV/POLICIESANDGUIDELINES/BIOMEDICALANDANIMALRESEARCHFACILITIESDESIGNPOLICIESANDGUIDELINES/DOCUMENTS/DESIGN%20REQUIREMENTS%20MANUAL/NIH%20DESIGN%20REQUIREMENTS%20MANUAL%20VER%205-13.PDF

1.08 TENANT IMPROVEMENT RENTAL ADJUSTMENT (SEP 2015)

5 U.S.C. (b)(4)

A. The Tenant Improvement Allowance (TIA) for purposes of this Lease is [redacted] per ABOA SF. The TIA is the amount that the Lessor shall make available for the Government to be used for TIs. This amount is amortized in the rent over the Firm Term of this Lease at an annual interest rate of [redacted] percent. 5 U.S.C. (b)(4)

B. The Government, at its sole discretion, shall make all decisions as to the use of the TIA. The Government may use all or part of the TIA. The Government may return to the Lessor any unused portion of the TIA in exchange for a decrease in rent according to the agreed-upon amortization rate over the Firm Term.

C. The Government may elect to make lump sum payments for any or all work covered by the TIA. That part of the TIA amortized in the rent shall be reduced accordingly. At any time after occupancy and during the Firm Term of the Lease, the Government, at its sole discretion, may elect to pay lump sum for any part or all of the remaining unpaid amortized balance of the TIA. If the Government elects to make a lump sum payment for the TIA after occupancy, the payment of the TIA by the Government will result in a decrease in the rent according to the amortization rate over the Firm Term of the Lease.

D. If it is anticipated that the Government will spend more than the allowance identified above, the Government may elect to:

1. Reduce the TI requirements;
2. Pay lump sum for the overage upon substantial completion in accordance with the "Acceptance of Space and

For pricing TI costs, the following rates shall apply for the initial build-out of the Space.

	INITIAL BUILD-OUT
ARCHITECT/ENGINEER FEES ($ PER ABOA SF OR % OF TI CONSTRUCTION COSTS)	[redacted]
LESSOR'S PROJECT MANAGEMENT FEE (% OF TI CONSTRUCTION COSTS)	[redacted]

5 U.S.C. (b)(4)

1.09 BUILDING SPECIFIC AMORTIZED CAPITAL (SEP 2012) 5 U.S.C. (b)(4)

For purposes of this Lease, the Building Specific Amortized Capital (BSAC) is [redacted] per ABOA SF. The Lessor will make the total BSAC amount available to the Government, which will use the funds for security related improvements. This amount is amortized in the rent over the Firm Term of this lease at an annual interest rate of [redacted] 5 U.S.C. (b)(4)

1.10 ~~BUILDING SPECIFIC AMORTIZED CAPITAL RENTAL ADJUSTMENT (SEP 2013)~~ INTENTIONALLY DELETED

1.11 PERCENTAGE OF OCCUPANCY FOR TAX ADJUSTMENT (JUN 2012)

As of the Lease Award Date, the Government's Percentage of Occupancy, as defined in the "Real Estate Tax Adjustment" paragraph of this Lease is **100** percent. The Percentage of Occupancy is derived by dividing the total Government Space of **53,120** RSF by the total Building space of **53,120** RSF.

1.12 ~~REAL ESTATE TAX BASE (SEP 2013)~~ INTENTIONALLY DELETED

1.13 OPERATING COST BASE (SEP 2013)

The parties agree, for the purpose of applying the paragraph titled "Operating Costs Adjustment," that the Lessor's base rate for operating costs shall be [redacted] 5 U.S.C. (b)(4)

1.14 ~~RATE FOR ADJUSTMENT FOR VACANT LEASED PREMISES (SEP 2013)~~ INTENTIONALLY DELETED

1.15 ~~HOURLY OVERTIME HVAC RATES (AUG 2011)~~ SEE SECTION 7.05 - 24-HOUR HVAC REQUIREMENT

1.16 ~~24-HOUR HVAC REQUIREMENT (SEP 2014)~~ INTENTIONALLY DELETED

1.17 BUILDING IMPROVEMENTS (MAR 2016)

Before the Government accepts the Space, the Lessor shall complete the following additional Building improvements:

A. Complete the following energy efficiency and conservation improvements:
   a. Efficient mechanical systems and good design strategies.
   b. Additional insulation at the walls and ceilings in the addition(s).
   c. Thermally insulated windows in the addition(s).
   d. Use of Energy Star certified equipment where new equipment is installed.
   e. Separate zoning of Office and Laboratory spaces.
   f. Installation of low flow toilets, pint-flush urinals, and low-flow lavatories and showers.
   g. LED lighting where-ever possible.
   h. Building energy management control system.
   i. Enhanced commissioning and measurement & verification.
B. Complete the following building security items shall be protected from the public if not already protected:
   a. Water supply.
   b. Main air ventilation system.
   c. Electric service.
   d. Gas service.
   e. Telephone service
   f. Any additional heating sources.
C. Complete the following Fire Life Safety Improvements as a Lessor Shell cost:
   a. Install an emergency voice/alarm communications system.
   b. Install emergency lighting in the paths of egress travel to building exits.
   c. Install emergency lighting in restrooms (if not already installed).

1.18 ~~HUBZONE SMALL BUSINESS CONCERNS ADDITIONAL PERFORMANCE REQUIREMENTS (MAR 2012)~~ INTENTIONALLY DELETED

SECTION 2 GENERAL TERMS, CONDITIONS, AND STANDARDS

2.01 DEFINITIONS AND GENERAL TERMS (SEP 2013)

Unless otherwise specifically noted, all terms and conditions set forth in this Lease shall be interpreted by reference to the following definitions, standards, and formulas:

A. Appurtenant Areas. Appurtenant Areas are defined as those areas and facilities on the Property that are not located within the Premises, but for which rights are expressly granted under this Lease, or for which rights to use are reasonably necessary or reasonably anticipated with respect to the Government's enjoyment of the Premises and express appurtenant rights.

B. Broker. If GSA awarded this Lease using a contract real estate broker, Broker shall refer to GSA's broker.

C. Building. The building(s) situated on the Property in which the Premises are located shall be referred to as the Building(s).

D. Commission Credit. If GSA awarded this Lease using a Broker, and the Broker agreed to forego a percentage of its commission to which it is entitled in connection with the award of this Lease, the amount of this credit is referred to as the Commission Credit.

E. Common Area Factor (CAF). The Common Area Factor (CAF) is a conversion factor determined by the Building owner and applied by the owner to the ABOA SF to determine the RSF for the leased Space. The CAF is expressed as a percentage of the difference between the amount of rentable SF and ABOA SF, divided by the ABOA SF. For example 11,500 RSF and 10,000 ABOA SF will have a CAF of 15% [(11,500 RSF-10,000 ABOA SF)/10,000 ABOA SF]. For the purposes of this Lease, the CAF shall be determined in accordance with the applicable ANSI/BOMA standard for the type of space to which the CAF shall apply.

F. Contract. Contract and contractor means Lease and Lessor, respectively.

G. Days. All references to "day" or "days" in this Lease shall mean calendar days, unless specified otherwise.

H. FAR/GSAR. All references to the FAR shall be understood to mean the Federal Acquisition Regulation, codified at 48 CFR Chapter 1. All references to the GSAR shall be understood to mean the GSA supplement to the FAR, codified at 48 CFR Chapter 5.

I. Firm Term/Non-Firm Term. The Firm Term is that part of the Lease term that is not subject to termination rights. The Non-Firm Term is that part of the Lease term following the end of the Firm Term.

J. Lease Term Commencement Date. The Lease Term Commencement Date means the date on which the lease term commences.

K. Lease Award Date. The Lease Award Date means the date of execution of the Lease by the LCO and the mailing or otherwise furnishing written notification of the executed Lease to the successful Offeror (and on which the parties' obligations under the Lease begin).

L. Premises. The Premises are defined as the total Office Area or other type of Space, together with all associated common areas, described in Section 1 of this Lease, and delineated by plan in the attached exhibit. Parking and other areas to which the Government has rights under this Lease are not included in the Premises.

M. Property. The Property is defined as the land and Buildings in which the Premises are located, including all Appurtenant Areas (e.g., parking areas) to which the Government is granted rights.

N. Rentable Space or Rentable Square Feet (RSF). Rentable Space is the area for which a tenant is charged rent. It is determined by the Building owner and may vary by city or by building within the same city. The Rentable Space may include a share of Building support/common areas such as elevator lobbies, Building corridors, and floor service areas. Floor service areas typically include restrooms, janitor rooms, telephone closets, electrical closets, and mechanical rooms. The Rentable Space does not include vertical building penetrations and their enclosing walls, such as stairs, elevator shafts, and vertical ducts. Rentable Square Feet is calculated using the following formula for each type of Space (e.g., office, warehouse, etc.) included in the Premises: ABOA SF of Space x (1 + CAF) = RSF.

O. Space. The Space shall refer to that part of the Premises to which the Government has exclusive use, such as Office Area, or other type of Space. Parking areas to which the Government has rights under this Lease are not included in the Space.

P. Office Area. For the purposes of this Lease, Space shall be measured in accordance with the standard (Z65.1-1996) provided by American National Standards Institute/Building Owners and Managers Association (ANSI/BOMA) for Office Area, which means "the area where a tenant normally houses personnel and/or furniture, for which a measurement is to be computed." References to ABOA mean ANSI/BOMA Office Area.

Q. Working Days. Working Days shall mean weekdays, excluding Saturdays and Sundays and Federal holidays.

2.02 AUTHORIZED REPRESENTATIVES (JUN 2012)

The signatories to this Lease shall have full authority to bind their respective principals with regard to all matters relating to this Lease. No other persons shall be understood to have any authority to bind their respective principals, except to the extent that such authority may be explicitly

delegated by notice to the other party, or to the extent that such authority is transferred by succession of interest. The Government shall have the right to substitute its Lease Contracting Officer (LCO) by notice, without an express delegation by the prior LCO.

2.03 ALTERATIONS REQUESTED BY THE GOVERNMENT (SEP 2013)

A. The Government may request the Lessor to provide alterations during the term of the Lease. Alterations will be ordered by issuance of a Lease Amendment, GSA Form 300, Order for Supplies or Services, or, when specifically authorized to do so by the LCO, a tenant agency-approved form. The GSAM clause, 552.270-31, Prompt Payment, including its invoice requirements, shall apply to orders for alterations. All orders are subject to the terms and conditions of this Lease and may be placed by the LCO or a warranted contracting officer's representative (COR) in GSA or the tenant agency when specifically authorized to do so by the Lease Contracting Officer, subject to the threshold limitation below.

B. Orders for alterations issued by an authorized COR are limited to no more than $150,000 (LCOs are not subject to this threshold). This threshold will change according to future adjustments of the simplified acquisition threshold (see FAR 2.101). The LCO will provide the Lessor with a list of tenant agency officials authorized to place orders and will specify any limitations on the authority delegated to tenant agency officials. The tenant agency officials are not authorized to deal with the Lessor on any other matters.

C. Payments for alterations ordered by the tenant agency under the authorization described in sub-paragraph B will be made directly by the tenant agency placing the order.

2.04 WAIVER OF RESTORATION (APR 2011)

The Lessor shall have no right to require the Government to restore the Premises upon termination of the Lease, and waives all claims against the Government for waste, damages, or restoration arising from or related to (a) the Government's normal and customary use of the Premises during the term of the Lease (including any extensions thereof), as well as (b) any initial or subsequent alteration to the Premises regardless of whether such alterations are performed by the Lessor or by the Government. At its sole option, the Government may abandon property in the Space following expiration of the Lease, in which case the property will become the property of the Lessor and the Government will be relieved of any liability in connection therewith.

2.05 PAYMENT OF BROKER (JUL 2011)

If GSA awarded the Lease through its Broker, the Lessor shall pay GSA's Broker its portion of the commission one half upon Lease award and the remaining half upon acceptance of the Space. "Its portion of the commission" means the agreed-upon commission to GSA's Broker minus the Commission Credit specified in the Lease or Lease Amendment.

2.06 CHANGE OF OWNERSHIP (APR 2015)

A. If during the term of the Lease, title to the Property is transferred, the Lease is assigned, or the Lessor changes its legal name, the Lessor and its successor shall comply with the requirements of FAR Subpart 42.12. If title is transferred, the Lessor shall notify the Government within five days of the transfer of title.

B. The Government and the Lessor may execute a Change of Name Agreement if the Lessor is changing only its legal name, and the Government's and the Lessor's respective rights and obligations remain unaffected. A sample form is found at FAR 42.1205.

C. If title to the Property is transferred, or the Lease is assigned, the Government, the original Lessor (Transferor), and the new owner or assignee (Transferee) shall execute a Novation Agreement providing for the transfer of Transferor's rights and obligations under the Lease to the Transferee. When executed on behalf of the Government, a Novation Agreement will be made part of the Lease via Lease Amendment.

D. In addition to all documents required by FAR 42.1204, the LCO may request additional information (e.g., copy of the deed, bill of sale, certificate of merger, contract, court decree, articles of incorporation, operation agreement, partnership certificate of good standing, etc.) from the Transferor or Transferee to verify the parties' representations regarding the transfer, and to determine whether the transfer of the Lease is in the Government's interest.

E. If the LCO determines that recognizing the Transferee as the Lessor will not be in the Government's interest, the Transferor shall remain fully liable to the Government for the Transferee's performance of obligations under the Lease, notwithstanding the transfer. Under no condition shall the Government be obligated to release the Transferor of obligations prior to (a) the rent commencement date; and (b) any amounts due and owing to the Government under the Lease have been paid in full or completely set off against the rental payments due under the Lease.

F. As a condition for being recognized as the Lessor and entitlement to receiving rent, the Transferee must register in the System for Award Management (SAM) (See FAR 52.232-33), and complete and sign GSA Form 3518-SAM, Addendum to System for Award Management (SAM) Representations and Certifications (Acquisition of Leasehold Interests in Real Property).

G. If title to the Property is transferred, or the Lease is assigned, rent shall continue to accrue, subject to the Government's rights as provided for in this Lease. However, the Government's obligation to pay rent to the Transferee shall be suspended until the Government has received all information reasonably required by the LCO under sub-paragraph D, the Government has determined that recognizing the Transferee as the Lessor is in the Government's interest (which determination will be prompt and not unreasonably withheld), and the Transferee has met all conditions specified in sub-paragraph F. So long as any delays in effecting the recognition of Transferee as Lessor are not the responsibility of the Government, no interest shall accrue on suspended rent.

2.07 REAL ESTATE TAX ADJUSTMENT (JUN 2012)

A. Purpose: This paragraph provides for adjustment in the rent (tax adjustment) to account for increases or decreases in Real Estate Taxes for the Property after the establishment of the Real Estate Tax Base, as those terms are defined herein. Tax adjustments shall be calculated in accordance with this paragraph.

B. Definitions: The following definitions apply to the use of the terms within this paragraph:

Property is defined as the land and Buildings in which the Premises are located, including all Appurtenant Areas (e.g., parking areas to which the Government is granted rights).

Real Estate Taxes are those taxes that are levied upon the owners of real property by a Taxing Authority (as hereinafter defined) of a state or local Government on an ad valorem basis to raise general revenue for funding the provision of government services. The term excludes, without limitation, special assessments for specific purposes, assessments for business improvement districts, and/or community development assessments.

Taxing Authority is a state, commonwealth, territory, county, city, parish, or political subdivision thereof, authorized by law to levy, assess, and collect Real Estate Taxes.

Tax Year refers to the 12-month period adopted by a Taxing Authority as its fiscal year for assessing Real Estate Taxes on an annual basis.

Tax Abatement is an authorized reduction in the Lessor's liability for Real Estate Taxes below that determined by applying the generally applicable real estate tax rate to the Fully Assessed (as hereinafter defined) valuation of the Property.

Unadjusted Real Estate Taxes are the full amount of Real Estate Taxes that would be assessed for the Property for one full Tax Year without regard to the Lessor's entitlement to any Tax Abatements (except if such Tax Abatement came into effect after the date of award of the Lease), and not including any late charges, interest or penalties. If a Tax Abatement comes into effect after the date of award of the Lease, "unadjusted Real Estate Taxes" are the full amount of Real Estate Taxes assessed for the Property for one full Tax Year, less the amount of such Tax Abatement, and not including any late charges, interest, or penalties.

Real Estate Tax Base is the unadjusted Real Estate Taxes for the first full Tax Year following the commencement of the Lease term. If the Real Estate Taxes for that Tax Year are not based upon a Full Assessment of the Property, then the Real Estate Tax Base shall be the Unadjusted Real Estate Taxes for the Property for the first full Tax Year for which the Real Estate Taxes are based upon a Full Assessment. Such first full Tax Year may be hereinafter referred to as the Tax Base Year. Alternatively, the Real Estate Tax Base may be an amount negotiated by the parties that reflects an agreed upon base for a Fully Assessed value of the Property.

The Property is deemed to be Fully Assessed (and Real Estate Taxes are deemed to be based on a Full Assessment) only when a Taxing Authority has, for the purpose of determining the Lessor's liability for Real Estate Taxes, determined a value for the Property taking into account the value of all improvements contemplated for the Property pursuant to the Lease, and issued to the Lessor a tax bill or other notice of levy wherein the Real Estate Taxes for the full Tax Year are based upon such Full Assessment. At no time prior to the issuance of such a bill or notice shall the Property be deemed Fully Assessed.

Percentage of Occupancy refers to that portion of the Property exclusively occupied or used by the Government pursuant to the Lease. For Buildings, the Percentage of Occupancy is determined by calculating the ratio of the RSF occupied by the Government pursuant to the Lease to the total RSF in the Building or Buildings so occupied, and shall not take into account the Government's ancillary rights including, but not limited to, parking or roof space for antennas (unless facilities for such ancillary rights are separately assessed). This percentage shall be subject to adjustment to take into account increases or decreases for Space leased by the Government or for rentable space on the Property.

C. Adjustment for changes in Real Estate Taxes. After the Property is Fully Assessed, the Government shall pay its share of any increases and shall receive its share of any decreases in the Real Estate Taxes for the Property, such share of increases or decreases to be referred to herein as "tax adjustment." The amount of the tax adjustment shall be determined by multiplying the Government's Percentage of Occupancy by the difference between the current year Unadjusted Real Estate Taxes and the Real Estate Tax Base, less the portion of such difference not paid due to a Tax Abatement (except if a Tax Abatement comes into effect after the date of award of the Lease). If a Tax Abatement comes into effect after the date of award of the Lease, the amount of the tax adjustment shall be determined by multiplying the Government's Percentage of Occupancy by the difference between the current year Unadjusted Real Estate Taxes and the Real Estate Tax Base. The Government shall pay the tax adjustment in a single annual lump sum payment to the Lessor. In the event that this tax adjustment results in a credit owed to the Government, the Government may elect to receive payment in the form of a rental credit or lump sum payment.

If the Property contains more than one separately assessed parcel, then more than one tax adjustment shall be determined based upon the Percentage of Occupancy, Real Estate Tax Base, and Real Estate Taxes for each respective parcel.

After commencement of the Lease term, the Lessor shall provide to the LCO copies of all real estate tax bills for the Property, all documentation of Tax Abatements, credits, or refunds, if any, and all notices which may affect the assessed valuation of the Property, for the Tax Year prior to the commencement of the Lease Term, and all such documentation for every year following. Lessor acknowledges that the LCO shall rely on the completeness and accuracy of these submissions in order to establish the Real Estate Tax Base and to determine tax adjustments. The LCO may memorialize the establishment of the Real Estate Tax Base by issuing a unilateral administrative lease amendment indicating the base year, the amount of the Real Estate Tax Base, and the Government's Percentage of Occupancy.

The Real Estate Tax Base is subject to adjustment when increases or decreases to Real Estate Taxes in any Tax Year are attributable to (a) improvements or renovations to the Property not required by this Lease, or (b) changes in net operating income for the Property not derived from this Lease. If either condition results in a change to the Real Estate Taxes, the LCO may re-establish the Real Estate Tax Base as the Unadjusted Real

Estate Taxes for the Tax Year the Property is reassessed under such condition, less the amount by which the Unadjusted Real Estate Taxes for the Tax Year prior to reassessment exceeds the prior Real Estate Tax Base.

If this Lease includes any options to renew the term of the Lease, or be otherwise extended, the Real Estate Tax Base for determining tax adjustments during the renewal term or extension shall be the last Real Estate Tax Base established during the base term of the Lease.

If any Real Estate Taxes for the Property are retroactively reduced by a Taxing Authority during the term of the Lease, the Government shall be entitled to a proportional share of any tax refunds to which the Lessor is entitled, calculated in accordance with this Paragraph. Lessor acknowledges that it has an affirmative duty to disclose to the Government any decreases in the Real Estate Taxes paid for the Property during the term of the Lease. Lessor shall annually provide to the LCO all relevant tax records for determining whether a tax adjustment is due, irrespective of whether it seeks an adjustment in any Tax Year.

If the Lease terminates before the end of a Tax Year, or if rent has been suspended, payment for the real estate tax increase due because of this section for the Tax Year will be prorated based on the number of days that the Lease and the rent were in effect. Any credit due the Government after the expiration or earlier termination of the Lease shall be made by a lump sum payment to the Government or as a rental credit to any succeeding Lease, as determined in the LCO's sole discretion. Lessor shall remit any lump sum payment to the Government within 15 calendar days of payment or credit by the Taxing Authority to Lessor or Lessor's designee. If the credit due to the Government is not paid by the due date, interest shall accrue on the late payment at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978, as amended (41 USC § 611), that is in effect on the day after the due date. The interest penalty shall accrue daily on the amount of the credit and shall be compounded in 30-day increments inclusive from the first day after the due date through the payment date. The Government shall have the right to pursue the outstanding balance of any tax credit using all such collection methods as are available to the United States to collect debts. Such collection rights shall survive the expiration of this Lease.

In order to obtain a tax adjustment, the Lessor shall furnish the LCO with copies of all paid tax receipts, or other similar evidence of payment acceptable to the LCO, and a proper invoice (as described in GSA Form 3517, General Clauses, 552.270-31, Prompt Payment) for the requested tax adjustment, including the calculation thereof. All such documents must be received by the LCO within 60 calendar days after the last date the real estate tax payment is due from the Lessor to the Taxing Authority without payment of penalty or interest. FAILURE TO SUBMIT THE PROPER INVOICE AND EVIDENCE OF PAYMENT WITHIN SUCH TIME FRAME SHALL CONSTITUTE A WAIVER OF THE LESSOR'S RIGHT TO RECEIVE A TAX ADJUSTMENT PURSUANT TO THIS PARAGRAPH FOR THE TAX YEAR AFFECTED.

Tax Appeals. If the Government occupies more than 50 percent of the Building by virtue of this and any other Government Lease(s), the Government may, upon reasonable notice, direct the Lessor to initiate a tax appeal, or the Government may elect to contest the assessed valuation on its own behalf or jointly on behalf of Government and the Lessor. If the Government elects to contest the assessed valuation on its own behalf or on behalf of the Government and the Lessor, the Lessor shall cooperate fully with this effort, including, without limitation, furnishing to the Government information necessary to contest the assessed valuation in accordance with the filing requirements of the Taxing Authority, executing documents, providing documentary and testimonial evidence, and verifying the accuracy and completeness of records. If the Lessor initiates an appeal at the direction of the Government, the Government shall have the right to approve the selection of counsel who shall represent the Lessor with regard to such appeal, which approval shall not be unreasonably withheld, conditioned or delayed, and the Lessor shall be entitled to a credit in the amount of its reasonable expenses in pursuing the appeal.

2.08 ADJUSTMENT FOR VACANT PREMISES (SEP 2013)

A. If the Government fails to occupy any portion of the leased Premises or vacates the Premises in whole or in part prior to expiration of the term of the Lease, the rental rate and the base for operating cost adjustments will be reduced.

B. If no rate reduction has been established in this Lease, the rate will be reduced by that portion of the costs per ABOA SF of operating expenses not required to maintain the Space. Said reduction shall occur after the Government gives 30 calendar days' prior notice to the Lessor and shall continue in effect until the Government occupies the vacant Premises or the Lease expires or is terminated.

2.09 OPERATING COSTS ADJUSTMENT (JUN 2012)

A. Beginning with the second year of the Lease and each year thereafter, the Government shall pay annual incremental adjusted rent for changes in costs for cleaning services, supplies, materials, maintenance, trash removal, landscaping, water, sewer charges, heating, electricity, and certain administrative expenses attributable to occupancy.

B. The amount of adjustment will be determined by multiplying the base rate by the annual percent of change in the Cost of Living Index. The percent change will be computed by comparing the index figure published for the month prior to the Lease Term Commencement Date with the index figure published for the month prior which begins each successive 12-month period. For example, a Lease which commences in June of 2005 would use the index published for May of 2005, and that figure would be compared with the index published for May of 2006, May of 2007, and so on, to determine the percent change. The Cost of Living Index will be measured by the Department of Labor revised Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), U.S. city average, all items, (1982 to 1984 = 100) published by the Bureau of Labor Statistics. Payment will be made with the monthly installment of fixed rent. Rental adjustments will be effective on the anniversary date of the Lease; however, payment of the adjusted rental rate will become due on the first workday of the second month following the publication of the Cost of Living Index for the month prior to the commencement of each 12-month period.

C. In the event of any decreases in the Cost of Living Index occurring during the term of the occupancy under the Lease, the rental amount will be reduced accordingly. The amount of such reductions will be determined in the same manner as increases in rent provided under this paragraph.

D. If the Government exercises an option to extend the Lease term at the same rate as that of the original term, the option price will be based on the adjustment during the original term. Annual adjustments will continue.

2.10 ADDITIONAL POST-AWARD FINANCIAL AND TECHNICAL DELIVERABLES (JUN 2012)

A. If the Lessor is a HUBZone small business concern (SBC) that did not waive the price evaluation preference, the Lessor shall provide a certification within 10 days after Lease award to the LCO (or representative designated by the LCO) that the Lessor was an eligible HUBZone SBC on the date of award. If it is determined within 20 days after award that a HUBZone SBC Offeror that has been awarded the Lease was not an eligible HUBZone SBC at the time of award, and the HUBZone SBC Lessor failed to provide the LCO with information regarding a change to its HUBZone eligibility prior to award, then the Lease shall be subject, at the LCO's discretion, to termination, and the Government will be relieved of all obligations to the Lessor in such an event and not be liable to the Lessor for any costs, claims or damages of any nature whatsoever.

B. Within **15** days after Lease award, the Lessor shall provide to the LCO (or representative designated by the LCO) evidence of:

1. A firm commitment of funds in an amount sufficient to perform the work.

2. The names of at least two proposed construction contractors, as well as evidence of the contractors' experience, competency, and performance capabilities with construction similar in scope to that which is required herein.

3. The license or certification to practice in the state where the Building is located from the individual(s) and/or firm(s) providing architectural and engineering design services.

C. The Government shall have the right to withhold approval of design intent drawings (DIDs) until the conditions specified in sub-paragraphs A and B have been satisfied.

D. Within ten (10) calendar days after the LCO issues the Notice To Proceed (NTP) for TI construction, the Lessor shall provide to the LCO evidence of:

1. Award of a construction contract for TIs with a firm completion date. This date must be in accordance with the construction schedule for TIs as described in the "Schedule for Completion of Space" paragraph of this Lease.

2. Issuance of required permits for construction of the TIs.

2.11 ~~RELOCATION ASSISTANCE ACT (APR 2011)~~ INTENTIONALLY DELETED

SECTION 3 CONSTRUCTION STANDARDS AND SHELL COMPONENTS

3.01 LABOR STANDARDS (SEP 2013)

If the Lessor proposes to satisfy the requirements of this Lease through the construction of a new Building or the complete rehabilitation or reconstruction of an existing Building, and the Government will be the sole or predominant tenant such that any other use of the Building will be functionally or quantitatively incidental to the Government's use and occupancy, the following FAR clauses shall apply to all work (including shell and TIs) performed prior to the Government's acceptance of space as substantially complete. Full text versions of these clauses are available upon request from the LCO. Full text versions are also available at https://www.acquisition.gov/far/.

52.222-4 Contract Work Hours and Safety Standards Act—Overtime Compensation
52.222-6 Davis–Bacon Act
52.222-7 Withholding of Funds
52.222-8 Payrolls and Basic Records
52.222-9 Apprentices and Trainees
52.222-10 Compliance with Copeland Act Requirements
52.222-11 Subcontracts (Labor Standards)
52.222-12 Contract Termination–Debarment
52.222-13 Compliance with Davis–Bacon and Related Act Regulations
52.222-14 Disputes Concerning Labor Standards
52.222-15 Certification of Eligibility

3.02 WORK PERFORMANCE (JUN 2012)

All work in performance of this Lease shall be done by skilled workers or mechanics and shall be acceptable to the LCO. The LCO may reject the Lessor's workers 1) if such are unlicensed, unskilled, or otherwise incompetent, or 2) if such have demonstrated a history of either untimely or otherwise unacceptable performance in connection with work carried out in conjunction with either this contract or other government or private contracts.

3.03 RECYCLED CONTENT PRODUCTS (COMPREHENSIVE PROCUREMENT GUIDELINES) (SEP 2013)

A. The Lessor shall comply to the extent feasible with the Resource Conservation and Recovery Act (RCRA), Section 6002, 1976. The Lessor shall use recycled content products as indicated in this Lease and as designated by the U.S. Environmental Protection Agency (EPA) in the Comprehensive Procurement Guidelines (CPG), 40 CFR Part 247, and its accompanying Recovered Materials Advisory Notice (RMAN). The CPG lists the designated recycled content products. EPA also provides recommended levels of recycled content for these products. The list of designated products, EPA's recommendations, and lists of manufacturers and suppliers of the products can be found at http://www.epa.gov/cpg.

B. The Lessor, if unable to comply with both the CPG and RMAN lists, shall submit a Request for Waiver for each material to the LCO with the TI pricing submittal. The request for waiver shall be based on the following criteria:

1. The cost of the recommended product is unreasonable.
2. Inadequate competition exists.
3. Items are not available within a reasonable period.
4. Items do not meet Lease performance standards.

3.04 ENVIRONMENTALLY PREFERABLE BUILDING PRODUCTS AND MATERIALS (SEP 2013)

A. The Lessor shall use environmentally preferable products and materials. The Lessor is encouraged to consider the lifecycle analysis of the product in addition to the initial cost.

B. Refer to EPA's environmentally preferable purchasing Web site, www.epa.gov/epp and USDA Bio-Preferred products Web site www.biopreferred.gov. In general, environmentally preferable products and materials do one or more of the following:

1. Contain recycled material, are bio-based, are rapidly renewable (10-year or shorter growth cycle), or have other positive environmental attributes.
2. Minimize the consumption of resources, energy, and water.
3. Prevent the creation of solid waste, air pollution, or water pollution.
4. Promote the use of nontoxic substances and avoid toxic materials or processes.

C. The Lessor is encouraged to use products that are extracted and manufactured regionally.

3.05 EXISTING FIT-OUT, SALVAGED, OR REUSED BUILDING MATERIAL (JUN 2012)

A. Items and materials existing in the Premises, or to be removed from the Premises during the demolition phase, are eligible for reuse in the construction phase of the project. The reuse of items and materials is preferable to recycling them; however, items considered for reuse shall be in re-furbished condition and shall meet the quality standards set forth by the Government in this Lease. In the absence of definitive quality standards, the

Lessor is responsible to confirm that the quality of the item(s) in question shall meet or exceed accepted industry or trade standards for first quality commercial grade applications.

B. The Lessor shall submit a reuse plan to the LCO. The Government will not pay for existing fixtures and other TIs accepted in place. However, the Government will reimburse the Lessor, as part of the TIA, the costs to repair or improve such fixtures or improvements identified on the reuse plan and approved by the LCO.

3.06 CONSTRUCTION WASTE MANAGEMENT (SEP 2015)

A. Recycling construction waste is mandatory for initial space alterations for TIs and subsequent alterations under the Lease.

B. Recycling construction waste means providing all services necessary to furnish construction materials or wastes to organizations which will employ these materials or wastes in the production of new materials. Recycling includes required labor and equipment necessary to separate individual materials from the assemblies of which they form a part.

C. SUBMITTAL REQUIREMENT: Prior to construction commencement, a proposed plan following industry standards to recycle construction waste. The construction waste management plan shall quantify material diversion goals and maximize the materials to be recycled and/or salvaged (at least 50 percent) from construction, demolition, and packaging debris. Where the small quantity of material, the extraordinarily complex nature of the waste disposal method, or prohibitive expense for recycling would represent a genuine hardship, the Government, upon written request of the Lessor and approval of the LCO, may permit alternative means of disposal.

D. The Lessor shall recycle the following items during both the demolition and construction phases of the project, subject to economic evaluation and feasibility:

1. Ceiling grid and tile
2. Light fixtures, including proper disposal of any transformers, ballasts, and fluorescent light bulbs
3. Duct work and HVAC equipment
4. Wiring and electrical equipment
5. Aluminum and/or steel doors and frames
6. Hardware
7. Drywall
8. Steel studs
9. Carpet, carpet backing, and carpet padding
10. Wood
11. Insulation
12. Cardboard packaging
13. Pallets
14. Windows and glazing materials
15. All miscellaneous metals (as in steel support frames for filing equipment)
16. All other finish and construction materials.

E. If any waste materials encountered during the demolition or construction phase are found to contain lead, asbestos, polychlorinated biphenyls (PCBs) (such as fluorescent lamp ballasts), or other harmful substances, they shall be handled and removed in accordance with Federal and state laws and requirements concerning hazardous waste.

F. In addition to providing "one time" removal and recycling of large scale demolition items such as carpeting or drywall, the Lessor shall provide continuous facilities for the recycling of incidental construction waste during the initial construction.

G. Construction materials recycling records shall be maintained by the Lessor and shall be accessible to the LCO. Records shall include materials recycled or land-filled, quantity, date, and identification of hazardous wastes.

3.07 WOOD PRODUCTS (SEP 2013)

A. For all new installations of wood products, the Lessor is encouraged to use independently certified forest products. For information on certification and certified wood products, refer to the Forest Certification Resource Center (www.certifiedwood.org), the Forest Stewardship Council United States (www.fscus.org), or the Sustainable Forestry Initiative (www.sfiprograms.org).

B. New installations of wood products used under this contract shall not contain wood from endangered wood species, as listed by the Convention on International Trade in Endangered Species. The list of species can be found at WWW.CITES.ORG/ENG/RESOURCES/SPECIES.HTML.

C. Particle board, strawboard, and plywood materials shall comply with Department of Housing and Urban Development (HUD) standards for formaldehyde emission controls. Plywood materials shall not emit formaldehyde in excess of 0.2 parts per million (ppm), and particleboard materials shall not emit formaldehyde in excess of 0.3 ppm.

D. All materials comprised of combustible substances, such as wood plywood and wood boards, shall be treated with fire retardant chemicals by a pressure impregnation process or other methods that treats the materials throughout as opposed to surface treatment.

3.08 ADHESIVES AND SEALANTS (AUG 2008)

All adhesives employed on this project (including, but not limited to, adhesives for carpet, carpet tile, plastic laminate, wall coverings, adhesives for wood, or sealants) shall be those with the lowest possible volatile organic compounds (VOC) content below 20 grams per liter and which meet the requirements of the manufacturer of the products adhered or involved. The Lessor shall use adhesives and sealants with no formaldehyde or heavy metals. Adhesives and other materials used for the installation of carpets shall be limited to those having a flash point of 140 degrees F or higher.

3.09 BUILDING SHELL REQUIREMENTS (SEP 2013)

A. The Building Shell shall be designed, constructed, and maintained in accordance with the standards set forth herein and completed prior to acceptance of Space. For pricing, fulfillment of all requirements not specifically designated as TIs, Building Specific Amortized Capital, Operating Costs, or other rent components as indicated shall be deemed included in the Shell Rent.

B. Base structure and Building enclosure components shall be complete. All common areas accessible by the Government, such as lobbies, fire egress corridors and stairwells, elevators, garages, and service areas, shall be complete. Restrooms shall be complete and operational. All newly installed Building shell components, including but not limited to, heating, ventilation, and air conditioning (HVAC), electrical, ceilings, sprinklers, etc., shall be furnished, installed, and coordinated with TIs. Circulation corridors are provided as part of the base Building only on multi-tenanted floors where the corridor is common to more than one tenant. On single tenant floors, only the fire egress corridor(s) necessary to meet code is provided as part of the shell.

3.10 RESPONSIBILITY OF THE LESSOR AND LESSOR'S ARCHITECT/ENGINEER (JUN 2012)

A. The Lessor shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by the Lessor under this contract. The Lessor shall, without additional compensation, correct or revise any errors or deficiencies in its designs, drawings, specifications, or other services.

B. THE LESSOR REMAINS SOLELY RESPONSIBLE FOR DESIGNING, CONSTRUCTING, OPERATING, AND MAINTAINING THE LEASED PREMISES IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THE LEASE. The Government retains the right to review and approve many aspects of the Lessor's design, including without limitation, review of the Lessor's design and construction drawings, shop drawings, product data, finish samples, and completed base building and TI construction. Such review and approval is intended to identify potential design flaws, to minimize costly misdirection of effort, and to assist the Lessor in its effort to monitor whether such design and construction comply with applicable laws and satisfy all Lease requirements.

C. Neither the Government's review, approval or acceptance of, nor payment through rent of the services required under this contract, shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the Lessor shall be and remain liable to the Government in accordance with applicable law for all damages to the Government caused by the Lessor's negligent performance of any of the services required under this Lease.

D. Design and construction and performance information is contained throughout several of the documents which comprise this Lease. The Lessor shall provide to space planners, architects, engineers, construction contractors, etc., all information required whether it is found in this Lease, special requirements and attachments, price lists, or design intent drawings. Reliance upon one of these documents to the exclusion of any other may result in an incomplete understanding of the scope of the work to be performed and/or services to be provided.

3.11 QUALITY AND APPEARANCE OF BUILDING (JUN 2012)

The Building in which the Premises are located shall be designed, built and maintained in good condition and in accordance with the Lease requirements. If not new or recent construction, the Building shall have undergone by occupancy, modernization, or adaptive reuse for office space with modern conveniences. The Building shall be compatible with its surroundings. Overall, the Building shall project a professional and aesthetically pleasing appearance including an attractive front and entrance way.

3.12 VESTIBULES (APR 2011)

A. Vestibules shall be provided at public entrances and exits wherever weather conditions and heat loss are important factors for consideration. In the event of negative air pressure conditions, provisions shall be made for equalizing air pressure.

B. The Lessor shall provide permanent entryway systems (such as grilles or grates) to control dirt and particulates from entering the Building at all primary exterior entryways.

3.13 MEANS OF EGRESS (MAY 2015)

A. Prior to occupancy, the Premises and any parking garage areas shall meet or will be upgraded to meet, either the applicable egress requirements in the National Fire Protection Association, Life Safety Code (NFPA 101), or the International Code Council, International Building Code (IBC), each current as of the Lease Award Date, or use an alternative approach or method that achieves an equivalent level of safety deemed acceptable by the Government.

B. The Space shall have unrestricted access to a minimum of two remote exits on each floor of Government occupancy.

C. Interlocking or scissor stairs located on the floor(s) where Space is located shall only count as one exit stair.

D. A fire escape located on the floor(s) where Space is located shall not be counted as an approved exit stair.

E. Doors shall not be locked in the direction of egress unless equipped with special locking hardware in accordance with requirements of NFPA 101 or the IBC.

3.14 AUTOMATIC FIRE SPRINKLER SYSTEM (SEP 2013)

A. Any portion of the Space located below-grade, including parking garage areas, and all areas in a Building referred to as "hazardous areas" (defined in National Fire Protection Association (NFPA) 101) that are located within the entire Building (including non-Government areas) shall be protected by an automatic fire sprinkler system or an equivalent level of safety.

B. For Buildings in which any portion of the Space is on or above the sixth floor, then, at a minimum, the Building up to and including the highest floor of Government occupancy shall be protected by an automatic fire sprinkler system or an equivalent level of safety.

C. For Buildings in which any portion of the Space is on or above the sixth floor, and lease of the Space will result, either individually or in combination with other Government Leases in the Building, in the Government leasing 35,000 or more ANSI/BOMA Office Area SF of Space in the Building, then the entire Building shall be protected throughout by an automatic fire sprinkler system or an equivalent level of safety.

D. Automatic fire sprinkler system(s) shall be installed in accordance with the requirements of NFPA 13, Standard for the Installation of Sprinkler Systems that was in effect on the actual date of installation.

E. Automatic fire sprinkler system(s) shall be maintained in accordance with the requirements of NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-based Fire Protection Systems (current as of the Lease Award Date).

F. "Equivalent level of safety" means an alternative design or system (which may include automatic fire sprinkler systems), based upon fire protection engineering analysis, which achieves a level of safety equal to or greater than that provided by automatic fire sprinkler systems.

3.15 FIRE ALARM SYSTEM (SEP 2013)

A. A Building-wide fire alarm system shall be installed in the entire Building in which any portion of the Space is located on the 3rd floor or higher.

B. The fire alarm system shall be installed in accordance with the requirements of NFPA 72, National Fire Alarm and Signaling Code, that was in effect on the actual date of installation.

C. The fire alarm system shall be maintained in accordance with the requirements of NFPA 72, National Fire Alarm and Signaling Code (current as of the Lease Award Date).

D. The fire alarm system shall transmit all fire alarm signals to the local fire department via any of the following means: directly to the local fire department, to the (911) public communications center, to a central station, to a remote supervising station, or to a proprietary supervising station.

E. If the Building's fire alarm control unit is over 25 years old as of the date of award of this Lease, Lessor shall install a new fire alarm system in accordance with the requirements of NFPA 72, National Fire Alarm and Signaling Code (current as of the Lease Award Date), prior to Government acceptance and occupancy of the Space.

3.16 ENERGY INDEPENDENCE AND SECURITY ACT (MAR 2016)

A. Energy-related Requirements:

1. The Energy Independence and Security Act (EISA) establishes the following requirements for Government Leases in Buildings that have not earned the ENERGY STAR® Label conferred by the Environmental Protection Agency (EPA) within one year prior to the due date for final proposal revisions ("most recent year").

2. If this Lease was awarded under any of EISA's Section 435 statutory exceptions, the Lessor shall either:

a. Earn the ENERGY STAR® Label prior to acceptance of the Space (or not later than one year after the Lease Award Date of a succeeding or superseding Lease); or

b. (i) Complete energy efficiency and conservation improvements if any, agreed to by Lessor in lieu of earning the ENERGY STAR® Label prior to acceptance of the Space (or not later than one year after the Lease Award Date of a succeeding or superseding Lease); and

(ii) Obtain and publicly disclose the Building's current ENERGY STAR® score (using EPA's Portfolio Manager tool), unless the Lessor cannot access whole building utility consumption data, or there is no building category within Portfolio Manager to benchmark against, including spaces—

I. That are located in States with privacy laws that provide that utilities shall not provide such aggregated information to multitenant building owners; and

II. For which tenants do not provide energy consumption information to the commercial building owner in response to a request from the building owner. (A Federal agency that is a tenant of the space shall provide to the building owner, or authorize the owner to obtain from the utility, the energy consumption information of the space for the benchmarking and disclosure required by this subparagraph D).

III. That cannot be benchmarked (scored) using EPA's Portfolio Manager tool because of excessive vacancy; in which case Lessor agrees to obtain the score and publicly disclose it within 120 days of the eligibility to obtain a score using the EPA Portfolio Manager tool.

Note: "public disclosure" means posting the Energy Star® score on state or local websites in those areas that have applicable disclosure mandates, and reporting the score to the Government via Portfolio Manager. In the absence of an applicable state or local disclosure mandate, Lessor shall either generate and display the Energy Star® score in a public space at the building location or post the score on Lessor's or Lessor's Parent/Affiliate website.

3. If this Lease was awarded to a Building to be built or to a Building predominantly vacant as of the due date for final proposal revisions and was unable to earn the ENERGY STAR® label for the most recent year (as defined above) due to insufficient occupancy, but was able to demonstrate sufficient evidence of capability to earn the ENERGY STAR® label, then Lessor must earn the ENERGY STAR® label within 18 months after occupancy by the Government.

4. The Lessor is encouraged to purchase at least 50 percent of the Government tenant's electricity from renewable sources.

B. Hydrology-related Requirements:

1. Per EISA Section 438, the sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the Property with regard to the temperature, rate, volume, and duration of flow. If the Lessor proposes to satisfy the Government's space requirements through a development or redevelopment project, and the Government will be the sole or predominant tenant such that any other use of the Property will be functionally or quantitatively incidental to the Government's use, the Lessor is required to implement hydrology maintenance and restoration requirements as required by EISA Section 438.

a. For the purposes of applying EISA Section 438 in this lease, "sponsor" shall mean "Lessor", and "exceeds 5,000 square feet" shall mean construction that disturbs 5,000 square feet or more of land area at the Property or on adjoining property to accommodate the Government's requirements, or at the Property for whatever reason. Information regarding implementation of the hydrology maintenance and restoration requirements can be found at: http://www.epa.gov/greeningepa/technical-guidance-implementing-stormwater-runoff-requirements-federal-projects

b. Lessor is required to implement these hydrology maintenance and restoration requirements to the maximum extent technically feasible, prior to acceptance of the Space, (or not later than one year after the Lease Award Date or Lease Term Commencement Date, whichever is later, of a succeeding or superseding Lease). Additionally, this Lease requires EISA Section 438 storm water compliance not later than one year from the date of any applicable disturbance (as defined in EISA Section 438) of more than 5,000 square feet of ground area if such disturbance occurs during the term of the Lease if the Government is the sole or predominant tenant. In the event the Lessor is required to comply with EISA Section 438, Lessor shall furnish the Government, prior to the filing for permits for the associated work, with a certification from Lessor's engineer that the design meets the hydrology maintenance and restoration requirements of EISA Section 438.

3.17 ~~ELEVATORS (SEP 2013)~~ INTENTIONALLY DELETED

3.18 ~~BUILDING DIRECTORY (APR 2011)~~ INTENTIONALLY DELETED

A tamper-proof directory with lock shall be provided in the Building lobby listing the Government agency. It must be acceptable to the LCO.

3.19 FLAGPOLE (SEP 2013)

If the Government is the sole occupant of the Building, a flagpole shall be provided at a location to be approved by the LCO. The flag of the United States of America will be provided by the Lessor, as part of shell rent, and replaced at all times during the Lease term when showing signs of wear.

3.20 DEMOLITION (JUN 2012)

The Lessor shall remove existing abandoned electric, telephone, and data cabling and devices, as well as any other improvements or fixtures in place to accommodate the Government's requirements. Any demolition of existing improvements that is necessary to satisfy the Government's layout shall be done at the Lessor's expense.

3.21 ACCESSIBILITY (FEB 2007)

The Building, leased Space, and areas serving the leased Space shall be accessible to persons with disabilities in accordance with the Architectural Barriers Act Accessibility Standard (ABAAS), Appendices C and D to 36 CFR Part 1191 (ABA Chapters 1 and 2, and Chapters 3 through 10). To the extent the standard referenced in the preceding sentence conflicts with local accessibility requirements, the more stringent shall apply.

3.22 CEILINGS (APR 2015)

A complete acoustical ceiling system (which includes grid and lay-in tiles or other Building standard ceiling system as approved by the LCO) throughout the Space and Premises shall be required. The acoustical ceiling system shall be furnished, installed, and coordinated with TIs.

A. Ceilings shall be at a minimum 9 feet and 0 inches and no more than 12 feet and 0 inches measured from floor to the lowest obstruction. Areas with raised flooring shall maintain these ceiling-height limitations above the finished raised flooring. Bulkheads and hanging or surface mounted light fixtures which impede traffic ways shall be avoided. Ceilings shall be uniform in color and appearance throughout the Space, with no obvious damage to tiles or grid.

B. Prior to closing the ceiling, the Lessor shall coordinate with the Government for the installation of any items above the ceiling.

C. Should the ceiling be installed in the Space prior to construction of the TIs, then the Lessor shall be responsible for all costs in regard to the disassembly, storage during construction, and subsequent re-assembly of any of the ceiling components which may be required to complete the TIs. The Lessor shall also bear the risk for any damage to the ceiling or any components thereof during the construction of the TIs.

D. Ceilings shall be a flat plane in each room and shall be suspended and finished as follows unless an alternate equivalent is pre-approved by the LCO:

1. Restrooms. Plastered or spackled and taped gypsum board.

2. Offices and conference rooms. Mineral and acoustical tile or lay in panels with textured or patterned surface and tegular edges or an equivalent pre-approved by the LCO. Tiles or panels shall contain a minimum of 30% recycled content.

3. Corridors and eating/galley areas. Plastered or spackled and taped gypsum board or mineral acoustical tile.

E. For ceiling installations in new lease construction projects, tiles or panels (for restrooms, offices, conference rooms, corridors, and eating/gallery areas) must comply with the following environmental standards: a) California Section 01350 standard for low-VOC materials; b) recyclable in a closed loop process; c) USDA Certified Biopreferred; and d) Environmental Product Declaration (EPD) available.

3.23 EXTERIOR AND COMMON AREA DOORS AND HARDWARE (SEP 2013)

A. Exterior Building doors and doors necessary to the lobbies, common areas, and core areas shall be required. This does not include suite entry or interior doors specific to TIs.

B. Exterior doors shall be weather tight and shall open outward. Hinges, pivots, and pins shall be installed in a manner which prevents removal when the door is closed and locked. These doors shall have a minimum clear opening of 32" clear wide x 80" high (per leaf). Doors shall be heavy duty, flush, (1) hollow steel construction, (2) solid core wood, or (3) insulated tempered glass. As a minimum requirement, hollow steel doors shall be fully insulated, flush, #16-gauge hollow steel. Solid-core wood doors and hollow steel doors shall be at least 1-3/4 inches thick. Door assemblies shall be of durable finish and shall have an aesthetically pleasing appearance acceptable to the LCO. The opening dimensions and operations shall conform to the governing building, fire safety, accessibility, and energy codes and/or requirements. Fire door assemblies shall be listed and labeled. Labels on fire door assemblies shall be maintained in a legible condition. Fire door assemblies and their accompanying hardware, including frames and closing devices shall be installed in accordance with the requirements of NFPA 80, Standard for Fire Doors and Other Opening Protectives.

C. Exterior doors and all common area doors shall have door handles or door pulls with heavyweight hinges. All doors shall have corresponding doorstops (wall or floor mounted) and silencers. All public use doors and restroom doors shall be equipped with kick plates. All doors shall have automatic door closers. All Building exterior doors shall have locking devices installed to reasonably deter unauthorized entry.

3.24 DOORS: IDENTIFICATION (APR 2011)

All signage required in common areas unrelated to tenant identification shall be provided and installed by the Lessor.

3.25 WINDOWS (APR 2011)

A. Office Space shall have windows in each exterior bay unless waived by the LCO.

B. All windows shall be weather tight. Operable windows that open shall be equipped with locks. Off-street, ground-level windows and those accessible from fire escapes, adjacent roofs, and other structures that can be opened must be fitted with a sturdy locking device. Windows accessible from fire escapes must be readily operable from the inside of the Building.

3.26 PARTITIONS: GENERAL (APR 2015)

Partitions in public areas shall be marble, granite, hardwood, or drywall covered with durable wall covering or high performance coating, or equivalent pre-approved by the LCO. Newly installed gypsum board material must be Greenguard Gold Certified or have 0 grams per liter of VOCs.

3.27 PARTITIONS: PERMANENT (APR 2015)

Permanent partitions shall extend from the structural floor slab to the structural ceiling slab. They shall be provided by the Lessor as part of shell rent as necessary to surround the Space, stairs, corridors, elevator shafts, restrooms, all columns, and janitor closets. They shall have a flame spread rating of 25 or less and a smoke development rating of 450 or less (ASTM E-84). Stairs, elevators, and other floor openings shall be enclosed by partitions and shall have the fire resistance required by the applicable building code, fire code and ordinances adopted by the jurisdiction in which the Building is located (such as the International Building Code, etc.) current as of the Lease Award Date. Newly installed gypsum board material must be Greenguard Gold Certified or have 0 grams per liter of VOCs.

3.28 INSULATION: THERMAL, ACOUSTIC, AND HVAC (SEP 2013)

A. All insulation products shall contain recovered materials as required by EPA's CPG and related recycled content recommendations.

B. No insulation installed with this project shall be material manufactured using chlorofluorocarbons (CFCs), nor shall CFCs be used in the installation of the product.

C. All insulation containing fibrous materials exposed to air flow shall be rated for that exposure or shall be encapsulated.

D. Insulating properties for all materials shall meet or exceed applicable industry standards. Polystyrene products shall meet American Society for Testing and Materials (ASTM) C578 91.

E. All insulation shall be low emitting with not greater than .05 ppm formaldehyde emissions.

F. The maximum flame spread and smoke developed index for insulation shall meet the requirements of the applicable local codes and ordinances (current as of the Lease Award Date) adopted by the jurisdiction in which the Building is located.

3.29 WALL FINISHES – SHELL (SEP 2015)

A. All restrooms within the Building common areas of Government-occupied floors shall have 1) ceramic tile, recycled glass tile, or comparable wainscot from the finished floor to a minimum height of 4'-6" and 2) semi-gloss paint on remaining wall areas, or other finish approved by the Government.

B. All elevator areas that access the Space and hallways accessing the Space shall be covered with wall coverings not less than 20 ounces per square yard, high performance paint, or an equivalent.

3.30 PAINTING – SHELL (JUN 2012)

A. The Lessor shall bear the expense for all painting associated with the Building shell. These areas shall include all common areas. Exterior perimeter walls and interior core walls within the Space shall be spackled and prime painted with low VOC primer. If any Building shell areas are already painted prior to TIs, then the Lessor shall repaint, at the Lessor's expense, as necessary during TIs.

B. The costs for cyclical painting requirements as outlined in Section 6 shall be included in the shell rent.

3.31 FLOORS AND FLOOR LOAD FOR LABORATORIES (SHELL) MODIFIED

A. All adjoining floor areas shall be of a common level not varying more than 1/4 inch over a 10-foot horizontal run in accordance with the American Concrete Institute standards, non-slip, and acceptable to the LCO.

B. Under-floor surfaces shall be smooth and level. Office areas shall have a minimum live load capacity of 100 pounds per ABOA SF. Laboratory and Storage areas shall have a minimum live load capacity of 150 pounds per ABOA SF.

C. Lessor shall provide a report by a registered structural engineer showing the floor load capacity, with calculations on the structural drawings at the Lessor's expense.

3.32 FLOOR COVERING AND PERIMETERS – SHELL (SEP 2013)

A. Exposed interior floors in primary entrances and lobbies shall be marble, granite, or terrazzo. Exposed interior floors in secondary entrances, elevator lobbies, and primary interior corridors shall be high-grade carpet, marble, granite, or terrazzo. Resilient flooring shall be used in telecommunications rooms. Floor perimeters at partitions shall have wood, rubber, vinyl, marble, or carpet base.

B. Terrazzo, unglazed ceramic tile, recycled glass tile, and/or quarry tile shall be used in all restroom and service areas of Government-occupied floors.

C. Any alternate flooring must be pre-approved by the LCO.

D. The costs for cyclical carpet replacement requirements as outlined in Section 6 shall be included in the shell rent.

3.33 MECHANICAL, ELECTRICAL, PLUMBING: GENERAL (APR 2011)

The Lessor shall provide and operate all Building equipment and systems in accordance with applicable technical publications, manuals, and standard procedures. Mains, lines, and meters for utilities shall be provided by the Lessor. Exposed ducts, piping, and conduits are not permitted in office Space.

3.34 BUILDING SYSTEMS (APR 2011)

Whenever requested, the Lessor shall furnish to GSA as part of shell rent, a report by a registered professional engineer(s) showing that the Building and its systems as designed and constructed will satisfy the requirements of this Lease.

3.35 ELECTRICAL (JUN 2012)

A. The Lessor shall be responsible for meeting the applicable requirements of local codes and ordinances. When codes conflict, the more stringent standard shall apply. Main service facilities shall be enclosed. The enclosure may not be used for storage or other purposes and shall have door(s) fitted with an automatic deadlocking latch bolt with a minimum throw of 1/2 inch. Main distribution for standard office occupancy shall be provided at the Lessor's expense. All floors shall have 120/208 V, 3-phase, 4-wire with bond, 60 hertz electric service available. In no event shall such power distribution (not including lighting and HVAC) for the Space fall below 4 watts per ABOA SF.

B. Main power distribution switchboards and distribution and lighting panel boards shall be circuit breaker type with copper buses that are properly rated to provide the calculated fault circuits. All power distribution panel boards shall be supplied with separate equipment ground buses. All

power distribution equipment shall be required to handle the actual specified and projected loads and 10 percent spare load capacity. Distribution panels are required to accommodate circuit breakers for the actual calculated needs and 10 percent spare circuits that will be equivalent to the majority of other circuit breakers in the panel system. Fuses and circuit breakers shall be plainly marked or labeled to identify circuits or equipment supplied through them.

C. Convenience outlets shall be installed in accordance with NFPA Standard 70, National Electrical Code, or local code, whichever is more stringent. The Lessor shall provide duplex utility outlets in restrooms, corridors, and dispensing areas.

3.36 ~~ADDITIONAL ELECTRICAL CONTROLS (JUN 2012)~~ INTENTIONALLY DELETED

3.37 PLUMBING (JUN 2012)

The Lessor shall include the cost of plumbing in common areas. Hot and cold water risers and domestic waste and vent risers, installed and ready for connections that are required for TIs, shall be included in the shell rent.

3.38 DRINKING FOUNTAINS (APR 2011)

On each floor of Government-occupied Space, the Lessor shall provide a minimum of two drinking fountains with chilled potable water within 200 feet of travel from any Government-occupied area on the floor. The fountains shall comply with Section F211 of the Architectural Barriers Act Accessibility Standard.

3.39 RESTROOMS (SEP 2013)

A. If this Lease is satisfied by new construction or major alterations, Lessor shall provide water closets, sinks and urinals on each floor that is partially or fully occupied by the government per the following schedule. The schedule is per floor and based on a density of one person for each 135 ABOA SF of office Space, allocated as 50% women and 50% men. If major alterations to the restrooms occur during the term of this Lease, the number of fixtures then must meet the schedule as part of the major alterations.

ESTIMATED TOTAL NUMBER OF PEOPLE PER FLOOR			(WOMEN'S) WATER CLOSETS	(WOMEN'S) SINKS	(MEN'S) WATER CLOSETS	(MEN'S) URINALS	(MEN'S) SINKS
1	to	8	2	1	1	1	1
9	to	24	3	2	2	1	1
25	to	36	3	2	2	1	2
37	to	56	5	3	3	2	2
57	to	75	6	4	4	2	2
76	to	96	6	5	4	2	3
97	to	119	7	5	5	2	3
120	to	134	9	5	6	3	4
Above 135			3/40	1/24	1/20	1/40	1/30

B. If no new construction or major renovation of a restroom is occurring, compliance with local code is sufficient. Separate restroom facilities for men and women shall be provided in accordance with local code or ordinances, on each floor occupied by the Government in the Building. The facilities shall be located so that employees will not be required to travel more than 200 feet on one floor to reach the restrooms. Each restroom shall have sufficient water closets enclosed with modern stall partitions and doors, urinals (in men's room), and hot (set in accordance with applicable building codes) and cold water. Water closets and urinals shall not be visible when the exterior door is open.

C. Each main restroom shall contain the following:

1. A mirror and shelf above the lavatory.
2. A toilet paper dispenser in each water closet stall that will hold at least two rolls and allow easy, unrestricted dispensing.
3. A coat hook on the inside face of the door to each water closet stall and on several wall locations by the lavatories.
4. At least one modern paper towel dispenser, soap dispenser, and waste receptacle for every two lavatories.
5. A coin-operated sanitary napkin dispenser in women's restrooms with a waste receptacle in each water closet stall.
6. A disposable toilet seat cover dispenser.
7. A counter area of at least 2 feet, 0 inches in length, exclusive of the lavatories (however, it may be attached to the lavatories) with a mirror above and a ground-fault interrupter-type convenience outlet located adjacent to the counter area. The counter should be installed to minimize pooling or spilling of water at the front edge.
8. A floor drain.
9. For new installations and major renovations, restroom partitions shall be made from recovered materials as listed in EPA's CPG.

3.40 PLUMBING FIXTURES: WATER CONSERVATION (DEC 2011)

For new installations and whenever plumbing fixtures are being replaced (replacement per floor is required prior to Lease commencement in all instances of nonconformance where the Government occupies the full floor):

A. Water closets must conform to EPA WaterSense or fixtures with equivalent flush volumes must be utilized.

B. Urinals must conform to EPA WaterSense or fixtures with equivalent flush volumes must be utilized. Waterless urinals are acceptable.

C. Faucets must conform to EPA WaterSense or fixtures with equivalent flow rates must be utilized.

Information on EPA WaterSense fixtures can be found at http://www.epa.gov/watersense/.

3.41 JANITOR CLOSETS (SEP 2015)

Janitor closets shall meet all local codes and ordinances. When not addressed by local code, Lessor shall provide containment drains plumbed for appropriate disposal of liquid wastes in spaces where water and chemical concentrate mixing occurs for maintenance purposes. Disposal is not permitted in restrooms.

3.42 HEATING, VENTILATION, AND AIR CONDITIONING - SHELL (SEP 2013) MODIFIED

A. Central HVAC systems shall be installed and operational, including, as appropriate, main and branch lines, VAV boxes, dampers, flex ducts, and diffusers, for an open office layout, including all Building common areas. The Lessor shall provide conditioned air through medium pressure duct work at a rate of .75 cubic feet per minute per ABOA SF and systems shall be designed with sufficient systems capacity to meet all requirements in this Lease.

B. Areas having excessive heat gain or heat loss, or affected by solar radiation at different times of the day, shall be independently controlled.

C. Equipment Performance. Temperature control for office Spaces shall be provided by concealed central heating and air conditioning equipment. The equipment shall maintain Space temperature control over a range of internal load fluctuations of plus 0.5 W/SF to minus 1.5 W/SF from initial design requirements of the tenant.

D. Ductwork Re-use and Cleaning. Any ductwork to be reused and/or to remain in place shall be cleaned, tested, and demonstrated to be clean in accordance with the standards set forth by NADCA. The cleaning, testing, and demonstration shall occur immediately prior to Government occupancy to avoid contamination from construction dust and other airborne particulates.

E. During working hours in periods of heating and cooling, ventilation shall be provided in accordance with the latest edition of American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Standard 62.1, Ventilation for Acceptable Indoor Air Quality.

F. Air filtration shall be provided and maintained with filters having a minimum efficiency rating as determined by the latest edition of ASHRAE Standard 52.2, Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size. Pre-filters shall have a Minimum Efficiency Reporting Value (MERV) efficiency of 8. Final filters shall have a MERV efficiency of 13.

G. Restrooms shall be properly exhausted, with a minimum of 10 air changes per hour.

H. INTENTIONALLY DELETED

3.43 TELECOMMUNICATIONS: DISTRIBUTION AND EQUIPMENT (SEP 2015)

A. Sufficient space shall be provided on the floor(s) where the Government occupies Space for the purposes of terminating telecommunications service into the Building. The Building's telecommunications closets located on all floors shall be vertically-stacked. Telecommunications switch rooms, wire closets, and related spaces shall be enclosed. The enclosure shall not be used for storage or other purposes and shall have door(s) fitted with an automatic door-closer and deadlocking latch bolt with a minimum throw of 1/2 inch. The telephone closets shall include a telephone backboard.

B. Telecommunications switch rooms, wire closets, and related spaces shall meet applicable Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) standards. These standards include the following:

1. TIA/EIA-568, Commercial Building Telecommunications Cabling Standard,
2. TIA/EIA 569, Commercial Building Standard for Telecommunications Pathways and Spaces,
3. TIA/EIA-570, Residential and Light Commercial Telecommunications Wiring Standard, and
4. TIA/EIA-607, Commercial Building Grounding and Bonding Requirements for Telecommunications Standard.

C. Telecommunications switch rooms, wire closets, and related spaces shall meet applicable NFPA standards. Bonding and grounding shall be in accordance with NFPA Standard 70, National Electrical Code, and other applicable NFPA standards and/or local code requirements.

3.44 TELECOMMUNICATIONS: LOCAL EXCHANGE ACCESS (JUN 2012)

A. The Government may elect to contract its own telecommunications (voice, data, video, Internet or other emerging technologies) service in the Space. The Government may contract with one or more parties to have INS wiring (or other transmission medium) and telecommunications equipment installed.

B. The Lessor shall allow the Government's designated telecommunications providers access to utilize existing Building wiring to connect its services to the Government's Space. If the existing Building wiring is insufficient to handle the transmission requirements of the Government's designated telecommunications providers, the Lessor shall provide access from the point of entry into the Building to the Government's floor Space, subject to any inherent limitations in the pathway involved.

C. The Lessor shall allow the Government's designated telecommunications providers to affix telecommunications antennas (high frequency, mobile, microwave, satellite, or other emerging technologies), subject to weight and wind load conditions, to roof, parapet, or Building envelope as required. Access from the antennas to the Premises shall be provided.

D. The Lessor shall allow the Government's designated telecommunications providers to affix antennas and transmission devices throughout the Space and in appropriate common areas frequented by the Government's employees to allow the use of cellular telephones and communications devices necessary to conduct business.

3.45 LIGHTING: INTERIOR AND PARKING - SHELL (SEP 2013)

NOTE: FOR PRICING ESTIMATING PURPOSES, FIXTURES WILL BE INSTALLED AT THE AVERAGE RATIO OF 1 FIXTURE PER 80 ABOA SF.

A. INTERIOR FIXTURES: High efficiency T-8, T-5, or LED light fixtures (and associated ballasts or drivers) shall be installed as either ceiling grid or pendant mounted for an open-office plan. Ceiling grid fixtures shall be either 2' wide by 4' long or 2' wide by 2' long. Lessor shall provide, as part of Shell Rent, a minimum overall lighting fixture efficiency of 85 percent. Lamps shall maintain a uniform color level throughout the lease term.

B. LIGHTING LEVELS: Fixtures shall have a minimum of two tubes and shall provide 50 foot-candles at desktop level (30" above finished floor) with a maximum uniformity ratio of 1.5:1. Lessor shall provide, as part of Shell Rent, 10 average foot-candles in all other Building areas within the Premises with a uniformity ratio of 4:1. Emergency egress lighting levels shall be provided in accordance with the local applicable building codes (but not less than 1 foot-candle) by either an onsite emergency generator or fixture mounted battery packs.

C. POWER DENSITY:

Existing Buildings: The maximum fixture power density shall not exceed 1.4 watts per ABOA SF.
New Construction: The maximum fixture power density shall not exceed 1.1 watts per ABOA SF.

D. DAYLIGHTING CONTROLS: If the Lease is more than 10,000 ABOA SF, the Lessor shall provide daylight dimming controls in atriums or within 15 feet of windows and skylights where daylight can contribute to energy savings. Daylight harvesting sensing and controls shall be either integral to the fixtures or ceiling mounted and shall maintain required lighting levels in work spaces.

E. OCCUPANCY/VACANCY SENSORS: The Lessor shall provide ceiling mount occupancy sensors, or vacancy sensors (preferred), or scheduling controls through the building automation system (BAS) throughout the Space in order to reduce the hours that the lights are on when a particular space is unoccupied. No more than 1,000 square feet shall be controlled by any one sensor. Occupancy sensors in enclosed rooms shall continue to operate after the BAS has shutdown the building at the end of the workday.

F. BUILDING PERIMETER:

1. Exterior parking areas, vehicle driveways, pedestrian walks, and the Building perimeter lighting levels shall be designed per Illuminating Engineering Society (IES) standards. Provide 5 foot-candles for doorway areas, 3 foot-candles for transition areas and at least 5 foot-candles throughout the parking lot. Parking lot fixtures shall provide a maximum to minimum uniformity ratio of 10:1.

2. If the leased space is 100 percent occupied by Government tenants, all exterior parking lot fixtures shall be "Dark Sky" compliant with no property line trespass.

G. PARKING STRUCTURES: The minimum illuminance level for parking structures is 5 foot-candles as measured on the floor with a uniformity ratio of 10:1.

H. PARKING SENSORS: If the leased space is 100 percent occupied by Government tenants, exterior parking area and parking structure lighting shall be sensor or BAS controlled in order that it may be programmed to produce reduced lighting levels during non-use. This non-use time period will normally be from 11:00 pm to 6:00 am.

I. EXTERIOR POWER BACKUP: Exterior egress, walkway, parking lot, and parking structure lighting must have emergency power backup to provide for safe evacuation of the Building.

3.46 ACOUSTICAL REQUIREMENTS (JUN 2012)

A. Reverberation Control. Private office and conference rooms using suspended acoustical ceilings shall have a noise reduction coefficient (NRC) of not less than 0.65 in accordance with ASTM C-423. Open office using suspended acoustical ceilings shall have an NRC of not less than 0.75. Private offices, conference rooms, and open offices using acoustical cloud or acoustical wall panels with a minimum of 70% coverage shall have an NRC of not less than 0.85.

B. Ambient Noise Control. Ambient noise from mechanical equipment shall not exceed noise criteria curve (NC) 35 in accordance with the ASHRAE Handbook of Fundamentals in offices and conference rooms; NC 40 in corridors, cafeterias, lobbies, and restrooms; NC 50 in other spaces.

C. Noise Isolation. Rooms separated from adjacent spaces by ceiling high partitions (not including doors) shall not be less than the following noise isolation class (NIC) standards when tested in accordance with ASTM E-336:

Conference rooms: NIC 40
Offices: NIC 35

D. Testing. The LCO may require, at Lessor's expense, test reports by a qualified acoustical consultant showing that acoustical requirements have been met.

3.47 ~~SECURITY FOR NEW CONSTRUCTION (NOV 2005)~~ INTENTIONALLY DELETED

3.48 ~~SEISMIC SAFETY FOR NEW CONSTRUCTION (SEP 2012)~~ INTENTIONALLY DELETED

3.49 ~~FIRE PROTECTION FOR NEW CONSTRUCTION (APR 2015)~~ INTENTIONALLY DELETED

3.50 ~~LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN FOR NEW CONSTRUCTION (LEED-NC) (SEP 2013)~~ INTENTIONALLY DELETED

3.51 ~~LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN FOR COMMERCIAL INTERIORS (LEED-CI) (SEP 2013)~~ INTENTIONALLY DELETED

3.52 INDOOR AIR QUALITY DURING CONSTRUCTION (SEP 2013)

A. The Lessor shall provide to the Government material safety data sheets (MSDS) or other appropriate documents upon request, but prior to installation or use for the following products, including but not limited to, adhesives, caulking, sealants, insulating materials, fireproofing or fire stopping materials, paints, carpets, floor and wall patching or leveling materials, lubricants, clear finishes for wood surfaces, janitorial cleaning products, and pest control products.

B. The LCO may eliminate from consideration products with significant quantities of toxic, flammable, corrosive, or carcinogenic material and products with potential for harmful chemical emissions. Materials used often or in large quantities will receive the greatest amount of review.

C. All MSDS shall comply with Occupational Safety and Health Administration (OSHA) requirements. The Lessor and its agents shall comply with all recommended measures in the MSDS to protect the health and safety of personnel.

D. To the greatest extent possible, the Lessor shall sequence the installation of finish materials so that materials that are high emitters of volatile organic compounds (VOCs) are installed and allowed to cure before installing interior finish materials, especially soft materials that are woven, fibrous, or porous in nature, that may adsorb contaminants and release them over time.

E. Where demolition or construction work occurs adjacent to occupied Space, the Lessor shall erect appropriate barriers (noise, dust, odor, etc.) and take necessary steps to minimize interference with the occupants. This includes maintaining acceptable temperature, humidity, and ventilation in the occupied areas during window removal, window replacement, or similar types of work.

F. HVAC during Construction: If air handlers are used during construction, the Lessor shall provide filtration media with a MERV of 8 at each return air grill, as determined by the latest edition of ASHRAE Standard 52.2, Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size. The permanent HVAC system may be used to move both supply and return air during the construction process only if the following conditions are met:

1. A complete air filtration system with 60 percent efficiency filters is installed and properly maintained;
2. No permanent diffusers are used;
3. No plenum type return air system is employed;
4. The HVAC duct system is adequately sealed to prevent the spread of airborne particulate and other contaminants; and
5. Following the Building "flush out," all duct systems are vacuumed with portable high-efficiency particulate arrestance (HEPA) vacuums and documented clean in accordance with National Air Duct Cleaners Association (NADCA) specifications.

G. Flush-Out Procedure:

1. A final flush-out period of 72 hours minimum is required after installation of all interior finishes and before occupancy of the Space. The Lessor shall ventilate 24 hours a day, with new filtration media at 100% outdoor air (or maximum outdoor air while achieving a relative humidity not greater than 60%).

2. After the 3-day period the Space may be occupied; however, the flush-out must continue for 30 days using the maximum percentage of outdoor air consistent with achieving thermal comfort and humidity control.

3. Any deviation from this ventilation plan must be approved by the LCO.

4. The Lessor is required to provide regularly occupied areas of the Space with new air filtration media before occupancy that provides a MERV of 13 or better.

5. During construction, meet or exceed the recommended design approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3.

6. Protect stored onsite and installed absorptive materials from moisture damage.

3.53 SYSTEMS COMMISSIONING (APR 2011)

The Lessor shall incorporate commissioning requirements to verify that the installation and performance of energy consuming systems meet the Government's project requirements. The commissioning shall cover only work associated with TIs or alterations or at a minimum: heating, ventilating, air conditioning and refrigeration (HVAC&R) systems and associated controls, lighting controls, and domestic hot water systems.

3.54 DUE DILIGENCE AND NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENTS – LEASE (SEP 2014)

A. Environmental Due Diligence

Lessor is responsible for performing all necessary "response" actions (as that term is defined at 42 U.S.C. § 9601(25) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)) with regard to all "recognized environmental conditions," as that term is defined in ASTM Standard E1527-13, as such standard may be revised from time to time. This obligation extends to any contamination of the Property where such contamination is not attributable to the Government. Lessor must provide the Government with a summary report demonstrating completion of all required response actions prior to Substantial Completion. Any remediation performed by or on behalf of Lessor must be undertaken in strict compliance with all applicable federal, state and local laws and regulations.

B. National Environmental Policy Act

The National Environmental Policy Act regulations provide for analyzing proposed major federal actions to determine if there are ways to mitigate the impact of the proposed actions to avoid, minimize, rectify, reduce, or compensate for environmental impacts associated with such actions. Where the Government has determined that any or all of these mitigation measures should be or must be adopted to lessen the impact of these proposed actions, Lessor must incorporate all mitigation measures identified and adopted by the Government in the design and construction drawings and specifications. All costs and expenses for development of design alternatives, mitigation measures and review submittals for work to be performed under the Lease are the sole responsibility of Lessor.

3.55 ~~NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS - LEASE (SEP 2014)~~ INTENTIONALLY DELETED

SECTION 4 DESIGN, CONSTRUCTION, AND POST AWARD ACTIVITIES

4.32 SCHEDULE FOR COMPLETION OF SPACE (SEP 2015) MODIFIED

Design and construction activities for the Space shall commence upon Lease award. The Lessor shall schedule the following activities to achieve timely completion of the work required by this Lease:

A. Design Intent Drawing (DID) Workshop: In conjunction with the Government, the Lessor shall commit as part of shell costs to a **5**-day DID workshop tentatively scheduled to begin **within 30 Calendar Days after award** at the office of the Lessor's architect or an alternate location agreed to by the Government. The architect will provide full design services so that the DIDs can be completed during this conference. At the DID workshop, the Lessor shall provide a minimum of three (3) finish options to include coordinated samples of finishes for all interior elements such as paint, wall coverings, base coving, carpet, window treatments, laminates, and flooring. All samples provided must comply with specifications set forth elsewhere in this Lease. The finish options shall be approved by the Government at the DID workshop. The Lessor may not make any substitutions after the finish option is selected. The Lessor shall then submit Printable Document Formatted files (.pdf's) and **5** full size hard copies to the designated Government recipients by overnight courier within **5 Working Days** after the DID Workshop. The Government then has **30 Working Days** to review the Workshop DIDs for comment.

B. Lessor-Provided Design Intent Drawings (DIDs): The Lessor must provide as part of the shell cost, complete DIDs conforming to the requirements of this Lease and other Government-supplied information related to the tenant agency's interior build-out requirements not later than **10 Working Days** following receipt of the Workshop **DIDs Comments**, provided that the Government supplies such information and direction as reasonably required for Lessor to timely complete DIDs. The Lessor shall then submit Printable Document Formatted files (.pdf's) and **5** full size hard copies to the designated Government recipients by overnight courier within **5 Working Days**. The Lessor should anticipate at least two submissions of DIDs before receiving approval. At the sole discretion of the Government, the Lessor may be required to submit a budget proposal based on the TIs and associated work as shown on the DIDs. This budget proposal shall be completed within **20 Working Days** of the Government's request.

C. DIDs. For the purposes of this Lease, DIDs are defined as fully dimensioned drawings of the leased Space which reflect all Lease requirements provided by the Government sufficient for the preparation of construction documents (CDs), including, but not limited to:

1. Generic furniture layout, wall, door, and built-in millwork locations;
2. Telephone, electrical, and data outlet types and locations;
3. Information necessary for calculation of electrical and HVAC loads;
4. Work related to security requirements; and
5. All finish selections.

D. Government review and approval of Lessor-provided DIDs: The Government must notify the Lessor of DID approval not later than **30 Working Days** following submission of DIDs conforming to the requirements of this Lease as supplied by the Government. Should the DIDs not conform to these requirements, the Government must notify the Lessor of such non-conformances within the same period; however, the Lessor shall be responsible for any delay to approval of DIDs occasioned by such non-conformance. The Government's review and approval of the DIDs is limited to conformance to the specific requirements of the Lease as they apply to the Space.

E. The Lessor's preparation and submission of construction documents (CDs): The Lessor as part of the TI must complete CDs conforming to the approved DIDs not later than the following schedule:

- **15 working days to complete 35% CDs**
- **15 working days to complete 50% CDs**
- **15 working days to complete 100% CDs**

The pricing for this work is included under the A/E fees established under Section 1 of the Lease. If during the preparation of CDs the Lessor becomes aware that any material requirement indicated in the approved DIDs cannot be reasonably achieved, the Lessor shall promptly notify GSA, and shall not proceed with completion of CDs until direction is received from the LCO. The LCO shall provide direction within **5 Working Days** of such notice, but the Government shall not be responsible for delays to completion of CDs occasioned by such circumstances. For the purpose of this paragraph, a "material requirement" shall mean any requirement necessary for the Government's intended use of the Space as provided for in, or reasonably inferable from, the Lease and the approved DIDs (e.g., number of workstations and required adjacencies).

F. Government review of CDs: The Government shall have **15 Working Days** to review **the 35% and 50%** CDs. After the 100% CDs have been prepared, the Government shall have **15** Working Days for its final review before the Lessor proceeds with preparing the TI price proposal for the work described in the CDs. At any time during this period of review, the Government shall have the right to require the Lessor to modify the CDs to enforce conformance to Lease requirements and the approved DIDs.

G. The Lessor's preparation and submission of the TI price proposal: The Lessor shall prepare and submit a complete TI price proposal in accordance with this Lease within **20 Working Days** following the end of the Government CD review period.

H. INTENTIONALLY DELETED

I. Negotiation of TI and BSAC price proposals and issuance of notice to proceed (NTP): The Government shall issue NTP within **50 Working Days** following the submission of the TI and BSAC price proposals, unless these have been priced as turnkey, provided that price proposals conform to the requirements of the Lease and the parties negotiate a fair and reasonable price.

J. Construction of TIs and completion of other required construction work: The Lessor shall complete all work required to prepare the Premises as required in this Lease ready for use not later than **160 Working Days** following issuance of NTP.

4.33 CONSTRUCTION DOCUMENTS (SEP 2012)

The Lessor's CDs shall include all mechanical, electrical, plumbing, fire protection, life safety, lighting, structural, security, and architectural improvements scheduled for inclusion into the Space. CDs shall be annotated with all applicable specifications. CDs shall also clearly identify TIs already in place and the work to be done by the Lessor or others. Notwithstanding the Government's review of the CDs, the Lessor is solely responsible and liable for their technical accuracy and compliance with all applicable Lease requirements.

4.34 TENANT IMPROVEMENTS PRICE PROPOSAL (SEP 2015)

A. The Lessor's TI price proposal shall be supported by sufficient cost or pricing data to enable the Government to evaluate the reasonableness of the proposal, or documentation that the Proposal is based upon competitive proposals (as described in the "Tenant Improvements Pricing Requirements" paragraph) obtained from entities not affiliated with the Lessor. Any work shown on the CDs that is required to be included in the Building shell rent or already priced as BSAC shall be clearly identified and excluded from the TI price proposal. After negotiation and acceptance of the TI price, GSA shall issue a NTP to the Lessor.

B. Under the provisions of FAR Subpart 15.4, the Lessor shall submit a TI price proposal with information that is adequate for the Government to evaluate the reasonableness of the price or determining cost realism for the TIs within the time frame specified in this section. The TI price proposal shall use the fee rates specified in the "Tenant Improvement Fee Schedule" paragraph of this Lease. The Lessor shall exclude from the TI price proposal all costs for fixtures and/or other TIs already in place, provided the Government has accepted same. However, the Lessor will be reimbursed for costs to repair or improve the fixture(s) and/or any other improvements already in place. The Lessor must provide certified cost or pricing data for TI proposals exceeding the threshold in FAR 15.403-4, to establish a fair and reasonable price. For TI proposals that do not exceed the threshold in FAR 15-403-4, the Lessor shall submit adequate documentation to support the reasonableness of the price proposal as determined by the LCO.

C. The TIs scope of work includes the Lease, the DIDs, the CDs, and written specifications. In cases of discrepancies, the Lessor shall immediately notify the LCO for resolution. All differences will be resolved by the LCO in accordance with the terms and conditions of the Lease.

D. In lieu of requiring the submission of detailed cost or pricing data as described above, the Government (in accordance with FAR 15.403) is willing to negotiate a price based upon the results of a competitive proposal process. A minimum of two qualified General Contractors (GCs) shall be invited by the Lessor to participate in the competitive proposal process. Each participant shall compete independently in the process. In the absence of sufficient competition from the GCs, a minimum of two qualified subcontractors from each trade of the Tenant Improvement Cost Summary (TICS) Table (described below) shall be invited to participate in the competitive proposal process.

E. Each TI proposal shall be (1) submitted by the proposed General Contractors (or subcontractors) using the TICS Table in CSI Masterformat; (2) reviewed by the Lessor prior to submission to the Government to ensure compliance with the scope of work (specified above) and the proper allocation of shell and TI costs; and (3) reviewed by the Government. General Contractors shall submit the supporting bids from the major subcontractors along with additional backup to the TICS Table in a format acceptable to the Government. Backup will follow the TICS table Master format cost elements and be to level 5 as described in P-120, Project Estimating Requirements for the Public Buildings Service.

F. Unless specifically designated in this Lease as a TI or BSAC cost, all construction costs shall be deemed to be included in the Shell Rent. Any costs in the GC's proposal for Building shell items shall be clearly identified on the TICS Table separately from the TI costs.

G. The Government reserves the right to determine if bids meet the scope of work, that the price is reasonable, and that the Lessor's proposed contractors are qualified to perform the work. The Government reserves the right to reject all bids at its sole discretion. The Government reserves the right to attend or be represented at all negotiation sessions between the Lessor and potential contractors.

H. The Lessor shall demonstrate to the Government that best efforts have been made to obtain the most competitive prices possible, and the Lessor shall accept responsibility for all prices through direct contracts with all contractors. The LCO shall issue to the Lessor a NTP with the TIs upon the Government's sole determination that the Lessor's proposal is acceptable. The Lessor shall complete the work within the time frame specified in this section of the Lease.

4.35 ~~BUILDING SPECIFIC AMORTIZED CAPITAL (BSAC) PRICE PROPOSAL (SEP 2015)~~ INTENTIONALLY DELETED

4.36 GREEN LEASE SUBMITTALS (SEP 2015) MODIFED

The Lessor shall submit to the LCO:

A. Product data sheets for floor coverings, paints and wall coverings, ceiling materials, all adhesives, wood products, suite and interior doors, subdividing partitions, wall base, door hardware finishes, window coverings, millwork substrate and millwork finishes, lighting and lighting controls, and insulation to be used within the leased Space. This information must be submitted NO LATER THAN the submission of the DIDs, if applicable.

B. MSDS or other appropriate documents upon request for products listed in the Lease.

C. Re-use plan required in accordance with the "Existing Fit-out, Salvaged, or Re-used Building Material" paragraph in the Lease.

D. Any waiver needed when not using materials from the CPG and RMAN lists of acceptable products in accordance with the "Recycled Content Products" paragraph in the Lease.

E. Radon test results as may be required by the "Radon in Air" and "Radon in Water" paragraphs in the Lease.

F. Construction waste management plan: Prior to construction commencement, a proposed plan following industry standards to recycle construction waste. The construction waste management plan shall quantify material diversion goals and maximize the materials to be recycled and/or salvaged (at least 50 percent) from construction, demolition, and packaging debris. Where the small quantity of material, the extraordinarily complex nature of the waste disposal method, or prohibitive expense for recycling would represent a genuine hardship, the Government, upon written request of the Lessor and approval of the LCO, may permit alternative means of disposal.

G. Building recycling service plan: A Building recycling service plan with floor plans annotating recycling area(s) as part of DIDs, if applicable, to be reflected on the CD submission.

H. A signed statement from the Lessor for the leased Space explaining how all HVAC systems serving the leased Space will achieve the desired ventilation of the Space during the flush-out period called for in the Lease.

I. A written commissioning plan submitted to the LCO prior to the completion of DIDs, if applicable, that includes:

1. A schedule of systems commissioning (revised as needed during all construction phases of the project, with such revisions provided to the LCO immediately); and

2. A description of how commissioning requirements will be met and confirmed.

J. INTENTIONALLY DELETED

K. If renewable source power is purchased, documentation within 9 months of occupancy.

4.37 CONSTRUCTION SCHEDULE AND INITIAL CONSTRUCTION MEETING (APR 2011)

The Lessor shall furnish a detailed construction schedule (such as Critical Path Method) to the Government within **15 Working Days** of issuance of the NTP. Such schedule shall also indicate the dates available for Government contractors to install telephone/data lines or equipment, if needed. Within **5** Working Days of NTP, the Lessor shall initiate a construction meeting. The Lessor will have contractor representatives including its architects, engineers, general contractor and sub-contractor representatives in attendance. The Lessor shall keep meeting minutes of discussion topics and attendance.

4.38 PROGRESS REPORTS (JUN 2012)

After start of construction, the Lessor shall submit to the LCO written progress reports at intervals of **10 Working Days**. Each report shall include information as to the percentage of the work completed by phase and trade; a statement as to expected completion and occupancy dates; changes introduced into the work; and general remarks on such items as material shortages, strikes, weather, etc, that may affect timely completion. In addition, at the Government's discretion, the Lessor shall conduct meetings every two weeks to brief Government personnel and/or contractors regarding the progress of design and construction of the Space. The Lessor shall be responsible for taking and distributing minutes of these meetings.

4.39 CONSTRUCTION INSPECTIONS (SEP 2015)

A. The LCO or the LCO's designated technical representative may periodically inspect construction work to review compliance with Lease requirements and approved DIDs, if applicable.

B. Periodic reviews, witnessing of tests, and inspections by the Government shall not constitute approval of the Lessor's apparent progress toward meeting the Government's objectives but are intended to discover any information which the LCO may be able to call to the Lessor's attention to prevent costly misdirection of effort. The Lessor shall remain responsible for designing, constructing, operating, and maintaining the Building in full accordance with the requirements of the Lease.

4.40 ACCESS BY THE GOVERNMENT PRIOR TO ACCEPTANCE (SEP 2013)

The Government shall have the right to access any space within the Building during construction for the purposes of performing inspections or installing Government furnished equipment. The Government shall coordinate the activity of Government contractors with the Lessor to minimize conflicts with and disruption to other contractors on site. Access shall not be unreasonably denied to authorized Government officials including, but not limited to, Government contractors, subcontractors, or consultants acting on behalf of the Government on this project.

4.41 ACCEPTANCE OF SPACE AND CERTIFICATE OF OCCUPANCY (SEP 2015)

A. Ten (10) Working Days prior to the completion of the Space, the Lessor shall issue written notice to the Government to schedule the inspection of the Space for acceptance. The Government shall accept the Space only if the construction of Building shell and TIs conforming to this Lease and the approved DIDs, if applicable, is substantially complete, a Certificate of Occupancy (C of O) has been issued as set forth below, and the Building improvements necessary for acceptance as described in the paragraph "Building Improvements" are completed.

B. The Space shall be considered substantially complete only if the Space may be used for its intended purpose, and completion of remaining work will not interfere unreasonably with the Government's enjoyment of the Space. Acceptance shall be final and binding upon the Government with respect to conformance of the completed TIs to the approved DIDs, with the exception of items identified on a punch list generated as a result of the inspection, concealed conditions, latent defects, or fraud, but shall not relieve the Lessor of any other Lease requirements.

C. The Lessor shall provide a valid C of O, issued by the local jurisdiction, for the intended use of the Government. If the local jurisdiction does not issue C of O's or if the C of O is not available, the Lessor may satisfy this condition by providing a report prepared by a licensed fire protection engineer that indicates the Space and Building are compliant with all applicable local codes and ordinances and all fire protection and life safety-related requirements of this Lease.

D. The Government will not be required to accept space prior to the schedule outlined in this Lease.

4.42 LEASE TERM COMMENCEMENT DATE AND RENT RECONCILIATION (JUN 2012)

At acceptance, the Space shall be measured in accordance with the standards set forth in this Lease to determine the total ABOA SF in the Space. The rent for the Space will be adjusted based upon the measured ABOA square footage as outlined under the Payment clause of the General Clauses. At acceptance, the Lease term shall commence. The Lease Term Commencement Date, final measurement of the Premises, reconciliation of the annual rent, and amount of Commission Credit, if any, shall be memorialized by Lease Amendment.

4.43 AS-BUILT DRAWINGS (JUN 2012)

Not later than **30** days after the acceptance of the Space, the Lessor, at Lessor's expense, shall furnish to the Government a complete set of Computer Aided Design (CAD) files of as-built floor plans showing the Space under Lease, as well as corridors, stairways, and core areas. The plans shall have been generated by a CAD program which is compatible with the latest release of AutoCAD. The required file extension is ".DWG." Clean and purged files shall be submitted on CD-ROM. They shall be labeled with Building name, address, list of drawing(s), date of the drawing(s), and Lessor's architect and architect's phone number. The Lessor's operator shall demonstrate the submission on GSA equipment, if requested by the LCO.

4.44 LIQUIDATED DAMAGES (JUN 2012)

In case of failure on the part of the Lessor to complete the work within the time fixed in the Lease, the Lessor shall pay the Government as fixed and agreed liquidated damages **one calendar day's rent** for each and every calendar day that the delivery is delayed beyond the date specified for delivery of all the Space ready for occupancy by the Government. This remedy is not exclusive and is in addition to any other remedies which may be available under this Lease or at law. This liquidated sum is not meant as a penalty, but as an approximation of actual damages that would be suffered by the Government because of the Lessor's delay.

4.45 ~~SEISMIC RETROFIT (SEP 2013)~~ INTENTIONALLY DELETED

4.46 LESSOR'S PROJECT MANAGEMENT FEE (SEP 2013)

A. The Lessor's project management fee shall cover all of the Lessor's project management costs associated with the delivery of Tenant Improvements, including, but not limited to:

1. Legal fees
2. Travel costs
3. Insurance
4. Home office overhead and other indirect costs
5. Carrying costs, exclusive of the TI amortization rate. Carrying costs are those costs of capital incurred for the delivery of TI, for the period starting from Lessor's outlay of funds, until the Lease Term Commencement Date.
6. Municipal, county, or state fees (not related to sales tax)
7. TI proposal preparation costs
8. Lessor's labor costs related to the management of the TI build-out.

B. At a minimum, the Lessor shall be responsible for performing the following services in order to receive the project management fee:

1. Provide assistance and expertise to the Government project team in the form of coordination, management, and administration of the design and construction process;
2. Monitor performance of the general contractor and other contractors, control schedules, and oversee financial accounts;
3. Conduct and document design and construction project meetings;
4. Perform administrative tasks, including documentation, record keeping (issuing meeting minutes), and payment validation in addition to submittal and change order processing;
5. Maintain Request for Information (RFI), submittal, and change order logs; and
6. Provide technical expertise (e.g. testing, estimating, resolving claims, or responding to inquiries).

5.32 TENANT IMPROVEMENT REQUIREMENTS (SEP 2013)

The TIs shall be designed, constructed, and maintained in accordance with the standards set forth in this Lease. For pricing, only those requirements designated as TIs within this section, or designated as TIs within the attached agency requirements and Security Requirements, shall be deemed to be TI costs.

5.33 ~~TENANT IMPROVEMENT SPECIFICATIONS (SEP 2015)~~ INTENTIONALLY DELETED

5.34 FINISH SELECTIONS (SEP 2015)

The Lessor must consult with the Government prior to developing a minimum of three (3) finish options to include coordinated samples of finishes for all interior elements such as paint, wall coverings, base coving, carpet, window treatments, laminates, and flooring. All samples provided must comply with specifications set forth elsewhere in this Lease. All required finish option samples must be provided at no additional cost to the Government within 10 Working Days after initial submission of DIDs, if applicable. GSA must deliver necessary finish selections to the Lessor within 10 Working Days after receipt of samples. The finish options must be approved by GSA prior to installation. The Lessor may not make any substitutions after the finish option is selected.

5.35 WINDOW COVERINGS (JUN 2012) MODIFIED

A. Window Blinds. All exterior windows shall be equipped with window blinds in new or like new condition, which shall be provided as part of the TIs. The blinds may be aluminum or plastic vertical blinds, horizontal blinds with aluminum slats of one-inch width or less, solar fabric roller shades, or an equivalent product pre-approved by the Government. The window blinds shall have non-corroding mechanisms and synthetic tapes. Color selection will be made by the Government.

B. INTENTIONALLY DELETED

5.36 DOORS: SUITE ENTRY (SEP 2013)

Suite entry doors shall be provided as part of the TIs and shall have a minimum clear opening of 32" wide x 84" high (per leaf). Doors shall meet the requirements of being a flush, solid core, 1-3/4-inch thick, wood door with a natural wood veneer face or an equivalent pre-approved by the Government. Hollow core wood doors are not acceptable. They shall be operable by a single effort; and shall meet the requirement of NFPA 101, Life Safety Code or the International Building Code (current as of the Lease Award Date). Doors shall be installed in a metal frame assembly which is primed and finished with a low VOC semi-gloss oil-based paint finish with no formaldehyde.

5.37 DOORS: INTERIOR (SEP 2013)

Doors within the Space shall be provided as part of the TIs and shall have a minimum clear opening of 32" wide x 80" high. Doors shall be flush, solid core, wood with a natural wood veneer face or an equivalent door pre-approved by the LCO. Hollow core wood doors are not acceptable. They shall be operable with a single effort, and shall meet the requirements of NFPA 101, Life Safety Code or the International Building Code (current as of the Lease Award Date). Doors shall be installed in a metal frame assembly which is primed and finished with a low VOC semi-gloss oil-based paint with no formaldehyde.

5.38 DOORS: HARDWARE (SEP 2013)

Doors shall have door handles or door pulls with heavyweight hinges. The Lessor is encouraged to avoid the use of chrome-plated hardware. All doors shall have corresponding doorstops (wall- or floor-mounted) and silencers. All door entrances leading into the Space from public corridors and exterior doors shall have automatic door closers. Doors designated by the Government shall be equipped with 5-pin, tumbler cylinder locks and strike plates. All locks shall be master keyed. Furnish at least two master keys for each lock to the Government. Any exterior entrance shall have a high security lock, with appropriate key control procedures, as determined by Government specifications. Hinge pins and hasps shall be secured against unauthorized removal by using spot welds or pinned mounting bolts. The exterior side of the door shall have a lock guard or astragal to prevent tampering of the latch hardware. Doors used for egress only shall not have any operable exterior hardware. All security-locking arrangements on doors used for egress shall comply with requirements of NFPA 101or the International Building Code current as of the Lease Award Date.

5.39 DOORS: IDENTIFICATION (JUN 2012)

Door identification shall be installed in approved locations adjacent to office entrances as part of the TIs. The form of door identification shall be approved by the Government.

5.40 PARTITIONS: SUBDIVIDING (SEP 2015)

A. Office subdividing partitions shall comply with applicable building codes and local requirements and ordinances and shall be provided as part of the TIs. Partitioning shall extend from the finished floor to the finished ceiling and shall be designed to provide a minimum sound transmission class (STC) of 37. Partitioning shall be installed by the Lessor at locations to be determined by the Government as identified in the DIDs, if applicable. They shall have a flame spread rating of 25 or less and a smoke development rating of 450 or less (ASTM E-84).

B. HVAC shall be rebalanced and lighting repositioned, as appropriate, after installation of partitions.

C. If installed in accordance with the "Automatic Fire Sprinkler System" and "Fire Alarm System" paragraphs, sprinklers and fire alarm notification appliances shall be repositioned as appropriate after installation of partitions to maintain the level of fire protection and life safety.

D. Partitioning requirements may be satisfied with existing partitions if they meet the Government's standards and layout requirements.

E. Newly installed gypsum board material must be Greenguard Gold Certified or have 0 grams per liter of VOCs.

5.41 WALL FINISHES (JUN 2012)

If the Government chooses to install a wall covering, the minimum standard is vinyl-free, chlorine-free, plasticizer-free wall covering with recycled content or bio-based commercial wall covering weighing not less than 13 ounces per square yard or equivalent. If the Government chooses to install a high-performance paint coating, it shall comply with the VOC limits of the Green Seal Standard GS-11.

5.42 PAINTING – TI (SEP 2013)

A. Prior to acceptance, all surfaces within the Space which are designated by GSA for painting shall be newly finished in colors acceptable to the Government.

B. The Lessor shall provide interior paints and coatings that meet or are equivalent to the following standards for VOC off gassing:

1. Topcoat paints: Green Seal Standard GS-11, Paints, First Edition, May 20, 1993.
2. All other architectural coatings, primers, and undercoats: South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, effective January 1, 2004.
3. Architectural paints, coatings, and primers applied to interior walls and ceilings:
   a. Flats: 50 grams per liter (g/L).
   b. Non-flats: 150 g/L.
4. Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates: 250 g/L.
5. Clear wood finishes:
   a. Varnish: 350 g/L.
   b. Lacquer: 550 g/L.
6. Floor coatings: 100 g/L.
7. Sealers:
   a. Waterproofing sealers: 250 g/L.
   b. Sanding sealers: 275 g/L.
   c. All other sealers: 200 g/L.
8. Shellacs:
   a. Clear: 730 g/L.
   b. Pigmented: 550 g/L.
9. Stains: 250 g/L.

C. Use reprocessed latex paint in accordance with EPA's CPG (Comprehensive Procurement Guidelines) on all painted surfaces where feasible. The type of paint shall be acceptable to the Government.

5.43 FLOOR COVERINGS AND PERIMETERS (APR 2015) MODIFIED

A. **Carpet tiles** shall meet the requirements set forth in the specifications below. Floor perimeters at partitions shall have wood, rubber, vinyl, or carpet base. Floor covering shall be installed in accordance with manufacturing instructions to lay smoothly and evenly.

B. The use of existing carpet may be approved by the Government; however, existing carpet shall be repaired, stretched, and cleaned before occupancy and shall meet the static buildup requirement as stated in the specifications below.

C. Any alternate flooring shall be pre-approved by the Government.

D. SPECIFICATIONS FOR CARPET TO BE NEWLY INSTALLED OR REPLACED

1. Product sustainability and environmental requirements. In order to achieve superior performance in multiple environmental attribute areas, carpet must have third party certification in accordance with ANSI/NSF 140 2007e Sustainable Carpet Assessment Standard at a "Gold" level minimum. Carpet manufacturer must supply certificate as part of the procurement documentation.

2. Recycled content: Recycled content is measured by total product weight of pre-consumer and/or post-consumer materials. Recycled content must be at least 10% post-consumer recovered content.

3. Low emitting materials. The carpet and floor adhesive (for glue-down installations) must meet the Green Label Plus (GLP) and floor adhesive (for direct glue down) requirements of the Carpet and Rug Institute (CRI). GLP number must be provided. Adhesives must meet VOC content standards per South Coast Air Quality Management District Rule #1168.

4. Face fiber content. Face yarn must be 100 percent nylon fiber. Loop Pile shall be 100 percent Bulk Continuous Filament (BCF); cut and loop shall be 100 percent BCF for the loop portion and may be BCF or staple for the cut portion; cut pile carpet shall be staple or BCF.

5. Performance requirements for broadloom and modular tile:

a. Static: Less than or equal to 3.5 kV when tested by AATCC Test Method 134 (Step Test Option).
b. Flammability: Meets CPSC-FF-1-70, DOC-FF-1-70 Methenamine Tablet Test criteria.
c. Flooring Radiant Panel Test: Meets NFPA 253 Class I or II depending upon occupancy and fire code when tested under ASTM E-648 for glue down installation.
d. Smoke Density: NBS Smoke Chamber - Less than 450 Flaming Mode when tested under ASTM E-662.

NOTE: Testing must be performed in a NVLAP accredited laboratory.

6. Texture Appearance Retention Rating (TARR). Carpet must meet TARR ratings specified below:

Space Definition	Traffic Classification	TARR Classification
Private Offices	Moderate	≥ 3.0 TARR
Training, conference, courtrooms, etc.	Heavy	≥ 3.0 TARR
Open Office, cafeteria, corridors, lobbies	Severe	≥ 3.5 TARR

The carpet must be evaluated using ASTM D-5252 Hexapod Drum Test as per the commercial carpet test procedure and the TARR classification determined using ASTM D-7330.

7. Carpet reclamation. Reclamation of existing carpet to be determined with potential vendor. When carpet is replaced, submit certification documentation from the reclamation facility to the LCO.

8. Warranty. Submit a copy of the manufacturer's standard warranty to the LCO within the first 60 days of Government occupancy. The Government is to be a beneficiary of the terms of this warranty.

5.44 HEATING AND AIR CONDITIONING (JUN 2012)

Zone Control. Provide individual thermostat control for office Space with control areas not to exceed 1,500 ABOA SF. Interior spaces must be separately zoned. Specialty occupancies (conference rooms, kitchens, etc.) must have active controls capable of sensing Space use and modulating HVAC system in response to Space demand. Areas that routinely have extended hours of operation shall be environmentally controlled through dedicated heating and air conditioning equipment. Special purpose areas (such as photocopy centers, large conference rooms, computer rooms, etc.) with an internal cooling load in excess of 5 tons shall be independently controlled. Provide concealed package air conditioning equipment to meet localized spot cooling of tenant special equipment. Portable space heaters are prohibited.

5.45 ELECTRICAL: DISTRIBUTION (SEP 2015)

A. All electrical, telephone, and data outlets within the Space shall be installed by the Lessor in accordance with the DIDs, if applicable. All electrical outlets shall be installed in accordance with NFPA Standard 70.

B. All outlets within the Space shall be marked and coded for ease of wire tracing; outlets shall be circuited separately from lighting. All floor outlets shall be flush with the plane of the finished floor. Outlet cover colors shall be coordinated with partition finish selections.

C. The Lessor shall in all cases safely conceal outlets and associated wiring (for electricity, voice, and data) to the workstation(s) in partitions, ceiling plenums, in recessed floor ducts, under raised flooring, or by use of a method acceptable to the Government.

5.46 TELECOMMUNICATIONS: DISTRIBUTION AND EQUIPMENT (JUN 2012)

Telecommunications floor or wall outlets shall be provided as part of the TIs. At a minimum, each outlet shall house one 4-pair wire jack for voice and one 4-pair wire jack for data. The Lessor shall ensure that all outlets and associated wiring, copper, coaxial cable, optical fiber, or other transmission medium used to transmit telecommunications (voice, data, video, Internet, or other emerging technologies) service to the workstation shall be safely concealed under raised floors, in floor ducts, walls, columns, or molding. All outlets/junction boxes shall be provided with rings and pull strings to facilitate the installation of cable. Some transmission medium may require special conduit, inner duct, or shielding as specified by the Government.

5.47 TELECOMMUNICATIONS: LOCAL EXCHANGE ACCESS (AUG 2008)

Provide sealed conduit to house the agency telecommunications system when required.

5.48 DATA DISTRIBUTION (JUN 2012)

The Government shall be responsible for the cost of purchasing and installing data cable. The Lessor shall safely conceal data outlets and the associated wiring used to transmit data to workstations in floor ducts, walls, columns, or below access flooring. The Lessor shall provide as part of the TI, outlets with rings and pull strings to facilitate the installation of the data cable. When cable consists of multiple runs, the Lessor shall provide ladder type or other acceptable cable trays to prevent Government-provided cable coming into contact with suspended ceilings or sprinkler piping. Cable trays shall form a loop around the perimeter of the Space such that they are within a 30-foot horizontal distance of any single drop.

5.49 ELECTRICAL, TELEPHONE, DATA FOR SYSTEMS FURNITURE (JUN 2012)

A. The Lessor shall provide as part of the TIs separate data, telephone, and electric junction boxes for the base feed connections to Government provided modular or systems furniture, when such feeds are supplied via wall outlets or floor penetrations. When overhead feeds are used, junction boxes shall be installed for electrical connections. Raceways shall be provided throughout the furniture panels to distribute the electrical, telephone, and data cable. The Lessor shall provide all electrical service wiring and connections to the furniture at designated junction points. Each electrical junction shall contain an 8-wire feed consisting of 3 general purpose 120-V circuits with 1 neutral and 1 ground wire, and a 120-V isolated ground circuit with 1 neutral and 1 isolated ground wire. A 20-ampere circuit shall have no more than 8 general purpose receptacles or 4 isolated ground "computer" receptacles.

B. The Government shall be responsible for the cost of purchasing data and telecommunications cable. Said cable shall be installed and connected to systems furniture by the Lessor/contractor with the assistance and/or advice of the Government or computer vendor. The Lessor shall provide wall mounted data and telephone junction boxes, which shall include rings and pull strings to facilitate the installation of the data and telecommunications cable. When cable consists of multiple runs, the Lessor shall provide ladder-type or other acceptable cable trays to prevent Government provided cable coming into contact with suspended ceilings or sprinkler piping. Cable trays shall form a loop around the perimeter of the Space such that they are within a 30-foot horizontal distance of any single drop. Said cable trays shall provide access to both telecommunications data closets and telephone closets.

C. The Lessor shall furnish and install suitably sized junction boxes near the "feeding points" of the furniture panels. All "feeding points" shall be shown on Government approved design intent drawings. The Lessor shall temporarily cap off the wiring in the junction boxes until the furniture is installed. The Lessor shall make all connections in the power panel and shall keep the circuit breakers off. The Lessor shall identify each circuit with the breaker number and shall identify the computer hardware to be connected to it. The Lessor shall identify each breaker at the panel and identify the devices that it serves.

D. The Lessor's electrical contractor must connect power poles or base feeds in the junction boxes to the furniture electrical system and test all pre-wired receptacles in the systems furniture. Other Government contractors will be installing the data cable in the furniture panels for the terminal and printer locations, installing the connectors on the terminal/printer ends of the cable, and continuity testing each cable. Work shall be coordinated and performed in conjunction with the furniture, telephone, and data cable installers. Much of this work may occur over a weekend on a schedule that requires flexibility and on-call visits. The Lessor must coordinate the application of Certification of Occupancy with furniture installation.

5.50 LIGHTING: INTERIOR AND PARKING – TI (SEP 2015)

A. FIXTURES: Once the design intent drawings are approved, the Lessor shall design and provide interior lighting to comply with requirements under the paragraph, "Lighting: Interior and Parking – Shell." Any additional lighting fixtures and/or components required beyond what would have been provided for an open office plan (shell) are part of the TIs.

B. PENDANT STYLE FIXTURES: If pendant style lighting fixtures are used, the increase between the number of fixtures required in the Building shell and the Space layout is part of the TIs.

C. MIXED FIXTURES: DIDs, if applicable, may require a mixed use of recessed or pendant style fixtures in the Space.

D. BUILDING PERIMETER: There may be additional requirements for lighting in exterior parking areas, vehicle driveways, pedestrian walkways, and Building perimeter in the Security Requirements attached to this Lease.

SECTION 6 UTILITIES, SERVICES, AND OBLIGATIONS DURING THE LEASE TERM

6.32 PROVISION OF SERVICES, ACCESS, AND NORMAL HOURS (JUN 2012) MODIFIED

A. The Government's normal hours of operations are established as **8:00** AM to **4:30** PM, Monday through Friday, with the exception of Federal holidays, **and 8:00 AM to 12:00 PM Saturday**. Services, maintenance, and utilities shall be provided during these hours. The Government shall have access to the Premises and its Appurtenant Areas at all times without additional payment, including the use, during other than normal hours, of necessary services and utilities such as elevators, restrooms, lights, and electric power. Cleaning shall be performed during normal hours.

B. The Lessor and the Lessor's representatives, employees and contractors shall demonstrate a cooperative, positive, welcoming, respectful, professional and business-like demeanor and shall present a neat, clean, job-appropriate (professional) appearance.

6.33 UTILITIES (APR 2011)

The Lessor is responsible for providing all utilities necessary for base Building and tenant operations as part of the rental consideration.

6.34 ~~UTILITIES SEPARATE FROM RENTAL/BUILDING OPERATING PLAN (AUG 2011)~~ INTENTIONALLY DELETED

6.35 HEATING AND AIR CONDITIONING (SEP 2014)

A. In all office areas, temperatures shall conform to local commercial equivalent temperature levels and operating practices in order to maximize tenant satisfaction. These temperatures shall be maintained throughout the leased Premises and service areas, regardless of outside temperatures, during the hours of operation specified in the Lease. The Lessor shall perform any necessary systems start-up required to meet the commercially equivalent temperature levels prior to the first hour of each day's operation. At all times, humidity shall be maintained below 60% relative humidity.

B. During non-working hours, heating temperatures shall be set no higher than 55° Fahrenheit, and air conditioning shall not be provided except as necessary to return Space temperatures to a suitable level for the beginning of working hours. Thermostats shall be secured from manual operation by key or locked cage. A key shall be provided to the Government's designated representative.

C. Thermal comfort. During all working hours, comply with the latest edition of ASHRAE Standard 55, Thermal Comfort Conditions for Human Occupancy.

D. Warehouse or garage areas require heating and ventilation only. Cooling of this Space is not required. Temperature of warehouse or garage areas shall be maintained at a minimum of 50° Fahrenheit.

E. The Lessor shall conduct HVAC system balancing after any HVAC system alterations during the term of the Lease and shall make a reasonable attempt to schedule major construction outside of office hours.

F. Normal HVAC systems' maintenance shall not disrupt tenant operations.

G. **200** ABOA SF of the Premises shall receive cooling at all times (24 hrs a day, 365 days a year) for purposes of cooling the designated server room. The peak BTU output of this room is established as **54,743** BTUs per hour. The temperature of this room shall be maintained at **70** degrees F, with humidity control not to exceed 60% relative humidity, regardless of outside temperature or seasonal changes. Notwithstanding the foregoing, Lessor shall provide this service at no additional cost to the Government if the Lessor provides this service to other tenants in the Building at no additional charge.

6.36 OVERTIME HVAC USAGE (JUN 2012)

A. If there is to be a charge for heating or cooling outside of the Building's normal hours, such services shall be provided at the hourly rates set forth elsewhere in the Lease. Overtime usage services may be ordered by the Government's authorized representative only.

B. When the cost of service is $3,000 or less, the service may be ordered orally. An invoice shall be submitted to the official placing the order for certification and payment. Orders for services costing more than $3,000 shall be placed using GSA Form 300, Order for Supplies or Services, or other approved service requisition procurement document. An invoice conforming to the requirements of this Lease shall be submitted to the official placing the order for certification and payment.

C. Failure to submit a proper invoice within 120 days of providing overtime utilities shall constitute a waiver of the Lessor's right to receive any payment for such overtime utilities pursuant to this Lease.

6.37 JANITORIAL SERVICES (JUN 2012)

The Lessor shall maintain the Premises and all areas of the Property to which the Government has routine access in a clean condition and shall provide supplies and equipment for the term of the Lease. The following schedule describes the level of services intended. Performance will be based on the LCO's evaluation of results, not the frequency or method of performance.

A. Daily. Empty trash receptacles. Sweep entrances, lobbies, and corridors. Spot sweep floors, and spot vacuum carpets. Clean drinking fountains. Sweep and damp mop or scrub restrooms. Clean all restroom fixtures, and replenish restroom supplies. Dispose of all trash and garbage

generated in or about the Building. Wash inside and out or steam clean cans used for collection of food remnants from snack bars and vending machines. Dust horizontal surfaces that are readily available and visibly require dusting. Spray buff resilient floors in main corridors, entrances, and lobbies. Clean elevators and escalators. Remove carpet stains. Police sidewalks, parking areas, and driveways. Sweep loading dock areas and platforms. Clean glass entry doors to the Space.

B. Three times a week. Sweep or vacuum stairs.

C. Weekly. Damp mop and spray buff all resilient floors in restrooms and health units. Sweep sidewalks, parking areas, and driveways (weather permitting).

D. Every two weeks. Spray buff resilient floors in secondary corridors, entrance, and lobbies. Damp mop and spray buff hard and resilient floors in office Space.

E. Monthly. Thoroughly dust furniture. Completely sweep and/or vacuum carpets. Sweep storage Space. Spot clean all wall surfaces within 70 inches of the floor.

F. Every two months. Damp wipe restroom wastepaper receptacles, stall partitions, doors, window sills, and frames. Shampoo entrance and elevator carpets.

G. Three times a year. Dust wall surfaces within 70 inches of the floor, vertical surfaces and under surfaces. Clean metal and marble surfaces in lobbies. Wet mop or scrub garages.

H. Twice a year. Wash all interior and exterior windows and other glass surfaces. Strip and apply four coats of finish to resilient floors in restrooms. Strip and refinish main corridors and other heavy traffic areas.

I. Annually. Wash all venetian blinds, and dust 6 months from washing. Vacuum or dust all surfaces in the Building more than 70 inches from the floor, including light fixtures. Vacuum all draperies in place. Strip and refinish floors in offices and secondary lobbies and corridors. Shampoo carpets in corridors and lobbies. Clean balconies, ledges, courts, areaways, and flat roofs.

J. Every two years. Shampoo carpets in all offices and other non-public areas.

K. Every five years. Dry clean or wash (as appropriate) all draperies.

L. As required. Properly maintain plants and lawns. Provide initial supply, installation, and replacement of light bulbs, tubes, ballasts, and starters. Provide and empty exterior ash cans and clean area of any discarded cigarette butts.

M. Pest control. Control pests as appropriate, using Integrated Pest Management techniques, as specified in the GSA Environmental Management Integrated Pest Management Technique Guide (E402-1001).

6.38 SELECTION OF CLEANING PRODUCTS (APR 2015)

The Lessor shall use cleaning products (including general purpose cleaners, floor cleaners, hand soap, etc.) that comply with either the Green Seal standard, the UL/EcoLogo standard, EPA's Design for the Environment (DfE) designation, or a substitute acceptable to the LCO. Hand soap products shall also be USDA Certified BioPreferred.

6.39 ~~SELECTION OF PAPER PRODUCTS (APR 2015)~~ INTENTIONALLY DELETED

6.40 SNOW REMOVAL (APR 2011)

Lessor shall provide snow removal services for the Government on all days for which this Lease has designated normal hours. Lessor shall clear parking lots if the accumulation of snow exceeds two inches. Lessor shall clear sidewalks, walkways and other entrances before accumulation exceeds 1.5 inches. The snow removal shall take place no later than 5:00 AM, without exception. Should accumulation continue throughout the day, the Lessor shall provide such additional snow removal services to prevent accumulation greater than the maximums specified in this paragraph. In addition to snow removal, the Lessor shall keep walkways, sidewalks and parking lots free of ice during the normal hours. The Lessor shall remove excess buildup of sand and/or ice melt to minimize slipping hazards. If the Building entrance(s) has a northern exposure, then Lessor shall take additional measures to protect the safety of pedestrians.

6.41 MAINTENANCE AND TESTING OF SYSTEMS (SEP 2013)

A. The Lessor is responsible for the total maintenance and repair of the leased Premises. Such maintenance and repairs include the site and private access roads. All equipment and systems shall be maintained to provide reliable, energy efficient service without unusual interruption, disturbing noises, exposure to fire or safety hazards, uncomfortable drafts, excessive air velocities, or unusual emissions of dirt. The Lessor's maintenance responsibility includes initial supply and replacement of all supplies, materials, and equipment necessary for such maintenance. Maintenance, testing, and inspection of appropriate equipment and systems shall be done in accordance with current applicable codes, and inspection certificates shall be displayed as appropriate. Copies of all records in this regard shall be forwarded to the Government's designated representative.

B. At the Lessor's expense, the Government reserves the right to require documentation of proper operations, inspection, testing, and maintenance of fire protection systems, such as, but not limited to, fire alarm, fire sprinkler, standpipes, fire pump, emergency lighting, illuminated exit signs, emergency generator, prior to occupancy to ensure proper operation. These tests shall be witnessed by the Government's designated representative.

6.42 MAINTENANCE OF PROVIDED FINISHES (SEP 2013)

A. Paint, wall coverings. Lessor shall maintain all wall coverings and high performance paint coatings in "like new" condition for the life of the Lease. All painted surfaces shall be repainted at the Lessor's expense, including the moving and returning of furnishings, any time during the occupancy by the Government if the paint is peeling or permanently stained, except where damaged due to the negligence of the Government. All work shall be done after normal working hours as defined elsewhere in this Lease. In addition to the foregoing requirement,

1. Lessor shall repaint common areas at least every three years.

2. Lessor shall perform cyclical repainting of the Space every **5** years of occupancy. This cost, including the moving and returning of furnishings, as well as disassembly and reassembly of systems furniture per manufacturer's warranty, shall be at the Lessor's expense.

B. Carpet and flooring.

1. Except when damaged by the Government, the Lessor shall repair or replace flooring at any time during the Lease term when:

a. Backing or underlayment is exposed;
b. There are noticeable variations in surface color or texture;
c. It has curls, upturned edges, or other noticeable variations in texture;
d. Tiles are loose; or,
e. Tears or tripping hazards are present.

2. Notwithstanding the foregoing, as part of the rental consideration, the Lessor shall replace all carpet in the Space every **5** years, with a product which meets the requirements in the "Floor Coverings and Perimeters" paragraph in this Lease.

3. Repair or replacement shall include the moving and returning of furnishings, including disassembly and reassembly of systems furniture per manufacturer's warranty, if necessary. Work shall be performed after the normal hours established elsewhere in this Lease.

6.43 ASBESTOS ABATEMENT (APR 2011)

If asbestos abatement work is to be performed in the Space after occupancy, the Lessor shall submit to the Government the occupant safety plan and a description of the methods of abatement and re-occupancy clearance, in accordance with OSHA, EPA, DOT, state, and local regulations and guidance, at least 4 weeks prior to the abatement work.

6.44 ONSITE LESSOR MANAGEMENT (APR 2011)

The Lessor shall provide an onsite Building superintendent or a locally designated representative available to promptly respond to deficiencies, and immediately address all emergency situations.

6.45 IDENTITY VERIFICATION OF PERSONNEL (SEP 2013)

A. The Government reserves the right to verify identities of personnel with routine pre-occupancy and/or unaccompanied access to Government space. The Lessor shall comply with the agency personal identity verification procedures below that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and M11-11, and Federal Information Processing Standards Publication (FIPS PUB) Number 201, as amended.

B. The Government reserves the right to conduct additional background checks on Lessor personnel and contractors with routine access to Government leased space throughout the term of the lease.

C. Upon request, the Lessor will notify the Government whether they will use either the manual process and submit completed fingerprint charts and background investigation forms, or use the electronic process of ID verification, completed through the e-QIP system. This would be done for each employee of the Lessor, as well as employees of the Lessor's contractors or subcontractors who will provide building operating services requiring routine access to the Government's leased space for a period greater than 6 months. The Government may also require this information for the Lessor's employees, contractors, or subcontractors who will be engaged to perform alterations or emergency repairs in the Government's space.

1. MANUAL PROCESS: The Lessor shall provide Form FD 258, Fingerprint Chart (available from the Government Printing Office at http://bookstore.gpo.gov), and Standard Form 85P, Questionnaire for Public Trust Positions, completed by each person and returned to the Lease Contracting Officer (or the contracting officer's designated representative) within 30 days from receipt of the forms.

2. ELECTRONIC PROCESS: The electronic process will be done through the e-QIP system. The Lessor's contractor/personnel will receive an email along with instructions for completing the Office of Personnel Electronic Questionnaire (e-QIP). The contractor/personnel will have up to (7) seven business days to login and complete the e-QIP for the background investigation. The contractor/personnel will be instructed to access the website, and receive on screen instructions which include but it is not limited to:

a) How to Log In
b) How to Answer and Create New Golden Questions
c) What Additional Documents to Send
d) To Print and Sign two Signature Forms (Certification That My Answers Are True)
e) To complete the submission process, press the "Release /Request Transmit to the Agency" and exit the process
f) Where to Send.

The Lessor must ensure prompt input, and timely receipt of the following, from their contractor/personnel:

a) Two FBI Fingerprint Cards (Form FD-258) or one card produced by a livescan device,
b) Certification That My Answers Are True
c) Authorization for Release of Information.

D. The Lessor must ensure the contracting officer (or the contracting officer's designated representative) has all of the requested documentation to ensure the completion of the investigation.

E. Based on the information furnished, the Government will conduct background investigations of the employees. The contracting officer will advise the Lessor in writing if an employee fails the investigation, and, effective immediately, the employee will no longer be allowed to work or be assigned to work in the Government's space.

F. Throughout the life of the lease, the Lessor shall provide the same data for any new employees, contractors, or subcontractors who will be assigned to the Government's space. In the event the Lessor's contractor or subcontractor is subsequently replaced, the new contractor or subcontractor is not required to submit another set of these forms for employees who were cleared through this process while employed by the former contractor or subcontractor. The Lessor shall resubmit Form FD 258 and Standard Form 85P for every employee covered by this paragraph on a 5 year basis.

G. The Lessor shall insert this paragraph in all subcontracts when the subcontractor is required to have physical access to a federally controlled facility or access to a federal information system.

6.46 SCHEDULE OF PERIODIC SERVICES (JUN 2012)

Within 60 days after occupancy by the Government, the Lessor shall provide the LCO with a detailed written schedule of all periodic services and maintenance to be performed other than daily, weekly, or monthly.

6.47 LANDSCAPING (SEP 2015)

A. Landscape management practices shall prevent pollution by:

1. Employing practices which avoid or minimize the need for fertilizers and pesticides;

2. Prohibiting the use of the 2,4-Dichlorophenoxyacetic Acid (2,4-D) herbicide and organophosphates; and

3. Composting/recycling all yard waste.

B. The Lessor shall use landscaping products with recycled content as required by EPA's CPG for landscaping products. Refer to EPA's CPG web site, www.epa.gov/cpg.

C. If the Lessor satisfies performance of this Lease by new construction, and where conditions permit, the site shall be landscaped for low maintenance and water conservation with plants that are either native or well-adapted to local growing conditions.

6.48 LANDSCAPE MAINTENANCE (APR 2011)

Landscape maintenance shall be performed during the growing season at not less than a weekly cycle and shall consist of watering, weeding, mowing, and policing the area to keep it free of debris. Pruning and fertilization shall be done on an as-needed basis. In addition, dead, dying, or damaged plants shall be replaced.

6.49 RECYCLING (JUN 2012)

A. For Leases greater than 10,000 rentable SF, with a Lease term greater than six months, the Lessor shall establish a recycling program for (at a minimum) paper, corrugated cardboard, glass, plastics, and metals where local markets for recovered materials exist.

B. Where state or local law, code, or ordinance requires recycling programs for the Premises, Lessor shall comply with such state and/or local law, code, or ordinance.

C. When implementing any recycling program, the Lessor shall provide an easily accessible, appropriately sized area (2 SF per 1,000 SF of Building gross floor area) that serves the Space for the collection and storage of materials for recycling. Telecom rooms are not acceptable as recycling space. During the Lease term, the Lessor agrees, upon request, to provide the Government with additional information concerning recycling programs maintained in the Building and in the Space.

6.50 RANDOLPH-SHEPPARD COMPLIANCE (SEP 2013)

During the term of the Lease, the Lessor may not establish vending facilities within the leased Space that will compete with any Randolph-Sheppard vending facilities.

6.51 ~~SAFEGUARDING AND DISSEMINATION OF SENSITIVE BUT UNCLASSIFIED (SBU) BUILDING INFORMATION (SEP 2013)~~ INTENTIONALLY DELETED

6.52 INDOOR AIR QUALITY (SEP 2013)

A. The Lessor shall control contaminants at the source and/or operate the Space in such a manner that the GSA indicator levels for carbon monoxide (CO), carbon dioxide (CO2), and formaldehyde (HCHO) are not exceeded. The indicator levels for office areas shall be: CO 9 ppm time weighted average (TWA 8 hour sample); CO2 1,000 ppm (TWA); HCHO 0.1 ppm (TWA).

B. The Lessor shall make a reasonable attempt to apply insecticides, paints, glues, adhesives, and HVAC system cleaning compounds with highly volatile or irritating organic compounds, outside of working hours. Except in an emergency, the Lessor shall provide at least 72 hours advance notice to the Government before applying noxious chemicals in occupied Spaces and shall adequately ventilate those Spaces during and after application.

C. The Lessor shall promptly investigate indoor air quality (IAQ) complaints and shall implement the necessary controls to address the complaint.

D. The Government reserves the right to conduct independent IAQ assessments and detailed studies in Space that it occupies, as well as in space serving the Space (e.g., common use areas, mechanical rooms, HVAC systems, etc.). The Lessor shall assist the Government in its assessments and detailed studies by:

1. Making available information on Building operations and Lessor activities;
2. Providing access to Space for assessment and testing, if required; and
3. Implementing corrective measures required by the LCO.

E. The Lessor shall provide to the Government material safety data sheets (MSDS) upon request for the following products prior to their use during the term of the Lease: adhesives, caulking, sealants, insulating materials, fireproofing or firestopping materials, paints, carpets, floor and wall patching or leveling materials, lubricants, clear finish for wood surfaces, janitorial cleaning products, pesticides, rodenticides, and herbicides. The Government reserves the right to review such products used by the Lessor within:

1. The Space;
2. Common Building areas;
3. Ventilation systems and zones serving the Space; and
4. The area above suspended ceilings and engineering space in the same ventilation zone as the Space.

F. Where hazardous gasses or chemicals (any products with data in the Health and Safety section of the MSDS sheets) may be present or used, including large-scale copying and printing rooms, segregate areas with deck-to-deck partitions with separate outside exhausting at a rate of at least 0.5 cubic feet per minute per SF, no air recirculation. The mechanical system must operate at a negative pressure compared with the surrounding spaces of at least an average of 5 Pa (pascal) (0.02 inches of water gauge) and with a minimum of 1 Pa (0.004 inches of water gauge) when the doors to the rooms are closed.

6.53 RADON IN AIR (SEP 2013)

A. The radon concentration in the air of the Space shall be less than 4 picoCuries per liter (pCi/L) for childcare and 25 pCi/L for all other space, herein called "GSA action levels."

B. INITIAL TESTING:

1. The Lessor shall:

a. Test for radon that portion of Space planned for occupancy by the Government in ground contact or closest to the ground up to and including the second floor above grade (Space on the third or higher floor above grade need not be measured);.

b. Report the results to the LCO upon award; and

c. Promptly carry out a corrective action program for any radon concentration which equals or exceeds the GSA action levels.

2. Testing sequence. The Lessor shall measure radon by the standard test in sub-paragraph D.1, completing the test not later than 150 days after award, unless the LCO decides that there is not enough time to complete the test before Government occupancy, in which case the Lessor shall perform the short test in sub-paragraph D.2.

3. If the Space offered for Lease to the Government is in a Building under construction or proposed for construction, the Lessor, if possible, shall perform the standard test during buildout before Government occupancy of the Space. If the LCO decides that it is not possible to complete the standard test before occupancy, the Lessor shall complete the short test before occupancy and the standard test not later than 150 days after occupancy.

C. CORRECTIVE ACTION PROGRAM:

1. Program Initiation and Procedures.

a. If either the Government or the Lessor detects radon at or above the GSA action levels at any time before Government occupancy, the Lessor shall carry out a corrective action program which reduces the concentration to below the GSA action levels before Government occupancy.

b. If either the Government or the Lessor detects a radon concentration at or above the GSA action levels at any time after Government occupancy, the Lessor shall promptly carry out a corrective action program which reduces the concentration to below the GSA action levels.

c. If either the Government or the Lessor detects a radon concentration at or above the GSA action levels at any time after Government occupancy, the Lessor shall promptly restrict the use of the affected area and shall provide comparable temporary space for the tenants,

as agreed to by the Government, until the Lessor carries out a prompt corrective action program which reduces the concentration to below the GSA action levels and certifies the Space for re-occupancy.

d. The Lessor shall provide the Government with prior written notice of any proposed corrective action or tenant relocation. The Lessor shall promptly revise the corrective action program upon any change in Building condition or operation which would affect the program or increase the radon concentration to or above the GSA action levels.

2. The Lessor shall perform the standard test in sub-paragraph D.1 to assess the effectiveness of a corrective action program. The Lessor may also perform the short test in sub-paragraph D.2 to determine whether the Space may be occupied but shall begin the standard test concurrently with the short test.

3. All measures to accommodate delay of occupancy, corrective action, tenant relocation, tenant re-occupancy, or follow-up measurement, shall be provided by the Lessor at no additional cost to the Government.

4. If the Lessor fails to exercise due diligence, or is otherwise unable to reduce the radon concentration promptly to below the GSA action levels, the Government may implement a corrective action program and deduct its costs from the rent.

D. TESTING PROCEDURES:

1. Standard Test. Place alpha track detectors throughout the required area for 91 or more days so that each covers no more than 2,000 ABOA SF. Use only devices listed in the EPA Radon Measurement Proficiency Program (RMP) application device checklists. Use a laboratory rated proficient in the EPA RMP to analyze the devices. Submit the results and supporting data (sample location, device type, duration, radon measurements, laboratory proficiency certification number, and the signature of a responsible laboratory official) within 30 days after the measurement.

2. Short Test. Place alpha track detectors for at least 14 days, or charcoal canisters for 2 days to 3 days, throughout the required area so that each covers no more than 2,000 ABOA SF, starting not later than 7 days after award. Use only devices listed in the EPA RMP application device checklists. Use a laboratory rated proficient in the EPA RMP to analyze the devices. Submit the results and supporting data within 30 days after the measurement. In addition, complete the standard test not later than 150 days after Government occupancy.

6.54 ~~RADON IN WATER (JUN 2012)~~ INTENTIONALLY DELETED

6.55 HAZARDOUS MATERIALS (SEP 2013)

A. The leased Space shall be free of hazardous materials, hazardous substances, and hazardous wastes, as defined by and according to applicable Federal, state, and local environmental regulations. Should there be reason to suspect otherwise, the Government reserves the right, at Lessor's expense, to require documentation or testing to confirm that the Space is free of all hazardous materials.

B. Lessor shall, to the extent of its knowledge, notify Government of the introduction of any hazardous materials onto the Property by Lessor or others, including but not limited to, co-tenants occupying Space in the Building.

6.56 MOLD (SEP 2013)

A. Actionable mold is mold of types and concentrations in excess of that found in the local outdoor air.

B. The Lessor shall provide Space to the Government that is free from actionable mold and free from any conditions that reasonably can be anticipated to permit the growth of actionable mold or are indicative of the possibility that actionable mold will be present (indicators).

C. At such times as the Government may direct, including but not limited to: after a flood, water damage not caused by the Government, or repairs caused by the Lessor, the Lessor, at its sole cost, expense and risk shall: (i) cause an industrial hygienist certified by the American Board of Industrial Hygienists or a qualified consultant (the Inspector) who, in either instance, is reasonably acceptable to the Government, to inspect and evaluate the Space for the presence of actionable mold or mold indicators; and (ii) cause the Inspector to deliver the results of its inspection and evaluation (the Report) to the Government within 30 days after it conducts same and, in all events, at the same time that it delivers the Report to Lessor. With the delivery of the Report to the Government, the Inspector shall notify the Government, in writing via cover letter to the report, if the Inspector discovers or suspects the existence of actionable mold or indicators in the leased Space.

D. The presence of actionable mold in the Premises may be treated as a Casualty, as determined by the Government, in accordance with the Fire and Other Casualty clause contained in the General Clauses of this Lease. In addition to the provisions of the Fire and Other Casualty clause of this Lease, should a portion of the Premises be determined by the Government to be un-tenantable due to an act of negligence by the Lessor or his agents, the Lessor shall provide reasonably acceptable alternative Space at the Lessor's expense, including the cost of moving, and any required alterations.

E. If the Report indicates that actionable mold or indicators are present in the leased Space, the Lessor, at its sole cost, expense, and risk, shall within 30 days after its receipt of the Report: (1) retain an experienced mold remediation contractor reasonably acceptable to the Government to prepare and submit to the Government and Lessor a remediation plan (the Plan) and within 90 days after the Government's approval of the Plan, remediate the actionable mold or the indicators in the leased Space, but prior to commencing such remediation, Lessor shall send the Government a notice stating: (i) the date on which the actionable mold remediation shall start and how long it is projected to continue; (ii) which portion of the leased Space shall be subject to the remediation; and (iii) the remediation procedures and standards to be used to implement the Plan and the clearance criteria to be employed at the conclusion of the remediation; and (2) notify, in accordance with any applicable Federal, state, and local health and safety requirements, the Government employees as well as all other occupants of and visitors to the leased Space of the nature, location and schedule for the planned remediation and reasons therefore.

F. The Lessor shall be responsible for conducting the remediation in accordance with the relevant provisions of the document entitled "Mold Remediation in Schools and Commercial Buildings" (EPA 402-K-01-001, March 2001), published by the U.S. Environmental Protection Agency, as same may be amended or revised from time to time, and any other applicable Federal, state, or local laws, regulatory standards and guidelines.

G. The Lessor acknowledges and agrees that the Government shall have a reasonable opportunity to inspect the leased Space after conclusion of the remediation. If the results of the Government's inspection indicate that the remediation does not comply with the Plan or any other applicable Federal, state, or local laws, regulatory standards or guidelines, the Lessor, at its sole cost, expense, and risk, shall immediately take all further actions necessary to bring the remediation into compliance.

H. If the Lessor fails to exercise due diligence, or is otherwise unable to remediate the actionable mold, the Government may implement a corrective action program and deduct its costs from the rent.

6.57 OCCUPANT EMERGENCY PLANS (SEP 2013)

The Lessor is required to cooperate, participate and comply with the development and implementation of the Government's Occupant Emergency Plan (OEP) and if necessary, a supplemental Shelter-in Place (SIP) Plan. Periodically, the Government may request that the Lessor assist in reviewing and revising its OEP and SIP. The Plan, among other things, must include an annual emergency evacuation drill, emergency notification procedures for the Lessor's Building engineer or manager, Building security, local emergency personnel, and Government agency personnel.

6.58 FLAG DISPLAY (SEP 2013)

If the Lessor has supplied a flagpole on the Property as a requirement of this Lease, the Lessor shall be responsible for flag display on all workdays and Federal holidays. The Lessor may illuminate the flag in lieu of raising and lowering the flag daily. The Government will provide instructions when flags shall be flown at half-staff.

SECTION 7 ADDITIONAL TERMS AND CONDITIONS

7.01 SECURITY STANDARDS (JUN 2012)

The Lessor agrees to the requirements of Security Level **II** attached to this Lease.

7.02 LEAK-PROOF DESIGN AND CONSTRUCTION

A. Roofs over all **laboratory** areas must be designed with a minimum ½ inch per foot slope. The low points of roof drainage should not be located over storage areas and processing rooms. All roofs must be provided with a separate overflow drainage system. All drains and traps must be screened to prevent pests from entering the building through the plumbing system.

B. If possible, new equipment should not be located over any **laboratory areas**. When major equipment is located above or adjacent to holdings storage, special precautions must be taken to guard against water infiltration. These measures may include drain pans, recessed floors, and sump pumps.

C. Piping (with the exception of sprinkler piping) should not run through or directly above any **laboratory areas**.

D. **Laboratory areas** must not be located below grade.

E. **Laboratory areas** must never be located under parking lots, plazas, driveways, or roadways where traffic can impact the integrity of the roofing system and cause leakage into storage areas. They also must never be located under gardens, courtyards, or plazas.

7.03 THE FOLLOWING PARAGRAPHS HAVE BEEN MODIFIED IN THIS LEASE:

1.03 RENT AND OTHER CONSIDERATION (SEP 2015)

3.31 FLOORS AND FLOOR LOADING (SHELL)

3.42 HEATING, VENTILATION, AND AIR CONDITIONING - SHELL (SEP 2013)

4.01 SCHEDULE FOR COMPLETION OF SPACE (SEP 2015)

4.05 GREEN LEASE SUBMITTALS (SEP 2015)

5.04 WINDOW COVERINGS (JUN 2012)

5.12 FLOOR COVERINGS AND PERIMETERS (APR 2015)

6.01 PROVISION OF SERVICES, ACCESS, AND NORMAL HOURS (JUN 2012)

7.04 HAZARDOUD WASTE DISPOSAL

Hazardous waste generated by the laboratory will be disposed of by the Government.

7.05 24-HOUR HVAC REQUIREMENT

A. The Space shall receive heating/cooling at all times (24 hrs a day, 365 days a year).

B. The 24 hour heating/cooling above the Normal Working Hours in the Lease in Section 6.01 - PROVISION OF SERVICES, ACCESS, AND NORMAL HOURS (JUN 2012) MODIFIED, Subparagraph A shall be provided by the Lessor per Section 1.16 – HOURLY OVERTIME HVAC RATES (AUG 2011) and billed at an average 535.5833333 hours per month. (Being 6,427 additional annual hours divided by 12 months.)

C. The Hourly Overtime Rate shall be:

a. $25.00 per hour for years 1-5 of the Lease (or monthly at $13,389.58 being $25.00 per hour x 535.583333 average hours per month).
b. $30.00 per hour for years 6-10 of the Lease (or monthly at $16,067.50 being $30.00 per hour x 535.583333 average hours per month).
c. $35.00 per hour for years 11-15 of the Lease (or monthly at $18,745.42 being $35.00 per hour x 535.583333 average hours per month).
d. $40.00 per hour for years 16-20 of the Lease (or monthly at $21,423.33 being $40.00 per hour x 535.583333 average hours per month).

D. The Lessor shall submit monthly invoices, in arrears, for this cost to the LCO (or the LCO's designated representative) at the address below:

Kory R. Hochler, CCIM
Lease Contracting Officer
U.S. General Services Administration, 6P1RW
2300 Main St., FL 7

Kansas City, MO 64108
Phone: 816-823-2229

7.06 OVERHEAD GARAGE DOOR

One (1) insulated overhead garage door with weathertight seals, exterior weather baffle, and electronic/motorized controls for opening and closing shall be included as a Lessor Shell cost. Other existing garage doors shall be closed in as a Shell cost. Any closed in areas shall match the other building materials or be approved by the LCO. The Overhead door shall also be serviced and maintained over the term of the Lease by the Lessor.

7.07 DISCREPANCY BETWEEN LEASE AND ATTACHMENTS TO THE LEASE

If there is a discrepancy between the Lease and any Attachments to the Lease, the higher or more stringent standard shall apply.

7.08 MECHANICAL AND ELECTRICAL ROOM

The Lessor shall provide a **contiguous** 4,500 square foot Mechanical Room located on the exterior of the building near the loading dock at the Lessors expense to be included in the building's Rentable Square Feet. The Govemment may also include any electrical in this room above the Shell requirements of normal office type space.

7.09 HAZARDOUS MATERIAL STORAGE

A **250** square foot hazardous material storage structure shall be provided as a Lessor BSAC item. This over-rides the 200 square foot space in the Final Program of Requirements. The structure shall be attached to the exterior of the building near the loading dock. All costs associated with the structure shall be included in the BSAC cost including: building punch through, electrical, mechanical, shelving, concrete foundation or base, etc. See pages 18, 19, 109 and 110 of the Final Program of Requirements. The 250 SF structure shall not be included in the ABOA SF or the RSF.

7.10 FRAMING VIBRATION AND SEISMIC REQUIREMENTS FOR LABORATORIES (SHELL)

A. Minimum Design Loads. The base building shall comply with the following:

a. Wind Loads: The building shall be designed to comply with the IBC for the geographic basic wind and exposure category.
b. Seismic Loads: Seismic loads shall be determined using the provisions of the IBC for the seismic area in which the project is located.
c. Snow Loads: The building shall be designed for the geographic ground snow load for the area indicated by the IBC. The effects of sliding and drifting snow shall be incorporated in the design.

B. Base Building Framing. The base building's framing shall meet the minimum vibration tolerances for laboratory equipment.

C. Noise and Vibration Transfer. Lessor Shell equipment and piping shall be designed to preclude noise and vibration transfer beyond referenced limits, including but not limited to the use of resilient supports, vibration dampening equipment bases, flexible connectors or braided hoses as appropriate, and other considerations as required for the intended operation of the facility.

D. Testing – Existing Construction. The Lessor is required at the Lessor's expense to provide a test report by a qualified vibration consultant acceptable to the Government that addresses the above items during design.

E. Testing – Additions/New Construction. The Lessor is required at the Lessor's expense to provide a report by a qualified vibration consultant acceptable to the Government that addresses the above items during design.

7.11 SERVICES AND MAINTENANCE

The Lessor shall include a $70,000 allowance for Services and Maintenance per Section 5.03 - SERVICE AND MAINTENANCE of the RLP (GSA Form R100) that will be finalized prior to occupancy by competitive bids. The Generator maintenance shall be included in line 14 – Electrical instead of Line 26 – Other. Any Systems Maintenance and Repair costs related to BSAC shall be included in either Line 26 – Other or BSAC if a lump sum Service and Maintenance Contract for the Full Term of the Lease is provided. Section 1.14 - OPERATING COST BASE (SEP 2013) of the Lease shall then be adjusted.

7.12 UTILITIES AND HVAC OVERTIME

The Lessor shall include an initial $650,000 allowance for Utilities per Section 5.04 - UTILITIES AND HVAC OVERTIME of the RLP. Section 1.14 - OPERATING COST BASE (SEP 2013) of the Lease and Section 1.14 – HOURLY OVETIME HVAC RATES Lease shall then be readjusted after one year of occupancy in truing up the Utility costs.

7.12 NIH DESIGN REQUIREMENTS CHANGE (PER RLP AMENDMENT#4)

NIH Design Requirements Manual version 5-13, page 5-3. Paragraph A.4 shall be deleted and replaced with the following:

"A.4 Columns, Beams, Girders, Concrete Pan Joist, Steel Joist, Concrete Slabs and Steel Decking:

Typical, acceptable structural framing may consist of concrete framing, steel framing, concrete for lower levels and steel framing at higher levels depending on the research to be conducted. Buildings that will house vibration-sensitive research require evaluation of the framing system by a vibration consultant acceptable to the NIH, for compatibility with the research equipment vibration limitation tolerances."

HKS

Liberty Government Properties

LUSARDI CONSTRUCTION COMPANY

OWNER
FOP 1101 KLAMEDA LLC
2101 L STREET NW, SUITE 700
WASHINGTON, DC 20037

CONTRACTOR
LUSARDI CONSTRUCTION COMPANY
1010 LINDA VISTA DRIVE
SAN MARCOS, CA 92078

ARCHITECT
HKS ARCHITECTS, INC.
2800 ROSEN CREEK SUITE 600
SAN DIEGO, CA 92123

DEVELOPER
EASTERLY GOVERNMENT PROPERTIES, INC.
1033 VISTA SORRENTO PARKWAY, SUITE 110
SAN DIEGO, CA 92121

GSA REQUEST FOR LEASE
PROPOSAL NO. 5KS0070

10749 WEST 84TH TERRACE, OVERLAND PARK, KS 66214

5 U.S.C. (b)(5)

KEY PLAN

NORTH

REVISION NO. | DESCRIPTION | DATE

HKS PROJECT NUMBER
20889.999

DATE
MAR. 22, 2017

SCALE
RLP ISSUE

SHEET TITLE
FLOOR PLAN

SHEET NO.
A2.00

[redacted]

HKS

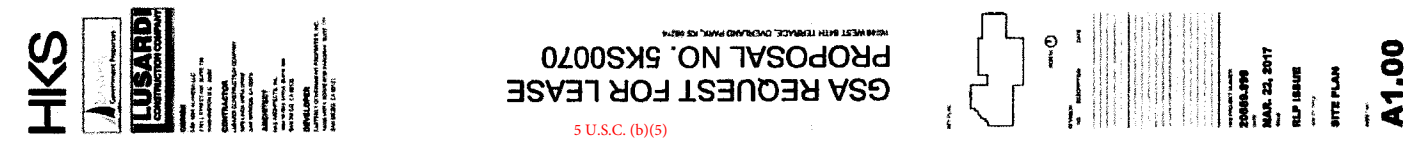
LUSARDI CONSTRUCTION COMPANY

GSA REQUEST FOR LEASE
PROPOSAL NO. 5KS0070

5 U.S.C. (b)(5)

20650.099
MAR. 22, 2017
RLP ISSUE
SITE PLAN
A1.00

Parking Plan



[redacted]

Lease GS-06P-LKS00076: Exhibit B page 1 of 1 Lessor (42) Gov't RM

Program of Requirements for the Laboratory Space for Food and Drug Administration Johnson County, KS

Final Program of Requirements Submittal

September 11, 2015

GENERAL SERVICES ADMINISTRATION

Two Pershing Square
2300 Main Street
Kansas City, Missouri 64108

GSA Contract No. – GS23F0111K / GS06P13GZA0011
GSA Order No. – GS-P-06-15-GZ-5039
GSA Solicitation No. - RFQR60006

JACOBS

501 N. Broadway
St. Louis, Missouri 63102

Jacobs Project No. - R7W76411

Table of Contents

i	**Executive Summary**	**2**
1	**Space Program**	**3**
	Planning Milestones	4
	Project Budget Estimate	4
	Program of Requirements Process	5
	Key Concepts and Adjacencies	5
	Conclusion	8
2	**Design Data and Basis of Design**	**9**
	Preface	9
	Planning Considerations & Practices Influencing Program	9
	Laboratory Basis of Design	13
	Typical Laboratory Finishes	24
	Laboratory Fixtures	24
3	**Appendices**	**26**
	Appendix A – Space Program Spreadsheets	
	Appendix B – Room Data Sheets	
	Appendix C – Adjacency Diagrams	
	Appendix D – Cutsheets	

i Executive Summary

Jacobs has been tasked by the General Services Administration (GSA) for the project titled "Program of Requirements for the Laboratory Space for Food and Drug Administration Johnson County, KS."

The Food and Drug Administration (FDA) KAN-LAB is currently located at 11510 West 80th Street, Lenexa, KS. This location presents impending operational restrictions. Modification is needed to allow continuity of operations and provide a modern, state of the art laboratory. The intent of this project is to develop a program of requirements and prepare a business case for the modification of the laboratory.

Information was gathered through an extensive work session conducted with Lab Director, Dr. Aref El-Demerdash; Assistant Lab Director, Annie Rice; Industrial Hygienist, Katherine Dunn; Robin Reel, FDA; Saijal Naik, FDA; Glenn Mcelvy, FDA; along with representatives Shellie Gill Starr, Lease Contracting Officer, GSA; and Doug Benton, Program Manager, GSA dated June 22, 2015.

1 Space Program

Planning Milestones

The programming methodology involved interviews with the laboratory staff and other representatives to identify user needs. The long-range perspective of this study will enable the future design team to 'master plan' the laboratory to be phased with available funding, and to grow and adapt in a logical fashion to accommodate future staff, space, and equipment.

The long-range modification program developed in this study will enable the Kansas City Laboratory (KAN-LAB) to continue to develop its critical role in the national servicing center for FDA's Total Diet Study (TDS) by:

- *meeting the challenges, trends, and influences that will impact the laboratory in future decades*
- *enabling the laboratory to keep pace with key growth factors*
- *assuring the ability of the laboratory to meet future accreditation requirements*
- *modifications of laboratory and infrastructure for enhanced mission*
- *ensuring the security and integrity of the analysis of products in the custody of the laboratory*

A summary of the proposed space needs follows:

No.	Space Type	Total Staff	Total ABOA USF	Total GSF
		113	**45,128 USF**	**58,666 GSF**
1.00	**Office / Administration**	**110**	**10,590 USF**	**13,767 GSF**
	Administrative Offices	19	2,060 USF	
	TDPRC Method Development Offices	5	610 USF	
	TDS / Regulatory Sample Prep Offices	15	1,430 USF	
	Pesticides Offices	10	1,010 USF	
	Chemothptcs. / Mycotoxins Offices	10	1,010 USF	
	Drugs / Dioxins Offices	10	1,010 USF	
	Metals Offices	10	1,010 USF	
	Support Offices	31	2,050 USF	
	Admin Support		400 USF	
2.00	**Laboratory**	**0**	**18,738 USF**	**24,359 GSF**
	Total Diet & Pesticides Research Center		864 USF	
	Pesticides		4,110 USF	
	Chemotherapeutics / LC-MS Poison Screen		864 USF	
	Mycotoxins		3,246 USF	
	Drugs and Dietary Supplements		1,872 USF	
	Dioxins		3,096 USF	
	Metals / Elemental Speciation Analysis		4,686 USF	
3.00	**Laboratory Service/Amenity Areas**	**0**	**6,250 USF**	**8,125 GSF**
	Laboratory Service and Support		4,950 USF	
	Laboratory Circulation		1,300 USF	
4.00	**Floor Service/Amenity Areas**	**0**	**8,850 USF**	**11,505 GSF**
	Staff Support Areas		4,950 USF	
	Staff Circulation		400 USF	
	Staff / Laboratory Service Utilities		800 USF	
	Staff / Laboratory Loading Dock		2,700 USF	
5.00	**IT Contractor Workspace**	**3**	**700 USF**	**910 GSF**

Project Budget Estimate

A detailed project budget estimate was prepared for the Kansas City Laboratory (KAN-LAB) to assist in design and modification requirements. The project is to be approximately 45,128 usable square feet. The detailed project budget for this facility is included in a separate document accompanying this program of requirements.

Program of Requirements Process

The following describes a summary of basic study tasks and Consultant's findings and recommendations. More detailed information may be found within the body of the document and appendix.

Facility Space Needs:

Facility Space projections have been based on future staff projections made by the laboratory staff, as well as by current design standards, new codes, trends in the analytical science field, and accreditation requirements.

Space Program Spreadsheets

Detailed space program spreadsheets are included in the Appendix, starting with the area summary. This space program summary contains square footage and staff requirements projected for the following milestones:

- Current Staff / Current Staff Space Milestone – Year 2015: 45,128 ABOA square feet with a staff of 113 (408 USF per staff) (20 -28 ELF of bench space)

The area summary also includes total staff counts from the subsequent spreadsheets. The column titled 'space types' includes various space standards used throughout the space program. These space types define the individual square footage of each space component shown in the program. The office space types are consistent with Federal space standards.

Key Concepts and Adjacencies

Program Descriptions

The mission of the Kansas City Laboratory (KAN-LAB) is to service the national surveillance program and regulatory functions for FDA's Total Diet Study (TDS), The Method Development Group, and assistance and analysis for other Governmental Agencies.

The Kansas City Laboratory (KAN-LAB) offers services through the following laboratory sections:

- Laboratory Administration
- Total Diet and Pesticides Research Center (TDPRC)
- Pesticides
- Chemotherapeutics / LC-MS Poison Screen
- Mycotoxins
- Drugs and Dietary Supplements
- Dioxins
- Metals / Elemental Speciation Analysis

General descriptions of each laboratory section, the spaces and staff required, and the special trends and influences affecting them, are addressed in the following discussions with accompanying adjacency diagrams and Room Data Sheets located in the Appendix.

Laboratory Administration

Overall Functions:

The Administration Section, headed by the Laboratory Director, assisted by the Deputy Director and the Section Supervisors, provides leadership and management of the daily laboratory operation through supervision. It also makes available the necessary resources (equipment and supplies) for scientists to perform casework analyses. Administration is responsible for quality assurance and safety within the laboratory and maintaining the ISO 17025 - General Requirements for the Competence of Testing and Calibration of Laboratories. It maintains communication within the organization and with user agencies and provides training and continuing education opportunities to staff and others. Finally, the Laboratory Administration Section meets with visitors and governmental officials. The modified facility will be designed to accommodate visitors and training without interrupting any lab functions.

Visitors meeting with the laboratory administration will provide necessary credentials and notification of proper escort to gain access to the interior of the building at the main entrance lobby security office. The visitor will be escorted from the main lobby to the administration area. In addition to receiving visitors, the front office staff duties include answering incoming phone calls, maintaining records and document images, purchasing materials, goods and services, contract maintenance for all laboratory equipment, and finally aiding and assisting all laboratory staff, the FDA's office and other Governmental Agencies. Preparing for and maintaining an accreditation standard or standards is also a responsibility of Administration.

Administration will manage the information technology needed for the laboratory. This section will include the central computer area housing laboratory servers. These servers include the Laboratory Information Management System (LIMS). Currently the laboratory is not entirely on a LIMS system, but is in the process of transitioning to that status.

Summary of Spaces Required:

The laboratory administration area is comprised of offices for the laboratory director and key staff, including the deputy director, industrial hygienist, quality assurance manager, and union officer. The adjacent open-office area will include workstations for the additional administrative staff, a centralized copy / workroom, mail room, and administrative file storage. Additional spaces include training room / conference rooms and A/V equipment. The administration area will be separated from the functional laboratory spaces.

Key Applicable Trends:

Some of the various trends driving the program development of this section are described below.

- The administrative section is linked to the growth of the laboratory as a whole.

Laboratory Sections

Overall Functions:

The Kansas City Laboratory (KAN-LAB) is fully equipped to perform the chemical analyses of food and drugs regulated by the agency. The laboratory has program capabilities for pesticide residues in human food and animal feeds; industrial chemical residues including perchlorates, melamine, and melamine analogs; toxic and nutritional elements in human food, animal feeds, and ceramics; mycotoxins including fumonisins, aflatoxins, patulin, ochratoxin and vomitoxin; dioxins; chemotherapeutics in shrimp and crab; and micro-analytical analyses. In the area of pharmaceutical analysis, Kansas City Laboratory (KAN-LAB) provides a full range of compendial determinations on human drugs and analyzes surveillance drug samples using both official and non-official methods, and has been performing research on and analyses of dietary supplements for most of the past decade.

Summary of Spaces Required:

The laboratory sections include an office area for the laboratory staff, which is separate, but adjacent to, the associated laboratory complex. The laboratory complex includes sample preparation rooms, main laboratories, instrumentation rooms, and additional laboratory support rooms. Additional hazards in the form of potential airborne contaminants must be contained through proper design and containment devices. Occasionally, food or feed samples are received in a non-ideal condition, including wet samples or plant material, which must be dried or otherwise processed.

Technological advancement and availability of more sensitive instrumentation in many cases will increase the number of testing procedures that should be performed. Where possible, the laboratory has taken advantage of advances in automation to make the scientists more productive. New and more efficient instrumentation for analyzing samples will probably emerge in the future. This likely will increase reliance on instrumentation in these analytical laboratory sections.

It is difficult to predict what regulatory changes will take place in the future, but when such changes do occur, they will have the potential to increase or decrease case load significantly. Due to the uncertainties involved, the proposed space program does not include any change in staff or space to account for such potential future regulatory changes. However, as concerns increase or new methodologies for analysis are created, the sections may need to develop

additional expertise, validate new technologies, and receive further training to allow for advancement of the laboratory mission.

Laboratory Support

Overall Functions:

Laboratory support includes diverse spaces that support the entire facility. Through service contracts, outside vendors are responsible for the maintenance of the majority of laboratory equipment.

Summary of Spaces Required:

Support spaces include the staff break area, staff toilets and lockers, wellness room, conference rooms, IT/Telecom rooms, central laboratory supply (receipt and storage of laboratory chemicals and supplies), lab gas cylinder/dewar storage rooms, laundry room, glass wash room, laboratory and trash waste products storage, which consist of food waste, regular municipal solid waste, and hazardous chemical waste, secure drug vault, and explosion-proof hazard rooms for acids and solvent storage.

Conclusion

The Kansas City Laboratory (KAN-LAB) has a clear need for modification and will require more staff and space to achieve the goals identified in the programming meeting. This study's collaborative effort between Jacobs Consultants, FDA laboratory staff, and GSA representatives has developed a long-range planning program that, if implemented, will provide a laboratory to service the demands and the expectations of the Food and Drug Administration.

The Jacobs Consultants, in collaboration with the Kansas City Laboratory (KAN-LAB) staff, have developed a program of requirements to improve and increase the services it provides. The Consultants feel that this plan is appropriate for a laboratory that has a number of both short-term and long-term needs. The program proposed will allow the Kansas City Laboratory (KAN-LAB) to make necessary progress towards the enhancement of services that will improve the quality and timeliness of the analytical services provided by the laboratory and will allow the Kansas City Laboratory (KAN-LAB) to enable the agency to perform its mission.

2 Design Data and Basis of Design

Preface

In this chapter, Jacobs has identified key laboratory design standards, planning principles, and general design guidelines for the laboratory.

While this information likely will influence the engineering design, the subsequent project architect/engineer will be responsible for all engineering design and related engineering criteria. Jacobs, an engineering and architectural firm, will not be involved in designing the engineering systems or establishing fundamental engineering design criteria for laboratory HVAC, laboratory piping, plumbing, electrical, control systems, etc.

Planning Considerations & Practices Influencing Program

General Laboratory Criteria:

Design of modified laboratory spaces should center on the open spaces concept of suites. Essentially, each section should be self-contained so that there is direct access to open labs, support labs, and storage areas through a vestibule entrance into each laboratory suite. Analysis samples should only leave the suite once they are ready for the next step or have completed the analysis that is required. Samples will then be put back into Sample Storage for retention or shipped back to the submitting agency.

With a modified lab design, there should be consideration for shared spaces, elimination of duplicity as much as possible. A more comprehensive approach to laboratory design should be considered, allowing for shared spaces and efficiencies to be discussed and resolved in ways that best suit the mission of the modified Kansas City Laboratory (KAN-LAB).

The (U.S. Green Building Council) USGBC has implemented the LEED (Leadership in Energy and Environmental Design) program to encourage clients and professionals to design, build, and operate more environmentally appropriate buildings. LEED goals are organized into seven categories:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Design Process
- Regional Priority

Pursuing LEED certifications have impacts for the owner, the architectural/engineering team, and the contractor working on laboratory building projects.

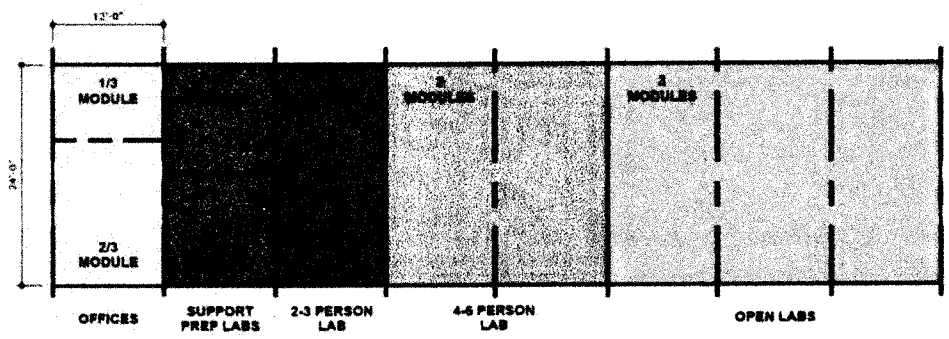
Building Organization:

The building has four functional zones and clear separation of these zones will enhance health and safety, security, and productivity to allow for cost efficient construction and operation.

- Public and Administration: this is the building entrance and security, conferencing, training areas, and administrative offices.
- Office Spaces: The Lab Supervisors, scientist, and technicians' offices or workstations support the non-lab function associated with the testing and analysis and are separated from the laboratory section.
- Laboratories: These make up the bulk of the building; these are open labs for examination and analysis, laboratory support rooms, and the instrument laboratories.
- Building Support: Circulation (horizontal only), mail room, sample receiving and release, sample receiving and release storage, laboratory storage, building mechanical/electrical spaces that support the laboratory operations.

Laboratories:

The laboratories are the primary functional purpose of the building. Spaces, utility services and mechanical distribution are to be associated with a modular approach in their design. The laboratory module establishes the functional building block on which the laboratories are based. The basic module size will be a block of space 12 feet wide x 24 feet long and 10 feet high. The 12 foot dimension is established on the premise that there is typically 2'-6" of counter top on each side with a 5'-0" to 6'-0" aisle of clear space. The remaining dimension is found within the wall from the outside of finished face to the center line of the wall. Based on using a typical 6" wall, the remaining 6" of 12'-0" allows for variability in equipment dimensions and other items, allowing for a 5'-0" to 6'-0" clear aisle to be maintained. Whether open or closed laboratories, this dimension maximizes flexibility.



Combinations of this module can form space for large open labs, instruments and support areas or spaces that may need only a single module wide and long, serving as a vestibule or storage space. The space program list located in the Appendix utilizes this module as the basis of the usable square footage

calculations. Keeping the module the same in both axes allows for labs to be oriented in either direction within the floor plans that will be developed.

Using this same modular approach, the building design and its structural layout should correspond to the established laboratory module. Smaller spaces can be opened up or large spaces subdivided; the overall strategy is to allow the building to be compartmented as required over time. Science is continually changing and evolving; so should the facilities for the Kansas City Laboratory (KAN-LAB).

Combining the basic modules with the best-practices for laboratory designing principles listed below, a successful blocking and stacking of the building will support the goals of the Kansas City Laboratory (KAN-LAB) efficiently serving the needs for investigative, diagnostic and research activities for the present and the future.

The following are typical best-practices for laboratory designing principles:

- Open laboratory floor areas
- Directly adjacent laboratory support
- Central support with core building functions such as mechanical chases and lab gas piping chases
- Separation of office and laboratory zoning
- Access to natural lighting for both office area and laboratories
- Common wet, dry, and work zones, maximizing efficiencies
- Common 'ghost' corridors within laboratory suites
- Regulatory-based separation of sample and waste streams
- Centralized mail, centralized receiving and release of samples
- Chain of custody requirements
- Sample Process Flow
- Material flow: Clean and Dirty
- Personnel Flow
- Waste Flow
- Placement of chemically intensive spaces closest to mechanical exhaust
- Continuous program adjacencies
- Separation of air streams
- Mechanical supply and exhaust efficiencies for laboratories
- Central service corridor for ease of access to critical Mechanical, Electrical, Plumbing Systems placed outside of laboratories
- Separate Service and Personnel traffic flows

Building Workflow:

This facility will be laid out to facilitate the sample workflow, but also be designed for flexibility for future changes in testing methodology and sample flow.

Sample Control and Intake

The loading dock area for sample intake is the central nerve center of the facility, handling all incoming samples, inputting the initial intake data and then distributing the samples to the appropriate laboratory for examination and analysis. Although the type of samples the Kansas City Laboratory (KAN-LAB) examines is fairly constant, it should be anticipated that there can be multiple types of samples brought to the loading dock area. It is important that the area for sample intake maintains flexibility in design so that it can handle surge capacity needs. Facilities for walk-in refrigeration and walk-in freezer storage will be required in the loading dock staging area. Samples will require chain of custody and other special handling Standard Operating Procedures for two distinct flows of items. 1) Regulatory samples that need to proceed to check-in and maintained in secure storage. 2) TDS samples, equipment, and supplies that need entry and distribution to other laboratory areas. The loading dock area also receives all laboratory supplies and equipment, which requires large temporary storage prior to installation.

Raw Material

The placement of lab storage disposables, PPE, glassware, consumables, chemicals, cleaning supplies, etc. will require assessment as these items change with the testing methodology. Their placement will be necessary to facilitating lab operation i.e. locating personal protection equipment at the entrances to labs. The bulk of the raw materials will be received and stored in the loading dock and storage room area within the building.

Service Corridors will provide alcoves or closets for compressed gas tanks and dewars manifolded to the adjacent laboratory. This will lessen laboratory interruptions and contamination issues that can be caused by material movement.

Waste Handling

There are three primary waste streams within the Kansas City Laboratory (KAN-LAB) which include:

- Domestic general and recyclable waste
- Secured Classified waste
- Laboratory waste

There shall be central access controlled areas for storage of domestic and chemical waste in each wing of the laboratory building. These storage areas are intended to be used for temporary holding prior to being carried to a central location within the facility.

As part of the overall facility's approach to waste and material handling, there should be a centralized point where waste is collected for final hauling. The loading dock area is ideal for the purpose for many reasons. The location and accessibility of the facility allow it to be the central point for all deliveries and shipments. The facility's waste should be separated based on the threat risk analysis criteria as part of the design.

The Kansas City Laboratory is a small quantity hazardous waste generator and maintains an EPA generator number with the State of Kansas. The laboratory's generator status is not expected to change.

Staff Workflow

There will be clear separation of non-lab space and lab spaces. Personal effects, food and similar items should not be allowed within the laboratory areas. Offices should be designed to allow storage and break areas for food, coffee, and other activities not to be allowed in the labs. The staff will have access to personal lockers outside the lab environment. The entrances to the lab zone will have appropriate personal protection equipment. The staff will not wear lab coats in the non-lab spaces.

Lab Equipment Workflow

The building will be designed to allow all lab equipment to be moved through the space; corridor widths, door widths and room sizes will allow for installation, replacement and easy movement of mobile units (instrumentation, sample carts, biosafety cabinets, large analytical equipment, etc.)

Laboratory Basis of Design

The following is a partial listing of applicable codes identified for key laboratory design standards, planning principles, and general design guidelines for the laboratory.

While this information likely will influence the engineering design, the subsequent project engineer/architect will be responsible for all engineering design and related engineering design criteria.

Building Codes and Laboratory design standards and regulations:

- Building Code – International Code Council (ICC)
- Life Safety Code – NFPA 101
- National Electrical Code
- State and Local Codes
- National Standards
- Occupational Safety and Health regulations
- Hazardous Waste Generator Regulations, CDC Select Agents Title 42, Part 73
- NFPA Codes and Regulations for Laboratories

Lab Module:

The laboratory planning module is the basic building block for the building. There have been several organizational models presented as well as some descriptions of some of the more definable, critical lab areas. However, the typical laboratory typology, the BSL-2 lab, will accommodate and take on many different forms. Open labs, support labs, analytical labs, chemistry labs and others will be found throughout; the building block modular approach can still be applied.

The 24'x32' diagram is the primary diagram for the majority of the open laboratories. It indicates the necessary planning components for each 12'-0" bay of laboratory. Two of these modules, a 24'x32' lab module, comprise a typical structural bay, although larger of smaller alternating structural bays may be used to as a technique to mitigate vibration. All other systems, including lighting, service distribution, HVAC grille locations, sprinklers, etc. can be organized on this planning pattern as well.

The building organizational concept must provide options to accommodate changes to the laboratories mission, staff changes, and addition of programs and equipment.

Examples of design flexibility include the following:

- Mobile Furniture: Cabinets and tables on wheels can be used to provide adaptable work surfaces. Multiple tables can be easily moved together to form larger work surfaces when the need arises.
- A movable wall between two similar spaces enables conversion to a larger space when needed.
- The ability to relocate instrumentation and services without major room modifications

Chemical Hazards

Recent regulatory requirements issued by the United States Occupational Safety and Health Administration (OSHA) mandate the need to provide protection for

workers encountering hazardous materials. These materials must be treated with care:

- In view of chemically-hazardous nature of the work in each laboratory unit, it is important that the laboratory staff be provided with separate office /reporting writing areas in a "clean" space outside of the laboratory.
- It is recommended that all air-ventilation systems serving laboratory spaces where chemical agents are present be served with independent air handling systems with once-through (100%) exhausted air flow.
- HEPA filtration is required for intake from the Metals Clean Room in the Metals / Elemental Speciation Analysis Section.

Laboratory vestibule:

Vestibules are provided at the entry points to laboratory areas to provide a physical and air (HVAC) separation between laboratory zones and non-laboratory zones. These vestibules minimize the potential transfer of contaminants to clean areas. When leaving a laboratory zone, it is a preferred recommendation to remove laboratory coats and to cleanup prior to moving to the office area. Similarly, when moving from the clean office zone to the laboratory zone, staff members should put on protective laboratory clothing. (See figure 2.1)

- This space will contain a hand-washing sink with hands-free wrist blade controls, coat hanging rack or hooks, and storage cabinets.
- Other special features in the vestibule include spill kits, a fire extinguisher cabinet, safety kits, electrical panels, and plumbing systems valve controls for the lab section the vestibule serves.
- The vestibule must be maintained under negative pressure relative to the outer clean areas and positive pressure relative to the hazards area in order to maintain a flow of clean air from the clean environment to the potentially hazardous lab zone. This containment strategy greatly reduces the risk of odors and airborne contaminants escaping from the laboratory areas.

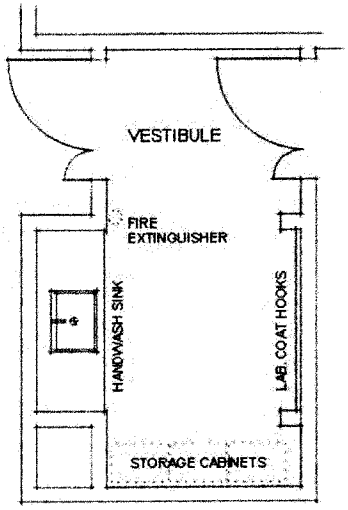


Fig. 2.1

Doors:

- Oversized or double doors (door and a half) are required from corridors to major laboratory spaces.
- Door lites are required in all doors except where a darkened room is required or in a door leading to storage rooms.
- Gasketed doors may be needed where required by the mechanical engineer for maintaining room pressurization.

Emergency eyewash and shower units:

- Provide combination emergency eyewash and shower units no more than 10 seconds walk from any point in the laboratory in accordance with ANSI/ISEA Z358.1-2014 regulations. Utilize manufactured products, not site-built units and assure ADA compliance.
- At each laboratory sink, provide deck-mounted, drench hose emergency eyewash for added safety. Such eye-wash units are common practice and are expected by best-practice laboratory design.
- Locate at least one combination emergency eyewash and shower units outside the laboratory areas, in each primary egress corridor. This recommendation is for the use of anyone who must exit the laboratory space due to chemical fumes resulting from an accidental spill.

Pressurization in lab spaces:

- Labs generally are to be under negative pressure relative to adjacent office and corridor areas. This is to ensure that airborne contaminants

and fumes stay in the lab areas. Flow of air should always be from clean areas (i.e. offices and corridors) to lab areas.

- Avoid excess negative pressurization to the exterior to prevent infiltration of moisture and exterior dust. This issue needs to be reviewed with the design engineer/architect relative to the exterior envelope.
- Spaces in which dust or particulate matter are generated (i.e. preparation areas including grinding and mixing of samples) are to be serviced by airflow across work surfaces for removal of dust and contaminants. The extents and CFM of such systems are to be determined by the mechanical design engineer. (See figure 2.2)

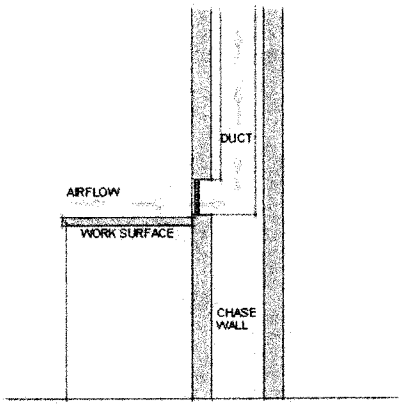


Fig. 2.2

Controlled Environment Rooms (Metals / Elementals):

A controlled environment is any given contained space where provisions are made to reduce particulate contamination and control other environmental parameters such as temperature, humidity and pressure. The key component is the High Efficiency Particulate Air (HEPA) filter that is used to trap particles that 0.3 microns and larger in size. All of the air delivered to the Controlled Environment Room passes through HEPA filters. The classification for this room should be ISO 14644 Class ISO 5 standards. This final classification will be determined during the design process of the laboratory. The Elemental rooms should be a modular setup. Samples need to flow in a logical fashion without having to go in and out of the laboratories into an adjacent corridor. Sample Prep, weighing and speciation rooms need to be ISO 14644 Class ISO 5 standards as these three rooms require intensive contamination control. Seamless floor (e.g. epoxy resin), polypropylene cabinets, epoxy resin bench tops, and walls lined with polypropylene wall panels. A solid gypsum board ceiling with epoxy paint should be the standard for rooms in this area.

Fume Hoods:

- All fume hoods will be Class A, chemical fume hoods for either a variable air volume (VAV) or constant volume (CV) system, as recommended by the mechanical engineer.
- Install all fume hood exhausts through building roof and isolate them from the building structure and laboratory spaces.
- Equip all chemical fume hoods with GFI fume hood power outlets and explosion-resistant light fixtures.
- Make available plumbing options that include vacuum, compressed air, water, and other gasses. Final determination will be made during the design process.
- Provide all fume hoods with a UL listing label.
- Provide polypropylene fume hoods in the metals and elementals area.

Articulating arm / task-exhaust units (snorkels):

Task-exhaust units will be located selectively where local exhaust would be advantageous to laboratory staff for small desk-top procedures involving odoriferous procedures, instrument exhaust, or removal of heat from instruments. Task-exhaust units would never be used in place of a fume hood or biological safety cabinet. Location and quantities will be decided during the design phase of this facility.

Work surfaces:

- At laboratory bench surfaces where chemicals and acids will be used or hazards are present, utilize epoxy resin countertops.
- Special polypropylene casework, fixtures, and work surfaces are required in Metals / Elementals Speciation Analysis Section, no substitution is allowed
- Work surfaces in non-laboratory areas, such as offices, administration, and clerical areas can be standard plastic laminate.

Laboratory sinks:

- Provide epoxy-resin sinks in all epoxy-resin countertops.
- Provide deck eyewash units at each laboratory sink.
- Provide hands free (wrist blade levers) operation at each laboratory sink.
- Provide polypropylene-lined, purified water fitting at lab sinks for deionized water (DI).

Chemical/Acid Storage and Chemical/Acid Waste Holding-rooms:

Design these rooms to be explosion-resistant.

- In the chemical storage room and chemical hazard room, provide explosion-resistant design classification class 1, division 2 (chemicals containers). In the chemical hazard room, explosion-resistant design classification shall be class 1, division 1 (since chemicals will be transferred). Design chemical storage rooms and hazardous chemical holding rooms with a blow-out panel to direct the force of a potential explosion in the safest direction possible.
- Chemical storage generally occurs on heavy duty shelving that is secured to the wall for storage of 4 liter solvents and 2.5 liter acid stored in the original shipping boxes. Internal spill containment is required for this room.
- Chemical storage rooms should be well-ventilated (at least 12 air changes per hour) and as directed by the HVAC engineer.
- Acid storage cabinets will need to be exhausted, with a recommended minimum of 12-15 air changes per hour from the cabinet and as directed by the HVAC engineer.

Instrument rooms:

Requirements for instrumentation rooms are as follows:

- Supplemental cooling: Instruments in these rooms will produce excess heat. Therefore, equip these rooms with a cooling system designed accordingly. This may require additional cooling not readily available by the general building system. Heat loads may be increased as much as 15% - 20% for these rooms.
- Instrument Exhaust: To minimize supplemental cooling requirements, a local exhaust unit is required at instrumentation workstations to exhaust heat or chemical fumes. Additionally, an exhaust port is required in each vented base cabinet in which the ancillary equipment, such as roughing pumps, chillers, or condensers, will be housed. Local exhaust of excess heat from instruments can greatly decrease the need for supplemental cooling of the instrument room.
- Ultrapure laboratory gases: Various instruments in these rooms will consume nitrogen, helium, and argon, which must be plumbed to ultrapure laboratory gas fittings located on the laboratory instrument benches. Nitrogen will be delivered from gas generators or cylinder-fed, while helium will be cylinder-fed. Pipe all ultrapure gases through a stainless-steel laboratory gas distribution system having a purity level of 99.999% (5 nines purity). The stainless steel piping should be delivered to the job site capped and bagged to maintain this level of purity from the factory. The entire ultrapure gas distribution system should be designed by the lab plumbing engineer and must be constructed and installed by a specialty gas contractor who is highly experienced in this kind of work. The following ultra high purity (UHP) gases are limited to the instrument rooms and will be located on subsequent lab plans following design.

- UHP Nitrogen: 99.999% purity (5 nines), generator or cylinder fed.
- UHP Nitrogen: 99.99% purity (4 nines), cylinder fed.
- UHP Argon: 99.999% purity (5 nines).
- UHP spare instrument gas: 99.999% purity (5 nines)
- UHP Hydrogen: 99.999% purity (5 nines), cylinder fed
- UHP Oxygen: 99.999% purity (5 nines), cylinder fed
- Lab Compressed air: A medical-grade compressed air system will need to be designed by the plumbing engineer capable of delivering a minimum of 110 psi of pressure to the bench top lab gas fittings. This will be piped to the fume hoods and bench air outlets. Medical grade quality (breathing air) purity needs to be defined by the engineer and verified by the lab, but should be at least 99.95% pure.
- UHP gases will be plumbed to ultrapure quick disconnect gas fittings located on the lab benches. The bench top fittings and the lab gas distribution system will be designed and specified by the engineer. Keep in mind that the lab gas piping system (including bench top fittings) must be installed by a specialty gas contractor, who should be pre qualified.
- Gas flow rates and pressures for each instrument for each gas need to be verified with the lab staff.
- The manifolded gas cylinders will be located in the gas cylinder room at the loading area assigned during the design of the laboratory. The gas cylinders should be manifolded in pairs, with an automatic, switch-over device. The dual manifolded system enables the gas system to deliver uninterrupted gas when one cylinder goes dry. The lab gas distribution system also should have a two stage regulation system which first decreases the 2,000 psi cylinder pressure to a lower level which is manageable by the lab gas piping system. The second stage of pressure regulation occurs at or near the instrument room, stepping the pressure down to a level that the instrument can tolerate, generally approximately 100 psi. The gas system also should include an alarm to alert lab staff when one cylinder is empty so that it can be replaced before the other one goes empty. From the manifolds, gasses should be plumbed to the instrumentation room through stainless steel piping.
- Power: Instrumentation consumes large amounts of power and requires dedicated circuits, emergency power, and UPS. In the instrument rooms, provide a two-compartment electrical raceway with 8 electrical outlets for each 8 feet of instrument bench. Provide a minimum of 4 dedicated, 120v, 20 amp circuits at each 8 feet of instrument bench, 4 dedicated, 230v, and 30 amp circuits at each 8 feet of instrument bench. Provide computer network outlets spaced as required for the instrumentation, but no less than 4 foot on center. Roughing pumps will be located in insulated and ventilated cabinets below the counter. These cabinets will be exhausted and will need to have a duplex electrical outlet for the pumps. The power consumption, distribution, and requirements will have to be carefully calculated and determined during the design phase.

Acoustical Design Considerations:

Noise can affect both personnel and equipment within the building and, if projected in excess into the environment, can impact neighboring buildings. Control of HVAC noise and the careful selection of relevant architectural details can improve communications, speech privacy, and the general condition of work environments. Proper noise control design can also reduce long-term, work-related hearing damage, fatigue, and general annoyance.

The following are some general comments related to acoustics:

- HVAC design: HVAC layouts must be consistent with the noise requirements. Whenever possible, large ducts should not run above noise sensitive spaces. No duct shafts or plumbing chases should be common with walls of noise sensitive spaces. The need for additional noise control in the form of duct lining, silencers, etc. will be determined as the mechanical design progresses.
- Air volume control devices: Terminal units, VAV boxes, and diffusers must be selected so that the noise they generate is consistent with the recommended Noise Criterion (NC) levels of the rooms they serve. The equipment manufacturer's NC rating may not apply to many rooms within a laboratory facility, as these ratings are usually computed for rooms with a great deal more sound absorption than is found in a typical laboratory. Terminal units shall be selected on the basis of the manufacturer's certified laboratory octave band, sound power levels. Diffusers should be selected for an NC requirement, 5 points lower than the stated room design criterion to account for the impact of multiple diffusers.
- Breakout noise: HVAC breakout noise is the noise that is transmitted into a space through the walls of the ducts. This is most commonly a problem when a particular system has large ducts that pass over an acoustically sensitive space on the way to a space with a much less stringent design criterion. Breakout noise may be reduced by using round ducts.
- General acoustic design criteria: Most laboratories, corridors, and lobbies can be designed to a Noise Criterion of NC-45, while private offices should be designed to NC-35. NC-30 would be appropriate for executive offices, conferences rooms, and the library. These criteria are intended to apply to building systems noise sources only. On occasion, they may be applied to other sources, such as the room noise level resulting from external noise sources (aircraft, traffic, etc.), or attributed to known equipment in the room.
- Provide insulated noise-reducing cabinets for all roughing pumps and ancillary noise producing equipment. Additional information will be provided during design phase of the facility.

Electrical power and data-cabling distribution:

- Raceway: Provide a two-compartment electrical raceway in all laboratory spaces, mounted just above the backsplash. One compartment is for electrical wiring while the other is for data cabling. The top of the raceway

will be set at 48" above the floor. Space duplex outlets at 4'- 0" on center and space duplex data outlets at 8'- 0" on center. At all bench sections less than 4 feet in length, provide at least one duplex power outlet, and at benches less than 8 feet, provide at least one duplex data outlet. The exception will be special areas such as in the instrument rooms and other locations where noted on the plans, e.g. under the instrument bench where power outlets are to be 2 feet on center, and data outlets at 4 feet on center. Incorporate UPS circuits into this raceway system as well. UPS will be a separate, smaller raceway mounted below the standard raceway.

- Provide a wall-mounted, data outlet behind each refrigerator and freezer for connection to a PC-based monitoring system. Confirm this during the design phase of the project.
- Cable trays: Cable trays should be exposed type, to be specified by the electrical engineer.
- Overhead Ceiling Service Panels for Instrumentation: All overhead ceiling service panels to be specified by the electrical engineer and coordinated with mechanical engineer. Cross coordination with casework and instrumentation design should be included to ensure proper placement.

Security elements:

Further development will be conducted in design phase with necessary recommendation from the "Physical Security Requirements/Specifications for FDA Facilities". The following are some general requirements related to security:

- Perimeter lighting at ground level is from 2.5 feet and shall be used for perimeter lighting, exact illumination will be determined for the following areas:
    - Perimeter of site area
    - Vehicle entrance
    - Building face boundary
    - Parking lot
    - Pedestrian entrance/exit
    - Shipping and receiving area
- Perimeter security lighting should be placed on the Emergency Power Backup Supply.
- First Floor Windows should be permanently sealed and covered with Mylar film. Alarmed shock sensors or glass breakage detectors shall be monitored into a central alarm station (local or remote)
- Perimeter Doors will be equipped with interior hinges. If hinges are exterior, hinges will be "pinned" or "spot-welded" to prevent pins or door from being removed. Interior hinges are preferred.
- If entrance doors are glass, or entryways contain glass panels, all glass is to be equipped with alarmed shock sensors or glass break detectors monitored into a central alarm station (local or remote).
- If entrance doors are glass, doors shall be equipped with a frame that is capable of accommodating an electric strike (fail secure).
- "Jimmy plates" or "astragals" will be permanently affixed to entry doors over locking mechanisms to prevent tampering with door lock.

- Doors shall be equipped with high security locks. High security locks shall be keyed separately from the interior building master key system. All doors activated by card readers will be keyed alike on a separate master system.
- Doors with card readers must be equipped with an electric strike (fail secure) and a store room function knob lock with a high security cylinder.
- All perimeter doors will be equipped with recessed magnetic door intrusion alarm contacts including doors with card readers.
- Shipping and Receiving Doors will be insulated metal type roll-up door, electrically powered with key-controlled "on/off" system.
- Provide manual chain in the event of power failure.
- Provide mounted/door mounted balanced magnetic door intrusion alarm contacts.
- Door alarm(s) will be monitored into a central alarm station (local or remote).
- Main Entrance (Access Control System) will have locking hardware with electric strikes (fail secure).
- System will have a key override feature to deactivate door lock if required.
- Card access system will be tied into generator and UPS System.
- Interior shunt (mounted in panic hardware) to deactivate alarm upon egress during security hours.
- Access system will have minimum 24-hour back-up battery system memory in the event of power failure.
- Roof Hatches shall be hollow metal with interior hinges. Locking mechanisms will be a double cylinder high security lock (deadbolt) with a minimum 1 inch-bolt throw. Lock will not be keyed on the master perimeter system.
- The following areas have been designated as Interior Controlled Areas:
    - Solvent storage
    - Acid Storage
    - IT and IT equipment room
    - Mycotoxins laboratory suite
    - Drug vault or drug storage room
    - Sample storage room
    - Filing/Archives room
    - Mycotoxin lab is a Select Agent Lab and must comply with CDC regulations for Select Agents (Title 42, Part 73)
- Perimeter walls of controlled areas shall be true "slab-to-slab"
- Entrance doors to these areas will be hollow metal or solid wood.
- Interior hinges, or "pinned" or "spot-welded" pins if exterior hinges.
- Locking mechanisms for these areas to be high-security type locks. Locks will be keyed separately and not be on the building master system.
- Doors will be equipped with card readers, recessed magnetic contacts where applicable.
- Cleaning Personnel will work during normal work hours Monday through Friday. All controlled areas will be cleaned under the escort of a guard or a FDA employee.
- Interior Walls/Corridor Walls that abut a non-FDA tenant (demising walls) will be "true" slab-to-slab. If current walls are not slab-to-slab, walls

should be extended with expanded metal placed between drywall to prevent access through wall(s) and/or over "drop ceiling".

Communications (voice, data, digital):

Give consideration to the following design features:

- Design voice and data systems in accordance with the Laboratory standards and requirements.
- Computer data ports: Provide computer data ports at key points in the laboratory and office areas to permit staff to computers to the local area network or laboratory information management system (LIMS). Locate data ports at all designated workstations, functional work areas, office spaces, and in all designated laboratory workbenches.

Emergency power:

The client requires the ability to operate selected aspects of the facility during a power outage. The 'emergency' power system is code-required to serve only emergency loads. The 'standby' system is connected to a separate diesel generator via separate transfer switches and distribution panels. Emergency power locations for equipment items are generally identified below. The exact equipment that will be on the emergency power system will be determined in subsequent design phases. The Select Agent lab equipment and fume hoods must be connected to the emergency power. Additional information will be provided during the design phase of the facility.

Serve the following loads from the standby power system:

- Selected building lighting
- Selected building and special purpose receptacles
- Building automation system remote panels
- Fume hood exhaust systems and supply air systems
- Selected laboratory equipment per the Laboratory's requirements
- Security system
- Computer servers
- Selected scientific freezers and/or refrigerators
- Select Agent Labs and equipment

HVAC air intakes:

Consider security precautions in the air intake placement.

- Locate air intakes in such a place that the general public cannot gain access to them.
- Provide vertical inlets, screened and 10 feet above grade, such that it would not be possible to throw a device into the inlet.

- Fit air intakes with security bars to prevent unauthorized entry of persons or objects via air ducts.
- Place air intakes to avoid re-entrainment of laboratory exhaust.

Mechanical Systems:

Ground level mounted or interior mechanical equipment is preferred. Any equipment required by design to be located high and / or at roof level should be enclosed within a roof penthouse or protective fence.

Typical Laboratory Finishes

Laboratory finishes include the following:

Flooring:

Chemical-resistant, heat-welded, homogeneous seamless, vinyl flooring should be provided in most laboratory spaces.

Walls:

Paint walls with semi-gloss paint over gypsum board surfaces and epoxy paint over CMU surfaces.

Ceilings:

- In laboratory spaces where there are special containment and pressurization requirements, use hard ceilings constructed of suspended gypsum board systems.
- Use acoustical lay-in ceilings in most laboratory spaces. Lab acoustical ceilings should be Mylar Finish Acoustic Ceiling Tiles.
- Run ceilings over top of fume hoods, as the skirt will stop 1" short of ceiling. Provide escutcheon around ducts.

Laboratory Fixtures

Fixtures Specified:

During design phases, a lab fixture package will be prepared. This package will include emergency shower / eyewash units, deck mounted eyewashes, sink faucets, pure water faucets, UHP lab gas fittings, overhead service panels, fume hoods, and biological safety cabinets. Specify the following lab fixtures and components:

- Lab sinks and associated fittings in lab counters. Vacuum breakers at all lab faucets are required to be included in the laboratory specifications. The plumbing engineer shall design and specify all related plumbing systems.
- Emergency shower and eyewash units in lab spaces will be specified. The plumbing engineer shall design and specify all related plumbing systems, including the tempered water system.

- Deck-mounted eyewash units: Drench hose, deck-mounted eyewashes will be specified. The plumbing engineer will need to comply with any code requirements for vacuum breakers at the eyewash units.
- Fume hoods: The fume hood specification for laboratories will be prepared during the design phase. The mechanical engineer must review pertinent sections of the specifications, relating to interfacing between the HVAC systems design and the fume hoods sash controls, monitors, etc. Face velocity monitors will need to be specified by the mechanical engineer in their control specification. Fume hoods will be specified to be pre-plumbed and pre-piped, meaning that only one connection is required for each of the services. Each fume hood will be pre-plumbed or pre-piped per the Laboratories requirements. Skirts will stop 1" short of ceiling and the ceiling will be continuous overhead with escutcheons around ducts and other penetrations (for pressurization control). Fume hoods will have integral fire suppression systems, which the fire protection engineer must tie into the fire alarm system.
- The purified water fittings and ultra pure gas fittings will be included in the laboratory specifications, but they must be installed per the direction of the plumbing engineer as part of the overall pure water system and ultra-pure gas system. The complete installation of the ultra-pure gas distribution system and purified water system will be designed and specified by the plumbing engineer, including gas generators and instrument ancillary equipment.
- Metals and Elementals Lab fixtures require non-metal components. Avoid yellow, orange or red colored plastic for contamination issues. Additional requirements will be given during the design phase of the facility.

3 Appendices

Appendix A – Space Program Spreadsheets

Appendix B – Room Data Sheets

Appendix C – Adjacency Diagrams

Appendix D – Cutsheets

Appendix A – Space Program Spreadsheets

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

No.	Space Type	Total Staff	Total ABOA USF	Total GSF
		113	45,128 USF	58,666 GSF
1.00	**Office / Administration**	**110**	**10,590 USF**	**13,767 GSF**
	Administrative Offices	19	2,060 USF	
	TDPRC Method Development Offices	5	610 USF	
	TDS / Regulatory Sample Prep Offices	15	1,430 USF	
	Pesticides Offices	10	1,010 USF	
	Chemothptcs. / Mycotoxins Offices	10	1,010 USF	
	Drugs / Dioxins Offices	10	1,010 USF	
	Metals Offices	10	1,010 USF	
	Support Offices	31	2,050 USF	
	Admin Support		400 USF	
2.00	**Laboratory**	**0**	**18,738 USF**	**24,359 GSF**
	Total Diet & Pesticides Research Center		864 USF	
	Pesticides		4,110 USF	
	Chemotherapeutics / LC-MS Poison Screen		864 USF	
	Mycotoxins		3,246 USF	
	Drugs and Dietary Supplements		1,872 USF	
	Dioxins		3,096 USF	
	Metals / Elemental Speciation Analysis		4,686 USF	
3.00	**Laboratory Service/Amenity Areas**	**0**	**6,250 USF**	**8,125 GSF**
	Laboratory Service and Support		4,950 USF	
	Laboratory Circulation		1,300 USF	
4.00	**Floor Service/Amenity Areas**	**0**	**8,850 USF**	**11,505 GSF**
	Staff Support Areas		4,950 USF	
	Staff Circulation		400 USF	
	Staff / Laboratory Service Utilities		800 USF	
	Staff / Laboratory Loading Dock		2,700 USF	
5.00	**IT Contractor Workspace**	**3**	**700 USF**	**910 GSF**
	IT Contractor Workspace		700 USF	

Lessor ____ Gov't ____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | Dept. | 1.00 | Office / Administration

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
							0.30	
1.00		**Office / Administration**	**110**			**10,590 USF**	**13,767 SF**	
1.00		**Administrative Offices**	**19**			**2,060 USF**		
1.01		Laboratory Director	1	1	150 SF	150 USF		
1.02		Deputy Laboratory Director	1	1	110 SF	110 USF		
1.03		Regional Industrial Hygienist	1	1	110 SF	110 USF		
1.04		Quality Control Manager	1	1	110 SF	110 USF		
1.05		Science Advisor	1	1	110 SF	110 USF		
1.06		Laboratory Support Technician	1	1	110 SF	110 USF		
1.07		Admin. Management Specialist	1	1	110 SF	110 USF		
1.08		Admin. Staff Wks.	11	11	100 SF	1,100 USF		Workstations are 64sf with 36sf of circulati
1.09		Union Office	1	1	150 SF	150 USF		include space for private meeting area
1.10		**TDPRC Method Development Offices**	**5**			**610 USF**		
1.11		TDPRC Method Devlpmt. Supervisor	1	1	110 SF	110 USF		
1.12		TDPRC Method Development Wks.	4	5	100 SF	500 USF		Workstations are 64sf with 36sf of circulati
1.20		**TDS / Regulatory Sample Prep Offices**	**15**			**1,430 USF**		
1.21		Sample Prep/Extraction Supervisor	1	1	110 SF	110 USF		
1.22		Sample Prep/Extract. Wks.	12	11	100 SF	1,100 USF		Workstations are 64sf with 36sf of circulati
1.23		Sample Custodian Office	2	2	110 SF	220 USF		
1.30		**Pesticides Offices**	**10**			**1,010 USF**		
1.31		Pesticides Supervisor	1	1	110 SF	110 USF		
1.32		Pesticides Analyst Wks.	9	9	100 SF	900 USF		Workstations are 64sf with 36sf of circulati
1.40		**Chemothptcs. / Mycotoxins Offices**	**10**			**1,010 USF**		
1.41		Chemo. / Mycotoxins Supervisor	1	1	110 SF	110 USF		
1.42		Chemo. / Mycotoxins Analyst Wks.	9	9	100 SF	900 USF		

Lessor ____ Gov't ____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | Dept. | 1.00 | Office / Administration

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
1.50		**Drugs / Dioxins Offices**	**10**			**1,010 USF**		
1.51		Drugs / Dioxins Supervisor	1	1	110 SF	110 USF		
1.52		Drugs / Dioxins Analyst Wks.	9	9	100 SF	900 USF		Workstations are 64sf with 36sf of circulati
1.70		**Metals Offices**	**10**			**1,010 USF**		
1.71		Metals Supervisor	1	1	110 SF	110 USF		
1.72		Metals Analyst Wks.	9	9	100 SF	900 USF		Workstations are 64sf with 36sf of circulati
1.80		**Support Offices**	**31**			**2,050 USF**		
1.81		Regional/National Staff Wks.	8	8	100 SF	800 USF		Workstations are 64sf with 36sf of circulati
1.82		Contractor Wks.	11	11	100 SF	1,100 USF		Workstations are 64sf with 36sf of circulati
1.83		Guard Station	2	1	150 SF	150 USF		
1.84		Visitors *(no workstations assigned)*	10	--	--	--		
1.90		**Admin Support**	**0**			**400 USF**		
1.91		Copy / Workroom		1	150 SF	150 USF		
1.92		Mail Room		1	100 SF	100 USF		can be incorporated into copy/work area
1.93		Filing / Archiving Room		1	150 SF	150 USF		

Lessor ____ Gov't ____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | Dept. | 2.00 | Laboratory

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
							0.30	
2.00		**Laboratory**	**0**			**18,738 USF**	**24,359 GSF**	
2.10		**Total Diet & Pesticides Research Cen**	0			**864 USF**		
2.11	148-169	TDPRC - Research GPC		1	864 SF	864 SF		
2.20		**Pesticides**	**0**			**4,110 USF**		
2.21	143	Pesticide Extractions Laboratory		1	1,152 SF	1,152 USF		
2.22	156	Pesticide GC Instrumentation		1	1,152 SF	1,152 USF		
2.23	142	LC/MS - Pesticides		1	576 SF	576 USF		
2.24	151	LC Clean-up		1	864 SF	864 USF		
2.25	158	Pesticide Standards		1	216 SF	216 USF		
2.26		Pesticide In-Process Sample Storage		1	150 SF	150 USF		
2.30		**Chemotherapeutics / LC-MS Poison S**	**0**			**864 USF**		
2.31	167	HPLC - Chemotherapeutics		1	288 SF	288 USF		
2.32	175	Inorganic Instrument		1	576 SF	576 USF		
2.40		**Mycotoxins**	**0**			**3,246 USF**		Controlled Access
2.41	199	Mycotoxins Sample Prep		1	288 SF	288 USF		
2.42	198	Mycotoxins Sample Grinders		1	288 SF	288 USF		
2.43	209-210	Mycotoxins Laboratory		1	2,304 SF	2,304 USF		
2.44		Mycotoxins Standards Weigh-In		1	216 SF	216 USF		
2.45		Mycotoxins In-Process Sample Storage		1	150 SF	150 USF		

Lessor ____ Gov't ____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | Dept. | 2.00 | Laboratory

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
2.50		**Drugs and Dietary Supplements**	**0**			**1,872 USF**		
2.51		Drugs/Dietary Supp. Sample Prep		1	288 SF	288 USF		
2.52	207	Drugs/Dietary Supp. Laboratory		1	864 SF	864 USF		
2.53	208	Microscope Room		1	288 SF	288 USF		
2.54	202	Drugs./Dietary Supp. Standards		1	216 SF	216 USF		
2.55	219	Drug Vault		1	216 SF	216 USF		
2.60		**Dioxins**	**0**			**3,096 USF**		**Clean Room Criteria required**
2.61		Dioxins Sample Prep		1	288 SF	288 USF		
2.62	140	Dioxins Laboratory		1	576 SF	576 USF		
2.63	190	Organic Prep.		1	576 SF	576 USF		
2.64	178	Inorganic Prep.		1	576 SF	576 USF		
2.65	173	LC-Dioxins		1	864 SF	864 USF		
2.66		Dioxins Standards		1	216 SF	216 USF		
2.70		**Metals / Elemental Speciation Analysi**	**0**			**4,686 USF**		**Clean Room Criteria required**
2.71	155	Metals Sample Prep		1	288 SF	288 USF		ISO 5 Clean Room Requirements
2.72	154-171	Metals ICP		1	1,152 SF	1,152 USF		ISO 5 Clean Room Requirements
2.73	155	Metals Dry Digestion		1	576 SF	576 USF		ISO 5 Clean Room Requirements
2.74	176	Metals Wet Digestion		1	576 SF	576 USF		ISO 5 Clean Room Requirements
2.75	165	Arsenic Speciation		1	576 SF	576 USF		ISO 5 Clean Room Requirements
2.76	177	Microwave Room		1	576 SF	576 USF		ISO 5 Clean Room Requirements
2.77	179	Iodine Instrument		1	216 SF	216 USF		ISO 5 Clean Room Requirements
2.78	191	Metals Clean Room		1	288 SF	288 USF		ISO 5 Clean Room Requirements
2.79	146	Metals Standards		1	288 SF	288 USF		ISO 5 Clean Room Requirements
2.80		Metals/Elements In-Process Sample Storage		1	150 SF	150 USF		ISO 5 Clean Room Requirements

Lessor _____ Gov't _____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | **Dept.** | **3.00** | **Laboratory Service and Amenity**

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
							0.30	
3.00		**Laboratory Service and Amenity**	**0**			**6,250 USF**	**8,125 GSF**	
3.10		**Laboratory Service and Support**	**0**			**4,950 USF**		
3.11	135-136	Sample Prep Kitchen		1	1,600 SF	1,600 USF		
3.12	220	Dry Sample Storage		1	400 SF	400 USF		
3.13		Laboratory Equipment Storage		1	300 SF	300 USF		
3.14		Chemical Storage		1	100 SF	100 USF		
3.15	130	Lab Gas Cylinder Holding		2	150 SF	300 USF		
3.16	194	Glassware Washing		1	150 SF	150 USF		
3.17	197	Laundry		1	100 SF	100 USF		
3.18	137-138	Walk-in Refrigerators		3	300 SF	900 USF		
3.19	131	Walk-in Freezers		3	200 SF	600 USF		
3.20	124	Acids Storage		1	100 SF	100 USF		explosion-proof construction
3.21	124	Solvent Storage		1	100 SF	100 USF		explosion-proof construction
3.22	122	Solvent Wastes		1	100 SF	100 USF		
3.23	123	Nitrogen Generator Room		1	200 SF	200 USF		
3.30		**Laboratory Circulation**	**0**			**1,300 USF**		
3.31		Laboratory Circulation		1	1,300 SF	1,300 USF		Minimum corridor width 6'-0"

Lessor _____ Gov't _____

JACOBS

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

Program of Requirements | Dept. | 4.00 | Floor Service and Amenity Areas

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
							0.30	
4.00		**Floor Service and Amenity Areas**	**0**			**9,400 USF**	**12,220 GSF**	
4.10		**Staff Support Areas**	**0**			**5,500 USF**		
4.11	101	Entry Vestibule / Lobby		1	250 SF	250 USF		
4.12	101	Security Screening		1	200 SF	200 USF		
4.13	106	Training Room		1	1,500 SF	1,500 USF		flexible classroom / accommodate 80 FTE
4.14		Conference Room		2	100 SF	200 USF		to accommodate 4-6 people each
4.15	224	Break Room		1	700 SF	700 USF		seating for 30
4.16	220	Office Supply Storage		1	150 SF	150 USF		
4.17	144, 246	Mens Restroom		2	250 SF	500 USF		
4.18	108	Mens Locker/Shower		1	700 SF	700 USF		
4.19	145, 247	Womens Restroom		2	250 SF	500 USF		
4.20	110	Women's Locker/Shower		1	700 SF	700 USF		
4.21								
4.22		Wellness Room		1	100 SF	100 USF		
4.30		**Staff Circulation**	**0**			**400 USF**		
4.31		Floor Service Area - Circulation		1	400 SF	400 USF		
4.40		**Staff / Laboratory Service Utilities**	**0**			**800 USF**		
4.41		IT/Telecomm. Room		3	200 SF	600 USF		
4.42	127	DI Water Room		1	200 SF	200 USF		
4.50		**Staff / Laboratory Loading Dock**	**0**			**2,700 USF**		
4.51	121	Loading Dock / Receiving		1	1,000 SF	1,000 USF		
4.52	119	Dock Staging		1	600 SF	600 USF		
4.53		Trash / Recyclables		3	200 SF	600 USF		
4.54	128	Bulk Reserve Regulatory Sample Storage		1	500 SF	500 USF		

Lessor ____ Gov't ____

JACOBS

GSA

Program of Requirements
Food and Drug Administration Laboratory
Johnson County, KS

FDA

Program of Requirements | Dept. | 5.00 | IT Contractors

LINE NO.	EXIST ROOM NO.	SPACE TYPE	NUMBER OF STAFF	UNIT QUANTITY	UNIT USF	TOTAL DEPT. USF	TOTAL BUILDING GSF	Remarks
							0.30	
5.00		**IT Contractors**	**3**			**700 USF**	**910 GSF**	
5.10		**IT Contractor Workspace**	**3**			**700 USF**		
5.11		IT Contractor Wks	3	3	100 SF	300 USF		
5.12		IT Contractor Workroom		1	200 SF	200 USF		
5.13		IT Contractor Storage Room		1	200 SF	200 USF		

Lessor _____ Gov't _____

JACOBS

Appendix B – Room Data Sheets

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Laboratory Director | Room Number: 1.01
Functional Area: Office - Private | Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Enclosed Private Office | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Deputy Laboratory Director — Room Number: 1.02
Functional Area: Office - Private — Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Regional Industrial Hygienist — Room Number: 1.03
Functional Area: Office - Private — Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Quality Control Manager — Room Number: 1.04
Functional Area: Office - Private — Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Science Advisor | Room Number: 1.05
Functional Area: Office - Private | Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Laboratory Support Technician Room Number: 1.06
Functional Area: Office - Private Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Admin. Management Specialist Room Number: 1.07
Functional Area: Office - Private Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Adminstration Staff | Room Number: 1.08
Functional Area: Workstations | Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 100 X 13 Rooms Reqd. = 1,300 Total Net Square Feet
Function: Open Office - Workstations | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Union Office | Room Number: 1.09
Functional Area: Office - Private | Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Enclosed Private Office | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: TDPRC Method Development Supervisor — Room Number: 1.11
Functional Area: Office - Private — Space Type: TDPRC Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: TDPRC Method Development Workstations Room Number: 1.12
Functional Area: Workstations Space Type: TDPRC Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 5 Rooms Reqd. = 500 Total Net Square Feet
Function: Open Office - Workstations Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: TDS / Regulatory Sample Prep/Extraction Supervisor Room Number: 1.21
Functional Area: Office - Private Space Type: Sample Prep Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: TDS/Regulatory Sample Prep/Extract. Workstations Room Number: 1.22
Functional Area: Workstations Space Type: Sample Prep Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 11 Rooms Reqd. = 1,100 Total Net Square Feet
Function: Open Office - Workstations Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Sample Custodian Office | Room Number: 1.23
Functional Area: Office - Private | Space Type: Sample Prep Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 2 Rooms Reqd. = 220 Total Net Square Feet
Function: Enclosed Private Office | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes: adjacent to loading dock/receiving

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticides Analysis Supervisor — Room Number: 1.31
Functional Area: Office - Private — Space Type: Pesticides Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: — ☐ Fume Hood:
☐ Casework: — ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: — ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person — ☑ General Exhaust: — ☐ Chemical
Recirc /Single Pass Airflow: Recirculated — ☐ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: — ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☐ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Liquid Nitrogen: — ☐ Carbon Dioxide:
☐ Helium: — ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☑ Access Control: Door Hardware
☐ Gas Leak — ☐ CCTV:
☐ Liquid Leak Detection: — ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticides Analyst Workstations Room Number: 1.32
Functional Area: Workstation Space Type: Pesticides Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 9 Rooms Reqd. = 900 Total Net Square Feet
Function: Open Office - Workstation Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Chemotherapeutics / Mycotoxins Analysis Supervisor Room Number: 1.41
Functional Area: Office - Private Space Type: Chemo/Mycotoxins Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Chemotherapeutics / Mycotoxins Analyst Workstations Room Number: 1.42
Functional Area: Workstation Space Type: Chemo/Mycotoxins Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 9 Rooms Reqd. = 900 Total Net Square Feet
Function: Open Office - Workstation Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drugs / Dioxins Analysis Supervisor — Room Number: 1.51
Functional Area: Office - Private — Space Type: Drugs/Dioxins Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drugs / Dioxins Analyst Workstations Room Number: 1.52
Functional Area: Workstation Space Type: Drugs/Dioxins Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 9 Rooms Reqd. = 900 Total Net Square Feet
Function: Open Office - Workstation Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Analysis Supervisor — Room Number: 1.71
Functional Area: Office - Private — Space Type: Metals Offices

SPACE REQUIREMENTS:
Allocated Space: 110 X 1 Rooms Reqd. = 110 Total Net Square Feet
Function: Enclosed Private Office — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Analyst Workstations Room Number: 1.72
Functional Area: Workstation Space Type: Metals Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 9 Rooms Reqd. = 900 Total Net Square Feet
Function: Open Office - Workstation Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Regional / National Staff Workstations — Room Number: 1.81
Functional Area: Workstations — Space Type: Support Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 8 Rooms Reqd. = 800 Total Net Square Feet
Function: Open Office - Workstations — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: — ☐ Fume Hood:
☐ Casework: — ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: — ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person — ☑ General Exhaust: — ☐ Chemical
Recirc /Single Pass Airflow: Recirculated — ☐ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: — ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☐ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Liquid Nitrogen: — ☐ Carbon Dioxide:
☐ Helium: — ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☐ Access Control:
☐ Gas Leak — ☐ CCTV:
☐ Liquid Leak Detection: — ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Contractor Workstations | Room Number: 1.82
Functional Area: Workstations | Space Type: Support Offices

SPACE REQUIREMENTS:
Allocated Space: 100 X 11 Rooms Reqd. = 1,100 Total Net Square Feet
Function: Open Office - Workstations | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: | ☐ Fume Hood:
☐ Casework: | ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification | ☑ Wet System: | ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person | ☑ General Exhaust: | ☐ Chemical
Recirc /Single Pass Airflow: Recirculated | ☐ Heat Exhaust: | ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: | ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: | ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: | ☐ DI Water:
☐ Nitrogen: | ☐ Chemical Drain:
☐ Liquid Nitrogen: | ☐ Carbon Dioxide:
☐ Helium: | ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: | ☑ Data Connections:
☑ PA System: | ☐ Access Control:
☐ Gas Leak | ☐ CCTV:
☐ Liquid Leak Detection: | ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Guard Station Room Number: 1.83
Functional Area: Office-Private Space Type: Support Offices

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Enclosed Private Office Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets:file cabinets ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☑ CCTV: security monitoring?
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Copy / Workroom — Room Number: 1.91
Functional Area: WorkRoom — Space Type: Adminstration Support

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Enclosed Workroom — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [ ] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mail Room | Room Number: 1.92
Functional Area: Receive and Send Mail - Sorting | Space Type: Adminstration Support

SPACE REQUIREMENTS:
Allocated Space: 100 X 1 Rooms Reqd. = 100 Total Net Square Feet
Function: Enclosed Room | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework: Mail Slots
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person
- [ ] General Exhaust:
- [ ] Chemical

Recirc /Single Pass Airflow: Recirculated
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [ ] PA System:
- [x] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: File/Archive Room — Room Number: 1.93
Functional Area: Storage — Space Type: Adminstration Support

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Archival Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets:
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [ ] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control:
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: TDPRC Research GPC — Room Number: 2.11 (148/169)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 864 X 1 Rooms Reqd. = 864 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: GPC AutoPrep 2000 (4); Exactive LCMS System*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticide Extractions Laboratory — Room Number: 2.21 (143 /149)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 1,152 X 1 Rooms Reqd. = 1,152 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: Tubo Vap (2), evaporators, grinder/mixer (3), centrifuge, freezer*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Bath in Fume Hood verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [x] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticide GC Instrumentation — Room Number: 2.22 (156)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 1,152 X 1 Rooms Reqd. = 1,152 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Equip: 5973 GC/MSD (4), GC-MS Triple Quad 7000 (2), 5975 GC/MSD, CP 3800 OI ELCD, CP 3800 PFPD*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: LC/MS Pesticides — Room Number: 2.23 (142)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Equip: Triple Quad LC Mass Spec*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes: Additional point exhaust for instrumentation heat required, verify in design

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: LC Clean-Up — Room Number: 2.24 (151)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 864 X 1 Rooms Reqd. = 864 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: Triple Quad LC Mass Spec. (2), Liquid Chromotograph, column oven, diode array detector*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr: 100%
Recirc /Single Pass Airflow: Single Pass
- [x] General Exhaust:
- [x] Heat Exhaust:
- [x] Chemical: Fume Hood
- [ ] Smoke Exhaust:

HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Bath in Fume Hood verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticide Standards — Room Number: 2.25 (158)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: Freezer (2), Refrigerator*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen:
- [ ] Argon:
- [x] Helium:
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Pesticide In-Process Sample Storage — Room Number: 2.26
Functional Area: Storage — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Sample Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Specialty Cabinets / Shelving
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [x] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Argon:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: HPLC - Chemotherapeutics | Room Number: 2.31 (167)
Functional Area: Laboratory | Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board | Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile | Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes: *Equip: LC/MS (2), TurboVap, Centrifuge, Refrigerator/Freezer*

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Modular Movable | ☑ Fume Hood: Chemical / Acid Storage Cabinets
☑ Casework: Modular Movable | ☑ Toxic / Hazardous Fume Hood Cabinet
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification | ☑ Wet System: | ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% | ☑ General Exhaust: | ☑ Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass | ☑ Heat Exhaust: | ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☑ Domestic Water H/C: | ☐ Floor / Trench Drain:
☑ Eyewash / Safety Shower: eyewash / drench hose at sink | ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☑ Compressed Air: Lab Bench | ☑ DI Water:
☑ Nitrogen: Lab Bench - Nitrogen Generator | ☐ Chemical Drain:
☐ Argon: | ☐ Vacuum:
☑ Helium: Lab Bench - Helium Generator | ☐ Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: | ☑ Data Connections:
☑ PA System: | ☑ Access Control: Card Reader
☐ Gas Leak | ☐ CCTV:
☐ Liquid Leak Detection: | ☑ Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Chemotherapeutics - Inorganic Instrument — Room Number: 2.32 (175)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: Mass Spec., freezer, refrigerators (2)*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Bath in fume hood - verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mycotoxins Sample Prep — Room Number: 2.41 (199)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Equip: FTIR Spect., portable hood*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Chemical / Acid Cabinet
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Argon:
- [ ] Helium:
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mycotoxins Sample Grinders — Room Number: 2.42 (198)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes: Requires HEPA filtration to meet CDC requirements

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes: Grinders in this area are excessively noisy, requires acoustical considerations.

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes: Low humidity for control of electrostatic charges.

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [ ] Fume Hood:
- [x] Toxic / Hazardous: Grain Dust Collector

Notes: *Equip: grain grinder, nut grinder, meat grinder, mill*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Grain Dust Collector System with 48 inch x 8 inch exhaust wall grill 48" above finished floor next to vertical grinder mixer

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [x] Floor / Trench Drain: Vertical Grinders / Mixer Area
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Verify location of floor drain in design

PROCESS PIPING:
- [x] Compressed Air:
- [ ] Nitrogen:
- [ ] Argon:
- [ ] Helium:
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [ ] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mycotoxins Laboratory — Room Number: 2.43 (209-210))
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 2,304 X 1 Rooms Reqd. = 2,304 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes: Room should be equipped with decontamination area. Comply with CDC regulations for Select Agent laboratory.

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: HPLC (7), UPLC (6), LC/MS (2), centrifuge (2), refrigerators (2), freezers (2), 3800 GC, GC-FID*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Baths in fume hood - verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mycotoxins Standards Weigh-In | Room Number: 2.44
Functional Area: Laboratory | Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: General Purpose Dry Laboratory | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board | Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile | Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: VWR Ovens (2), Exactive LCMS System*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr 100%
- [x] General Exhaust:
- [ ] Chemical

Recirc /Single Pass Airflow: Single Pass
- [x] Heat Exhaust:
- [ ] Smoke Exhaust:

HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	230v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Mycotoxins In-Process Sample Storage — Room Number: 2.45
Functional Area: Storage — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Sample Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Specialty Cabinets / Shelving
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Provide open shelf storage for easy cleaning, no closed cabinets in this area.*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Argon:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drugs / Dietary Supp. Sample Prep — Room Number: 2.51
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinets
- [x] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] DI Water:
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [x] Helium: Lab Bench - Helium Generator
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drug / Dietary Supplement Laboratory — Room Number: 2.52 (207)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: Exactive LC/MS System*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drug Microscope Room — Room Number: 2.53 (208)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes: Minimize structural vibration velocity - balance tables

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Casework: Modular Movable
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: HPLC (2), Balance Tables*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] DI Water:
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [x] Helium: Lab Bench - Helium Generator
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drug / Dietary Supplement Standards Weigh-In — Room Number: 2.54 (202)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: Refrigerator/Freezer*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr 100%
Recirc /Single Pass Airflow: Single Pass
- [x] General Exhaust:
- [x] Heat Exhaust:
- [ ] Chemical
- [ ] Smoke Exhaust:

HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Drug Vault — Room Number: 2.55 (219)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: Stock Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gyp.Board w/ wire mesh to deck — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes: solid door w/ continuous hinge

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: lockable drug storage cabinets, shelving
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: Secure Vault Construction, Refrigerator, Freezer

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: (keypad?)
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dioxins Sample Prep — Room Number: 2.61
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Casework:
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] DI Water:
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [x] Helium: Lab Bench - Helium Generator
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dioxins Laboratory — Room Number: 2.62 (140)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: Drying Oven, Chiller, Centrifuge*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr 100%
- [x] General Exhaust:
- [x] Chemical Fume Hood

Recirc /Single Pass Airflow: Single Pass
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Bath in fume hood - verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dioxins Organic Prep — Room Number: 2.63 (190)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Modular Movable — ☑ Fume Hood: Chemical / Acid Storage Cabinet
☑ Casework: Modular Movable — ☑ Toxic / Hazardous Fume Hood Cabinet
Notes: *Equip: Refrigerator*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — ☑ General Exhaust: — ☑ Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — ☑ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☑ Domestic Water H/C: — ☐ Floor / Trench Drain:
☑ Eyewash / Safety Shower: eyewash / drench hose at sink — ☐ Toxic / Hazardous Materials:
Plumbing Notes: **Steam Bath in** fume hood - verify in design

PROCESS PIPING:
☑ Compressed Air: Lab Bench — ☑ DI Water:
☑ Nitrogen: Lab Bench - Nitrogen Generator — ☐ Chemical Drain:
☐ Argon: — ☐ Vacuum:
☑ Helium: Lab Bench - Nitrogen Generator — ☐ Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☑ Access Control: Card Reader
☐ Gas Leak — ☐ CCTV:
☐ Liquid Leak Detection: — ☑ Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dioxins Inorganic Prep — Room Number: 2.64 (178)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework: Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Nitrogen Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: LC - Dioxins | Room Number: 2.65 (173)
Functional Area: Laboratory | Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 864 X 1 Rooms Reqd. = 864 Total Net Square Feet
Function: General Purpose Wet Laboratory | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board | Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile | Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 35 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Modular Movable | ☑ Fume Hood: (1) Chemical Storage Cabinet Below
☑ Casework: Modular Movable | ☑ Toxic / Hazardous Fume Hood Cabinet
Notes: *Equip: HRMS Mass Spec., refrigerators (2), HRMS chiller is noisy and heat producing, supplemental cooling is required.*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification | ☑ Wet System: | ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% | ☑ General Exhaust: | ☑ Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass | ☑ Heat Exhaust: | ☐ Smoke Exhaust:
HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
☑ Domestic Water H/C: | ☐ Floor / Trench Drain:
☑ Eyewash / Safety Shower: eyewash / drench hose at sink | ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☑ Compressed Air: | ☑ DI Water:
☑ Nitrogen: Lab Bench - Nitrogen Generator | ☐ Chemical Drain:
☐ Argon: | ☐ Vacuum:
☑ Helium: Lab Bench - Nitrogen Generator | ☐ Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	230v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: | ☑ Data Connections:
☑ PA System: | ☑ Access Control: Card Reader
☐ Gas Leak | ☐ CCTV:
☐ Liquid Leak Detection: | ☑ Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dioxins Standards — Room Number: 2.66
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Modular Movable
- [x] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals/Elemental Speciation Sample Prep — Room Number: 2.71
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Fume Hood: Chemical / Acid Storage Cabinet
- [x] Casework: Polypropylene
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Large industrial sink, movable spray nozzle is required

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] DI Water:
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [x] Helium: Lab Bench - Helium Generator
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals ICP — Room Number: 2.72 (154 / 171)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 1,152 X 1 Rooms Reqd. = 1,152 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Casework: Polypropylene / Modular Movable
- [x] Fume Hood: (1) Polypropylene; Chem. Storage Cabinet Below
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: ICP-Mass Spec.-7700, ICP-Mass Spec.-8800, ICP-OES, ICP-MS*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [ ] Helium:
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	230v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Dry Digestion — Room Number: 2.73 (155)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Polypropylene / Modular Movable — ☐ Fume Hood:
☑ Casework: Polypropylene / Modular Movable — ☐ Toxic / Hazardous
Notes: *Equip: Grinder/Mixer (4), oven*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — ☑ General Exhaust: — ☐ Chemical
Recirc /Single Pass Airflow: Single Pass — ☑ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes: Grain Dust Collector System with 48 inch x 8 inch exhaust wall grill 48" above finished floor next to vertical grinder mixer

PLUMBING:
☑ Domestic Water H/C: polypropylene sink / fixtures — ☐ Floor / Trench Drain:
☑ Eyewash / Safety Shower: eyewash / drench hose at sink — ☐ Toxic / Hazardous Materials:
Plumbing Notes: Large industrial sink, with spray hose required

PROCESS PIPING:
☑ Compressed Air: Lab Bench — ☑ DI Water:
☑ Nitrogen: Lab Bench - Nitrogen Generator — ☐ Chemical Drain:
☐ Argon: — ☐ Vacuum:
☑ Helium: Lab Bench - Helium Generator — ☐ Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☑ Access Control: Card Reader
☐ Gas Leak — ☐ CCTV:
☐ Liquid Leak Detection: — ☑ Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Wet Digestion — Room Number: 2.74 (176)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Fume Hood: Polypropylene ; chemical /acid storage cabinet
- [x] Casework: Polypropylene / Modular Movable
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Equip: microwave digesters, perchloric hoods - verify in design*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] DI Water:
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [x] Helium: Lab Bench - Helium Generator
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	230v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Arsenic Speciation — Room Number: 2.75 (165)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Casework: Polypropylene / Modular Movable
- [x] Fume Hood: Polypropylene; Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous: Fume Hood Cabinet

Notes: *Equip: ICP-Mass Spec. (2)*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [x] Chemical: Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Steam Bath in fume hood - verify in design

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Microwave Room — Room Number: 2.76 (177)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 576 X 1 Rooms Reqd. = 576 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Casework: Polypropylene
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Equip: microwave digesters (6), ICP-OES*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Additional point exhaust for instrumentation heat required, verify in design

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall/Bench
	230v	1 ph	Normal	Raceway/Bench

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Iodine Instrument — Room Number: 2.77 (179)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 216 X 1 Rooms Reqd. = 216 Total Net Square Feet
Function: General Purpose Dry Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Casework: Polypropylene / Modular Movable
- [x] Fume Hood: (2) Perchloric Polypropylene / Chemical Storage Cabinet Below
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes: *Percholoric hoods and polypropylene fume hoods - verify in design*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr 100%
Recirc /Single Pass Airflow: Single Pass
- [x] General Exhaust:
- [x] Heat Exhaust:
- [x] Chemical Fume Hood
- [ ] Smoke Exhaust:

HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Nitrogen Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes: Dedicated 230v circuits - instrumentation - verify in design

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	230v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Clean Room — Room Number: 2.78 (191)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Suspended Gypsum Board — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: **Positive** — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes: **Class 10,000 / ISO 7 / 60-90 ACH**

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Polypropylene / Modular Movable — ☑ Fume Hood: Polypropylene; chemical / acid storage cabinet
☑ Casework: Polypropylene — ☑ Toxic / Hazardous Fume Hood Cabinet
Notes: *Equip: refrigerator, dishwasher*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 60-90 — ☑ General Exhaust: — ☑ Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — ☑ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes: **Positive Air Flow -Class 10,000 / ISO 7 / 60-90 ACH - Fan and Filter Systems**

PLUMBING:
☑ Domestic Water H/C: polypropylene sink / fixtures — ☐ Floor / Trench Drain:
☑ Eyewash / Safety Shower: eyewash / drench hose at sink — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☑ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Argon: — ☐ Vacuum:
☐ Helium: — ☐ Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☑ Access Control: Card Reader
☐ Gas Leak — ☐ CCTV:
☐ Liquid Leak Detection: — ☑ Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals Standards Weigh-In — Room Number: 2.79 (146)
Functional Area: Laboratory — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 288 X 1 Rooms Reqd. = 288 Total Net Square Feet
Function: General Purpose Wet Laboratory — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Polypropylene / Modular Movable
- [x] Casework: Polypropylene / Modular Movable
- [x] Fume Hood: Polypropylene; Chemical / Acid Storage Cabinet
- [x] Toxic / Hazardous Fume Hood Cabinet

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [x] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: polypropylene sink / fixtures
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [x] Compressed Air: Lab Bench
- [x] Nitrogen: Lab Bench - Nitrogen Generator
- [ ] Argon:
- [x] Helium: Lab Bench - Helium Generator
- [x] DI Water:
- [ ] Chemical Drain:
- [ ] Vacuum:
- [ ] Other:

Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Card Reader
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Metals In-Process Sample Storage — Room Number: 2.80
Functional Area: Storage — Space Type: Laboratory

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Sample Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Monolithic Seamless Chemical Resistant VCT
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: polypropylene Specialty Cabinets / Shelving
- [ ] Fume Hood:
- [ ] Casework:
- [ ] Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical Fume Hood
Recirc /Single Pass Airflow: Single Pass — [x] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [x] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Argon:
- [ ] Vacuum:
- [ ] Helium:
- [ ] Other:
Piping Notes: All laboratory gases required / distribution method / purity level to be verified in design

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct / Indirect
Light Switching: Occupancy Sensor
Lighting Level (FC): 50-75 (75 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS: Central Distribution - Verify in design
Emergency Power: Essential Equipment - Verify in design

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control: Card Reader
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detectors
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Sample Prep Kitchen — Room Number: 3.11
Functional Area: Kitchen — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 1,000 X 1 Rooms Reqd. = 1,000 Total Net Square Feet
Function: Kitchen — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: FRP - Fiberglass Reinforced Panels — Floors: Non-Slip Quarry Tile with Cove Base
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes: Stainless Steel behind all Equipment that emits high levels of heat

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Stainless Steel - food prep.
- [x] Casework: Stainless Steel - food prep.
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: **Oven(s)/Range(s) (# burners), power cutting mill, mixer(s), steamer, broiler, cook top- Verify all necessary equipment**

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Type I range hoods

PLUMBING:
- [x] Domestic Water H/C:
- [x] Eyewash / Safety Shower: eyewash / drench hose at sink
- [x] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: double bowl sink - hand sink

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [ ] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dry Sample Storage — Room Number: 3.12 (220)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Stock Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board — Floors: Sealed Concrete
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: heavy duty shelving 30"-36" deep
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: Bulk Storage area

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control: Door Hardware
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Laboratory Equipment Storage Room Number: 3.13
Functional Area: Storage Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 500 X 1 Rooms Reqd. = 500 Total Net Square Feet
Function: Stock Room Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board Floors: Sealed Concrete
Ceilings: Exposed to Structure Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Positive Vibration Criteria: None
Acoustic Noise Level(NIC): 30 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: heavy duty shelving 30"-36" deep ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes: Bulk Area Storage

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☐ Phone / Voice: ☐ Data Connections:
☐ PA System: ☑ Access Control: Door Hardware
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Chemical Storage | Room Number: 3.14
Functional Area: Storage | Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Storage | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board | Floors: Sealed Concrete
Ceilings: Exposed to Structure | Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Positive | Vibration Criteria: None
Acoustic Noise Level(NIC): 30 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Vented Specialty Chemical Storage Cabinets
- [ ] Fume Hood:
- [ ] Casework:
- [x] Toxic / Hazardous: Verify in design

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person
- [x] General Exhaust:
- [ ] Chemical

Recirc /Single Pass Airflow: Recirculated
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

HVAC Notes: Vent Chemical Storage Cabinets - Verify in design

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [ ] PA System:
- [x] Access Control: Door Hardware
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [x] Fire Detection Type: Photoelectric Smoke Detector

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Lab Gas Cylinder Holding — Room Number: 3.15 (130)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: CMU — Floors: Sealed Concrete
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☐ PA System: ☑ Access Control: Door Hardware
☑ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☑ Fire Detection Type: Photoelectric Smoke Detector
Telecom Notes:

Lessor _____ Gov't _____ 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Glassware Washing — Room Number: 3.16 (194)
Functional Area: Wash Room — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Wash Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Ceramic Tile / Painted Gypsum Board (Epoxy) — Floors: Non-Slip Quarry Tile
Ceilings: Mylar Finish Acoustic Ceiling Tile — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Dry Rack
- [x] Casework: Stainless Steel
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: *Equp: dish washer / dryer*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [x] Heat Exhaust: Steam Hood — [ ] Smoke Exhaust:
HVAC Notes: Steam Exhaust canopy hood above dishwasher - verify in design

PLUMBING:
- [x] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [x] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detector

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Laundry — Room Number: 3.17 (197)
Functional Area: Wash Room — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Wash Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Ceramic Tile / Painted Gypsum Board (Epoxy) — Floors: Non-Slip Quarry Tile
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 35 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets:
- [ ] Fume Hood:
- [ ] Casework:
- [ ] Toxic / Hazardous

Notes: *Stainless Steel Tables; Equip: clothes washer/dryer*

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes: Dryer Vent to Exterior

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Acids Storage — Room Number: 3.20 (124)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Stock Room — Occupancy Class: Class C - NFPA 45
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: CMU — Floors: Sealed Concrete
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Specialty Acids Storage Cabinet(s)
- [ ] Casework:
- [ ] Fume Hood:
- [x] Toxic / Hazardous

Notes: **Explosion-Proof Construction; Blow-away panel - Exterior Wall Location**

FIRE PROTECTION:
Hazard Classification: Hazard - H-3
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr 100%
- [x] General Exhaust:
- [x] Chemical Dedicated

Recirc /Single Pass Airflow: Single Pass
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [x] Liquid Leak Detection:
- [x] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [x] Fire Detection Type: Photoelectric Smoke Detector

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Solvent Storage — Room Number: 3.21 (124)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Stock Room — Occupancy Class: Class C - NFPA 45
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: CMU — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: Specialty Storage Cabinet(s) — ☐ Fume Hood:
☐ Casework: — ☑ Toxic / Hazardous
Notes: **Explosion-Proof Construction; Blow-away panel - Exterior Wall Location**

FIRE PROTECTION:
Hazard Classification: Hazard - H-3 — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — ☑ General Exhaust: — ☑ Chemical: Dedicated
Recirc /Single Pass Airflow: Single Pass — ☐ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: — ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☐ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Liquid Nitrogen: — ☐ Carbon Dioxide:
☐ Helium: — ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☐ PA System: — ☐ Access Control:
☐ Gas Leak — ☐ CCTV:
☑ Liquid Leak Detection: — ☑ Fire Detection Type: Photoelectric Smoke Detector
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Solvent Wastes | Room Number: 3.22
Functional Area: Storage | Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Storage | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: CMU | Floors: Sealed Concrete
Ceilings: Exposed to Structure | Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Positive | Vibration Criteria: None
Acoustic Noise Level(NIC): 30 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Heavy duty shelving
- [ ] Casework:
- [ ] Fume Hood:
- [x] Toxic / Hazardous

Notes: **Bulk Storage Area**

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person
- [x] General Exhaust:
- [ ] Chemical
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

Recirc /Single Pass Airflow: Single Pass
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [ ] Data Connections:
- [x] Access Control: Door Hardware
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Nitrogen Generator Room — Room Number: 3.23 (123)
Functional Area: Storage — Space Type: Lab Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Stock Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: CMU — Floors: Sealed Concrete
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Positive — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [ ] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

Lessor EE Gov't Kw 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Laboratory Service - Circulation Room Number: 3.31
Functional Area: Circulation Space Type: Laboratory Service/Amenity

SPACE REQUIREMENTS:
Allocated Space: 1,300 X 1 Rooms Reqd. = 1,300 Total Net Square Feet
Function: Circulation Occupancy Class: Business
General Notes: **Minimum width = 8'-0"**

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: _____ psf Vibration Reqmts: _____
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 10'-0"Above Finished Floor / 12'-0" to Underside of Struct
Finish Notes: Wall protection Guard Rails and Corner Guards

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating _____
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating _____
Room Pressure Positive Vibration Criteria: None
Acoustic Noise Level(NIC): 40 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Single Pass ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☑ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☐ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

Lessor _____ Gov't _____ 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Entry Vestibule / Lobby — Room Number: 4.11 (101)
Functional Area: Lobby — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 250 X 1 Rooms Reqd. = 250 Total Net Square Feet
Function: Lobby — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Vinyl Composite Tile / walk-off mat(s)
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: — ☐ Fume Hood:
☐ Casework: — ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — ☑ General Exhaust: — ☐ Chemical
Recirc /Single Pass Airflow: Recirculated — ☐ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: — ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☐ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Liquid Nitrogen: — ☐ Carbon Dioxide:
☐ Helium: — ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☐ Phone / Voice: — ☐ Data Connections:
☑ PA System: — ☐ Access Control:
☐ Gas Leak — ☑ CCTV:
☐ Liquid Leak Detection: — ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Security Screening — Room Number: 4.12 (101)
Functional Area: Lobby — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Lobby — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes: space for metal detector / security x-ray machine / material lay-out space

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☐ Phone / Voice: ☐ Data Connections:
☑ PA System: ☑ Access Control:
☐ Gas Leak ☑ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Training Room — Room Number: 4.13 (106)
Functional Area: Conference / Training — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 1,500 X 1 Rooms Reqd. = 1,500 Total Net Square Feet
Function: Conference / Training — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: ____ psf — Vibration Reqmts: ____
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes: marker board(s) / tackable surface(s)

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating ____
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating ____
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework: modular moveable tables with data/power
- [ ] Toxic / Hazardous
Notes: Operable Partition / audio-visual, VTC capabilities / speaker podium

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:
Telecom Notes: server/rack console; VTC / Network capabilities

Lessor ____ Gov't KCA 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Conference Room | Room Number: 4.14
Functional Area: Conference Room - small | Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 100 X 2 Rooms Reqd. = 200 Total Net Square Feet
Function: Conference Room - small | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Carpet Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes: marker board / tackable surface

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 40 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: | ☐ Fume Hood:
☑ Casework: modular moveable tables with data/power | ☐ Toxic / Hazardous
Notes: audio / visual, VTC capabilities

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification | ☑ Wet System: | ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person | ☑ General Exhaust: | ☐ Chemical
Recirc /Single Pass Airflow: Recirculated | ☐ Heat Exhaust: | ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: | ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: | ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: | ☐ DI Water:
☐ Nitrogen: | ☐ Chemical Drain:
☐ Liquid Nitrogen: | ☐ Carbon Dioxide:
☐ Helium: | ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: | ☑ Data Connections:
☑ PA System: | ☐ Access Control:
☐ Gas Leak | ☐ CCTV:
☐ Liquid Leak Detection: | ☐ Fire Detection Type:
Telecom Notes: server/rack console; VTC / Network capabilities

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Break Room | Room Number: 4.15 (224)
Functional Area: Break Room / Kitchenette | Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 700 X 1 Rooms Reqd. = 700 Total Net Square Feet
Function: Break Room / Kitchenette | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 40 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets:
- [x] Casework: modular moveable tables
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: ice machine, vending machine(s), refrigerator(s), microwaves, coffee makers, toaster-oven

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification | [x] Wet System: | [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person | [x] General Exhaust: | [ ] Chemical
Recirc /Single Pass Airflow: Single Pass | [ ] Heat Exhaust: | [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes: Double Bowl sink w/ garbage disposal

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [x] Fire Detection Type: photoelectric smoke detectors

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Office Supply Storage — Room Number: 4.16
Functional Area: Storage — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 150 X 1 Rooms Reqd. = 150 Total Net Square Feet
Function: Stock Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Sealed Concrete
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Heavy Duty Shelving 30-36 inches deep
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Men's Restroom — Room Number: 4.17
Functional Area: Restroom — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 250 X 2 Rooms Reqd. = 500 Total Net Square Feet
Function: Restroom — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Porcelain Tile - Slip-Resistant Finish
Ceilings: Painted Gypsum Board (Epoxy) — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Surface Mount
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [ ] Phone / Voice:
- [ ] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Men's Locker/Shower — Room Number: 4.18
Functional Area: Restroom — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 700 X 1 Rooms Reqd. = 700 Total Net Square Feet
Function: Restroom — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Porcelain Tile - Slip-Resistant Finish
Ceilings: Painted Gypsum Board (Epoxy) — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework: Lockers with Clothes Changing Bench
- [ ] Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Surface Mount
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [ ] Phone / Voice:
- [ ] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:
Telecom Notes:

Lessor _____ Gov't _____ 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Women's Restroom | Room Number: 4.19
Functional Area: Restroom | Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 250 X 2 Rooms Reqd. = 500 Total Net Square Feet
Function: Restroom | Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf | Floor Capacity Load: psf | Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim | Floors: Porcelain Tile - Slip-Resistant Finish
Ceilings: Painted Gypsum Board (Epoxy) | Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F | Cooling: 72 F +/- 5 F | Heating
Humidity: 50 RH +/- 10 RH | Cooling: 30 RH +/- 10 RH | Heating
Room Pressure: Negative | Vibration Criteria: None
Acoustic Noise Level(NIC): 40 | EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification
- [x] Wet System:
- [ ] Preaction System:

Fire Prot Notes:

HVAC:
Air Changes / Hr: 100%
- [x] General Exhaust:
- [ ] Chemical
- [ ] Heat Exhaust:
- [ ] Smoke Exhaust:

Recirc /Single Pass Airflow: Single Pass
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Surface Mount
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [ ] Phone / Voice:
- [ ] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Women's Locker/Shower — Room Number: 4.20
Functional Area: Restroom — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 700 X 1 Rooms Reqd. = 700 Total Net Square Feet
Function: Restroom — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Porcelain Tile - Slip-Resistant Finish
Ceilings: Painted Gypsum Board (Epoxy) — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework: Lockers with Clothes Changing Bench
- [ ] Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 100% — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Surface Mount
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [ ] Phone / Voice:
- [ ] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Wellness Room — Room Number: 4.22
Functional Area: Building Support — Space Type: Staff Support Areas

SPACE REQUIREMENTS:
Allocated Space: 100 X 1 Rooms Reqd. = 100 Total Net Square Feet
Function: Building Support — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf — Floor Capacity Load: ____ psf — Vibration Reqmts: ____
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Carpet
Ceilings: Acoustical Ceiling Tile — Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating ____
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating ____
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 40 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [x] Casework: Sink Cabinet
- [ ] Toxic / Hazardous
Notes: Refrigerator / Freezer, Couch, Waste Basket

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/Person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Single Pass — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C: Single bowl hand sink
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Surface Mount
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [ ] Data Connections:
- [ ] PA System:
- [ ] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Floor Service - Circulation Room Number: 4.31
Functional Area: Circulation Space Type: Adminstrative Office

SPACE REQUIREMENTS:
Allocated Space: 400 X 1 Rooms Reqd. = 400 Total Net Square Feet
Function: Circulation Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Carpet Tile in Adminstration Office Areas
Ceilings: Acoustical Ceiling Tile Clg. Ht. 9'-0"
Finish Notes: Wall protection Guard Rails and Corner Guards

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 40 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Single Pass ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☐ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

Lessor _____ Gov't KW 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: IT / Telecomm. Room — Room Number: 4.41
Functional Area: IT / Telecomm. Room — Space Type: Staff/Laboratory Support

SPACE REQUIREMENTS:
Allocated Space: 200 X 3 Rooms Reqd. = 600 Total Net Square Feet
Function: IT / Telecomm. Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Static Dissipative Vinyl Composite Tile
Ceilings: Exposed to Structure — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes: In Row Cooling IRC) or Computer Room Air Conditioning (CRAC)

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes: VESDA

HVAC:
Air Changes / Hr: 20 CFM/person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes: Emergency Power Shut-Off Disconnect

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS: required
Emergency Power: required

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☑ Fire Detection Type: VESDA
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: DI Water Room — Room Number: 4.42 (127)
Functional Area: DI Water Room — Space Type: Floor Service Area

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: DI Water Room — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [ ] Fume Hood:
- [ ] Casework:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr — [ ] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [x] Domestic Water H/C:
- [x] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [x] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v			

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [ ] PA System:
- [x] Access Control:
- [ ] Gas Leak
- [ ] CCTV:
- [x] Liquid Leak Detection:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Loading Dock / Receiving — Room Number: 4.51 (121)
Functional Area: Loading Dock — Space Type: Staff / Lab Loading Dock

SPACE REQUIREMENTS:
Allocated Space: 1,000 X 1 Rooms Reqd. = 1,000 Total Net Square Feet
Function: Loading Dock — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes: Minimize structural vibration velocity

FINISHES:
Walls: FRP (Fiberglass Reinforced Panels) over CMU — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: — ☐ Fume Hood:
☐ Casework: — ☐ Toxic / Hazardous
Notes: Two (2) Overhead Doors

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/ person — ☑ General Exhaust: — ☐ Chemical
Recirc /Single Pass Airflow: Single Pass — ☐ Heat Exhaust: — ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: — ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: — ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: — ☐ DI Water:
☐ Nitrogen: — ☐ Chemical Drain:
☐ Liquid Nitrogen: — ☐ Carbon Dioxide:
☐ Helium: — ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: — ☑ Data Connections:
☑ PA System: — ☑ Access Control:
☐ Gas Leak — ☑ CCTV:
☐ Liquid Leak Detection: — ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Dock Staging — Room Number: 4.52 (119)
Functional Area: Loading Dock — Space Type: Staff / Lab Loading Dock

SPACE REQUIREMENTS:
Allocated Space: 600 X 1 Rooms Reqd. = 600 Total Net Square Feet
Function: Loading Dock — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: FRP (Fiberglass Reinforced Panels) over CMU — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: Shelving (Shipping Cooler Staging)
- [ ] Fume Hood:
- [ ] Casework:
- [ ] Toxic / Hazardous
Notes: Sample Log-in Computer Station

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/ person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Floor / Trench Drain:
- [ ] Eyewash / Safety Shower:
- [ ] Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] DI Water:
- [ ] Nitrogen:
- [ ] Chemical Drain:
- [ ] Liquid Nitrogen:
- [ ] Carbon Dioxide:
- [ ] Helium:
- [ ] Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] Data Connections:
- [x] PA System:
- [x] Access Control:
- [ ] Gas Leak
- [x] CCTV:
- [ ] Liquid Leak Detection:
- [ ] Fire Detection Type:
Telecom Notes: Sample Log-in Computer Station

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Trash / Recyclables — Room Number: 4.53
Functional Area: Storage — Space Type: Staff / Lab Loading Dock

SPACE REQUIREMENTS:
Allocated Space: 200 X 3 Rooms Reqd. = 600 Total Net Square Feet
Function: Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: ____ psf — Vibration Reqmts: ____
Structural Notes:

FINISHES:
Walls: FRP (Fiberglass Reinforced Panels) over CMU — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating ____
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating ____
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets: ____
- [ ] Casework: ____
- [ ] Fume Hood: ____
- [ ] Toxic / Hazardous ____

Notes: Recycling Bins

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: — [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/person — [x] General Exhaust: ____ — [ ] Chemical ____
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: ____ — [ ] Smoke Exhaust: ____
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C: ____
- [ ] Eyewash / Safety Shower: ____
- [ ] Floor / Trench Drain: ____
- [ ] Toxic / Hazardous Materials: ____

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air: ____
- [ ] Nitrogen: ____
- [ ] Liquid Nitrogen: ____
- [ ] Helium: ____
- [ ] DI Water: ____
- [ ] Chemical Drain: ____
- [ ] Carbon Dioxide: ____
- [ ] Other: ____

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground: ____
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power: ____
UPS: ____
Emergency Power: ____

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [ ] Phone / Voice: ____
- [x] PA System: ____
- [ ] Gas Leak ____
- [ ] Liquid Leak Detection: ____
- [ ] Data Connections: ____
- [ ] Access Control: ____
- [ ] CCTV: ____
- [ ] Fire Detection Type: ____

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: Bulk Reserve Regulatory Sample Storage — Room Number: 4.54 (128)
Functional Area: Storage — Space Type: Staff / Lab Loading Dock

SPACE REQUIREMENTS:
Allocated Space: 500 X 1 Rooms Reqd. = 500 Total Net Square Feet
Function: Storage — Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 150 psf — Floor Capacity Load: psf — Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: FRP (Fiberglass Reinforced Panels) over CMU — Floors: Sealed Concrete
Ceilings: None — Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F — Cooling: 72 F +/- 5 F — Heating
Humidity: 50 RH +/- 10 RH — Cooling: 30 RH +/- 10 RH — Heating
Room Pressure: Negative — Vibration Criteria: None
Acoustic Noise Level(NIC): 30 — EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [x] Storage Cabinets: heavy duty shelving 30"-36" deep
- [ ] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes: Area for bulk storage

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification — [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr: 20 CFM/person — [x] General Exhaust: — [ ] Chemical
Recirc /Single Pass Airflow: Recirculated — [ ] Heat Exhaust: — [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Pendant
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [x] Access Control:
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: IT Contractor Workstations Room Number: 5.11
Functional Area: Workstations Space Type: IT Contractors

SPACE REQUIREMENTS:
Allocated Space: 100 X 3 Rooms Reqd. = 300 Total Net Square Feet
Function: Open Office - Workstations Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Static Dissipative Vinyl Composite Tile
Ceilings: Acoustic Ceiling Tile Clg. Ht. 9'-0"
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 35 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☐ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☑ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☐ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: IT Contractor Workroom Room Number: 5.12
Functional Area: WorkRoom Space Type: IT Contractors

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Enclosed Workroom Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: _____ psf Vibration Reqmts: _____
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Static Dissipative Vinyl Composite Tile
Ceilings: None Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating _____
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating _____
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 40 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
- [ ] Storage Cabinets:
- [x] Casework:
- [ ] Fume Hood:
- [ ] Toxic / Hazardous

Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification [x] Wet System: [ ] Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person [ ] General Exhaust: [ ] Chemical
Recirc /Single Pass Airflow: Recirculated [ ] Heat Exhaust: [ ] Smoke Exhaust:
HVAC Notes:

PLUMBING:
- [ ] Domestic Water H/C:
- [ ] Eyewash / Safety Shower:
- [ ] Floor / Trench Drain:
- [ ] Toxic / Hazardous Materials:

Plumbing Notes:

PROCESS PIPING:
- [ ] Compressed Air:
- [ ] Nitrogen:
- [ ] Liquid Nitrogen:
- [ ] Helium:
- [ ] DI Water:
- [ ] Chemical Drain:
- [ ] Carbon Dioxide:
- [ ] Other:

Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall
	120v	1 ph	Normal	Raceway

Clean Power:
UPS:
Emergency Power:

TELECOMMUNICATION AND SPECIAL SYSTEMS:
- [x] Phone / Voice:
- [x] PA System:
- [ ] Gas Leak
- [ ] Liquid Leak Detection:
- [x] Data Connections:
- [ ] Access Control:
- [ ] CCTV:
- [ ] Fire Detection Type:

Telecom Notes:

Lessor _____ Gov't _____ 9/11/2015

FOOD AND DRUG ADMINSTRATION LABORATORY - JOHNSON COUNTY, KS

ROOM DATA SHEET

Room Name: IT Contractor Storage Room Room Number: 5.13
Functional Area: Storage Space Type: IT Contractors

SPACE REQUIREMENTS:
Allocated Space: 200 X 1 Rooms Reqd. = 200 Total Net Square Feet
Function: Archival Storage Occupancy Class: Business
General Notes:

STRUCTURAL DATA:
Floor Live load: 100 psf Floor Capacity Load: psf Vibration Reqmts:
Structural Notes:

FINISHES:
Walls: Painted Gypsum Board with base trim Floors: Static Dissipative Vinyl Composite Tile
Ceilings: none Clg. Ht. n/a
Finish Notes:

ROOM ENVIRONMENT:
Temperature: 75 F +/- 5 F Cooling: 72 F +/- 5 F Heating
Humidity: 50 RH +/- 10 RH Cooling: 30 RH +/- 10 RH Heating
Room Pressure Negative Vibration Criteria: None
Acoustic Noise Level(NIC): 30 EMI Criteria: None
Notes:

SPECIAL REQUIREMENTS:
☑ Storage Cabinets: ☐ Fume Hood:
☐ Casework: ☐ Toxic / Hazardous
Notes:

FIRE PROTECTION:
Hazard Classification: Ordinary Hazard Classification ☑ Wet System: ☐ Preaction System:
Fire Prot Notes:

HVAC:
Air Changes / Hr 20 CFM/Person ☐ General Exhaust: ☐ Chemical
Recirc /Single Pass Airflow: Recirculated ☐ Heat Exhaust: ☐ Smoke Exhaust:
HVAC Notes:

PLUMBING:
☐ Domestic Water H/C: ☐ Floor / Trench Drain:
☐ Eyewash / Safety Shower: ☐ Toxic / Hazardous Materials:
Plumbing Notes:

PROCESS PIPING:
☐ Compressed Air: ☐ DI Water:
☐ Nitrogen: ☐ Chemical Drain:
☐ Liquid Nitrogen: ☐ Carbon Dioxide:
☐ Helium: ☐ Other:
Piping Notes:

ELECTRICAL:
Lighting Fixture Type: Recessed Troffer
Lighting Lamp Type: Fluorescent
Lighting Direction: Direct
Light Switching: Occupancy Sensor
Lighting Level (FC): 30-50 (50 at work surface)
Ground:
Electrical Notes:

Power Outlets:

No.	Voltage	Phase	Type	Location
	120v	1 ph	Normal	Wall

Clean Power:
UPS:
Emergency Power:

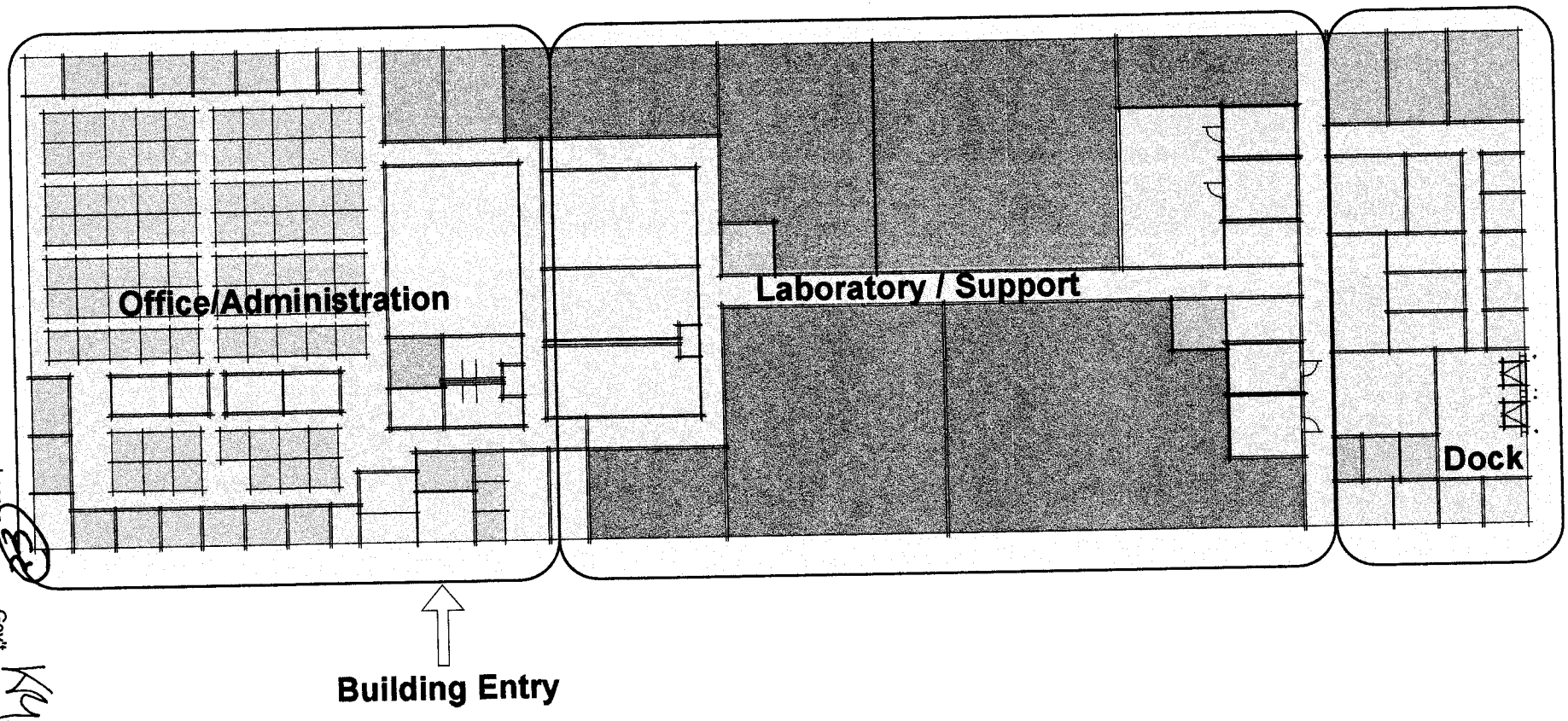
TELECOMMUNICATION AND SPECIAL SYSTEMS:
☑ Phone / Voice: ☑ Data Connections:
☑ PA System: ☑ Access Control:
☐ Gas Leak ☐ CCTV:
☐ Liquid Leak Detection: ☐ Fire Detection Type:
Telecom Notes:

Appendix C – Adjacency Diagrams

Space Planning Diagram

Legend

- Office
- Floor Service/Amenity Area
- Laboratory
- Laboratory Service/Amenity Area
- Dock / Receiving
- Circulation



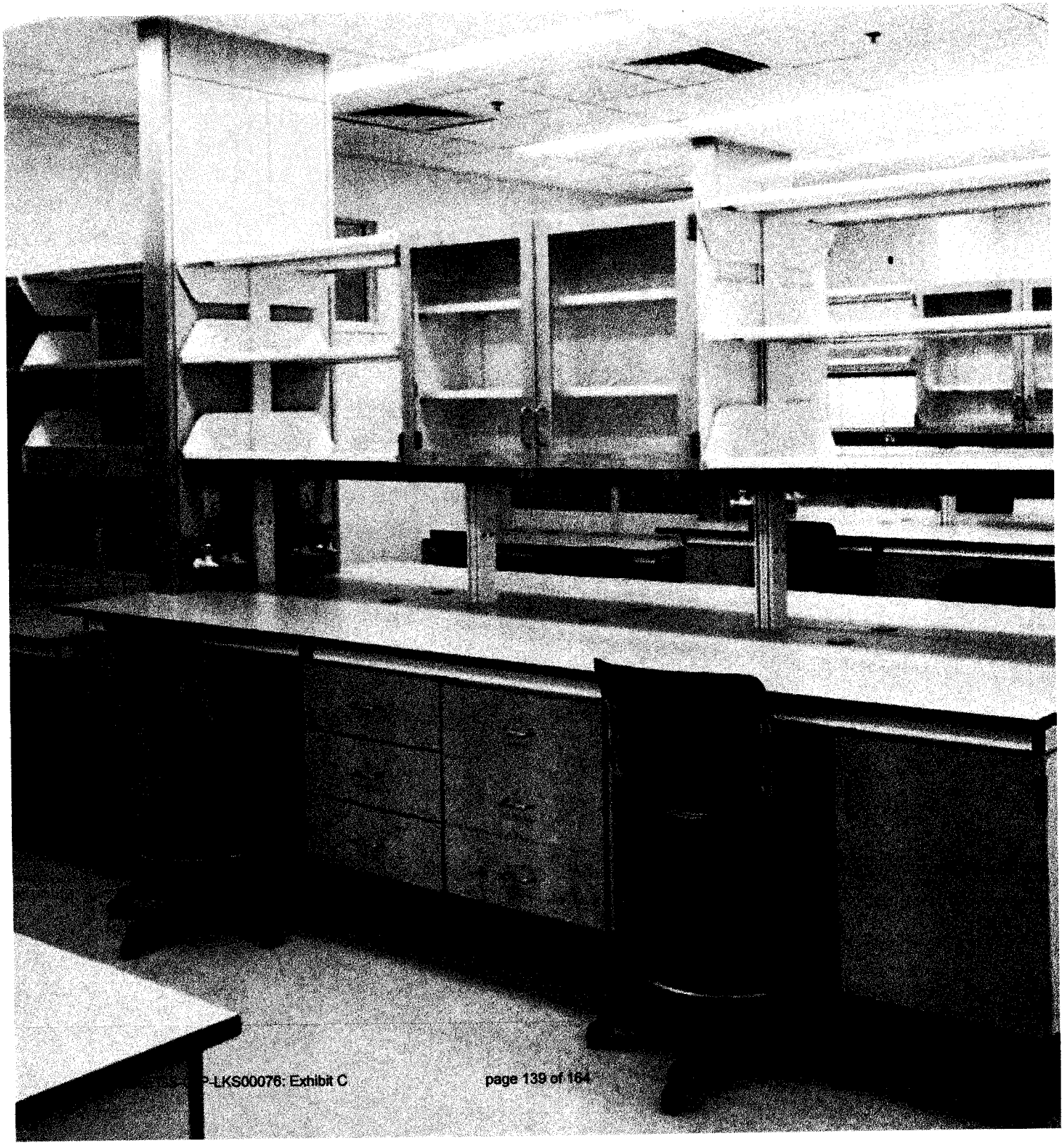
JACOBS

Appendix D – Cutsheets

new furniture systems
designing your new lab

five questions to get us started

1. How often will your lab be reconfigured?
2. Do your countertops need to be height adjustable?
3. What weight capacity does your system need to support?
4. How will the mechanical services be connected to the system?
5. Will form or function be the priority in design?



selecting your furniture system.

Lab furniture systems fall into three general categories: fixed, flexible and moveable. At New England Lab we listen to your unique needs and match them with the correct system to maximize your productivity and utilization of space. Today's labs have more options than ever to meet the growing need for adaptability in the lab environment. While traditional fixed casework still serves many needs, flexible and moveable systems allow labs to be reconfigured easily and increase mobility within the lab.

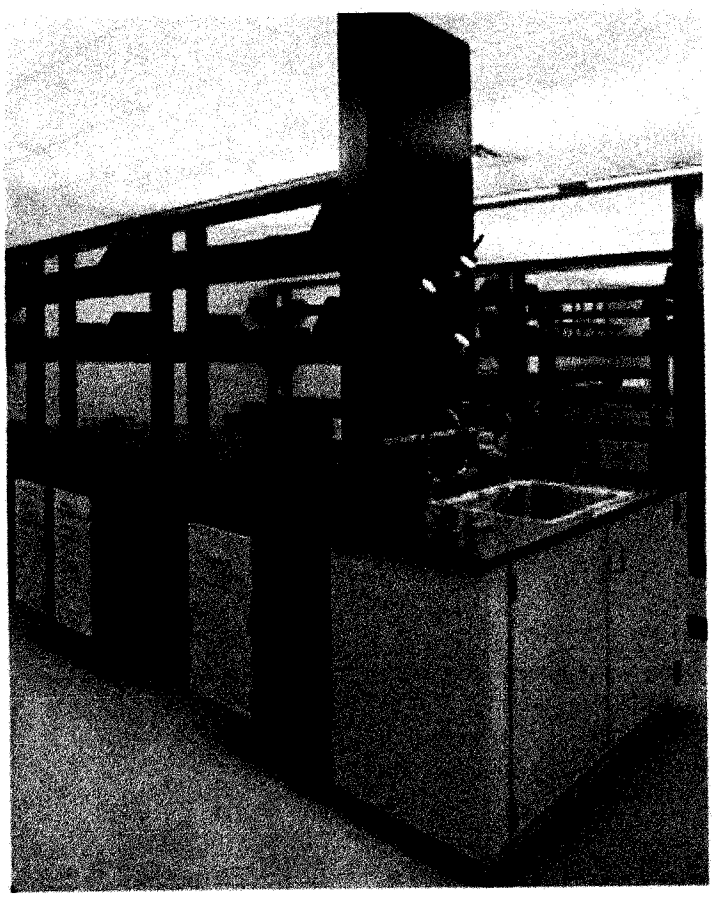
Occasionally, unique needs or style choices require a more "hybrid" approach where components from a variety of systems are combined. You can rely on New England Lab to deliver the system that meets your needs.

fixed casework
maximum storage

TRADITIONAL SERIES

Fixed casework has been the traditional system used in laboratories, valued for its durability, continuous work surfaces and ability to maximize storage. Its floor-mounted structure supports heavy weight loads, and is built at sitting, standing, ADA compliant or custom heights as required. Mechanical services are concealed within the casework and connect at the floor, wall or ceiling. Maximize your storage capacity and create an uncluttered working area with our wide range of overhead components. Fixed casework can be provided in a variety of materials to address the specific needs of your lab environment.

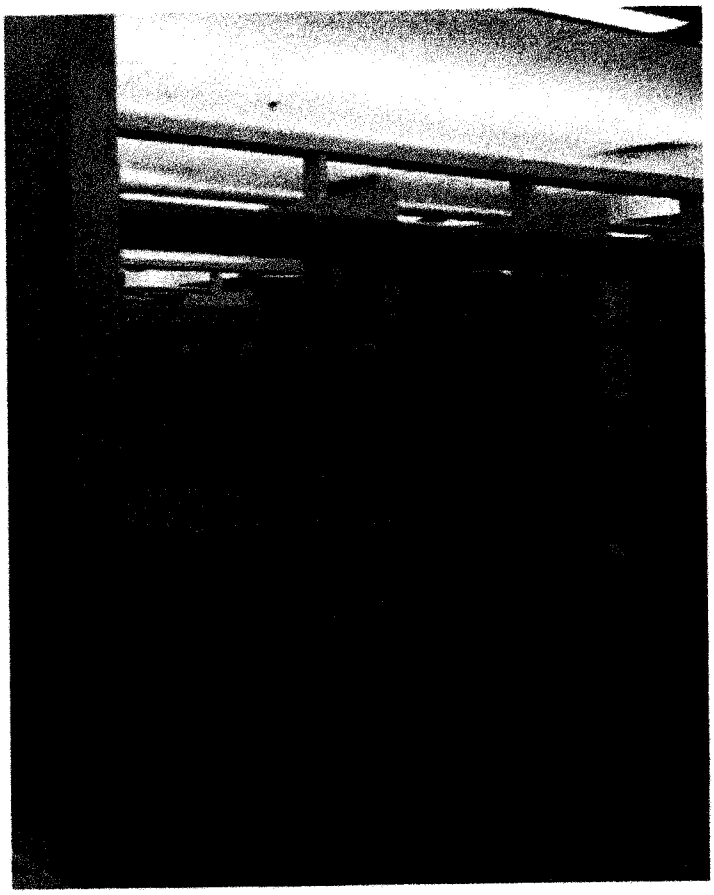
core based system
anchored flexibility



FLEX SERIES

The Flex Series utilizes a fixed center core structure which supports interchangeable units to create specialized workstations. The inner service chase located within the core conveniently houses all services such as plumbing, electrical and data. Service fixtures can be vertically mounted providing an unobstructed work area or surface mounted as preferred. Removable work surfaces, shelves and tables can be reconfigured and adjusted in height to meet the specific requirements of individual users and equipment. Storage options include mobile, suspended and overhead cabinets. This system offers increased flexibility to adapt to future changes while retaining a traditional look.

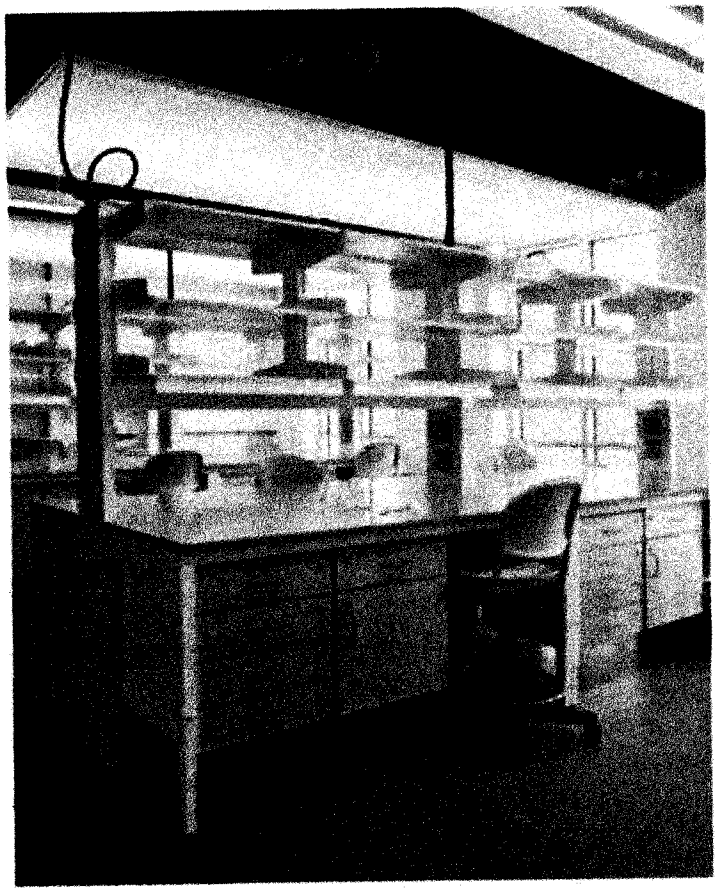
structured overhead system
flexible floor space



FREEDOM SERIES

Our Freedom Series combines independent floor mounted tables with a vertically supported upper storage structure that delivers mechanical services such as plumbing, electrical and data. This overhead structure allows for large spans of unobstructed work surface as the upper storage and services are not mounted to the bench top. Mobile cabinets and moveable tables allow the end user to easily reconfigure the furniture to adapt to evolving processes.

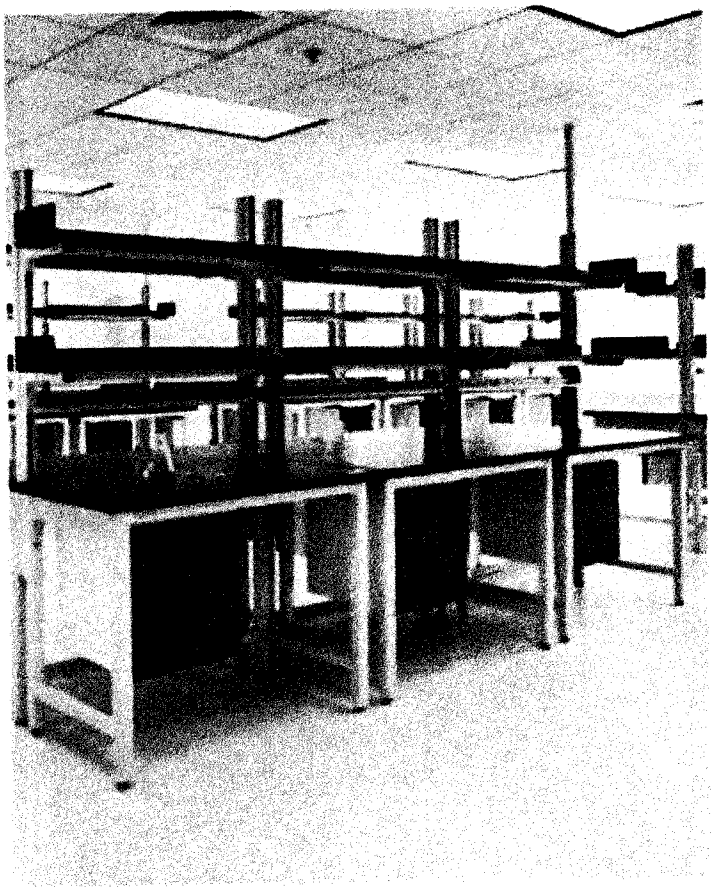
free-standing bench system
multiple configurations



OPTIMA SERIES

The Optima Series is a moveable bench system designed to adapt to changing lab processes, equipment and users. Self-supporting benches are constructed with either fixed or adjustable height work surfaces and offer single or double-sided flexibility. Lower storage options include suspended, mobile and floor-mounted cabinets and are available in a variety of configurations. Cabinets and shelves can be added above the work surface for additional storage. Pre-plumbed and pre-wired quick connect mechanical service fixtures are used in conjunction with overhead service carriers or ceiling panels which facilitates bench movement and optimizes layout flexibility

steel table system
welded strength



CAMBRIDGE SERIES

Our steel tables are fully welded providing the strength and stability needed to support heavy loads. Tables are a cost effective furniture system that lab personnel can reconfigure quickly and efficiently. Our tables can be used with casters or leveling feet depending on the need for mobility and are available in a variety of fixed or adjustable heights. If required, cabinets and shelving can be added and also relocated to create versatile workstations.

carts and carriers
workspace adaptability

MOBILE CARTS

The Flex Cart Series is an ideal solution for workstations that require high levels of durability, mobility, adjustability and adaptability with a contemporary design. These carts are easily integrated into existing workspaces or used as independent workstations, which makes them optimal for sharing instrumentation, tools or processes within the same laboratory area. Flex Carts can be configured with a broad range of accessories including adjustable height work surfaces, suspended upper and lower cabinets, adjustable shelving, electrical raceways, task lighting, pegboards, tack boards and marker boards.

OVERHEAD CARRIERS

Overhead service carriers and ceiling panels are designed to compliment moveable furniture systems by providing a convenient point of access for mechanical, electrical and plumbing connections at the ceiling. They can be strategically located throughout the lab for reconfiguration of workstations or equipment. They come in a variety of sizes, types, and styles to fit the lab requirements.

understanding the process.

At New England Lab, we understand the details of building a new lab. A brief outline of the process:

Conceptual

- Workflow Analysis
- Spatial Optimization
- Conceptual Planning
- Conceptual Budget
- Fume Hood Selection
- HVAC Design
- MEP Dialog
- LEED Considerations

Planning

- Furniture System Selection
- Material Selection
- Finishing Components
- Environmental

Procurement

- Shop Drawings
- Field Dimensions
- Lead Time Planning
- Material Fabrication

Installation

- Layout
- Delivery
- Installation
- Trade Coordination
- Mechanical Connections
- Electrical Connections
- Commissioning
- Quality Control

Our team is trained to walk you through this process so that the end result meets your expectations. Our knowledge and experience facilitates smooth and proactive coordination with other trades to avoid common pitfalls through each phase.

New England Lab specializes in creative solutions to keep pace with evolving technology and demands.

For further assistance in planning your new lab, contact one of our experienced lab furniture specialists at 888-635-2080 or newenglandlab.com

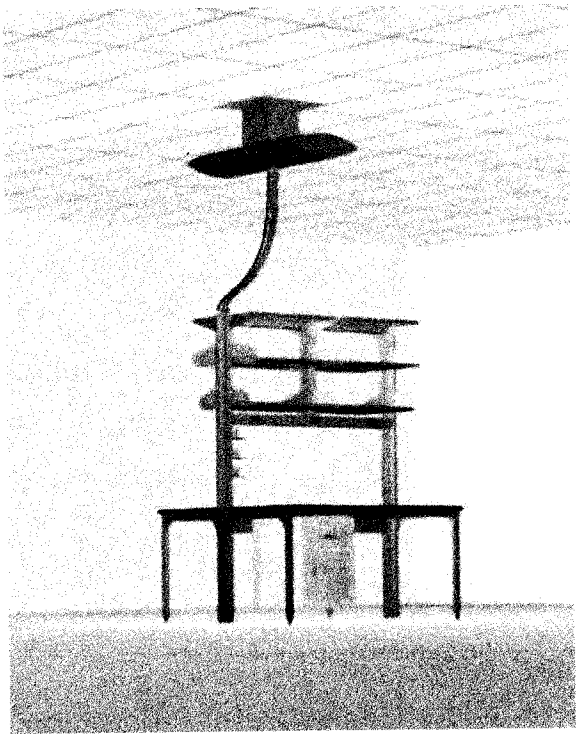
mott MANUFACTURING

LABORATORY FURNITURE

OPTIMA™
ADAPTABLE LABORATORY FURNITURE SOLUTIONS

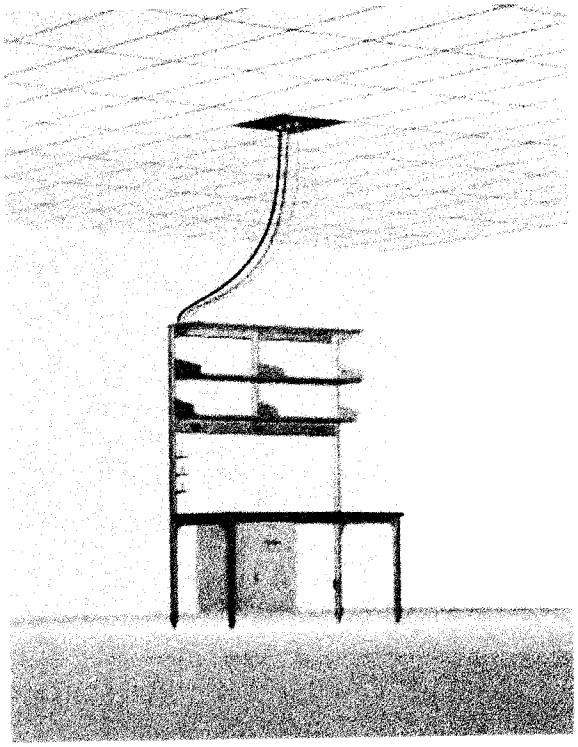
The Optima™ Laboratory Bench system has been designed to adapt to an array of laboratory processes, equipment and users. It conveniently supplies all the services and features required for today's laboratory in a self-contained and self-standing bench assembly. This stylish system is available in different designs with the option of a powder coated steel finish or stainless steel.

With the Optima™ system, laboratories can be easily created, changed and reconfigured for new applications or changing space. Integrated services deliver quick and easy access while providing superior flexibility by keeping the work surface open. Plumbing, electrical and data services are factory installed and designed to quick connect to ceiling mounted service panels or overhead service carriers. The Optima™ system provides the ultimate answer to flexibility by offering adjustable work surfaces and shelving to accommodate the ever-changing requirements in today's laboratories.



Optima™ 2500 Series Laboratory
Bench systems can be found on pages
T2 - T16

Note: Double Sided Assembly as shown is not available in the USA.



Optima™ 2100 Series Laboratory
Bench systems can be found on pages
T17 - T27

For additional information and help in planning contact Mott Manufacturing.

QUALITY BY DESIGN

Lessor _____ Gov't _____

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

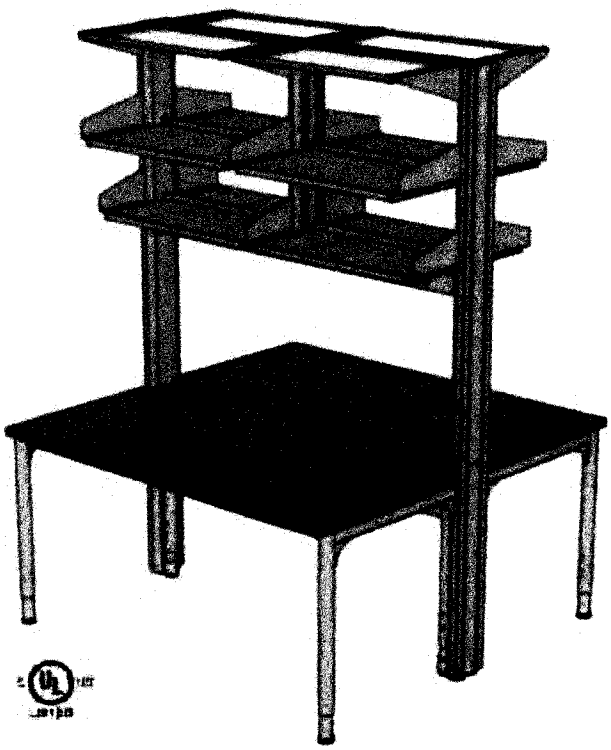
V.8.0

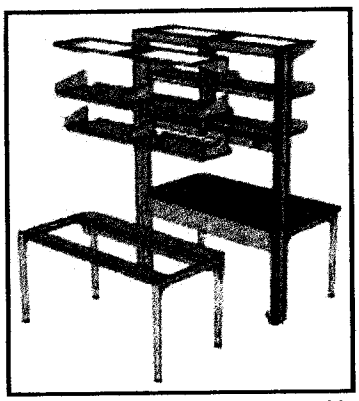
mott MANUFACTURING

LABORATORY FURNITURE

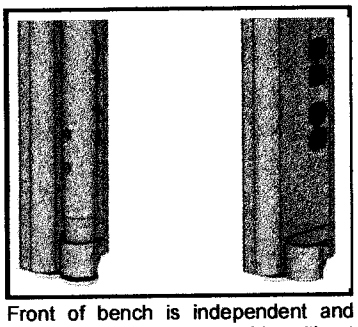
OPTIMA™
2550 SERIES LABORATORY BENCH SYSTEM

Optima™ 2550 adapts to an array of laboratory processes, equipment, and users. This system offers increased flexibility by providing a freestanding bench with an integrated stand alone table all at the same price of our Optima™ 2500 laboratory bench system.

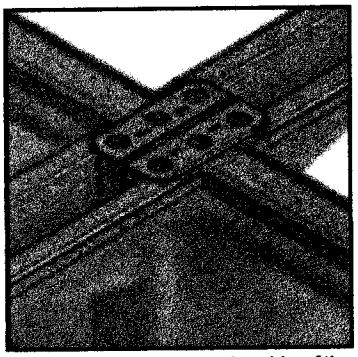




Four legged table is easily removable without tools and can be used as a self-supporting work area anywhere in your lab. Before removing the four leg table the above shelves should be removed.



Front of bench is independent and freestanding round leg table without uprights or shelving and docks almost invisibly into the upright. Held in place by clips at the bottom of the frame.



Profile is flat on the exterior side of the bench and is rounded on the inside which provides a clean and uniform appearance when benches are sequenced.

- Overall assembly is 84" high, 2" x 6" deep rear posts with leveling feet, comes complete with cantilevered table frame and freestanding round leg table (without uprights).
- Table frame is height adjustable in 1" increments from 29" to 36" (work surface not included).
- Available in 58" and 70" depths, overall depth does not include work surface.
- Shelves and end panels are not included and must be ordered separately.
- Complete with hanging rails to suspend lower cabinets on units 72" wide and smaller. To order suspended base cabinets and mobile cabinets refer to that catalog sections (assemblies larger than 72" wide cannot suspend cabinets).
- A maximum of three plumbing fixtures are available on the plumbing post.
- Four electrical receptacles are standard in lower electrical post.
- Utility channel will have electrical and data provisions, see page T6 for details.
- Available in powder coated steel finish or stainless steel.
- Ships partially assembled.
- Please indicate Optima™ 2550 when ordering.

NOTE: Please contact Mott Manufacturing for maximum load ratings.

QUALITY BY DESIGN

Lessor _____ Gov't _____

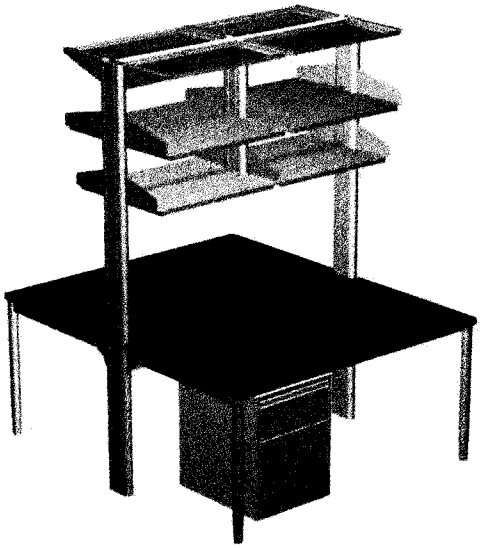
V.8.0

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

mott MANUFACTURING

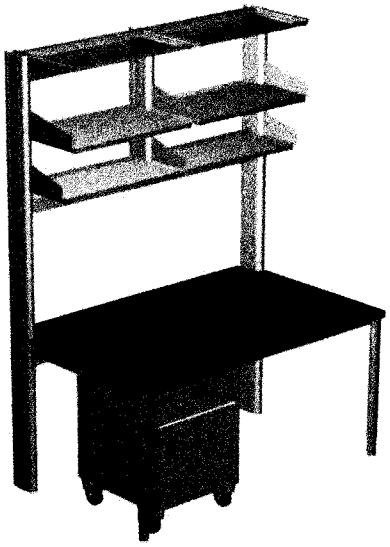
LABORATORY FURNITURE

OPTIMA™
2500 SERIES LABORATORY BENCH SYSTEM

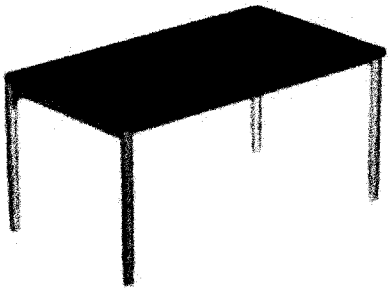


Double Sided Assembly

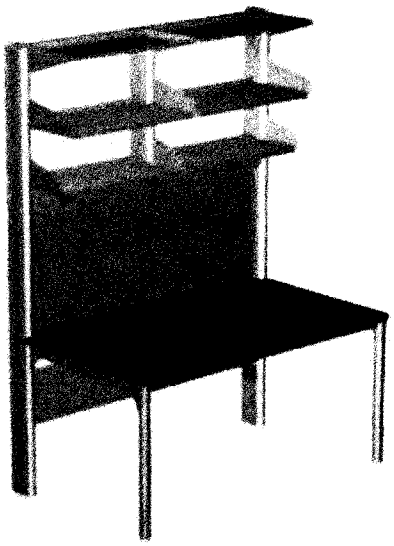
Note: Double Sided Assembly as shown is not available in the USA.



Single Sided Assembly



Stationary Table



Tech Desk Station

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

QUALITY BY DESIGN

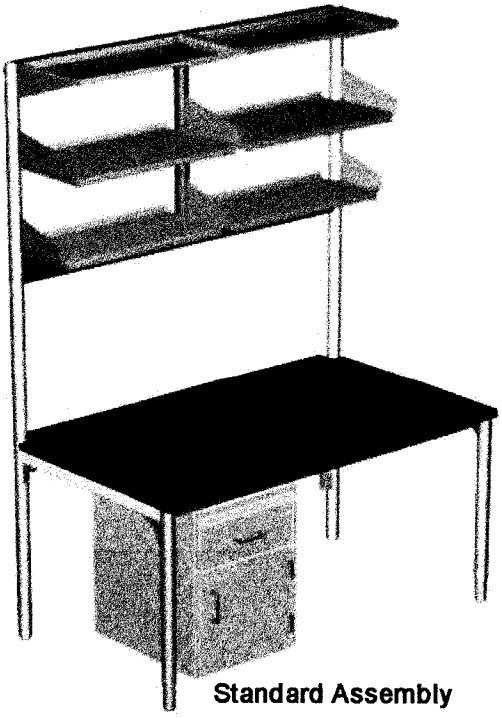
Lessor _____ Gov't _____

V.8.0

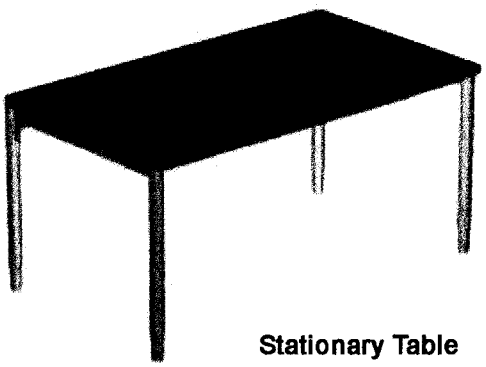
mott MANUFACTURING

LABORATORY FURNITURE

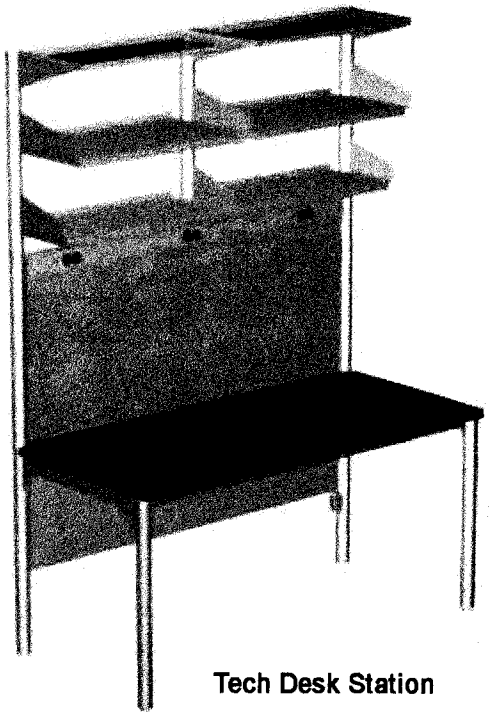
OPTIMA™
2100 SERIES LABORATORY BENCH SYSTEM



Standard Assembly



Stationary Table



Tech Desk Station

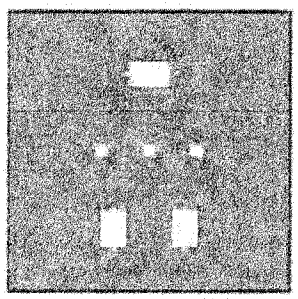
Lease GS-06P-LKS00076: Exhibit C page 147 of 164
117

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

QUALITY BY DESIGN
Lessor _____ Gov't _____

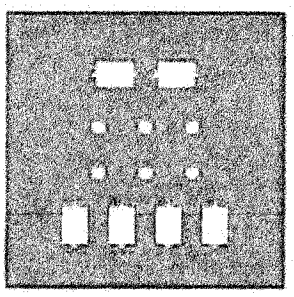
V.8.0

OPTIMA™ COMPONENTS



Item Number
OSP0001

- Powder coated steel panel takes the place of a standard ceiling tile.
- Offers the ability to mount and disconnect quick connect service fixtures, electrical and data outlets.
- Dimension 23-3/4" x 23-3/4".
- 3 service access holes and 3 electrical cutouts.
- Panel is compatible with most T grid acoustical suspended ceiling structures.
- Fixtures must be ordered separately.



Item Number
OSP0002

- Powder coated steel panel takes the place of a standard ceiling tile.
- Offers the ability to mount and disconnect quick connect service fixtures, electrical and data outlets.
- Dimension 23-3/4" x 23-3/4".
- 6 service access holes and 6 electrical cutouts.
- Panel is compatible with most T grid acoustical suspended ceiling structures.
- Fixtures must be ordered separately.

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

QUALITY BY DESIGN

Lessor _____ Gov't _____

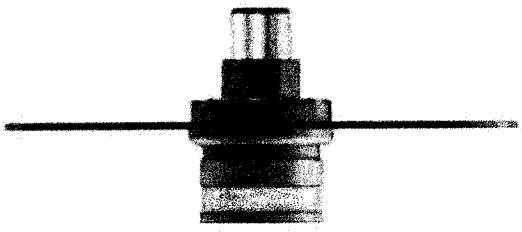
V.8.0

mott
MANUFACTURING

LABORATORY FURNITURE

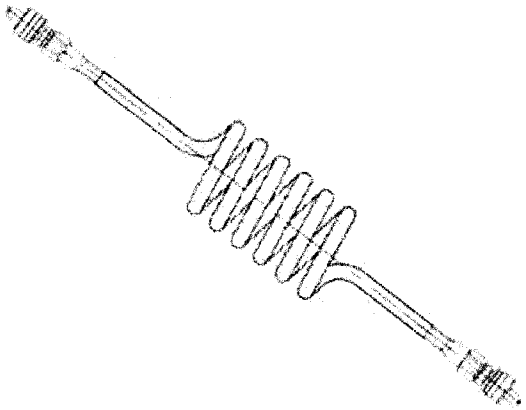
Standard Optima™ Laboratory Bench systems are UL962 Listed, however this listing does not cover plumbing fixtures and associated piping. The customer is responsible for ensuring that internal piping and components meet local codes and standards. In some jurisdictions on-site inspection and testing may be required, this service is not provided by Mott Manufacturing.

OPTIMA™
SERVICE FIXTURES - These parts are to be ordered if you require services to be shipped loose.



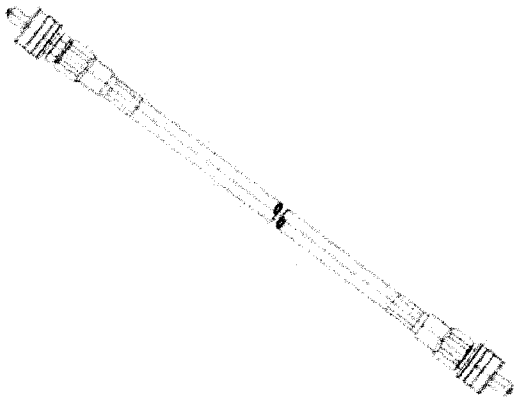
For Coiled & PVC Hose		
Service	Band Color	Item Number
AIR	Orange	MCPVAIR
ARG	Violet	MCPVARG
CW	Green	MCPVCWT
GAS	Blue	MCPVGAS
HE	Black	MCPVHEL
NIT	Brown	MCPVNIT
VAC	Yellow	MCPVVAC

- These parts are to be ordered if you require services to be shipped loose.
- A panel mounted brass keyed quick connect plug is suitable for panel mounting on overhead service carriers and Ceiling Service Panels with coiled and PVC hoses.
- Complete with a 3/8" male NPT inlet.
- Only plug and body quick connects of the same color will couple and allow flow.



Coiled Hose		
Service	Band Color	Item Number
AIR	Orange	COHAAIR
ARG	Violet	COHAARG
CW	Green	COHACWT
GAS	Blue	COHAGAS
HE	Black	COHAHEL
NIT	Brown	COHANIT
VAC	Yellow	COHAVAC

- These parts are to be ordered if you require services to be shipped loose.
- Assembly complete with 3/8" I.D. X 9/16" O.D. Coiled polyurathane hose (color of hose is translucent blue) and keyed plug quick connects.
- Suitable for all Optima™ series.
- Only plug and body quick connects of the same color will couple and allow flow.



PVC Hose		
Service	Band Color	Item Number
AIR	Orange	PVHAAIR
ARG	Violet	PVHAARG
CW	Green	PVHACWT
GAS	Blue	PVHAGAS
HE	Black	PVHAHEL
NIT	Brown	PVHANIT
VAC	Yellow	PVHAVAC

- These parts are to be ordered if you require services to be shipped loose.
- Assembly complete with 3/8" I.D. X 72"long reinforced PVC hose color-coded per service and keyed plug quick connects.
- Suitable for Optima™ series.
- Only plug and body quick connects of the same color will couple and allow flow.

Note: The above hoses may not be acceptable for use with Natural Gas in some jurisdictions. Please consult with the local authorities before ordering. Consult Mott for further information.

QUALITY BY DESIGN

Lessor _____ Gov't _____

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

V.8.0

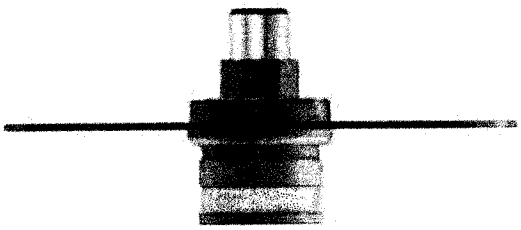
mott
MANUFACTURING

LABORATORY FURNITURE

Standard Optima™ Laboratory Bench systems are UL962 Listed, however this listing does not cover plumbing fixtures and associated piping. The customer is responsible for ensuring that internal piping and components meet local codes and standards. In some jurisdictions on-site inspection and testing may be required, this service is not provided by Mott Manufacturing.

OPTIMA™
SERVICE FIXTURES - These parts are to be ordered if you require services to be shipped loose.

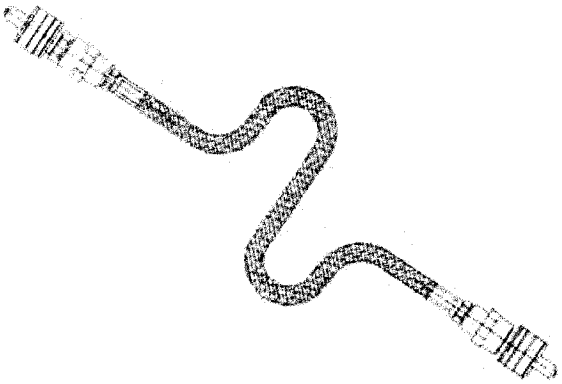
[redacted]



For Stainless Steel Hose		
Service	Band Color	Item Number
AIR	Orange	MSSAAIR
ARG	Violet	MSSAARG
CW	Green	MSSACWT
GAS	Blue	MSSAGAS
HE	Black	MSSAHEL
NIT	Brown	MSSANIT
VAC	Yellow	MSSAVAC

- These parts are to be ordered if you require services to be shipped loose.
- A panel mounted stainless steel keyed quick connect plug is suitable for panel mounting on overhead service carriers and Ceiling Service Panels with stainless steel hoses.
- Complete with3/8" NPT inlet.
- Only plug and body quick connects of the same color will couple and allow flow.

[redacted]



Stainless Steel Hose		
Service	Band Color	Item Number
AIR	Orange	SSHAAIR
ARG	Violet	SSHAARG
CW	Green	SSHACWT
GAS	Blue	SSHAGAS
HE	Black	SSHAHEL
NIT	Brown	SSHANIT
VAC	Yellow	SSHAVAC

- These parts are to be ordered if you require services to be shipped loose.
- Assembly complete with 3/8" I.D. X 72" long stainless steel braided hose (hose has Teflon core) and stainless steel keyed plug quick connects.
- Corrugated gas appliance connector is supplied for natural gas.
- Suitable for Optima™ series.
- Only plug and body quick connects of the same color will couple and allow flow.

Note: The above hoses may not be acceptable for use with Natural Gas in some jurisdictions. Please consult with the local authorities before ordering. Consult Mott for further information.

[redacted]

QUALITY BY DESIGN
Lessor _____ Gov't _____

As of Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

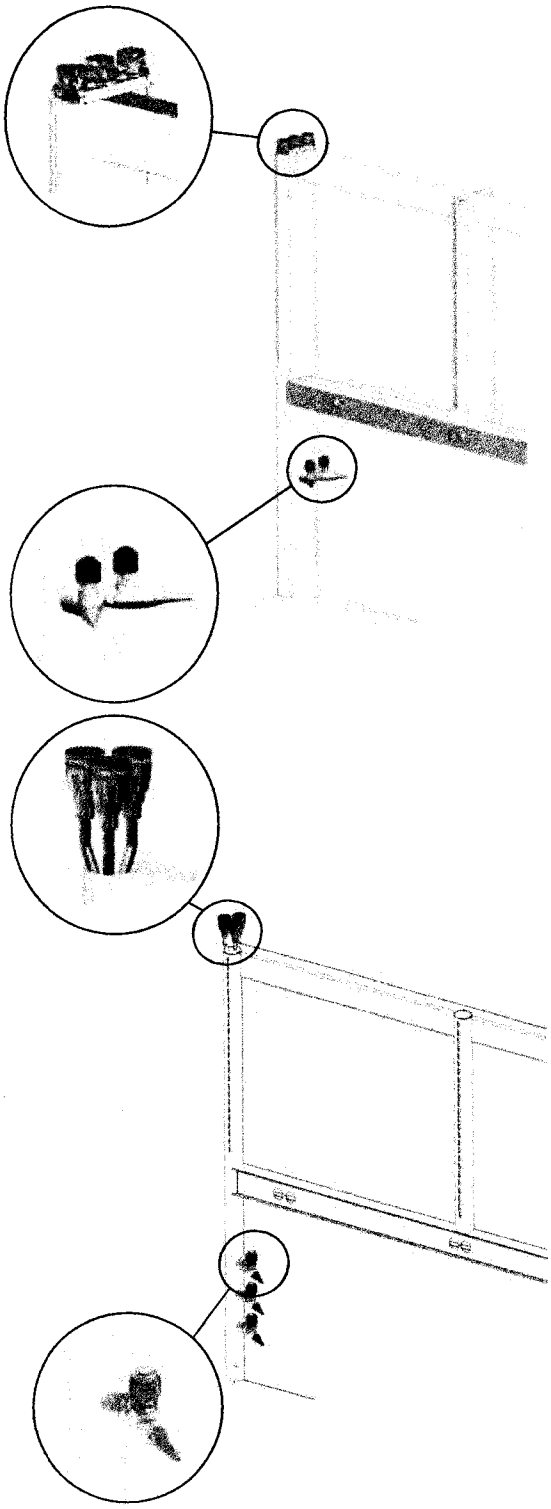
V.8.0

mott MANUFACTURING

LABORATORY FURNITURE

Standard Optima™ Laboratory Bench systems are UL962 Listed, however this listing does not cover plumbing fixtures and associated piping. The customer is responsible for ensuring that internal piping and components meet local codes and standards. In some jurisdictions on-site inspection and testing may be required, this service is not provided by Mott Manufacturing.

OPTIMA™ SERVICE FIXTURES - These parts are to be ordered if you require services to be shipped loose.



For 2500 Series			
Service	Band Color	For Coiled & PVC Hose	For Stainless Hose
AIR	Orange	QCV1AIR	QCV3AIR
ARG	Violet	QCV1ARG	QCV3ARG
CW *	Green	QCV1CWT	QCV3CWT
GAS	Blue	-	QCV3GAS
HE	Black	QCV1HEL	QCV3HEL
NIT	Brown	QCV1NIT	QCV3NIT
VAC	Yellow	QCV1VAC	QCV3VAC

- These parts are to be ordered if you require services to be shipped loose.
- Assembly complete with panel mounted wye service fixture (Instrumentation Needle Valve supplied, Note: * Cold Water is supplied with ball valve), keyed quick connect body and tubing. Hoses are not included and must be ordered sparately. (When ordering assembly for Coiled & PVC hose, brass keyed quick connect body and copper tubing is supplied. When ordering assembly for stainless steel hose, stainless steel keyed quick connect body and stainless steel tubing is supplied.)
- Corrugated gas appliance connector is supplied for natural gas.
- This assembly is only suitable for Optima™ 2500 Series and double sided Optima™ Mobile Workstation.
- Only plug and body quick connects of the same color will couple and allow flow.

For 2100 Series			
Service	Band Color	For Coiled & PVC Hose	For Stainless Hose
AIR	Orange	QCV2AIR	QCV4AIR
ARG	Violet	QCV2ARG	QCV4ARG
CW *	Green	QCV2CWT	QCV4CWT
GAS	Blue	-	QCV4GAS
HE	Black	QCV2HEL	QCV4HEL
NIT	Brown	QCV2NIT	QCV4NIT
VAC	Yellow	QCV2VAC	QCV4VAC

- These parts are to be ordered if you require services to be shipped loose.
- Assembly complete with panel mounted single service fixture (Instrumentation Needle Valve supplied, Note: * Cold Water is supplied with ball valve), keyed quick connect body and tubing. Hoses are not included and must be ordered sparately.(When ordering assembly for Coiled & PVC hose, brass keyed quick connect body and copper tubing is supplied. When ordering assembly for stainless steel hose, stainless steel keyed quick connect body and stainless steel tubing is supplied.)
- Corrugated gas appliance connector is supplied for natural gas.
- This assembly is only suitable for Optima™ 2100 Series and single sided Optima™ Mobile Workstation.
- Only plug and body quick connects of the same color will couple and allow flow.

QUALITY BY DESIGN

Lessor _____ Gov't _____

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

V.8.0

Eyewash / Drench Hose Units

new englandlab
lab-tested furniture systems

WaterSaver

ANSI Guidelines

ANSI Standard Z358.1-2009 states that drench hose units may supplement, but may not be used in place of, dedicated eyewash units. WaterSaver offers a series of units that meet the provisions for both an eyewash and a drench hose. These dual purpose units can be used to combine an eyewash and a drench hose into a single versatile, economic unit.

To use the unit as a fixed eyewash, simply leave the unit in the holder. The dual spray heads will deliver water to both eyes simultaneously. To function as a drench hose, remove the unit from the holder and rinse any part of the eyes, face or body.

These units are particularly useful in areas such as laboratories where workers are handling relatively small quantities of injurious materials. However, should a spill occur, it might affect any part of the worker's eyes, face or body. Eyewash/ drench hose units offer a degree of versatility not found with other types of emergency equipment.

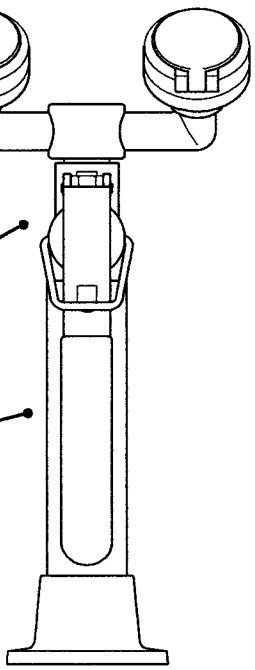
This checklist summarizes the provisions of ANSI Z358.1-2009 for both eyewashes and drench hoses. Please refer to the standard for a complete listing of these provisions.

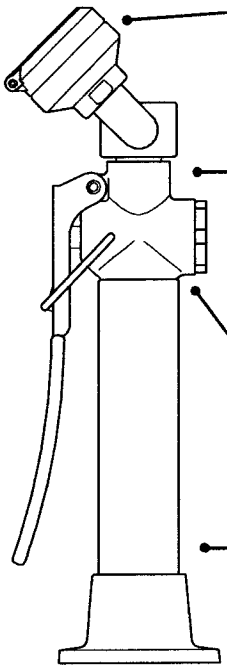
All WaterSaver eyewash/drench hose units are third-party certified to meet or exceed the provisions of ANSI Z358.1-2009.

Outlet heads shall be positioned between 33" (83.8 cm) and 45" (114.3 cm) from the floor and at least 6" (15.3 cm) from the wall or nearest obstruction. (Section 5.4.4)

Controlled, low velocity flow rinses both eyes and is not injurious to user. (Sections 5.1.1 and 8.2.1)

Valve actuator shall be easy to locate and readily accessible to the user. (Sections 5.2 and 8.2.2)





Protect spray heads from airborne contaminants. (Section 5.1.3)

Unit must deliver at least 0.4 gallons (1.5 liters) of water per minute for 15 minutes. (Section 5.1.6)

"Hands-free" stay-open valve shall activate in one second or less. (Sections 5.2 and 8.2.2)

Connect unit to water supply delivering at least 0.4 GPM. (Sections 5.4.5 and 8.2.3.3)

IDENTIFICATION
Identify eyewash/ drench hose unit with highly visible sign. Area around unit shall be well lighted.(Sections 5.4.3 and 8.2.3.2)

LOCATION
Install eyewash/drench hose unit within 10 seconds or 55 ft. of hazard, on same level as hazard and with unobstructed travel path. (Section 5.4.4)

WATER TEMPERATURE
Water delivered by eyewash/drench hose units shall be tepid (60°-100°F). (Sections 5.4.6 and 8.2.3.4)

TRAINING
Instruct all employees in the location and proper use of eyewash/drench hose units. (Sections 5.5.4 and 8.2.4.3)

MAINTENANCE/INSPECTION
Activate eyewash/drench hose units at least weekly. (Sections 5.5.2 and 8.2.4.2) Inspect annually for compliance with standard. (Section 5.5.5)

rev ~~0110~~ © 2010 / WaterSaver Faucet Co.

WaterSaver Faucet Co. 312 666 5500 TELEPHONE
701 West Erie Street 312 666 5501 FACSIMILE
Chicago, IL 60654 www.wsfc.com

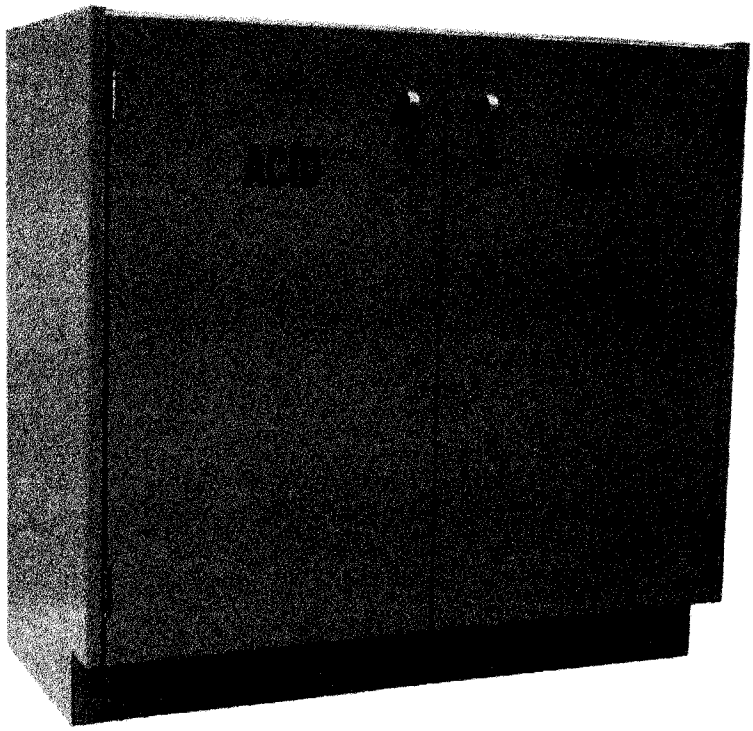
ETL Listed 101496.
Units have been tested to and comply with ANSI Z358.1 - 2009

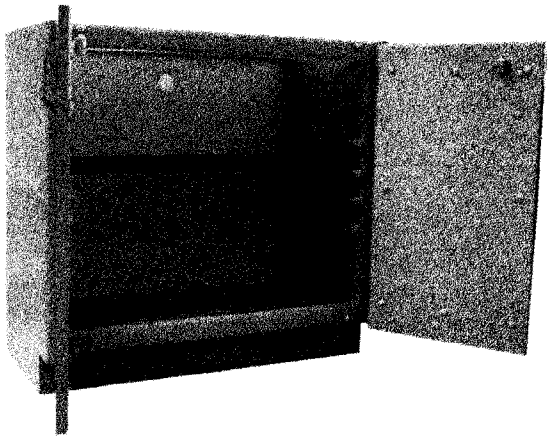
Acid Cabinet

Specialty Cabinet

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible] resistance and may be located in four different positions
- Molded liner can be removed in one piece from the front to gain access to services located behind the cabinet
- Threaded vent connection is fusion welded to the cabinet using standard plastic pipe fittings
- Door roller catch is plastic to eliminate corrosion
- Available in various heights and widths
- Interior depth of cabinet liner is 16"



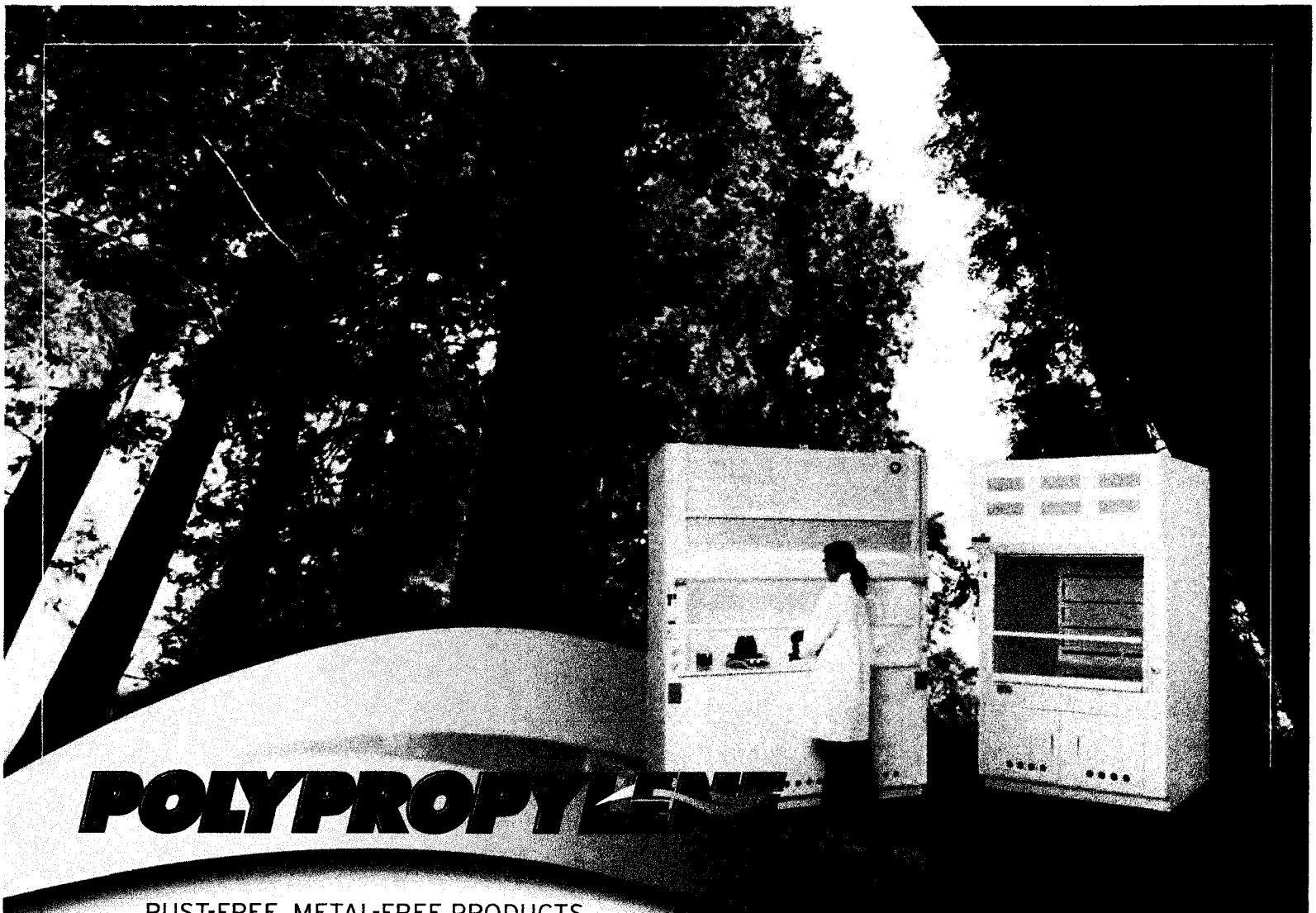


mott MANUFACTURING

ISO 9001:2008 REGISTERED

QUALITY BY DESIGN

Corporate Headquarters - 452 Hardy Rd, Brantford ON, Canada N3T 5L8 • T. 519.752.2825 • F. 519.752.2895
Wood Casework Division - 562 Industrial Park Rd, P.O. Box 156, Maxwelton, WV, USA 24957 • T. 304.497.2115
www.mott.ca



POLYPROPYLENE

RUST-FREE, METAL-FREE PRODUCTS

new england lab®
lab-tested furniture systems

NUAIRE

Table of Contents

FumeGard Series ..... 4 - 9

KU-156 Vertical Laminar Airflow Fume Hood ..... 4 - 5

KU-162 Conventional Fume Hood ..... 6 - 7

KU-164 By-Pass Fume Hood ..... 8 - 9

Fume Hood Base Cabinets ..... 10 - 11

Acid Storage Cabinets ..... 12 - 13

Polypropylene Casework ..... 14 - 24

Base Cabinets ..... *16 - 18*

Sink Units and Vented Storage *19*

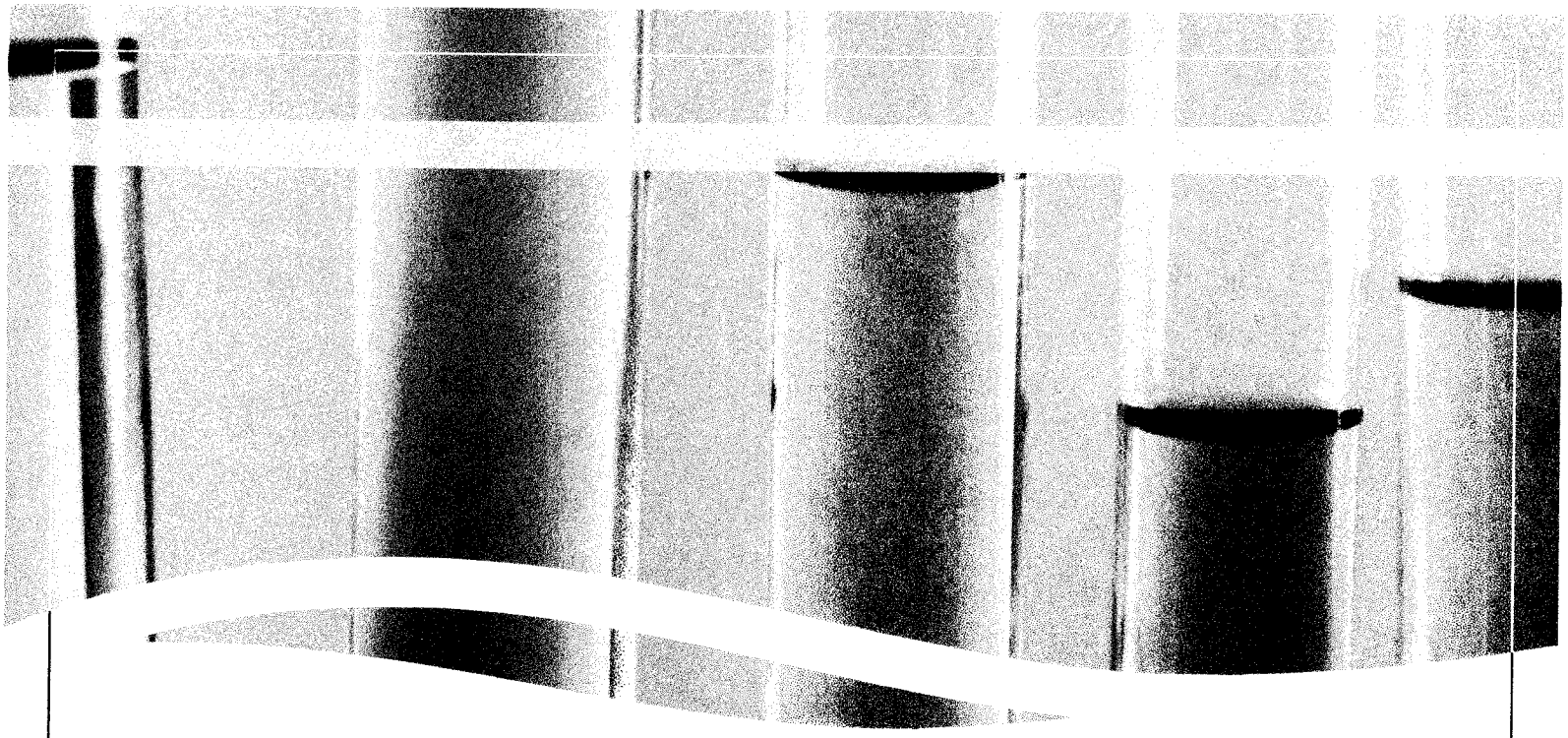
Knee Space and Filler Panels ..... *20 - 21*

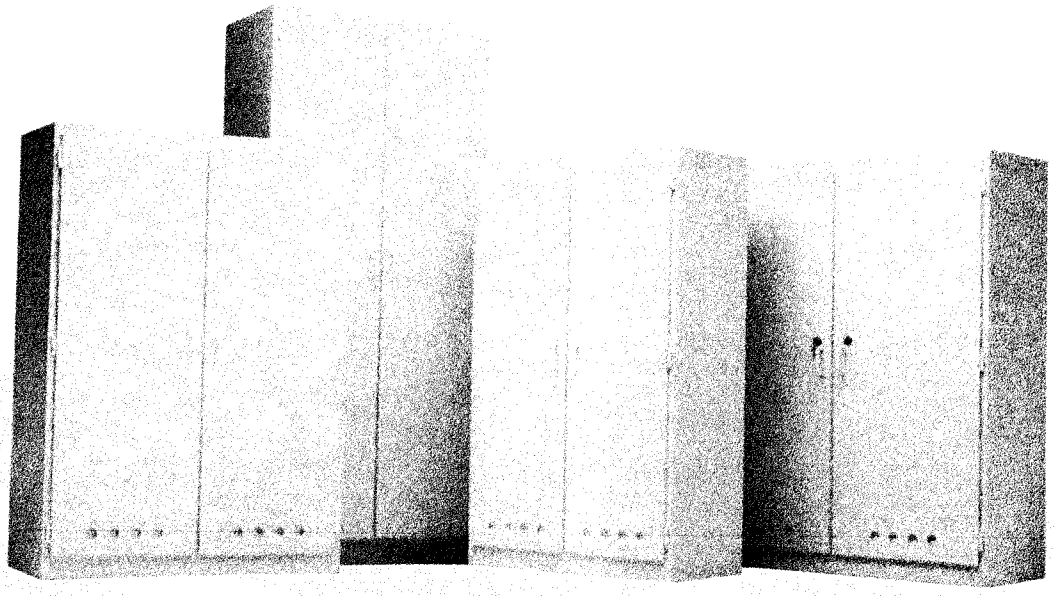
Tall Storage Cabinets *22*

Wall Cases ..... *22 - 24*

Other *24*

Chemical Resistance Guide 25



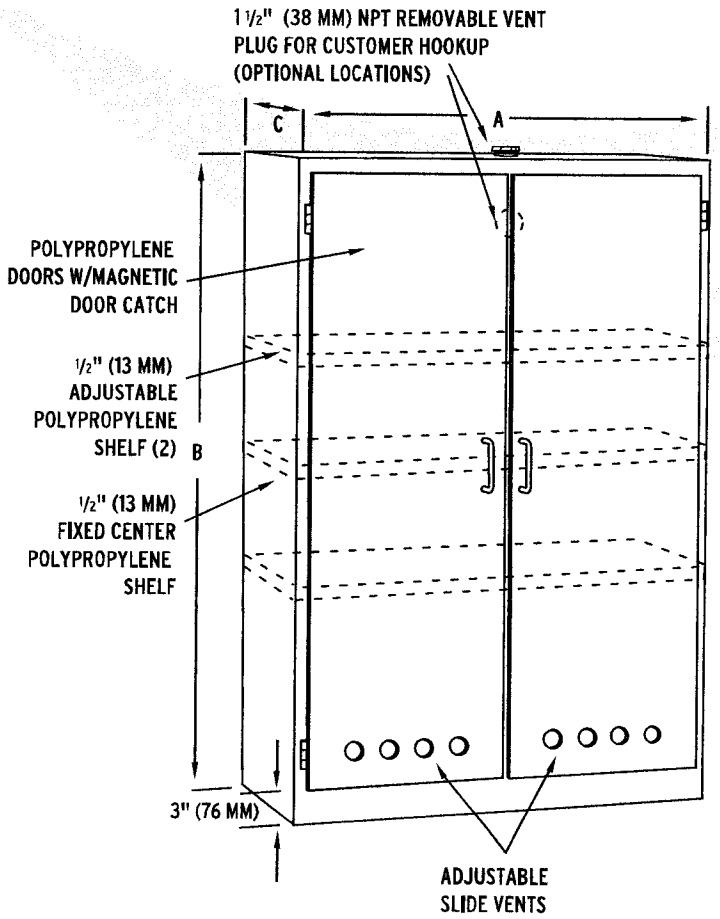


NU-53 Acid Storage Cabinets

tall vented acid storage cabinets

NU-53 Acid Storage Cabinets are constructed from stress-relieved, fully seam-welded, white polypropylene. The outer cabinet shell, kick plate, and shelves are constructed from 1/2 inch (13 mm) polypropylene. The NU-53 Tall Double Door Cabinet has one fixed and two adjustable shelves with drip-proof lips. Cabinets come with a capped vent placed at the customer's specified location.

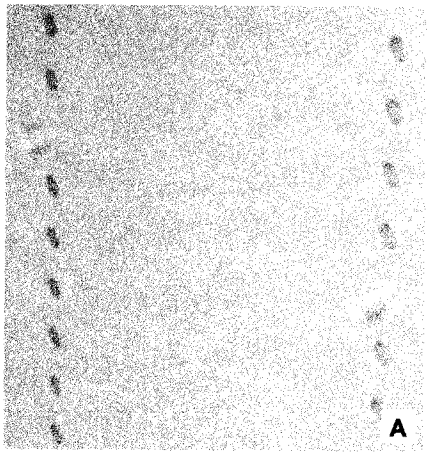
Each solid 1/2 inch (13 mm) polypropylene door features easy-to-clean handles, as well as hinges, and screws made of polypropylene. Doors are secured with Teflon® coated magnetic catches.

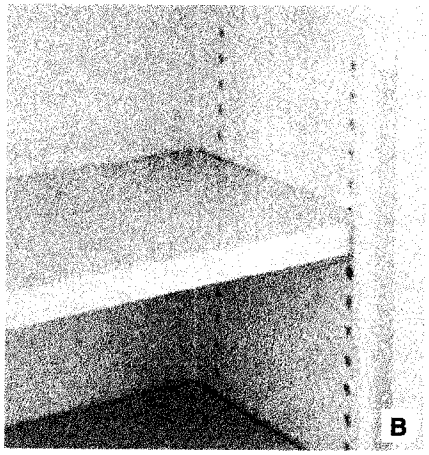


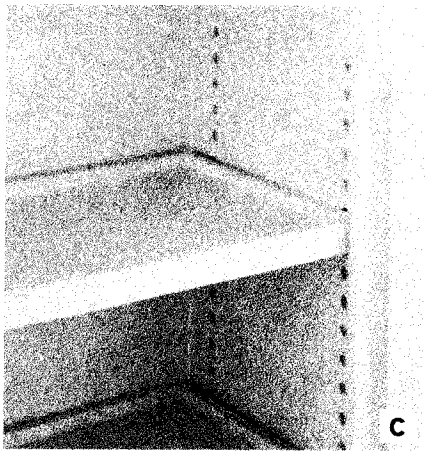
NU-53 Tall Vented Acid Storage Cabinet

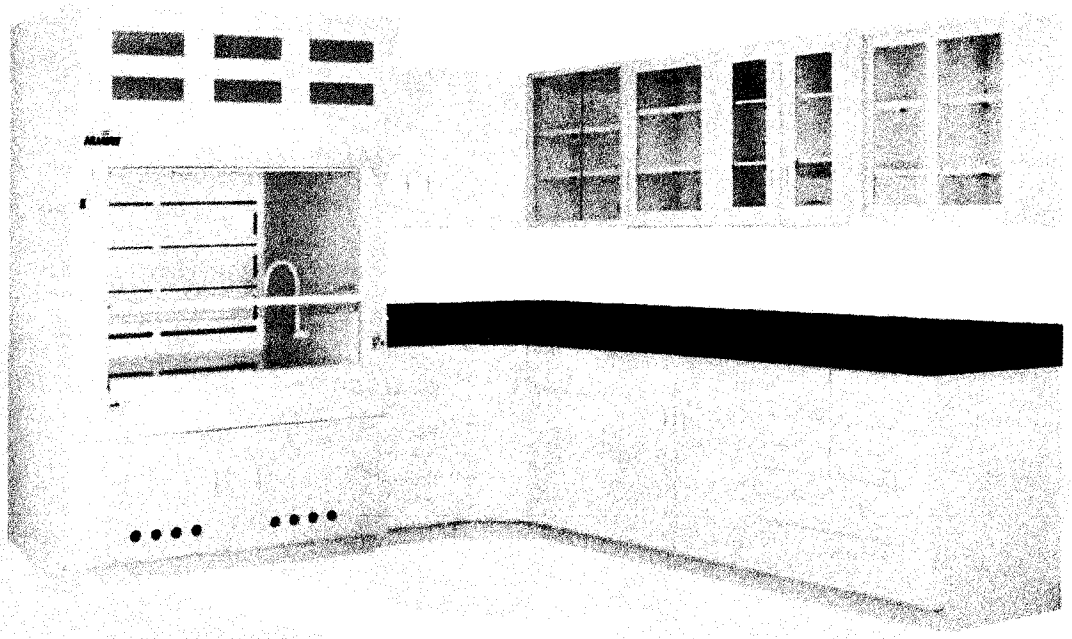
Overall Dimensions	Width (A)	Height (B)	Depth (C)
NU-53-3660	36" (914 mm)	60" (1524 mm)	18" (457 mm)
NU-53-4260	42" (1067 mm)	60" (1524 mm)	18" (457 mm)
NU-53-4860	48" (1219 mm)	60" (1524 mm)	18" (457 mm)
NU-53-3684	36" (914 mm)	84" (2134 mm)	22" (559 mm)
NU-53-4284	42" (1067 mm)	84" (2134 mm)	22" (559 mm)
NU-53-4884	48" (1219 mm)	84" (2134 mm)	22" (559 mm)

The NU-53 features top and bottom shelves that are removable and adjustable in 2" (51 mm) increments using the provided pegs **[A]**. The shelves are also reversible, flat on one side **[B]** and with a 1/2" (13 mm) lip on the reverse side to contain spilled liquids **[C]**.







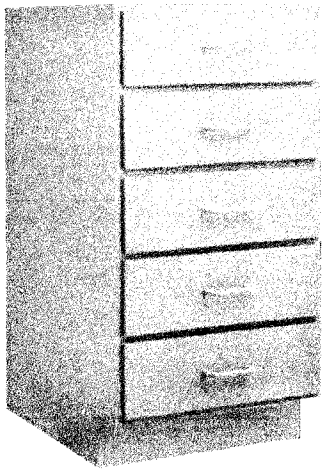


Polypropylene Casework

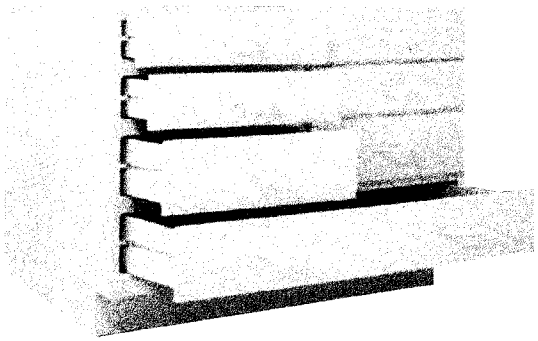
modular cabinetry

All casework is manufactured using stress-relieved, fully seam-welded, white polypropylene. Walls and floors are reinforced where required to maintain structural integrity. Doors are readily removable and hinges easily replaceable. Base cabinets with doors have 1/4 inch (6 mm) flush mounted access panels. The outer cabinet shell, kick plate, and shelves are 1/2 inch (13 mm) thick. Sliding wall case doors may use glass, Lexan™ or solid polypropylene.

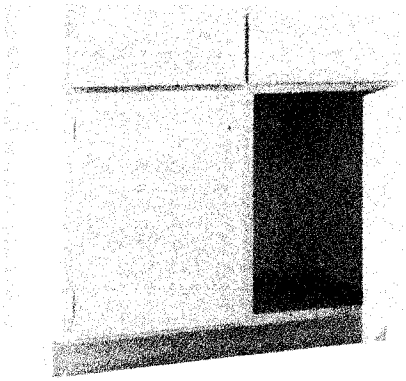
NuAire polypropylene casework is designed to conform to a wide variety of unique customer requirements. Modifications, additions, optional accessories or customer-designed products can be fabricated to meet the specific needs of your laboratory application.



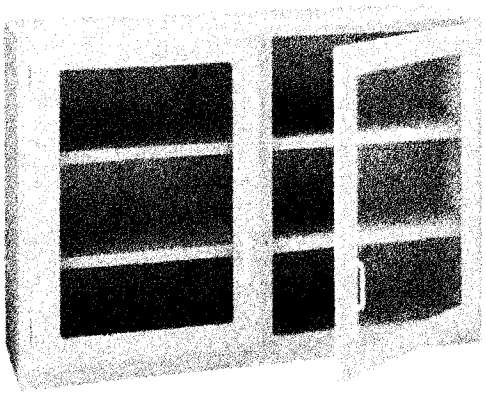
NU-13 Basic 5-Drawer Unit



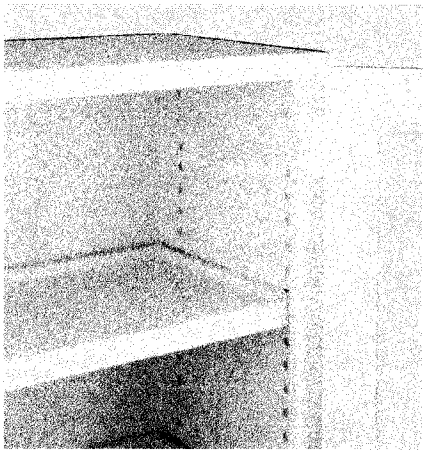
NU-17 Combination 7-Drawer Unit



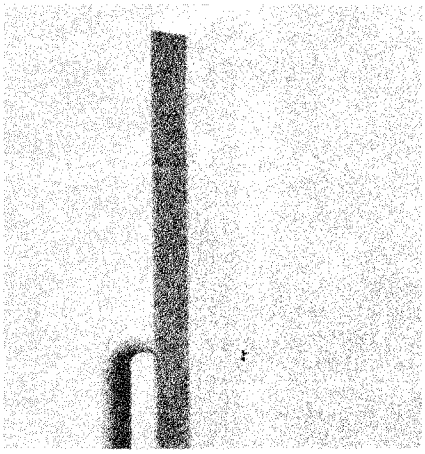
NU-30 Double Drawer/Door Combination Unit



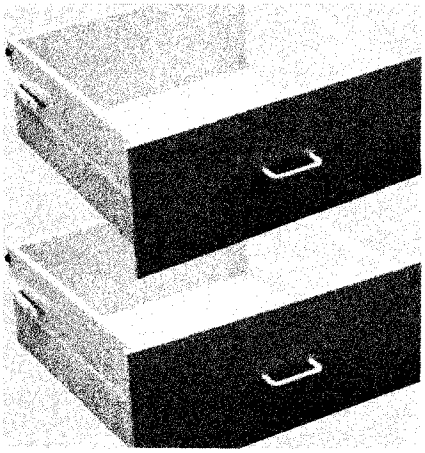
NU-43 Double Hinged Framed Glass Door Wall Case



Wall and base cabinet shelves are adjustable and come with a drip-proof 1/2 inch (13 mm) lip.



20 Mil thickness PolyArmor® magnet imbedded in door and cabinet frame.



Drawers, drawer guides, sliding window components, drawer pulls, handles, hinges, and screws are all manufactured using polypropylene.

Chemical Resistance Guide

PLEASE NOTE: This guide is intended as general information only. Since each pair of ratings listed is for ideal conditions, consider all factors when evaluating chemical resistance. The first letter of each pair applies to conditions at 20°C; the second to those at 50°C.

MATERIALS KEY:
LDPE - Low Density Polyethylene
HDPE - High Density Polyethylene
PP/PA - Polypropylene/ Polypropylene Copolymer
PMP - Polymethylpentene
FEP - Teflon® FEP
TFE - Teflon® TFE
PFA - Teflon® PFA
PC - Polycarbonate
PVC - Polyvinyl Chloride
PSF - Polysulfone

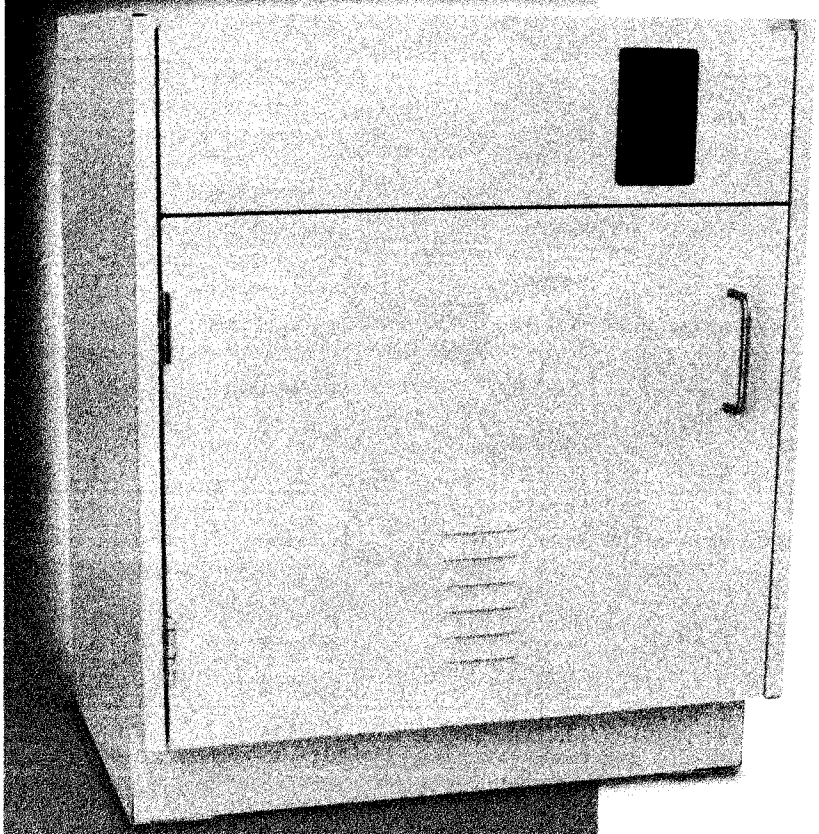
RATINGS KEY:
E - Excellent
G - Good
F - Fair
N - Not Recommended

CHEMICAL ▼ / MATERIAL ►	LDPE	HDPE	PP/ PPCO	PMP	FEP/ TFE/ PFA	PC	RIGID PVC	PSF
Acetaldehyde	GN	GF	GN	GN	EE	FN	GN	NN
Acetamide (saturated)	EE	EE	EE	EE	EE	NN	NN	NN
Acetic Acid (5%)	EE	EE	EE	EE	EE	EG	EE	EE
Acetic Acid (50%)	EE	EE	EE	EE	EE	EG	EG	GG
Acetone	NN	NN	EE	EE	EE	NN	NN	NN
Acetonitrile	EE	EE	FN	FN	EE	NN	NN	NN
Acrylonitrile	EE	EE	FN	FN	EE	NN	NN	NN
Adipic Acid	EG	EE	EE	EE	EE	EE	EG	GG
Alanine	EE	EE	EE	EE	EE	NN	NN	NN
Allyl Alcohol	EE	EE	EE	EG	EE	GF	GF	GF
Aluminum Hydroxide	EG	EE	EG	EG	EE	FN	EG	GG
Aluminum Salts	EE	EE	EE	EE	EE	EG	EE	EE
Amino Acids	EE	EE	EE	EE	EE	EE	EE	EE
Ammonia	EE	EE	EE	EE	EE	NN	EG	GF
Ammonium Acetate (saturated)	EE	EE	EE	EE	EE	EE	EE	EE
Ammonium Glycolate	EG	EE	EG	EG	EE	GF	EE	GG
Ammonium Hydroxide (5%)	EE	EE	EE	EE	EE	FN	EE	GG
Ammonuim Hydroxide (30%)	EG	EE	EG	EG	EE	NN	EG	GG
Ammonium Oxalate	EG	EE	EG	EG	EE	EE	EE	EE
Ammonium Salts	EE	EE	EE	EE	EE	EG	EG	EE
n-Amyl Acetate	GF	EG	GF	GF	EE	NN	NN	NN
Amyl Chloride	NN	FN	NN	NN	EE	NN	NN	NN
Aniline	EG	EG	GF	GF	EE	FN	NN	NN
Benzaldehyde	EG	EE	EG	EG	EE	FN	NN	FF
Benzene	NN	NN	NN	GF	EE	NN	NN	NN
Benzoic Acid (saturated)	EE	EE	EG	EG	EE	EG	EG	FF
Benzyl Acetate	EG	EE	EG	EG	EE	FN	NN	NN
Benzyl Alcohol	NN	FN	NN	NN	EE	NN	GF	NN
Bromine	NN	FN	NN	NN	EE	FN	GN	NN
Bromobenzene	NN	FN	NN	NN	EE	NN	NN	NN
Bromoform	NN	NN	NN	NN	EE	NN	NN	NN
Butadiene	NN	FN	NN	NN	EE	NN	FN	NN
n-Butyl Acetate	GF	EG	GF	GF	EE	NN	NN	NN
n-Butyl Alcohol	EE	EE	EE	EG	EE	GF	GF	GF
sec-Butyl Alcohol	EG	EE	EG	EG	EE	GF	GG	GF
tert-Butyl Alcohol	EG	EE	EG	EG	EE	GF	EG	GF
Butyric Acid	NN	FN	NN	NN	EE	FN	GN	GG
Calcium Hydroxide (concentrated)	EE	EE	EE	EE	EE	NN	EE	GG
Calcium Hypochlorite (saturated)	EE	EE	EE	EG	EE	FN	GF	EE
Carbazole	EE	EE	EE	EE	EE	NN	NN	NN
Carbon Disulfide	NN	NN	NN	NN	EE	NN	NN	NN
Carbon Tetrachloride	FN	GF	GF	NN	EE	NN	GF	NN
Cedarwood Oil	NN	FN	NN	NN	EE	GF	FN	FF
Cellosolve Acetate	EG	EE	EG	EG	EE	FN	FN	NN
Chlorine (10% in air)	GN	EF	GN	GN	EE	EG	EE	NN
Chlorine (10% (moist))	GN	GF	FN	GN	EE	GF	EG	NN
Chloroacetic Acid	EE	EE	EG	EG	EE	FN	FN	NN
p-Chloroacetophenone	EE	EE	EE	EE	EE	NN	NN	NN
Chloroform	FN	NN	NN	NN	EE	NN	NN	NN
Chromic Acid (10%)	EE	EE	EE	EE	EE	GF	EG	NN
Chromic Acid (50%)	EE	EE	GF	GF	EE	FN	EF	NN
Cinnamon Oil	NN	FN	NN	NN	EE	GF	NN	FF
Citric Acid (10%)	EE	EE	EE	EE	EE	EG	GG	EE
Cresol	NN	FN	GF	NN	EE	NN	NN	NN
Cyclohexane	FN	FN	FN	NN	EE	EG	GF	NN
Decalin	GF	EG	GF	FN	EE	NN	EG	NN
o-Dichlorobenzene	FN	FF	FN	FN	EE	NN	NN	NN
p-Dichlorobenzene	FN	GF	GF	GF	EE	NN	NN	NN
Diethyl Benzene	NN	FN	NN	NN	EE	FN	NN	NN
Diethyl Ether	NN	FN	NN	NN	EE	NN	FN	NN
Diethyl Ketone	NN	NN	GG	GF	EE	NN	NN	NN
Diethyl Malonate	EE	EE	EE	EG	EE	FN	GN	FF
Diethylene Glycol	EE	EE	EE	EE	EE	GF	FN	GG
Diethylene Glycol Ethyl Ether	EE	EE	EE	EE	EE	FN	FN	FF
Dimethylformamide	EE	EE	EE	EE	EE	NN	FN	NN
Dimethyl Sulfoxide	EE	EE	EE	EE	EE	NN	NN	NN
1, 4-Dioxane	GF	GG	GF	GF	EE	GF	FN	GF
Dipropylene Glycol	EE	EE	EE	EE	EE	GF	GF	GG
Ether	NN	FN	NN	NN	EE	NN	FN	NN
Ethyl Acetate	EE	EE	EE	FN	EE	NN	NN	NN
Ethyl Alcohol (Absolute)	EG	EE	EG	EG	EE	EG	EG	EG
Ethyl Alcohol (40%)	EG	EE	EG	EG	EE	EG	EE	EG
Ethyl Benzene	NN	NN	NN	NN	EE	NN	NN	NN
Ethyl Benzoate	FF	GG	GF	GF	EE	NN	NN	NN
Ethyl Butyrate	GN	GF	GN	FN	EE	NN	NN	NN
Ethyl Chloride (liquid)	FN	FF	FN	FN	EE	NN	NN	NN
Ethyl Cyanoacetate	EE	EE	EE	EE	EE	FN	FN	FF
Ethyl Lactate	EE	EE	EE	EE	EE	FN	FN	FF
Ethylene Chloride	GN	GF	FN	NN	EE	NN	NN	NN
Ethylene Glycol	EE	EE	EE	EE	EE	GF	EE	EE
Ethylene Glycol Methyl Ether	EE	EE	EE	EE	EE	FN	FN	FF
Ethylene Oxide	FF	GF	FF	FN	EE	FN	FN	EE
Fluorides	EE	EE	EE	EE	EE	EE	EE	EE
Fluorine	FN	GN	FN	FN	EG	GF	EG	NN
Formaldehyde (40%)	EE	EE	EE	EG	EE	EG	GF	GF

CHEMICAL ▼ / MATERIAL ►	LDPE	HDPE	PP/ PPCO	PMP	FEP/ TFE/ PFA	PC	RIGID PVC	PSF
Formaldehyde (40%)	EG	EE	EG	EG	EE	EG	GF	GF
Formic Acid (3%)	EG	EE	EG	EG	EE	EG	GF	GG
Formic Acid (50%)	EG	EE	EG	EG	EE	EG	GF	GG
Formic Acid (98-100%)	EG	EE	EG	EF	EE	EF	FN	FF
Fuel Oil	FN	GF	EG	GF	EE	EG	EE	EG
Gasoline	FN	GG	GF	GF	EE	FF	GN	FF
Glacial Acetic Acid	EG	EE	EG	EG	EE	NN	EG	FN
Glycerin	EE	EE	EE	EE	EE	EE	EE	EE
n-Heptane	FN	GF	FF	FF	EE	EG	GF	EG
Hexane	NN	GF	GF	FN	EE	FN	GN	EG
Hydrochloric Acid (1-5%)	EE	EE	EE	EG	EE	EE	EE	EE
Hydrochloric Acid (20%)	EE	EE	EE	EG	EE	GF	EG	EE
Hydrochloric Acid (35%)	EE	EE	EG	EG	EE	NN	GF	EE
Hydrofluoric Acid (4%)	EG	EE	EG	EG	EE	GF	GF	GF
Hydrofluoric Acid (48%)	EE	EE	EE	EE	EE	NN	GF	FN
Hydrogen Peroxide (3%)	EE	EE	EE	EE	EE	EE	EE	EE
Hydrogen Peroxide (30%)	EG	EE	EG	EG	EE	EE	EE	EE
Hydrogen Peroxide (90%)	EG	EE	EG	EG	EE	EE	EG	EE
Isobutyl Alcohol	EE	EE	EE	EG	EE	EG	EG	EG
Isopropyl Acetate	GF	EG	GF	GF	EE	NN	NN	NN
Isopropyl Alcohol	EE	EE	EE	EE	EE	EE	EG	EE
Isopropyl Benzene	FN	GF	FN	NN	EE	NN	NN	NN
Kerosene	FN	GG	GF	GF	EE	EE	EE	GF
Lactic Acid (3%)	EG	EE	EG	EG	EE	EG	GF	EE
Lactic Acid (85%)	EE	EE	EG	EG	EE	EG	GF	EE
Methoxyethyl Oleate	EG	EE	EG	EG	EE	FN	NN	NN
Methyl Alcohol	EE	EE	EE	EE	EE	GF	EF	GF
Methyl Ethyl Ketone	NN	NN	EG	NN	EE	NN	NN	NN
Methyl Isobutyl Ketone	NN	NN	GF	FF	EE	NN	NN	NN
Methyl Propyl Ketone	GF	EG	GF	FF	EE	NN	NN	NN
Methylene Chloride	FN	FN	FN	FN	EE	NN	NN	NN
Mineral Oil	GN	EE	EE	E&	EE	EG	EG	EE
Nitric Acid (1-10%)	EE	EE	EE	EE	EE	EG	EG	EF
Nitric Acid (50%)	GN	GN	FN	GN	EE	GF	GF	GF
Nitric Acid (70%)	FN	GN	NN	GF	EE	NN	FN	NN
Nitrobenzene	NN	FN	NN	NN	EE	NN	NN	NN
n-Octane	EE	EE	EE	EE	EE	GF	FN	GF
Orange Oil	FN	GF	GF	FF	EE	FF	FN	FF
Ozone	EG	EE	EG	EE	EE	EG	EG	EE
Perchloric Acid	GN	GN	GN	GN	GF	NN	GN	NN
Perchloroethylene	NN	NN	NN	NN	EE	NN	NN	NN
Phenol, Crystals	GN	GF	GN	FG	EE	EN	FN	FF
Phosphoric Acid (1-5%)	EE	EE	EE	EE	EE	EE	EE	EE
Phosphoric Acid (85%)	EE	EE	EG	EG	EE	EG	EG	EE
Pine Oil	GN	EG	EG	GF	EE	GF	FN	FF
Potassium Hydroxide (1%)	EE	EE	EE	EE	EE	FN	EE	EE
Potassium Hydroxide (conc.)	EE	EE	EE	EE	EE	NN	EG	EE
Propane Gas	NN	FN	NN	NN	EE	FN	EG	FF
Propylene Glycol	EE	EE	EE	EE	EE	GF	FN	GG
Propylene Oxide	EG	EE	EG	EG	EE	GF	FN	GG
Resorcinol (saturated)	EE	EE	EE	EE	EE	GF	FN	NN
Resorcinol (5%)	EE	EE	EE	EE	EE	GF	GN	NN
Salicylaldehyde	EG	EE	EG	EG	EE	GF	FN	FF
Salicylic Acid (powder)	EE	EE	EE	EG	EE	EG	GF	EE
Salicylic Acid (saturated)	EE	EE	EE	EE	EE	EG	GF	EE
Salt Solutions (metallic)	EE	EE	EE	EE	EE	EE	EE	EE
Silver Acetate	EE	EE	EE	EE	EE	EG	GG	EE
Silver Nitrate	EG	EE	EG	EE	EE	EE	EG	EE
Sodium Acetate (saturated)	EE	EE	EE	EE	EE	EG	GF	EE
Sodium Hydroxide (1%)	EE	GF	EE	EE	EE	FN	EE	EE
Sodium Hydroxide (50% to sat.)	GG	GF	EE	EE	EE	NN	NN	EG
Sodium Hypochlorite (15%)	EE	EE	GF	EE	EE	GF	EE	EE
Stearic Acid, Crystals	EE	EE	EE	EE	EE	EG	EG	GG
Sulfuric Acid (1-6%)	EE	EE	EE	EE	EE	EE	EG	EE
Sulfuric Acid (20%)	EE	EE	EG	EG	EE	EG	EG	EE
Sulfuric Acid (60%)	EG	EE	EG	EG	EE	GF	EG	EE
Sulfuric Acid (98%)	GG	GG	FN	GG	EE	NN	GN	NN
Sulfur Dioxide, Liquid, 46 psi	NN	FN	NN	NN	EE	GN	FN	GG
Sulfur Dioxide (wet or dry)	EE	EE	EE	EE	EE	EG	EG	GG
Sulfur Salts	FN	GF	FN	FN	EE	FN	NN	GG
Tartaric Acid	EE	EE	EE	EE	EE	EG	EG	EE
Tetrahydrofuran	FN	GF	GF	FF	EE	NN	NN	NN
Thionyl Chloride	NN	NN	NN	NN	EE	NN	NN	NN
Toluene	FN	GG	GF	FF	FF	FN	NN	NN
Tributyl Citrate	GF	EG	GF	GF	EE	NN	FN	FF
Trichloroethane	NN	FN	NN	NN	EG	NN	NN	NN
Trichloroethylene	NN	FN	NN	NN	EE	NN	NN	NN
Triethylene Glycol	EE	EE	EE	EE	EE	EG	GF	EE
Tripropylene Glycol	EE	EE	EE	EE	EE	EG	GF	EE
Turpentine	FN	GG	GF	FF	EE	FN	GF	NN
Undecyl Alcohol	EF	EG	EG	EG	EE	GF	EF	FF
Urea	EE	EE	EE	EG	EE	NN	GN	FF
Vinylidene Chloride	NN	FN	NN	NN	EE	NN	NN	NN
Xylene	GN	GF	FN	FN	EE	NN	NN	NN
Zinc Stearate	EE	EE	EE	EE	EE	EE	EG	EE

PUMP STORAGE
CABINET

Pump Storage Cabinets provide an enclosed space for active vacuum pump storage and reduces noise and vibration in the laboratory. Pump cabinets can be free standing or integrated into a laboratory bench.



Baffles & Louvers - Interior baffles on the door improve noise suppression while the louvers on the door exterior provide enhanced airflow to cool the pump.

Vibration Dampening - Optional integrated vibration isolators can help further isolate pump noise that comes with mechanical pumps.

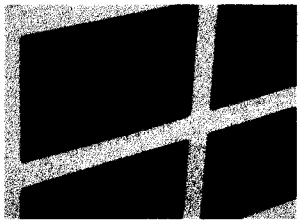
Electrical - One 120 Volt /20 Amp electrical duplex receptacle provides power to the vacuum pump (final power connection required). The switch that controls the receptacles is located on the front panel on False Panel Units; Full Height Door Units are typically wired through the fume hood.

Exhaust Venting - Two vent holes are incorporated into the cabinet back for connections to centralized lab exhaust systems. Custom vent cutouts are available.

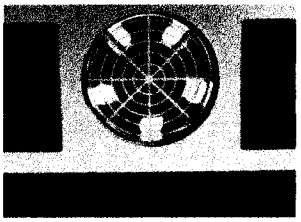
Access Panel - Back access panel is easily removable to provide convenient access to venting or electrical connections after installation.

Coating Finish & Color - A thermosetting laboratory grade powder coating delivers exceptional chemical and scratch resistance, excellent hardness and adhesion, with a quality luster. Our coating is quality controlled to ensure consistent color match.

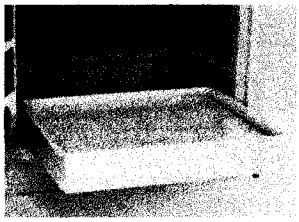
Configurations - Cabinets are available in different configurations, in a wide variety of widths, heights and depths. Available in powder coated steel or stainless steel finishes.



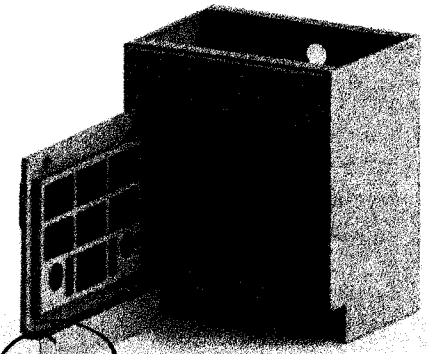
Noise Suppression - Cabinet is insulated with 1" thick acoustic foam which provides sound absorption and noise reduction over a wide range of frequencies. Foam is incorporated to the interior of the cabinet including the door and it is contained with a mechanical inner steel frame.



Cooling Fans - Optional internal fan to ensure adequate air cooling is provided to the pump. Fans pull fresh air in through the door louvers and blow heated air out behind the cabinet or into building ductwork. Fan plugs into switch controlled outlet.



Pull Out Containment Shelf - Shelf slides in and out providing convenient access to pump and allows for spills from incidental leaks to be contained.



Cabinet shown: Pump cabinet with toe kick integral with door and roll-out dolly.

mott MANUFACTURING
ISO 9001:2008 REGISTERED

Corporate Headquarters
452 Hardy Rd, Brantford ON, Canada N3T 5L8
T. 519.752.7825 • F. 519.752.2895

Wood Casework Division - 562 Industrial Park Rd,
P.O. Box 156, Maxwelton, WV, USA 24957
T. 304.497.2115

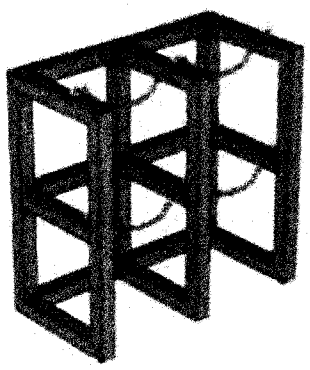
www.mott.ca

QUALITY BY DESIGN

August 2012

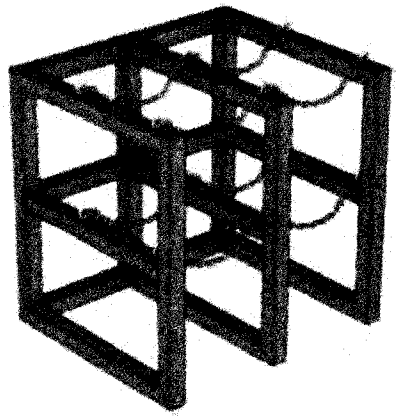
STEEL CASEWORK
MISCELLANEOUS ITEMS - Cylinder Storage Rack

Cylinder Storage Rack



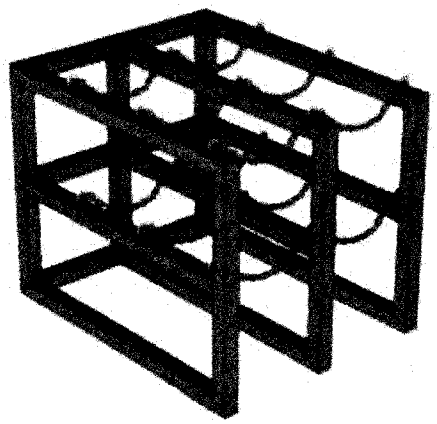
Item Number
CSR1000

- Holds up to 10" diameter cylinders.
- Capable of handling up to 2 full size cylinders.
- Welded steel rack 30"H x 30"W x 16"D
- Secure to walls and floor with ½" steel anchor bolts.
- Non-kink zinc plated chain.



Item Number
CSR2000

- Holds up to 10" diameter cylinders.
- Capable of handling up to 4 full size cylinders.
- Welded steel rack 30"H x 30"W x 26"D
- Secure to walls and floor with ½" steel anchor bolts.
- Non-kink zinc plated chain.



Item Number
CSR3000

- Holds up to 10" diameter cylinders.
- Capable of handling up to 4 full size cylinders.
- Welded steel rack 30"H x 30"W x 38"D
- Secure to walls and floor with ½" steel anchor bolts.
- Non-kink zinc plated chain.

Specifications and details are based on product information at the time of printing and may change at any time without notice.
Mott Manufacturing reserves the right to change dimensions, specifications and manufacturing details at any time without notice.

○ ESBF670 Recessed Emergency Shower, Exposed Shower Head

APPLICATION: Recessed emergency shower with ceiling mounted exposed shower head. Recessed shower conserves valuable floor space, while eliminating the clutter and obstruction created by conventional shower equipment. Unit can be installed in either a corridor or a lab room, close to where accidents might occur.

ADA COMPLIANCE: When installed at recommended mounting heights, unit complies with ADA requirements for accessibility by handicapped persons.

SHOWER HEAD: 10" diameter stainless steel. Furnished with vertical supply pipe and ceiling escutcheon for mounting shower head at desired height below finished ceiling.

VALVE: 1" IPS brass stay-open ball valve with stainless steel "panic bar." Pulling bar down activates shower; shower remains in operation until bar is returned to original closed position. Furnished with stainless steel access panel and 1" IPS unions for valve.

PIPE AND FITTINGS: Exposed pipe and escutcheon are brushed stainless steel.

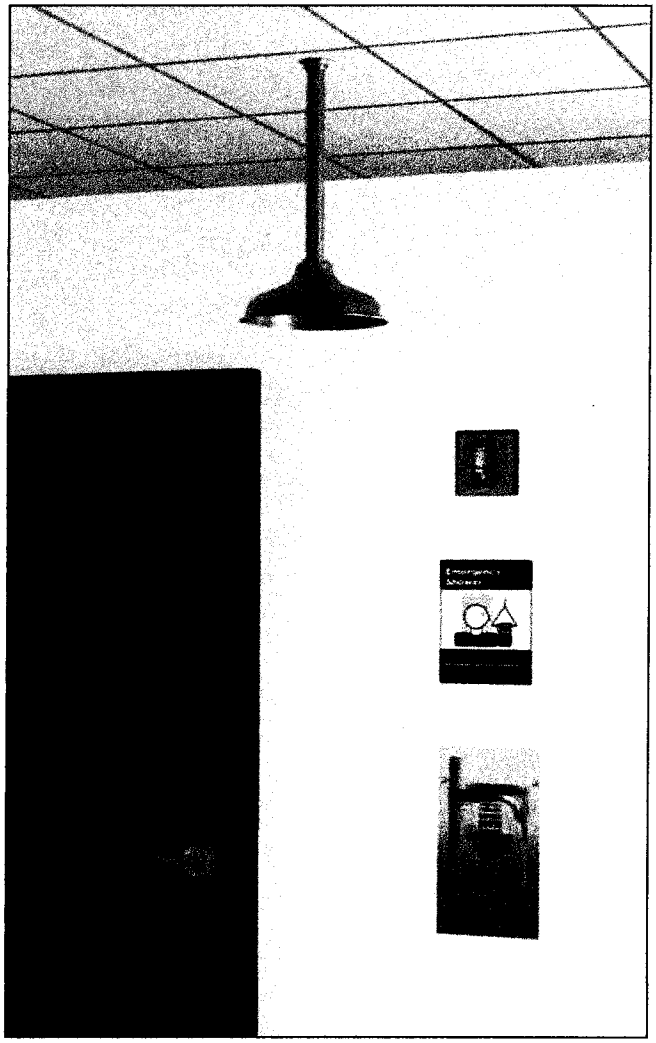
SUPPLY: 1" NPT female inlet.

SIGN: ANSI-compliant identification sign.

U.S. PATENT 5,768,721

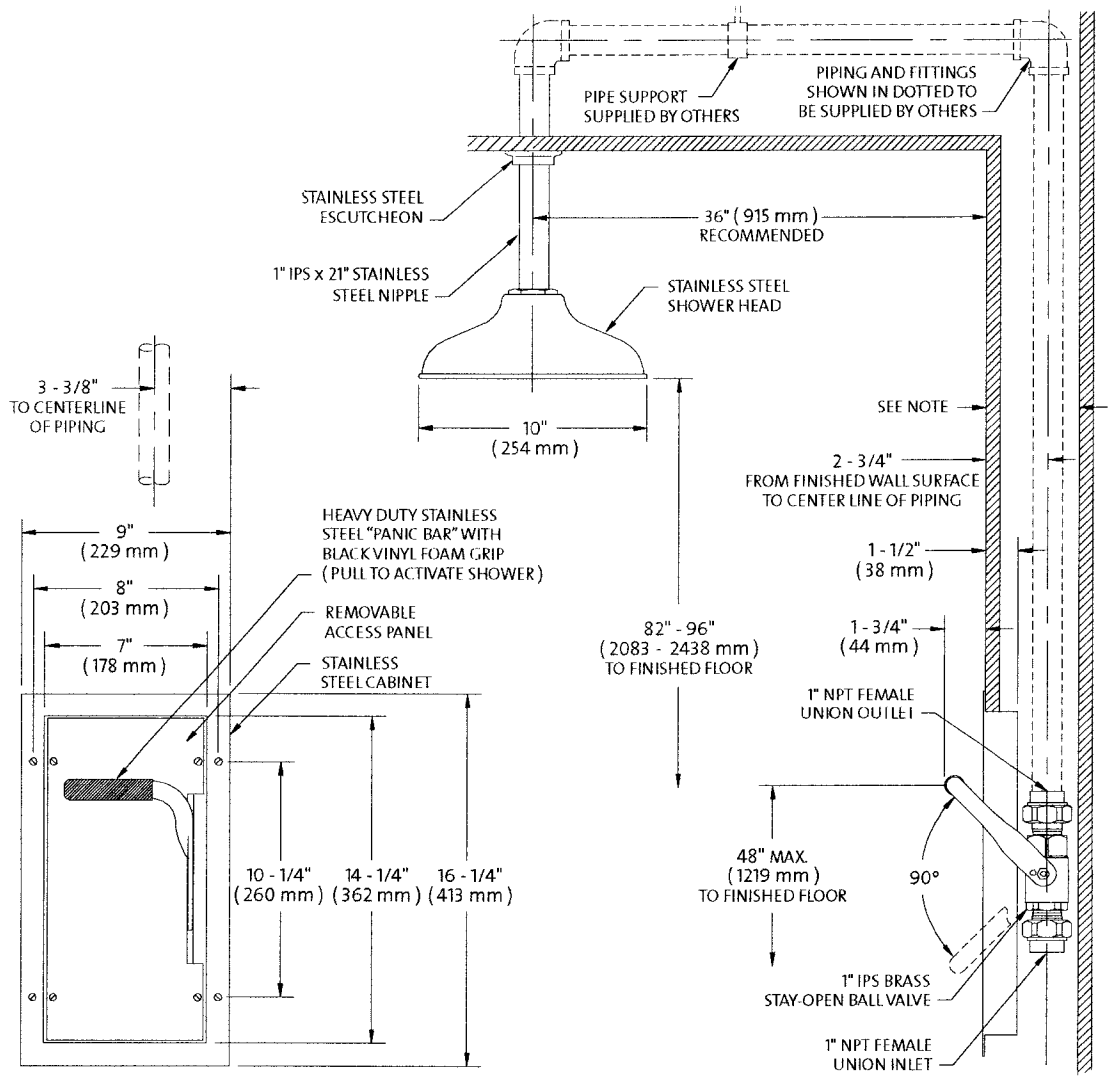
Available Options

- ○ FC20 Regulates shower flow rate to 20 GPM.
- ○ **AP250-065 Modesty Curtain**
  Modesty curtain for wall mounting.
- ○ **AP280-235 Electric Light and Alarm Horn**
  Flashing light/alarm horn unit is recess mounted in finished wall. Light is illuminated and horn sounds when shower is activated. Includes additional leads for remote monitoring.
- ○ TMV AP3800 thermostatic mixing valve precisely blends hot and cold water to deliver tepid water as required by ANSI Z358.1-2009.



Note: Shown with optional AP280-235 electric light and alarm horn unit (sold separately).

○ **ESBF670** Recessed Emergency Shower, Exposed Shower Head



NOTES:

1. A MINIMUM OF 4 - 1/8" (105 mm) IS REQUIRED FROM FINISHED WALL SURFACE TO REAR OF WALL CAVITY TO ACCOMMODATE UNIT.
2. U.S. PATENT NO. 5,768,721.

Sign Included

THIS SPACE FOR ARCHITECT/ENGINEER APPROVAL

ETL Listed 101496. Units have been tested to and comply with ANSI Z358.1 - 2009

Due to continuing product improvement, the information contained in this document is subject to change without notice. All dimensions are ± 1/4" (6mm).

rev 0110 © 2010 / WaterSaver Faucet Co.

WaterSaver Faucet Co.
701 West Erie Street
Chicago, IL 60654
312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsfaucet.com

Lessor Gov't

ID Number: *816*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR SKIN		
Nomenclature	STUCCO		
Procedure Frequency	Annual	Shop	Multi-Purpose
Schedule Procedure Id	STUCCO-MAS-A-1	Est Hours	0.016

Tasks

1.	MAS	INSPECT FOR CRACKING AROUND WINDOWS, DOORS AND OTHER OPENINGS.
2.	MAS	INSPECT SURFACE FOR CRACKING, DETERIORATION, SEPARATION, SURFACE DAMAGE AND DIRT.
3.	MP	INSPECT INTERIOR FOR SIGNS OF MOISTURE; STAINS, BLISTERING OR PEELING PAINT, SOFT SPOTS, MOLD
4.	MAS	WHERE NEEDED, CLEAN SURFACE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5.	MAS	CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *807*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR SKIN		
Nomenclature	DRYVIT EXTERIOR SURFACE COVERING		
Procedure Frequency	Semi-Annual	Shop	Multi-Purpose
Schedule Procedure Id	EIFS-MAS-SA-1	Est Hours	0.0186

Tasks

1.	MAS	INSPECT FOR CRACKING AROUND WINDOWS, DOORS AND OTHER OPENINGS.
2.	MAS	INSPECT SURFACE FOR CRACKING, DETERIORATION, SEPARATION, SURFACE DAMAGE AND DIRT.
3.	MP	INSPECT INTERIOR FOR SIGNS OF MOISTURE; STAINS, BLISTERING OR PEELING PAINT, SOFT SPOTS, MOLD
4.	MAS	WHERE NEEDED, CLEAN SURFACE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5.	MAS	CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *800*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR SKIN		
Nomenclature	BRICK		
Procedure Frequency	10 Year	Shop	Multi-Purpose
Schedule Procedure Id	BRICK-MAS-10Y-1	Est Hours	0.016

Tasks

1.	MAS	INSPECT BRICKS FOR CRACKING, FLAKING AND DETERIORATION.
2	MAS	INSPECT FOR SIGNS OF FOUNDATION SETTLING; STAIR STEP CRACKS, STRESS CRACKS THROUGH BRICK
3.	MAS	INSPECT ALL JOINTS FOR SEALANT INTEGRITY.
4.	MP	INSPECT INTERIOR FOR SIGNS OF MOISTURE; STAINS, BLISTERING OR PEELING PAINT, SOFT SPOTS, MOLD
5.	MAS	CHECK THAT WEEP HOLES IN BRICK FACE ARE CLEAN, WHERE APPLICABLE. CLEAN AS NEEDED.
6.	MAS	INSPECT MORTAR JOINTS.CHECK FOR JOINTS THAT NEED RE-POINTING
7.	MAS	CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *808*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR LOUVER AND SCREEN		
Nomenclature	EXTERIOR LOUVER AND SCREEN		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	LOUVER-MECH-A-1	Est Hours	0.25

Tasks

1. MECH INSPECT LOUVER AND SCREEN FOR DAMAGE.
2. MECH INSPECT FOR BLOCKAGE. REMOVE ANY OBSTRUCTIONS INCLUDING INSECT AND BIRD NESTS.
3. MECH CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *801*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR SKIN		
Nomenclature	CONCRETE MASONRY UNIT		
Procedure Frequency	10 Year	Shop	Masonery
Schedule Procedure Id	CONC-MAS-10Y-1	Est Hours	0.0186

Tasks

1.	MAS	INSPECT SURFACE FOR CRACKING DETERIORATION, SEPARATION, SURFACE DAMAGE AND DIRT.
2.	MAS	INSPECT FOR SIGNS OF FOUNDATION SETTLING; STAIR STEP CRACKS, STRESS CRACKS THROUGH BLOCK
3.	MAS	INSPECT EXPANSION JOINT AND OR JOINT SEALANT.
4.	MAS	INSPECT MORTAR JOINTS.CHECK FOR JOINTS THAT NEED RE-POINTING
5.	MAS	CHECK THAT WEEP HOLES, WHERE APPLICABLE ARE CLEAN. CLEAN AS NEEDED.
6.	MAS	WHERE NEEDED, CLEAN SURFACE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7.	MAS	CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *811*

Facility System	EXTERIOR CLOSURE		
Facility Subsystem	EXTERIOR WALL		
Assembly Category	EXTERIOR SKIN		
Nomenclature	PAINTING		
Procedure Frequency	Annual	Shop	Painter
Schedule Procedure Id	PAINT-P-A-1	Est Hours	0.016

Tasks

1.	P	INSPECT SURFACE FOR BLISTERING, PEELING OR RUST.
2.	P	PREPARE SURFACE IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
3.	P	REPAINT TO MATCH ADJACENT SURFACES.
4.	P	CLEAN UP WORK AREA AND REMOVE ALL DEBRIS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *882*

Facility System	ROOFING		
Facility Subsystem	ROOF COVERING		
Assembly Category	<NA>		
Nomenclature	SHINGLE AND ROOF TILE		
Procedure Frequency	Semi-Annual	Shop	Multi-Purpose
Schedule Procedure Id	SHNGROOF-MP-SA-1	Est Hours	0.0019

Tasks

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP CONDUCT A COMPLETE WALK-OVER OF THE ROOF AND CHECK FOR:
A. ACCUMULATED DEBRIS, SUCH AS CANS, BOTTLES, LEAVES, RAGS, CIGARETTE BUTTS AND EQUIPMENT THAT MAY HAVE BEEN LEFT FROM A JOB ON OR NEAR THE ROOF. DISPOSE OF APPROPRIATELY.
B. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION. ALSO LOOK FOR "SOFT" ROOF INSULATION. IF THE ROOF INSULATION APPEARS TO BE "SOFT" UNDER FOOT, IT MAY HAVE ABSORBED EXCESSIVE MOISTURE. REPAIR AS PER MANUFACTURER'S RECOMMENDATIONS
C. CHECK FOR LOOSE CRACKED OR MISSING SHINGLES OR TILES
D. CHECK FOR EXPOSED NAILS THAT HAVE WORKED LOOSE
E. CHECK ASPHALT SHINGLES FOR LOSS OF COATING, BRITTLENESS, AND EDGE CURL
F. ON WOOD SHINGLES, CHECK FOR CRACKS, LOOSENESS AND ROTTING

3. MP CHECK ALL GUTTERS & DOWNSPOUTS TO SEE THAT THEY ARE OPEN AND FREE OF DEBRIS AND PROPERLY SECURED AND NOT DETERIORATED OR DAMAGED.

4. MP CHECK FOR "ICE DAMMING" CHECK FIRST FEW ROWS OF SHINGLES FOR A "HIGH WATER MARK" DISCOLORATION THAT MAY BE DUE TO A BUILD-UP OF SNOW OR ICE. IF PRESENT, CHECK FOR SIGNS OF MOISTURE THAT MAY HAVE BACKED UP UNDER THE SHINGLES OR TILES.

5. MP CHECK FOR WIND OR STORM DAMAGE - CHECK FOR SIGNS OF MOISTURE THAT MAY HAVE BACKED UP UNDER THE SHINGLES OR TILES DURING VERY SEVERE RAINSTORMS. LOOK FOR LOOSE OR MISSING SHINGLES OR TILES. LOOK FOR DEFLECTION OR DISTORTION OF THE INSULATION BOARDS OR BASE BENEATH THE ROOF SHINGLES OR TILE. LOOK FOR DISPLACED OR DAMAGED ROOFTOP UNITS OR DAMAGED OR MISSING SHEET METAL COMPONENTS.

6. MP CHECK THE BASE FOR LOOSE FASTENERS. THE OBSERVATION OF LOOSE OR "TENTED" FASTENERS, OR "POPPED" NAILS, BENEATH THE SHINGLES OR TILES MAY INDICATE THAT THE ORIGINAL INSTALLATION OF THE FASTENER WAS INADEQUATE TO ACCOMMODATE LONG-TERM STRESS ON THE BASE.

7. SM CHECK ALL FASCIAS FOR DAMAGE AND CAULKING.

8. MP CHECK ALL FLASHINGS, SEALS OR CAULKED JOINTS AROUND DRAINS, EQUIPMENT, ROOF VENTS, STACKS, SKYLIGHTS, HATCHES, AND ALONG ROOF EDGES AND PARAPET WALLS FOR:
A. CRACKS
B. ANY DISCONTINUITIES IN THE FIRM UNIFORM COMPRESSION BETWEEN METAL FLASHINGS AND THE WALL SURFACE
C. LOOSENESS AND DETERIORATION OF SEAMS, EDGES, NAILS AND FASTENERS
D. CRACKED OR SUNKEN CAULKING
E. CURLING OR EXPOSED EDGES

9. MP CHECK ALL EXPANSION JOINTS TO ENSURE THAT NO STRUCTURAL MOVEMENT HAS TAKEN PLACE RESULTING IN CRACKS, SPLITS OR OPEN JOINTS

10. MP WHERE APPLICABLE, INSPECT ALL PITCH POCKETS FOR CRACKING, PROPER FILLING, FLASHING, AND METAL DAMAGE.

11. MP INSPECT ALL VENT STACKS FOR CRACKING, DAMAGE, OBSTRUCTIONS AND DETERIORATION OF LEAD OR RUBBER SLEEVES

12. MP/MAS CHECK PARAPET WALL/PERIMETER EDGE FOR CONDITIONS THAT MIGHT PERMIT WATER ENTRY INTO THE BUILDING OR BEHIND THE ROOF SYSTEM SUCH AS:
A. LOOSENESS, SEPARATION AND DETERIORATION OF COPING ATTACHMENT
B. CRACKED OR SUNKEN CAULKING
C. WALL SETTLEMENT CRACKS AND MORTAR JOINTS THAT NEED RE-POINTING
D. CRACKING, SPALLING OR DISCOLORATION OF WALLS

E. CLOGGED OR COVERED WEEP HOLES.
F. LOOSENESS, SEPARATION AND DETERIORATION OF COUNTERFLASHING ATTACHMENT
G. PHYSICAL DAMAGE

13. MAS WHERE APPLICABLE, CHECK ALL EQUIPMENT CURBS FOR DETERIORATION AND CRACKING REPAIR AS REQUIRED.

14. MP CHECK AREAS AROUND ROOF ACCESS POINTS, WALKWAYS AND "NATURAL" PATHWAYS, AND AROUND ANY ROOFTOP MECHANICAL EQUIPMENT THAT REQUIRES PERIODIC SERVICE FOR:

A. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION
B. LOOSE CRACKED OR MISSING SHINGLES OR TILES
C. EXPOSED NAILS THAT HAVE WORKED LOOSE

15. MP CHECK FOR SWELLING, CRACKING, DISCOLORATION, SOFTNESS OR LOSS OF BITUMINOUS COATING ON ASPHALT SHINGLES AROUND ROOF TOP EQUIPMENT SUCH AS AIR CONDITIONING UNITS AND KITCHEN EXHAUST FANS. OIL LEAKS, OIL THAT MAY HAVE BEEN SPILLED DURING PERIODIC MAINTENANCE, OR GREASE FROM COOKING EXHAUSTS CAN

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *881*

Facility System	ROOFING
Facility Subsystem	ROOF COVERING
Assembly Category	<NA>
Nomenclature	SHEET METAL ROOFING
Procedure Frequency	Semi-Annual
Shop	Multi-Purpose
Schedule Procedure Id	METLROOF-SM-SA-1
Est Hours	0.001

Tasks

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP CONDUCT A COMPLETE WALK-OVER OF THE ROOF AND CHECK FOR:
A. ACCUMULATED DEBRIS, SUCH AS CANS, BOTTLES, LEAVES, RAGS, CIGARETTE BUTTS AND EQUIPMENT THAT MAY HAVE BEEN LEFT FROM A JOB ON OR NEAR THE ROOF. DISPOSE OF APPROPRIATELY.
B. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION. ALSO LOOK FOR "SOFT" ROOF INSULATION. IF THE ROOF INSULATION APPEARS TO BE "SOFT" UNDER FOOT, IT MAY HAVE ABSORBED EXCESSIVE MOISTURE.
C. CHECK FOR EXPOSED NAILS THAT HAVE WORKED LOOSE
D. DETERIORATION AND OR "RUST THROUGH" OF MATERIAL.

3. MP CHECK ALL GUTTERS & DOWNSPOUTS TO SEE THAT THEY ARE OPEN AND FREE OF DEBRIS AND PROPERLY SECURED AND NOT DETERIORATED OR DAMAGED.

4. MP CHECK FOR WIND OR STORM DAMAGE - CHECK FOR SIGNS OF MOISTURE THAT MAY HAVE BACKED UP UNDER EDGES OR SEAMS DURING VERY SEVERE RAINSTORMS. LOOK FOR LOOSE DAMAGED OR MISSING METAL PANELS. LOOK FOR DEFLECTION OR DISTORTION OF THE INSULATION BOARDS OR BASE BENEATH THE METAL PANELS. LOOK FOR DISPLACED OR DAMAGED ROOFTOP UNITS.

5. MP CHECK THE BASE FOR LOOSE FASTENERS. THE OBSERVATION OF LOOSE OR "TENTED" FASTENERS, OR "POPPED" NAILS, BENEATH THE SHINGLES OR TILES MAY INDICATE THAT THE ORIGINAL INSTALLATION OF THE FASTENER WAS INADEQUATE TO ACCOMMODATE LONG-TERM STRESS ON THE BASE.

6. SM CHECK ALL FASCIAS FOR DAMAGE AND CAULKING.

7. MP CHECK ALL FLASHINGS, SEALS OR CAULKED JOINTS AROUND DRAINS, EQUIPMENT, ROOF VENTS, STACKS, SKYLIGHTS, HATCHES, AND ALONG ROOF EDGES AND PARAPET WALLS FOR:
A. CRACKS
B. ANY DISCONTINUITIES IN THE FIRM UNIFORM COMPRESSION BETWEEN METAL FLASHINGS AND THE WALL SURFACE
C. LOOSENESS AND DETERIORATION OF SEAMS, EDGES, NAILS AND FASTENERS
D. CRACKED OR SUNKEN CAULKING
E. CURLING OR EXPOSED EDGES

8. SM CHECK SEAMS FOR DETERIORATION, SEPARATION AND LOOSE OR MISSING FASTENERS

9. MP CHECK ALL EXPANSION JOINTS TO ENSURE THAT NO STRUCTURAL MOVEMENT HAS TAKEN PLACE RESULTING IN CRACKS, SPLITS OR OPEN JOINTS

10. MP WHERE APPLICABLE, INSPECT ALL PITCH POCKETS FOR CRACKING, PROPER FILLING, FLASHING, AND METAL DAMAGE.

11. MP INSPECT ALL VENT STACKS FOR CRACKING, DAMAGE, OBSTRUCTIONS AND DETERIORATION OF LEAD OR RUBBER SLEEVES

12. MP/MAS CHECK PARAPET WALL/PERIMETER EDGE FOR CONDITIONS THAT MIGHT PERMIT WATER ENTRY INTO THE BUILDING OR BEHIND THE ROOF SYSTEM SUCH AS:
A. LOOSENESS, SEPARATION AND DETERIORATION OF COPING ATTACHMENT
B. CRACKED OR SUNKEN CAULKING
C. WALL SETTLEMENT CRACKS AND MORTAR JOINTS THAT NEED RE-POINTING
D. CRACKING, SPALLING OR DISCOLORATION OF WALLS
E. CLOGGED OR COVERED WEEP HOLES.
F. LOOSENESS, SEPARATION AND DETERIORATION OF COUNTERFLASHING ATTACHMENT
G. PHYSICAL DAMAGE

13. MAS	WHERE APPLICABLE, CHECK ALL EQUIPMENT CURBS FOR DETERIORATION AND CRACKING REPAIR AS REQUIRED.
14. MP	CHECK AREAS AROUND ROOF ACCESS POINTS, WALKWAYS AND "NATURAL" PATHWAYS, AND AROUND ANY ROOFTOP MECHANICAL EQUIPMENT THAT REQUIRES PERIODIC SERVICE FOR: A. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION B. LOOSE DAMAGED OR MISSING METAL PANELS C. EXPOSED NAILS THAT HAVE WORKED LOOSE

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *880*

Facility System	ROOFING		
Facility Subsystem	ROOF COVERING		
Assembly Category	<NA>		
Nomenclature	MEMBRANE ROOFING		
Procedure Frequency	Semi-Annual	Shop	Multi-Purpose
Schedule Procedure Id	MEMROOF-MP-SA-1	Est Hours	0.0016

Tasks

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP CONDUCT A COMPLETE WALK-OVER OF THE ROOF AND CHECK FOR:
A. ACCUMULATED DEBRIS, SUCH AS CANS, BOTTLES, LEAVES, RAGS, CIGARETTE BUTTS AND EQUIPMENT THAT MAY HAVE BEEN LEFT FROM A JOB ON OR NEAR THE ROOF. DISPOSE OF APPROPRIATELY.
B. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION. ALSO LOOK FOR "SOFT" ROOF INSULATION. IF THE ROOF INSULATION APPEARS TO BE "SOFT" UNDER FOOT, IT MAY HAVE ABSORBED EXCESSIVE MOISTURE. REPAIR AS PER MANUFACTURER'S RECOMMENDATIONS

3. MP CHECK ALL ROOF DRAINS, THROUGH-WALL SCUPPERS, GUTTERS & DOWNSPOUTS TO SEE THAT THEY ARE OPEN AND FREE OF DEBRIS AND PROPERLY SECURED AND NOT DETERIORATED OR DAMAGED.

4. MP CHECK FOR IMPROPER ROOF DRAINAGE SUCH AS: PONDING AREAS OR A CONCENTRIC PATTERN OF DEBRIS OR DIRT INDICATING A PONDING CONDITION. ALSO, CHECK CURBS AND WALLS FOR "HIGH WATER MARK" DISCOLORATION THAT MAY BE DUE TO A BUILD-UP OF SNOW OR ICE, OR IT MAY BE AN INDICATION THAT WATER MAY "BACK UP" DURING VERY SEVERE RAINSTORMS.

5. MP CHECK FOR WIND OR STORM DAMAGE - LOOK FOR LOOSE OR DISBONDED AREAS OF ROOF MEMBRANE. LOOK FOR DEFLECTION OR DISTORTION OF THE INSULATION BOARDS BENEATH THE ROOF MEMBRANE. LOOK FOR "TENTED" INSULATION FASTENERS AND PLATES. DISPLACED OR DAMAGED ROOFTOP UNITS OR DAMAGED OR MISSING SHEET METAL COMPONENTS. MEMBRANE CUTS AND PUNCTURES.

6. MP CHECK SEAMS FOR DETERIORATION AND SEPARATION WHERE TWO SHEETS OF ROOFING MEMBRANE INTERSECT OR WHERE THERE IS AN ANGLE CHANGE, SUCH AS A DECK-TO-WALL JOINT. THESE AREAS ARE SUBJECT TO LONG-TERM STRESSES AND MAY BEGIN TO OPEN UP OVER TIME. CHECK FOR:
A. EDGE CAVITATION. THE LEADING EDGE OF THE SEAM MAY BE STARTING TO OPEN UP, ALLOWING DIRT TO ACCUMULATE IN A CAVITY AT THE SEAM EDGE.
B. ENTRAPPED MOISTURE. SEAMS WHICH ARE TAKING ON MOISTURE WILL TYPICALLY EXHIBIT "BUBBLING" ALONG THE SEAM EDGE WHEN FOOT PRESSURE IS APPLIED TO THE SEAM.

7. MP CHECK THE BASE ATTACHMENT FOR SIGNS OF STRESS. THE ROOFING MEMBRANE MAY BE PULLED AWAY FROM ANY ANGLED INTERSECTION DUE TO ITS INHERENT "MEMORY". MINOR BRIDGING, EXTENDING BEYOND THE ANGLE CHANGE LESS THAN ONE INCH, CAN TYPICALLY BE EXPECTED FROM ANY ROOFING MEMBRANE AFTER A REASONABLE PERIOD OF SERVICE. BRIDGING GREATER THAN ONE INCH MAY INDICATE THAT THE BASE ATTACHMENT ITSELF IS BEGINNING TO EXPERIENCE STRESS, AND THIS STRESS MAY LEAD TO WATER ENTRY THROUGH ROOF SEAMS WHICH RUN THROUGH THE ANGLE CHANGE OF THE BASE.

8. MP CHECK THE BASE FOR LOOSE FASTENERS. THE OBSERVATION OF LOOSE OR "TENTED" FASTENERS, OR "POPPED" NAILS, BENEATH THE MEMBRANE MAY INDICATE THAT THE ORIGINAL INSTALLATION OF THE FASTENER WAS INADEQUATE TO ACCOMMODATE LONG-TERM STRESS ON THE BASE.

9. SM CHECK ALL FASCIAS FOR DAMAGE AND CAULKING.

10. MP CHECK ALL FLASHINGS, SEALS OR CAULKED JOINTS AROUND DRAINS, EQUIPMENT, ROOF VENTS, STACKS, SKYLIGHTS, HATCHES, AND ALONG ROOF EDGES AND PARAPET WALLS FOR:
A. CRACKS
B. ANY DISCONTINUITIES IN THE FIRM UNIFORM COMPRESSION BETWEEN METAL FLASHINGS AND THE WALL SURFACE
C. LOOSENESS AND DETERIORATION OF SEAMS, EDGES, NAILS AND FASTENERS
D. CRACKED OR SUNKEN CAULKING
E. CURLING OR EXPOSED EDGES

11. MP CHECK ALL EXPANSION JOINTS TO ENSURE THAT NO STRUCTURAL MOVEMENT HAS TAKEN PLACE RESULTING IN CRACKS, SPLITS OR OPEN JOINTS

12. MP WHERE APPLICABLE, INSPECT ALL PITCH POCKETS FOR CRACKING, PROPER FILLING, FLASHING, AND METAL

DAMAGE.

13. MP INSPECT ALL VENT STACKS FOR CRACKING, DAMAGE, OBSTRUCTIONS AND DETERIORATION OF LEAD OR RUBBER SLEEVES

14. MP/MAS CHECK PARAPET WALL/PERIMETER EDGE FOR CONDITIONS THAT MIGHT PERMIT WATER ENTRY INTO THE BUILDING OR BEHIND THE ROOF SYSTEM SUCH AS:

A. LOOSENESS, SEPARATION AND DETERIORATION OF COPING ATTACHMENT
B. CRACKED OR SUNKEN CAULKING
C. WALL SETTLEMENT CRACKS AND MORTAR JOINTS THAT NEED RE-POINTING
D. CRACKING, SPALLING OR DISCOLORATION OF WALLS
E. CLOGGED OR COVERED WEEP HOLES.
F. LOOSENESS, SEPARATION AND DETERIORATION OF COUNTERFLASHING ATTACHMENT
G. PHYSICAL DAMAGE
H. LOOSENESS, SEPARATION AND DETERIORATION OF FOAM STOP ATTACHMENT

15. MAS CHECK ALL EQUIPMENT CURBS FOR DETERIORATION AND CRACKING REPAIR AS REQUIRED.

16. MP CHECK AREAS AROUND ROOF ACCESS POINTS, WALKWAYS AND "NATURAL" PATHWAYS, AND AROUND ANY ROOFTOP MECHANICAL EQUIPMENT THAT REQUIRES PERIODIC SERVICE FOR:

A. CUTS & PUNCTURES
B. COMPRESSED OR CRUSHED ROOF INSULATION TO INCLUDE THE PRESENCE OF PONDING WATER AND "TENTED" INSULATION FASTENERS WHICH DID NOT COMPRESS ALONG WITH THE INSULATION.
C. CHECK WALKWAY PAVERS FOR CRACKING AND OR DETERIORATION.
D. ENSURE ALL WALKWAY PAVERS ARE LAYING FLAT AND THAT NO PORTION OF THE ROOF IN THE WALKWAY PATH IS EXPOSED.
E. REPLACE AND OR ADJUST PAVERS AS NEEDED.

17. MP CHECK FOR SWELLING OR BUCKLING OF THE MEMBRANE AROUND ROOF TOP EQUIPMENT SUCH AS AIR CONDITIONING UNITS AND KITCHEN EXHAUST FANS. OIL LEAKS, OIL THAT MAY HAVE BEEN SPILLED DURING PERIODIC MAINTENANCE, OR GREASE FROM COOKING EXHAUSTS CAN ACCUMULATE AND CAUSE SOME SINGLE-PLY MEMBRANES TO EXPERIENCE FAILURE.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *879*

Facility System	ROOFING
Facility Subsystem	ROOF COVERING
Assembly Category	<NA>
Nomenclature	INFRA-RED ROOF INSPECTION
Procedure Frequency	5 Year
Shop	Multi-Purpose
Schedule Procedure Id	INFRARED-MP-5Y-1
Est Hours	0.04

Tasks

BE SURE TO USE QUALIFIED INDIVIDUALS WITH THE RIGHT EQUIPMENT. INFRA-RED TRAINING IS HIGHLY RECOMMENDED BEFORE ATTEMPTING A ROOF INSPECTION.

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP THE WEATHER IS A CRUCIAL VARIABLE THAT MUST BE ACCOUNTED FOR AT ALL TIMES. LONG CLEAR DAYS OF PROLONGED SUNSHINE FOLLOWED BY CLEAR NIGHTS ARE THE BEST. YOU MAY EVEN SEE A VISIBLE DIFFERENCE IF CLOUDS COVER THE SKY AT NIGHT WHILE YOU ARE INSPECTING. MAKE SURE YOU DON'T FORGET THAT THE WINDSPEED MUST BE BELOW 5MPH FOR THE BEST RESULTS.

3. MP SAFETY FIRST. WALK THE ROOF DURING DAYLIGHT HOURS. PLAN HOW YOU WILL PROCEED AT NIGHT. CHECK FOR ANY AREAS THAT MAY PRESENT A PROBLEM AT NIGHT. TAKE NOTE OF OBSTACLES AND PROTRUSIONS.

4. MP PERFORM THE INSPECTION ABOUT 1-2 HOURS AFTER SUNSET. TURN ON THE IMAGER AND TAKE A LOOK AROUND. IF YOU DON'T SEE MUCH OF ANYTHING WAIT A WHILE AND TRY AGAIN.

5. MP CHECK ANY SUSPICIOUS PATTERNS AGAINST THE INTERIOR OF THE FACILITY. SEE IF THERE IS ANY REASON FOR THE PATTERN TO SHOW UP OTHER THAN A PROBLEM AREA. PAY ATTENTION TO EQUIPMENT LOCATION BELOW THE ROOF, AS ITS ENERGY WILL RADIATE UP AND COULD SHOW UP ON THE IMAGE.

6. MP REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *877*

Facility System	ROOFING		
Facility Subsystem	ROOF COVERING		
Assembly Category	<NA>		
Nomenclature	FLUID APPLIED ROOFING		
Procedure Frequency	Semi-Annual	Shop	Multi-Purpose
Schedule Procedure Id	FAROOF-MP-SA-1	Est Hours	0.0034

Tasks

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP CONDUCT A COMPLETE WALK-OVER OF THE ROOF AND CHECK FOR:
A. ACCUMULATED DEBRIS, SUCH AS CANS, BOTTLES, LEAVES, RAGS, CIGARETTE BUTTS AND EQUIPMENT THAT MAY HAVE BEEN LEFT FROM A JOB ON OR NEAR THE ROOF. DISPOSE OF APPROPRIATELY.
B. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION. ALSO LOOK FOR "SOFT" ROOF INSULATION. IF THE ROOF INSULATION APPEARS TO BE "SOFT" UNDER FOOT, IT MAY HAVE ABSORBED EXCESSIVE MOISTURE. REPAIR AS PER MANUFACTURER'S RECOMMENDATIONS

3. MP CHECK ALL ROOF DRAINS, THROUGH-WALL SCUPPERS, GUTTERS & DOWNSPOUTS TO SEE THAT THEY ARE OPEN AND FREE OF DEBRIS AND PROPERLY SECURED AND NOT DETERIORATED OR DAMAGED.

4. MP CHECK FOR IMPROPER ROOF DRAINAGE SUCH AS: PONDING AREAS OR A CONCENTRIC PATTERN OF DEBRIS OR DIRT INDICATING A PONDING CONDITION. ALSO, CHECK CURBS AND WALLS FOR "HIGH WATER MARK" DISCOLORATION THAT MAY BE DUE TO A BUILD-UP OF SNOW OR ICE, OR IT MAY BE AN INDICATION THAT WATER MAY "BACK UP" DURING VERY SEVERE RAINSTORMS.

5. MP CHECK FOR WIND OR STORM DAMAGE - LOOK FOR LOOSE OR DISBONDED AREAS OF ROOF MEMBRANE. LOOK FOR DEFLECTION OR DISTORTION OF THE INSULATION BOARDS BENEATH THE ROOF MEMBRANE. LOOK FOR "TENTED" INSULATION FASTENERS AND PLATES. DISPLACED OR DAMAGED ROOFTOP UNITS OR DAMAGED OR MISSING SHEET METAL COMPONENTS. MEMBRANE CUTS AND PUNCTURES.

6. MP CHECK THE BASE ATTACHMENT FOR SIGNS OF STRESS. THE ROOFING MEMBRANE MAY BE PULLED AWAY FROM ANY ANGLED INTERSECTION DUE TO ITS INHERENT "MEMORY". MINOR BRIDGING, EXTENDING BEYOND THE ANGLE CHANGE LESS THAN ONE INCH, CAN TYPICALLY BE EXPECTED FROM ANY ROOFING MEMBRANE AFTER A REASONABLE PERIOD OF SERVICE. BRIDGING GREATER THAN ONE INCH MAY INDICATE THAT THE BASE ATTACHMENT ITSELF IS BEGINNING TO EXPERIENCE STRESS.

7. MP CHECK THE BASE FOR LOOSE FASTENERS. THE OBSERVATION OF LOOSE OR "TENTED" FASTENERS, OR "POPPED" NAILS, BENEATH THE MEMBRANE MAY INDICATE THAT THE ORIGINAL INSTALLATION OF THE FASTENER WAS INADEQUATE TO ACCOMMODATE LONG-TERM STRESS ON THE BASE.

8. SM CHECK ALL FASCIAS FOR DAMAGE AND CAULKING.

9. MP CHECK ALL FLASHINGS, SEALS OR CAULKED JOINTS AROUND DRAINS, EQUIPMENT, ROOF VENTS, STACKS, SKYLIGHTS, HATCHES, AND ALONG ROOF EDGES AND PARAPET WALLS FOR:
A. CRACKS
B. ANY DISCONTINUITIES IN THE FIRM UNIFORM COMPRESSION BETWEEN METAL FLASHINGS AND THE WALL SURFACE
C. LOOSENESS AND DETERIORATION OF SEAMS, EDGES, NAILS AND FASTENERS
D. CRACKED OR SUNKEN CAULKING
E. CURLING OR EXPOSED EDGES

10. MP CHECK ALL EXPANSION JOINTS TO ENSURE THAT NO STRUCTURAL MOVEMENT HAS TAKEN PLACE RESULTING IN CRACKS, SPLITS OR OPEN JOINTS

11. MP WHERE APPLICABLE, INSPECT ALL PITCH POCKETS FOR CRACKING, PROPER FILLING, FLASHING, AND METAL DAMAGE.

12. MP INSPECT ALL VENT STACKS FOR CRACKING, DAMAGE, OBSTRUCTIONS AND DETERIORATION OF LEAD OR RUBBER SLEEVES

13. MP/MAS CHECK PARAPET WALL/PERIMETER EDGE FOR CONDITIONS THAT MIGHT PERMIT WATER ENTRY INTO THE BUILDING OR BEHIND THE ROOF SYSTEM SUCH AS:
A. LOOSENESS, SEPARATION AND DETERIORATION OF COPING ATTACHMENT
B. CRACKED OR SUNKEN CAULKING

C. WALL SETTLEMENT CRACKS AND MORTAR JOINTS THAT NEED RE-POINTING
D. CRACKING, SPALLING OR DISCOLORATION OF WALLS
E. CLOGGED OR COVERED WEEP HOLES.
F. LOOSENESS, SEPARATION AND DETERIORATION OF COUNTERFLASHING ATTACHMENT
G. PHYSICAL DAMAGE
H. LOOSENESS, SEPARATION AND DETERIORATION OF FOAM STOP ATTACHMENT

14. MAS CHECK ALL EQUIPMENT CURBS FOR DETERIORATION AND CRACKING REPAIR AS REQUIRED.

15. MP CHECK AREAS AROUND ROOF ACCESS POINTS, WALKWAYS AND "NATURAL" PATHWAYS, AND AROUND ANY ROOFTOP MECHANICAL EQUIPMENT THAT REQUIRES PERIODIC SERVICE FOR:
A. CUTS & PUNCTURES
B. COMPRESSED OR CRUSHED ROOF INSULATION TO INCLUDE THE PRESENCE OF PONDING WATER AND "TENTED" INSULATION FASTENERS WHICH DID NOT COMPRESS ALONG WITH THE INSULATION.
C. CHECK WALKWAY PAVERS FOR CRACKING AND OR DETERIORATION.
D. ENSURE ALL WALKWAY PAVERS ARE LAYING FLAT AND THAT NO PORTION OF THE ROOF IN THE WALKWAY PATH IS EXPOSED.
E. REPLACE AND OR ADJUST PAVERS AS NEEDED.

16. MP CHECK FOR SWELLING OR BUCKLING OF THE MEMBRANE AROUND ROOF TOP EQUIPMENT SUCH AS AIR CONDITIONING UNITS AND KITCHEN EXHAUST FANS. OIL LEAKS, OIL THAT MAY HAVE BEEN SPILLED DURING PERIODIC MAINTENANCE, OR GREASE FROM COOKING EXHAUSTS CAN ACCUMULATE AND CAUSE SOME FLUID APPLIED MEMBRANES TO EXPERIENCE FAILURE.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *876*

Facility System	ROOFING
Facility Subsystem	ROOF COVERING
Assembly Category	<NA>
Nomenclature	BUILT-UP TAR & GRAVEL
Procedure Frequency	Semi-Annual
Shop	Multi-Purpose
Schedule Procedure Id	BUTGROOF-MP-SA-1
Est Hours	0.0034

Tasks

1. MP CHECK HISTORICAL INFORMATION FOR LEAKS DURING LONG-CONTINUED RAIN OR LEAKS THAT OCCUR EVERY TIME IT RAINS, ETC.

2. MP CONDUCT A COMPLETE WALK-OVER OF THE ROOF AND CHECK FOR:
A. ACCUMULATED DEBRIS, SUCH AS CANS, BOTTLES, LEAVES, RAGS, CIGARETTE BUTTS AND EQUIPMENT THAT MAY HAVE BEEN LEFT FROM A JOB ON OR NEAR THE ROOF. DISPOSE OF APPROPRIATELY.
B. CRACKS, PUNCTURES, PENETRATIONS AND UNUSUAL SIGNS OF WEAR OR EROSION. ALSO LOOK FOR "SOFT" ROOF INSULATION. IF THE ROOF INSULATION APPEARS TO BE "SOFT" UNDER FOOT, IT MAY HAVE ABSORBED EXCESSIVE MOISTURE. REPAIR AS PER MANUFACTURER'S RECOMMENDATIONS

3. MP CHECK ALL ROOF DRAINS, THROUGH-WALL SCUPPERS, GUTTERS & DOWNSPOUTS TO SEE THAT THEY ARE OPEN AND FREE OF DEBRIS AND PROPERLY SECURED AND NOT DETERIORATED OR DAMAGED.

4. MP CHECK FOR IMPROPER ROOF DRAINAGE SUCH AS: PONDING AREAS OR A CONCENTRIC PATTERN OF DEBRIS OR DIRT INDICATING A PONDING CONDITION. ALSO, CHECK CURBS AND WALLS FOR "HIGH WATER MARK" DISCOLORATION THAT MAY BE DUE TO A BUILD-UP OF SNOW OR ICE, OR IT MAY BE AN INDICATION THAT WATER MAY "BACK UP" DURING VERY SEVERE RAINSTORMS.

5. MP CHECK FOR WIND OR STORM DAMAGE - CHECK BALLASTED ROOFING SYSTEMS FOR MISSING OR DISPLACED ROOF BALLAST. LOOK FOR LOOSE OR DISBONDED AREAS OF ROOF MEMBRANE. LOOK FOR DEFLECTION OR DISTORTION OF THE INSULATION BOARDS BENEATH THE ROOF MEMBRANE. LOOK FOR "TENTED" INSULATION FASTENERS AND PLATES. DISPLACED OR DAMAGED ROOFTOP UNITS OR DAMAGED OR MISSING SHEET METAL COMPONENTS. MEMBRANE CUTS AND PUNCTURES.

6. MP CHECK THE BASE ATTACHMENT FOR SIGNS OF STRESS. THE ROOFING MEMBRANE MAY BE PULLED AWAY FROM ANY ANGLED INTERSECTION DUE TO ITS INHERENT "MEMORY". MINOR BRIDGING, EXTENDING BEYOND THE ANGLE CHANGE LESS THAN ONE INCH, CAN TYPICALLY BE EXPECTED FROM ANY ROOFING MEMBRANE AFTER A REASONABLE PERIOD OF SERVICE. BRIDGING GREATER THAN ONE INCH MAY INDICATE THAT THE BASE ATTACHMENT ITSELF IS BEGINNING TO EXPERIENCE STRESS.

7. MP CHECK THE BASE FOR LOOSE FASTENERS. THE OBSERVATION OF LOOSE OR "TENTED" FASTENERS, OR "POPPED" NAILS, BENEATH THE MEMBRANE MAY INDICATE THAT THE ORIGINAL INSTALLATION OF THE FASTENER WAS INADEQUATE TO ACCOMMODATE LONG-TERM STRESS ON THE BASE.

8. SM CHECK ALL FASCIAS FOR DAMAGE AND CAULKING.

9. MP CHECK ALL FLASHINGS, SEALS OR CAULKED JOINTS AROUND DRAINS, EQUIPMENT, ROOF VENTS, STACKS, SKYLIGHTS, HATCHES, AND ALONG ROOF EDGES AND PARAPET WALLS FOR:
A. CRACKS
B. ANY DISCONTINUITIES IN THE FIRM UNIFORM COMPRESSION BETWEEN METAL FLASHINGS AND THE WALL SURFACE
C. LOOSENESS AND DETERIORATION OF SEAMS, EDGES, NAILS AND FASTENERS
D. CRACKED OR SUNKEN CAULKING
E. CURLING OR EXPOSED EDGES

10. MP CHECK ALL EXPANSION JOINTS TO ENSURE THAT NO STRUCTURAL MOVEMENT HAS TAKEN PLACE RESULTING IN CRACKS, SPLITS OR OPEN JOINTS

11. MP WHERE APPLICABLE, INSPECT ALL PITCH POCKETS FOR CRACKING, PROPER FILLING, FLASHING, AND METAL DAMAGE.

12. MP INSPECT ALL VENT STACKS FOR CRACKING, DAMAGE, OBSTRUCTIONS AND DETERIORATION OF LEAD OR RUBBER SLEEVES

13. MP/MAS CHECK PARAPET WALL/PERIMETER EDGE FOR CONDITIONS THAT MIGHT PERMIT WATER ENTRY INTO THE BUILDING OR BEHIND THE ROOF SYSTEM SUCH AS:
A. LOOSENESS, SEPARATION AND DETERIORATION OF COPING ATTACHMENT
B. CRACKED OR SUNKEN CAULKING

C. WALL SETTLEMENT CRACKS AND MORTAR JOINTS THAT NEED RE-POINTING
D. CRACKING, SPALLING OR DISCOLORATION OF WALLS
E. CLOGGED OR COVERED WEEP HOLES.
F. LOOSENESS, SEPARATION AND DETERIORATION OF COUNTERFLASHING ATTACHMENT
G. PHYSICAL DAMAGE
H. LOOSENESS, SEPARATION AND DETERIORATION OF FOAM STOP ATTACHMENT

14. MAS CHECK ALL EQUIPMENT CURBS FOR DETERIORATION AND CRACKING REPAIR AS REQUIRED.

15. MP CHECK AREAS AROUND ROOF ACCESS POINTS, WALKWAYS AND "NATURAL" PATHWAYS, AND AROUND ANY ROOFTOP MECHANICAL EQUIPMENT THAT REQUIRES PERIODIC SERVICE FOR:

A. CUTS & PUNCTURES
B. COMPRESSED OR CRUSHED ROOF INSULATION TO INCLUDE THE PRESENCE OF PONDING WATER AND "TENTED" INSULATION FASTENERS WHICH DID NOT COMPRESS ALONG WITH THE INSULATION.
C. CHECK WALKWAY PAVERS FOR CRACKING AND OR DETERIORATION
D. ENSURE ALL WALKWAY PAVERS ARE LAYING FLAT AND THAT NO PORTION OF THE ROOF IN THE WALKWAY PATH IS EXPOSED.
E. REPLACE AND OR ADJUST PAVERS AS NEEDED.

16. MP CHECK FOR SWELLING, CRACKING, DISCOLORATION, SOFTNESS OR LOSS OF BITUMINOUS COATING AROUND ROOF TOP EQUIPMENT SUCH AS AIR CONDITIONING UNITS AND KITCHEN EXHAUST FANS. OIL LEAKS, OIL THAT MAY HAVE BEEN SPILLED DURING PERIODIC MAINTENANCE, OR GREASE FROM COOKING EXHAUSTS CAN ACCUMULATE AND CAUSE BITUMINOUS COATINGS TO EXPERIENCE FAILURE.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28

ID Number: *918*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	CONTROLS & INSTRUMENTATION
Assembly Category	HVAC CONTROL
Nomenclature	HUMIDIFIERS
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	HUMID-REF-SA-1
Est Hours	1.5

Tasks

1. MECH OPERATE HUMIDISTAT THROUGH ITS THROTTLING RANGE TO VERIFY ACTIVATION, OR DEACTIVATION OF HUMIDIFIER.
2. MECH IF APPLICABLE, CLEAN AND FLUSH CONDENSATE PANS, DRAINS AND WATER PANS. REMOVE CORROSION, AND REPAINT AS NEEDED. IF A CORROSION PREVENTIVE CHEMICAL IS USED, ENSURE THAT IT DOES NOT BECOME A PART OF THE INDOOR AIR BY CREATING LARGE AMOUNTS OF VOLATILE ORGANIC COMPOUNDS OR IRRITANTS. CHECK THE MATERIAL SAFETY DATA SHEET (MSDS) TO SEE WHAT HAZARDOUS PRODUCTS ARE PRESENT. IF HAZARDOUS PRODUCTS ARE PRESENT RINSE VERY WELL BEFORE THE SYSTEM IS RETURNED TO USE. ENSURE THAT THE PAINT LEAD LEVEL IS 0.06% OR LESS.
3. MECH IF APPLICABLE, CHECK CONDITION OF HEATING ELEMENT. CLEAN STEAM COILS.
4. MECH CLEAN STEAM INJECTORS OR WATERWAYS. ADJUST/REPLACE AS NEEDED.
5. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF WATER CONTROL VALVE. INSPECT CONTROLLER AND OPERATE CONTROL VALVE.
6. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF STEAM CONTROL VALVE. INSPECT CONTROLLER AND OPERATE CONTROL VALVE.
7. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF THE STEAM TRAP. CHECK OPERATION OF STEAM TRAP.
8. MECH INSPECT FOR LEAKS AND CORROSION.
9. MECH CLEAN UP WORK AREA AND REMOVE DEBRIS.

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29 CFR 1910; (NFPA) NFPA-70, 70B, 70E;

Lessor _____ Gov't _____

ID Number: *913*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	CONTROLS & INSTRUMENTATION
Assembly Category	HVAC CONTROL
Nomenclature	HUMIDIFIERS
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	HUMID-REF-SA-1
Est Hours	1.5

Tasks

1. MECH OPERATE HUMIDISTAT THROUGH ITS THROTTLING RANGE TO VERIFY ACTIVATION, OR DEACTIVATION OF HUMIDIFIER.
2. MECH IF APPLICABLE, CLEAN AND FLUSH CONDENSATE PANS, DRAINS AND WATER PANS. REMOVE CORROSION, AND REPAINT AS NEEDED. IF A CORROSION PREVENTIVE CHEMICAL IS USED, ENSURE THAT IT DOES NOT BECOME A PART OF THE INDOOR AIR BY CREATING LARGE AMOUNTS OF VOLATILE ORGANIC COMPOUNDS OR IRRITANTS. CHECK THE MATERIAL SAFETY DATA SHEET (MSDS) TO SEE WHAT HAZARDOUS PRODUCTS ARE PRESENT. IF HAZARDOUS PRODUCTS ARE PRESENT RINSE VERY WELL BEFORE THE SYSTEM IS RETURNED TO USE. ENSURE THAT THE PAINT LEAD LEVEL IS 0.06% OR LESS.
3. MECH IF APPLICABLE, CHECK CONDITION OF HEATING ELEMENT. CLEAN STEAM COILS.
4. MECH CLEAN STEAM INJECTORS OR WATERWAYS. ADJUST/REPLACE AS NEEDED.
5. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF WATER CONTROL VALVE. INSPECT CONTROLLER AND OPERATE CONTROL VALVE.
6. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF STEAM CONTROL VALVE. INSPECT CONTROLLER AND OPERATE CONTROL VALVE.
7. MECH IF APPLICABLE, BLOW DOWN SEDIMENT STRAINER UPSTREAM OF THE STEAM TRAP. CHECK OPERATION OF STEAM TRAP.
8. MECH INSPECT FOR LEAKS AND CORROSION.
9. MECH CLEAN UP WORK AREA AND REMOVE DEBRIS.

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29 CFR 1910; (NFPA) NFPA-70, 70B, 70E;

ID Number: 435

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	HEAT GENERATING SYSTEM
Assembly Category	HOT WATER BOILER (SPACE HEATING)
Nomenclature	BOILER
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	HWBOILER-PL-SA-1
Est Hours	3

Tasks

1. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS. MANY OF THE STEPS ARE REGULARLY PERFORMED ON "ROUNDS".
2. MECH INSPECT WATER COLUMN, GAGE GLASS, AND WATER LEVEL CONTROL SYSTEM. RECORD WATER LEVEL.
3. MECH OBSERVE TEST OF LOW WATER CUT-OUT AND ALARM.
4. MECH OBSERVE A BOTTOM BLOW OF THE BOILER.
5. MECH TEST FEEDWATER MAKE-UP CONTROL AND FEEDWATER PUMP CONTROL.
6. MECH VERIFY CORRECT BOILER OPERATING PRESSURE AND TEMPERATURE RANGE. RECORD CUT-IN AND CUT-OUT POINTS.
7. MECH CHECK ALL WATER, OIL, GAS, AND STEAM LINES, CONNECTIONS, VALVES, GAGES AND CONTROLS.
8. MECH CHECK ALL INDICATOR AND ALARM LAMPS.

BURNER, GAS OR OIL:

1. MECH EXTERNALLY, CHECK STACK AND, IF APPLICABLE, STACK MOUNTING.
2. MECH INSPECT FUEL TRAIN(S). IF APPLICABLE, CLEAN FUEL STRAINERS.
3. MECH REVIEW OPERATING AND CHEMICAL TREATMENT LOGS.
4. MECH PERFORM FLUE GAS ANALYSIS TESTS. RECORD STACK TEMPERATURE, C02 AND 02. COMPARE THE COMBUSTION EFFICIENCY WITH THE MANUFACTURER'S MANUAL.
   TESTS SHOULD BE RUN AT THE FOLLOWING LOAD POINTS:
   A. AT THE MINIMUM, 25%, 50%, 75%, AND 100% LOAD FOR BOILERS HAVING METERING OR MODULATION CONTROLS.
   B. AT THE HIGH AND LOW FIRE RATES ON BOILERS EQUIPPED WITH OFF-LOW FIRE-HIGH FIRE CONTROL.
   C. AT THE SINGLE FIRING LOAD POINT ON BOILERS EQUIPPED WITH OFF-ON CONTROLS ONLY.
5. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS. MANY OF THE STEPS ARE REGULARLY PERFORMED ON "ROUNDS".
6. MECH CHECK THAT AIR INTAKE LOUVERS AND VENTILATION IN BOILER ROOM MEETS OIL BURNER REQUIREMENTS.
7. MECH OBSERVE TEST OF FLAME SAFEGUARD UNIT. CHECK FLAME FAILURE SHUTDOWN AND FUEL TRAIN SHUTOFF.
8. MECH CHECK PRE-IGNITION PURGING CAPABILITY OF BURNER, COMBUSTION CHAMBER, BOILER PASSES AND BREACHING.
9. MECH CHECK COMBUSTION BLOWER, DAMPER MODULATION, AND COMBUSTION CONTROL.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29CFR 1910
(OSHA) 1926.28, 1926.29B, 1926.400-499; (NFPA) NFPA-54, 70, 70B, 70E

Lessor _____ Gov't _____

ID Number: *434*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	HEAT GENERATING SYSTEM
Assembly Category	HOT WATER BOILER (SPACE HEATING)
Nomenclature	BOILER
Procedure Frequency	Quarterly
Shop	Mechanical
Schedule Procedure Id	HWBOILER-PL-Q-1
Est Hours	3

Tasks

1. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS. MANY OF THE STEPS ARE REGULARLY PERFORMED ON "ROUNDS".
2. MECH INSPECT WATER COLUMN, GAGE GLASS, AND WATER LEVEL CONTROL SYSTEM. RECORD WATER LEVEL.
3. MECH OBSERVE TEST OF LOW WATER CUT-OUT AND ALARM.
4. MECH OBSERVE A BOTTOM BLOW OF THE BOILER.
5. MECH TEST FEEDWATER MAKE-UP CONTROL AND FEEDWATER PUMP CONTROL.
6. MECH VERIFY CORRECT BOILER OPERATING PRESSURE AND TEMPERATURE RANGE. RECORD CUT-IN AND CUT-OUT POINTS.
7. MECH CHECK ALL WATER, OIL, GAS, AND STEAM LINES, CONNECTIONS, VALVES, GAGES AND CONTROLS.
8. MECH CHECK ALL INDICATOR AND ALARM LAMPS.

BURNER, GAS OR OIL:

1. MECH INSPECT FUEL TRAIN(S). IF APPLICABLE, CLEAN FUEL STRAINERS.
2. MECH REVIEW OPERATING AND CHEMICAL TREATMENT LOGS.
3. MECH PERFORM FLUE GAS ANALYSIS TESTS. RECORD STACK TEMPERATURE, C02 AND 02. COMPARE THE COMBUSTION EFFICIENCY WITH THE MANUFACTURER'S MANUAL.
   TESTS SHOULD BE RUN AT THE FOLLOWING LOAD POINTS:
   A. AT THE MINIMUM, 25%, 50%, 75%, AND 100% LOAD FOR BOILERS HAVING METERING OR MODULATION CONTROLS.
   B. AT THE HIGH AND LOW FIRE RATES ON BOILERS EQUIPPED WITH OFF-LOW FIRE-HIGH FIRE CONTROL.
   C. AT THE SINGLE FIRING LOAD POINT ON BOILERS EQUIPPED WITH OFF-ON CONTROLS ONLY.
4. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS. MANY OF THE STEPS ARE REGULARLY PERFORMED ON "ROUNDS".
5. MECH CHECK THAT AIR INTAKE LOUVERS AND VENTILATION IN BOILER ROOM MEETS OIL BURNER REQUIREMENTS.
6. MECH OBSERVE TEST OF FLAME SAFEGUARD UNIT. CHECK FLAME FAILURE SHUTDOWN AND FUEL TRAIN SHUTOFF.
7. MECH CHECK PRE-IGNITION PURGING CAPABILITY OF BURNER, COMBUSTION CHAMBER, BOILER PASSES AND BREACHING.
8. MECH CHECK COMBUSTION BLOWER, DAMPER MODULATION, AND COMBUSTION CONTROL.

Tools and Material

BASIC TOOL SETS, COMBUSTION ANALYZER

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29CFR 1910
(OSHA) 1926.28, 1926.29B, 1926.400-499; (NFPA) NFPA-54, 70, 70B, 70E

ID Number: *433*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	HEAT GENERATING SYSTEM		
Assembly Category	HOT WATER BOILER (SPACE HEATING)		
Nomenclature	BOILER		
Procedure Frequency	Monthly	Shop	Mechanical
Schedule Procedure Id	HWBOILER-PL-M-1	Est Hours	0.5

Tasks

1. MECH CHECK THE EXTERIOR FOR WATER OR FLUE GAS LEAKS.
2. MECH VERIFY THE CORRECT AQUASTAT OPERATING TEMPERATURE RANGE. RECORD CUT-IN AND CUT-OUT POINTS.
3. MECH CLEAN EXTERIOR AND LUBRICATE CIRCULATING PUMP, IF APPLICABLE.

BURNER, GAS OR OIL

1. MECH CHECK THAT AIR INTAKE LOUVERS AND VENTILATION IN BOILER ROOM MEET THE INSTALLED BURNER REQUIREMENTS.
2. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
3. MECH CLEAN FUEL FILTER(S).
4. MECH TEST FLAME SAFEGUARD UNIT. CHECK FLAME FAILURE SHUTDOWN AND FUEL TRAIN SHUTOFF.
5. MECH CHECK PRE-IGNITION PURGING CAPABILITY OF BURNER, IF APPLICABLE.
6. MECH CHECK CONDITION OF COMBUSTION CHAMBER, BOILER PASSES AND BREACHING.
7. MECH OBSERVE OPERATION OF COMBUSTION BLOWER AND COMBUSTION CONTROL.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-54, 70, 70B, 70E

ID Number: *432*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	HEAT GENERATING SYSTEM
Assembly Category	HOT WATER BOILER (SPACE HEATING)
Nomenclature	BOILER
Procedure Frequency	Annual
Shop	Mechanical
Schedule Procedure Id	HWBOILER-PL-A-1
Est Hours	4

Tasks

1. MECH CHECK THE EXTERIOR FOR WATER OR FLUE GAS LEAKS.
2. MECH VERIFY THE CORRECT AQUASTAT OPERATING TEMPERATURE RANGE. RECORD CUT-IN AND CUT-OUT POINTS.
3. MECH CLEAN EXTERIOR AND LUBRICATE CIRCULATING PUMP, IF APPLICABLE.

BURNER, GAS OR OIL

1. MECH CHECK THAT AIR INTAKE LOUVERS AND VENTILATION IN BOILER ROOM MEET THE INSTALLED BURNER REQUIREMENTS.
2. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
3. MECH CLEAN FUEL FILTER(S).
4. MECH TEST FLAME SAFEGUARD UNIT. CHECK FLAME FAILURE SHUTDOWN AND FUEL TRAIN SHUTOFF.
5. MECH CHECK PRE-IGNITION PURGING CAPABILITY OF BURNER, IF APPLICABLE.
6. MECH CHECK CONDITION OF COMBUSTION CHAMBER, BOILER PASSES AND BREACHING.
7. MECH OBSERVE OPERATION OF COMBUSTION BLOWER AND COMBUSTION CONTROL.
8. MECH EXTERNALLY, CHECK STACK AND, IF APPLICABLE, STACK MOUNTING.
9. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
10. MECH REVIEW OPERATING LOGS.
11. MECH MANUALLY CHECK OPERATION OF SAFETY VALVE AND CHECK IT FOR CORROSION.
12. MECH INSPECT AND LUBRICATE, IF APPLICABLE, COMBUSTION BLOWER MOTOR, ALL DAMPERS, LINKAGES, AND COCK VALVES.
13. MECH PERFORM FLUE GAS ANALYSIS TESTS. RECORD STACK TEMPERATURE, C02 AND 02. COMPARE THE COMBUSTION EFFICIENCY WITH THE MANUFACTURER'S MANUAL.
    TESTS SHOULD BE RUN AT THE FOLLOWING LOAD POINTS:
    A. AT THE HIGH AND LOW FIRE RATES ON BOILERS EQUIPPED WITH OFF-LOW FIRE-HIGH FIRE CONTROL.
    B. AT THE SINGLE FIRING LOAD POINT ON BOILERS EQUIPPED WITH OFF-ON CONTROLS ONLY.
14. MECH REFER TO MANUFACTURER'S MANUAL. SECURE THE HOT WATER BOILER FOR ANNUAL INSPECTION.
15. MECH CHECK FOR SLUDGE, PITTING, AND CORROSION OF THE METAL SURFACES. REPORT FINDINGS.
16. MECH CHECK CONNECTING PIPING, VALVE PACKING AND GASKET RENEWAL. REPORT FINDINGS.
17. MECH RE-CERTIFY SAFETY VALVES AS PER CHIEF ENGINEER'S INSTRUCTIONS.
18. MECH CHECK INTERIOR OF STACK, BAFFLES, FIRE BOX, TUBE FIRESIDES, BRICK WORK AND FIRE CONE, WHEN APPLICABLE.
19. MECH INSPECT CLEANLINESS OF BURNER(S), IGNITOR(S), AND COMBUSTION CHAMBER. REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-54, 70, 70B, 70E

ID Number: 64

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	HEAT GENERATING SYSTEM		
Assembly Category	HOT WATER BOILER (SPACE HEATING)		
Nomenclature	BOILER		
Procedure Frequency	Weekly	Shop	Mechanical
Schedule Procedure Id	BOILER-MECH-W-1	Est Hours	0.5

Tasks

1. MECH TEST FIRE OPERATIONS OF BOILER
2. MECH VERIFY PROPER OPERATION OF PUMP AND CONTROLS
3. MECH CHECK UNUSUAL NOISES, VIBRATION, HIGH TEMPS AND LEAKS
4. MECH VERIFY ALL VALVES ARE OPERATING PROPERLY

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-54, 70, 70B, 70E

Lessor _____ Gov't _____

ID Number: *90*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	COOLING GENERATING SYSTEMS
Assembly Category	CHILLED WATER SYSTEM
Nomenclature	CENTRIFUGAL CHILLER
Procedure Frequency	Semi-Annual
Shop	Refrigeration
Schedule Procedure Id	CCHILL-REF-SA-1
Est Hours	1

Tasks

1. REF COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. REF IF SYSTEM IS EQUIPPED WITH A MICROPROCESSOR CONTROLLER. IF DATA IS AVAILABLE, CHECK FOR ABNORMALTIES. CHECK ALARM HISTORY MENU AND REVIEW ALARMS.
3. REF CHECK SAFETY CONTROLS AND RECORD CUT-IN AND CUT-OUT POINTS. TYPICAL ITEMS ARE: LOW OIL PRESSURE, CONDENSER HIGH PRESSURE, CHILLED WATER LOW TEMPERATURE, ANTICYCLE TIME DELAY, FLOW SWITCHES.
4. REF FOR AN INDICATION AS WHEN TO CLEAN FOULED TUBES USE ONE OF THE FOLLOWING OR AN EQUIVALENT METHOD: AT A PARTICULAR LOAD, VERIFY THAT CONDENSER WATER PRESSURE AND TEMPERATURE DIFFERENTIALS ARE WITHIN LIMITS SPECIFIED BY MANUFACTURER. AT FULL LOAD RECORD THE REFRIGERANT CONDENSING LIQUID TEMPERATURE AND CONDENSING PRESSURE, REFER TO MANUFACTURER'S MANUAL FOR AN INTERPRETATION OF THE RESULTS.
5. REF REPORT DEFECTIVE GAGES, THERMOMETERS AND INDICATORS.
6. REF CHECK REFRIGERANT LEVEL AND QUALITY. RECORD FINDINGS
7. REF CHECK THAT OIL IS FREE OF CONTAMINATION AND MAINTAINED AT THE PROPER LEVEL.
8. REF INSPECT FOR PROPER OPERATION OF OIL HEATER.
9. REF IF APPLICABLE, CHECK LUBE OIL PUMP CURRENT AND VOLTAGE.
10. REF ENSURE THAT ALL VALVES OPEN AND CLOSE PROPERLY.
11. REF IF APPLICABLE, CHECK THAT ANY WATER ACCUMULATION IS DRAINED FROM PURGE DRUM.
12. IEL UNDER LOAD, CHECK COMPRESSOR MOTOR CURRENT AND VOLTAGE. COMPARE WITH MANUFACTURER'S OR HISTORICAL DATA.
13. REF CHECK PURGE DRIVE BELT TENSION AND LUBRICATE PURGE MOTOR, IF APPLICABLE.
14. IEL VERIFY PROPER OPERATION OF REDUCED VOLTAGE COMPRESSOR MOTOR STARTER, IF APPLICABLE. REFER TO MANUFACTURER'S MANUAL FOR CHECKLIST.
15. REF TEST OPERATION OF THE COMPRESSOR VANES. LUBRICATE VANE LINKAGE IF REQUIRED. REPORT FINDINGS.
16. REF OPEN FLUSH LINE TO CHECK WATER FLOW THROUGH EVAPORATOR PURGE CONDENSER AND BEARING OIL COOLER.
17. REF IF APPLICABLE, BLOW DOWN THE BEARING OIL COOLING WATER STRAINER LOCATED UPSTREAM OF THE COOLING WATER FLOW CONTROL VALVE.
18. REF ENSURE PROPER OPERATION OF CONTROL DEVICES, REPORT MALFUNCTIONING COMPONENTS.
19. REF LEAK TEST ENTIRE UNIT.
20. REF CLEAN PURGE DRUM. IF APPLICABLE.

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *89*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	COOLING GENERATING SYSTEMS
Assembly Category	CHILLED WATER SYSTEM
Nomenclature	CENTRIFUGAL CHILLER
Procedure Frequency	Monthly
Shop	Refrigeration
Schedule Procedure Id	CCHILL-REF-M-1
Est Hours	0.25

Tasks

1. REF COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. REF IF SYSTEM IS EQUIPPED WITH A MICROPROCESSOR CONTROLLER. IF DATA IS AVAILABLE, CHECK FOR ABNORMALTIES. CHECK ALARM HISTORY MENU AND REVIEW ALARMS.
3. REF CHECK SAFETY CONTROLS AND RECORD CUT-IN AND CUT-OUT POINTS. TYPICAL ITEMS ARE: LOW OIL PRESSURE, CONDENSER HIGH PRESSURE, CHILLED WATER LOW TEMPERATURE, ANTICYCLE TIME DELAY, FLOW SWITCHES.
4. REF FOR AN INDICATION AS WHEN TO CLEAN FOULED TUBES USE ONE OF THE FOLLOWING OR AN EQUIVALENT METHOD: AT A PARTICULAR LOAD, VERIFY THAT CONDENSER WATER PRESSURE AND TEMPERATURE DIFFERENTIALS ARE WITHIN LIMITS SPECIFIED BY MANUFACTURER. AT FULL LOAD RECORD THE REFRIGERANT CONDENSING LIQUID TEMPERATURE AND CONDENSING PRESSURE, REFER TO MANUFACTURER'S MANUAL FOR AN INTERPRETATION OF THE RESULTS.
5. REF REPORT DEFECTIVE GAGES, THERMOMETERS AND INDICATORS.
6. REF CHECK REFRIGERANT LEVEL AND QUALITY. RECORD FINDINGS
7. REF CHECK THAT OIL IS FREE OF CONTAMINATION AND MAINTAINED AT THE PROPER LEVEL.
8. REF INSPECT FOR PROPER OPERATION OF OIL HEATER.
9. REF IF APPLICABLE, CHECK LUBE OIL PUMP CURRENT AND VOLTAGE.
10. REF ENSURE THAT ALL VALVES OPEN AND CLOSE PROPERLY.
11. REF IF APPLICABLE, CHECK THAT ANY WATER ACCUMULATION IS DRAINED FROM PURGE DRUM.

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *88*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	COOLING GENERATING SYSTEMS		
Assembly Category	CHILLED WATER SYSTEM		
Nomenclature	CENTRIFUGAL CHILLER		
Procedure Frequency	Daily	Shop	Refrigeration
Schedule Procedure Id	CCHILL-REF-D-1	Est Hours	0.25

Tasks

1. REF IF SYSTEM IS EQUIPPED WITH A MICROPROCESSOR CONTROLLER, CHECK ALARM HISTORY /MENU AND REVIEW THE ALARM.
   IF NO MICROPROCESSOR IS AVAILABLE, CHECK OPERATOR LOG.
2. REF CHECK FOR DEFECTIVE GAGES, THERMOMETERS AND INDICATORS
3. REF CHECK FOR LEAKS ON SYSTEM. CHECK FOR WATER LEAKS FOR FITTING AND VALVES
4. REF CHECK PUMP FOR PROPER OPERATION
5. REF CHECK VALVE LINE OPERATION

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: 87

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	COOLING GENERATING SYSTEMS
Assembly Category	CHILLED WATER SYSTEM
Nomenclature	CENTRIFUGAL CHILLER
Procedure Frequency	Annual
Shop	Refrigeration
Schedule Procedure Id	CCHILL-REF-A-1
Est Hours	8

Tasks

1. REF COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. REF IF SYSTEM IS EQUIPPED WITH A MICROPROCESSOR CONTROLLER CHECK FOR ABNORMALTIES. CHECK ALARM HISTORY MENU AND REVIEW ALARMS.
3. REF CHECK SAFETY CONTROLS AND RECORD CUT-IN AND CUT-OUT POINTS. TYPICAL ITEMS ARE: LOW OIL PRESSURE, CONDENSER HIGH PRESSURE, CHILLED WATER LOW TEMPERATURE, ANTICYCLE TIME DELAY, FLOW SWITCHES.
4. REF FOR AN INDICATION AS WHEN TO CLEAN FOULED TUBES USE ONE OF THE FOLLOWING OR AN EQUIVALENT METHOD: AT A PARTICULAR LOAD, VERIFY THAT CONDENSER WATER PRESSURE AND TEMPERATURE DIFFERENTIALS ARE WITHIN LIMITS SPECIFIED BY MANUFACTURER. AT FULL LOAD RECORD THE REFRIGERANT CONDENSING LIQUID TEMPERATURE AND CONDENSING PRESSURE, REFER TO MANUFACTURER'S MANUAL FOR AN INTERPRETATION OF THE RESULTS.
5. REF REPORT DEFECTIVE GAGES, THERMOMETERS AND INDICATORS.
6. REF CHECK REFRIGERANT LEVEL AND QUALITY. RECORD FINDINGS
7. REF CHECK THAT OIL IS FREE OF CONTAMINATION AND MAINTAINED AT THE PROPER LEVEL.
8. REF INSPECT FOR PROPER OPERATION OF OIL HEATER.
9. REF IF APPLICABLE, CHECK LUBE OIL PUMP CURRENT AND VOLTAGE.
10. REF ENSURE THAT ALL VALVES OPEN AND CLOSE PROPERLY.
11. REF IF APPLICABLE, CHECK THAT ANY WATER ACCUMULATION IS DRAINED FROM PURGE DRUM.
12. IEL UNDER LOAD, CHECK COMPRESSOR MOTOR CURRENT AND VOLTAGE. COMPARE WITH MANUFACTURER'S OR HISTORICAL DATA.
13. REF CHECK PURGE DRIVE BELT TENSION AND LUBRICATE PURGE MOTOR, IF APPLICABLE.
14. IEL VERIFY PROPER OPERATION OF REDUCED VOLTAGE COMPRESSOR MOTOR STARTER, IF APPLICABLE. REFER TO MANUFACTURER'S MANUAL FOR CHECKLIST.
15. REF TEST OPERATION OF THE COMPRESSOR VANES. LUBRICATE VANE LINKAGE IF REQUIRED. REPORT FINDINGS.
16. REF IF APPLICABLE, OPEN FLUSH LINE TO CHECK WATER FLOW THROUGH EVAPORATOR PURGE CONDENSER AND BEARING OIL COOLER.
17. REF IF APPLICABLE, BLOW DOWN THE BEARING OIL COOLING WATER STRAINER LOCATED UPSTREAM OF THE COOLING WATER FLOW CONTROL VALVE.
18. REF ENSURE PROPER OPERATION OF CONTROL DEVICES, REPORT MALFUNCTIONING COMPONENTS.
19. REF LEAK TEST ENTIRE UNIT.
20. REF CLEAN PURGE DRUM. IF APPLICABLE.
21. REF PUMP DOWN SYSTEM. COMPLY WITH CLEAN AIR ACT AND ENVIRONMENTAL PROTECTION AGENCY REGULATIONS.
22. REF REPLACE OIL FILTER AND SEAL AS NECESSARY
23. REF CLEAN OIL COOLER LINE STRAINER.
24. REF IF APPLICABLE, CHANGE THE OIL SEPARATOR.
25. REF BASED ON MANUFACTURER'S OIL QUALITY REQUIREMENTS, DETERMINE WHETHER TO REPLACE THE OIL IN THE UNIT.
26. REF IF RECOMMENDED BY MANUFACTURER, VERIFY PROPER CLEARANCE BETWEEN IMPELLER AND COMPRESSOR INTAKE WALL. REPORT FINDINGS.
27. REF EXAMINE PURGE UNIT AND REPORT FINDINGS.
28. REF REFER TO MANUFACTURER'S MANUAL. SECURE AND OPEN THE CONDENSER FOR THE ANNUAL INSPECTION.
    A. CLEAN WATERSIDE OF TUBES AND CHECK CONDITION OF TUBES. REPORT FINDINGS.
    B. WHERE APPLICABLE, BLOW DOWN STRAINERS.
    C. CHECK ALL VALVES AND REPORT FINDINGS.
    D. RE-CERTIFY RELIEF VALVE AS PER CHIEF ENGINEER'S INSTRUCTIONS.

Tools and Material

BASIC AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *86*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	COOLING GENERATING SYSTEMS
Assembly Category	CHILLED WATER SYSTEM
Nomenclature	CENTRIFUGAL CHILLER
Procedure Frequency	Quarterly
Shop	Refrigeration
Schedule Procedure Id	CCHILL-MP-Q-1
Est Hours	0.5

Tasks

1. REF COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. REF IF SYSTEM IS EQUIPPED WITH A MICROPROCESSOR CONTROLLER, IF DATA IS AVAILABLE, CHECK FOR ABNORMALTIES. CHECK ALARM HISTORY MENU AND REVIEW ALARMS.
3. REF CHECK SAFETY CONTROLS AND RECORD CUT-IN AND CUT-OUT POINTS. TYPICAL ITEMS ARE: LOW OIL PRESSURE, CONDENSER HIGH PRESSURE, CHILLED WATER LOW TEMPERATURE, ANTICYCLE TIME DELAY, FLOW SWITCHES.
4. REF FOR AN INDICATION AS WHEN TO CLEAN FOULED TUBES USE ONE OF THE FOLLOWING OR AN EQUIVALENT METHOD: AT A PARTICULAR LOAD, VERIFY THAT CONDENSER WATER PRESSURE AND TEMPERATURE DIFFERENTIALS ARE WITHIN LIMITS SPECIFIED BY MANUFACTURER. AT FULL LOAD RECORD THE REFRIGERANT CONDENSING LIQUID TEMPERATURE AND CONDENSING PRESSURE, REFER TO MANUFACTURER'S MANUAL FOR AN INTERPRETATION OF THE RESULTS.
5. REF REPORT DEFECTIVE GAGES, THERMOMETERS AND INDICATORS.
6. REF CHECK REFRIGERANT LEVEL AND QUALITY. RECORD FINDINGS
7. REF CHECK THAT OIL IS FREE OF CONTAMINATION AND MAINTAINED AT THE PROPER LEVEL.
8. REF INSPECT FOR PROPER OPERATION OF OIL HEATER.
9. REF IF APPLICABLE, CHECK LUBE OIL PUMP CURRENT AND VOLTAGE.
10. REF ENSURE THAT ALL VALVES OPEN AND CLOSE PROPERLY.
11. REF IF APPLICABLE, CHECK THAT ANY WATER ACCUMULATION IS DRAINED FROM PURGE DRUM.
12. IEL UNDER LOAD, CHECK COMPRESSOR MOTOR CURRENT AND VOLTAGE. COMPARE WITH MANUFACTURER'S OR HISTORICAL DATA.
13. REF CHECK PURGE DRIVE BELT TENSION AND LUBRICATE PURGE MOTOR, IF APPLICABLE.
14. IEL VERIFY PROPER OPERATION OF REDUCED VOLTAGE COMPRESSOR MOTOR STARTER, IF APPLICABLE. REFER TO MANUFACTURER'S MANUAL FOR CHECKLIST.
15. REF TEST OPERATION OF THE COMPRESSOR VANES. LUBRICATE VANE LINKAGE IF REQUIRED. REPORT FINDINGS.
16. REF IF APPLICABLE, OPEN FLUSH LINE TO CHECK WATER FLOW THROUGH EVAPORATOR PURGE CONDENSER AND BEARING OIL COOLER.
17. REF IF APPLICABLE, BLOW DOWN THE BEARING OIL COOLING WATER STRAINER LOCATED UPSTREAM OF THE COOLING WATER FLOW CONTROL VALVE.

Tools and Material

BASIC, ELECTRICAL AND REFRIGERATION TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: 29
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *166*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	DISTRIBUTION SYSTEMS
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM
Nomenclature	CHILLED WATER MAKEUP TANK
Procedure Frequency	Annual
Shop	Plumbing
Schedule Procedure Id	CWMT-PL-A-1
Est Hours	0.25

Tasks

1. PL CHECK TANK HANGERS OR FLOOR SUPPORTS FOR CORROSION. REPORT FINDINGS.
2. PL CHECK TANK, PIPING, AND VALVES FOR LEAKS.
3. PL FOR DIRECT CONTACT TANK (AIR IN CONTACT WITH WATER SURFACE):
   A. CHECK THE CONDITION OF GAGE GLASS.
   B. IF APPLICABLE, ADJUST LEVEL OF WATER UNTIL IT IS WITHIN OPERATING RANGE.
4. PL FOR TANK EQUIPPED WITH FLEXIBLE DIAPHRAGM:
   A. CHECK CONDITION OF THE PRESSURE GAGE.
   B. IF APPLICABLE, ADJUST GAS PRESSURE UNTIL IT IS WITHIN OPERATING RANGE.

Tools and Material

BASIC AND PLUMBING TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: 29CFR 1910 (OSHA) 1926.28

ID Number: *506*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	MANUAL VALVE		
Procedure Frequency	Annual	Shop	Plumbing
Schedule Procedure Id	MVALVE-PL-A-1	Est Hours	0.25

Tasks

1.	PL	COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2.	PL	OPERATE VALVE IN FULL OPEN/CLOSED POSITION. REPORT IF UNABLE TO CLOSE TIGHTLY.
3.	PL	CHECK FOR STICKING VALVE STEMS. LUBRICATE BASED ON MANUFACTURER'S RECOMMENDATIONS.
4.	PL	IF APPLICABLE, INSPECT PACKING GLAND ASSEMBLY. REPORT FINDINGS.
5.	PL	CHECK REMOTE OPERATION OF VALVES EQUIPPED WITH CHAIN. REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28 29CFR 1910

ID Number: *174*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER EXPANSION TANK		
Procedure Frequency	Annual	Shop	Plumbing
Schedule Procedure Id	CWTANK-PL-A-1	Est Hours	0.5

Tasks

1. PL CHECK TANK HANGERS OR FLOOR SUPPORTS FOR CORROSION. REPORT FINDINGS.
2. PL CHECK TANK, PIPING, AND VALVES FOR LEAKS.
3. PL FOR DIRECT CONTACT TANK (AIR IN CONTACT WITH WATER SURFACE):
   A. CHECK THE CONDITION OF GAGE GLASS.
   B. IF APPLICABLE, ADJUST LEVEL OF WATER UNTIL IT IS WITHIN OPERATING RANGE.
4. PL FOR TANK EQUIPPED WITH FLEXIBLE DIAPHRAGM:
   A. CHECK CONDITION OF THE PRESSURE GAGE.
   B. IF APPLICABLE, ADJUST GAS PRESSURE UNTIL IT IS WITHIN OPERATING RANGE.

Tools and Material

BASIC AND PLUMBING TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: 29CFR 1910 (OSHA) 1926.28

ID Number: *110*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CIRCULATING PUMP		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	CIPUMP-MECH-Q-1	Est Hours	0.25

Tasks

1.	MECH	CHECK MOTOR/PUMP FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2.	MECH	USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3 AND 4.
3.	MECH	CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4.	MECH	CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5.	MECH	CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499;CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *111*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CIRCULATING PUMP MOTOR		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	CIPUMPM-MECH-Q-1	Est Hours	0.25

Tasks

1. MECH CHECK MOTOR MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *112*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	DISTRIBUTION SYSTEMS
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM
Nomenclature	CIRCULATING PUMP MOTOR
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	CIPUMPM-MECH-SA-1
Est Hours	0

Tasks

1. MECH CHECK MOTOR/PUMP ALIGNMENT, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3, 4 AND 10.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4. MECH CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5. MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.
6. MECH CLEAN OR FLUSH THE SUCTION STRAINERS.
7. MECH CHECK OPERATION OF PUMP DISCHARGE CHECK VALVE.
8. MECH LUBRICATE THE PUMP BEARINGS, IF APPLICABLE.
9. MECH OPERATE ALL HAND VALVES FULL RANGE (CLOSE TO OPEN). PUMP NOT IN SERVICE. IF APPLICABLE, ADJUST VALVE STEM PACKING. IF APPLICABLE, LUBRICATE THE VALVE.
10. IEL WITH THE PUMP OPERATING UNDER LOAD, RECORD CURRENT AND VOLTAGE AT EACH PHASE.
11. IEL CHECK MOTOR STARTER, AND REPORT, FOR:
    A. WORN, PITTED, OR BURNED CONTACTS.
    B. WORN OR DAMAGED CONTACTOR ARMATURE AND GUIDE.
    C. IF COIL SHOWS SIGNS OF BURNED OR SCORCHED INSULATION.
12. IEL CHECK DISCONNECT SWITCHES FOR PITTED, WORN, OR BURNED KNIFE BLADES AND CLIPS.
13. IEL FOR MOTOR:
    A. CHECK THAT AIR IS AVAILABLE FOR VENTILATION OF THE MOTOR.
    B. REMOVE DUST AND DIRT FROM EXTERIOR OF MOTOR TO ALLOW FOR HEAT TRANSFER.
    C. LUBRICATE BEARINGS, IF APPLICABLE.
    D. CHECK HOLD-DOWN BOLTS AND GROUNDING STRAPS FOR TIGHTNESS.

Tools and Material

BASIC, ELECTRICAL AND PLUMBING TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *113*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CIRCULATING PUMP		
Procedure Frequency	Semi-Annual	Shop	Mechanical
Schedule Procedure Id	CIPUMP-MECH-SA-1	Est Hours	2

Tasks

1. MECH CHECK MOTOR/PUMP ALIGNMENT, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3, 4 AND 10.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4. MECH CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5. MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.
6. MECH CLEAN OR FLUSH THE SUCTION STRAINERS.
7. MECH CHECK OPERATION OF PUMP DISCHARGE CHECK VALVE.
8. MECH LUBRICATE THE PUMP BEARINGS, IF APPLICABLE.
9. MECH OPERATE ALL HAND VALVES FULL RANGE (CLOSE TO OPEN). PUMP NOT IN SERVICE. IF APPLICABLE, ADJUST VALVE STEM PACKING. IF APPLICABLE, LUBRICATE THE VALVE.
10. IEL WITH THE PUMP OPERATING UNDER LOAD, RECORD CURRENT AND VOLTAGE AT EACH PHASE.
11. IEL CHECK MOTOR STARTER, AND REPORT, FOR:
    A. WORN, PITTED, OR BURNED CONTACTS.
    B. WORN OR DAMAGED CONTACTOR ARMATURE AND GUIDE.
    C. IF COIL SHOWS SIGNS OF BURNED OR SCORCHED INSULATION.
12. IEL CHECK DISCONNECT SWITCHES FOR PITTED, WORN, OR BURNED KNIFE BLADES AND CLIPS.
13. IEL FOR MOTOR:
    A. CHECK THAT AIR IS AVAILABLE FOR VENTILATION OF THE MOTOR.
    B. REMOVE DUST AND DIRT FROM EXTERIOR OF MOTOR TO ALLOW FOR HEAT TRANSFER.
    C. LUBRICATE BEARINGS, IF APPLICABLE.
    D. CHECK HOLD-DOWN BOLTS AND GROUNDING STRAPS FOR TIGHTNESS.

Tools and Material

BASIC, ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
29 CFR 1910
(OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *145*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CONDENSER PUMP		
Procedure Frequency	Monthly	Shop	Mechanical
Schedule Procedure Id	CPUMP-MECH-M-1.0	Est Hours	0.5

Tasks

1. MECH VERIFY PROPER OPERATION OF PUMP AND ITS CONTROLS.
2. MECH CHECK FOR UNUSUAL NOISES, VIBRATIN, HIGH TEMPERATURE AND LEAKS.
3. MECH VERIFY ALL VALVES ARE OPERATING PROPERLY

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *146*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CONDENSER PUMP		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	CPUMP-MECH-Q-1	Est Hours	0.25

Tasks

1.	MECH	CHECK MOTOR, FLEXIBLE COUPLING FOR WEAR, CHECK MOUNTS FOR TIGHTNESS.
2.	MECH	USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3 AND 4.
3.	MECH	CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4.	MECH	CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5.	MECH	CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: 45

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	AUTOMATIC VALVE		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	AVALVE-PL-A-1	Est Hours	0.5

Tasks

MOTOR OPERATED (ELECTRIC, PNEUMATIC):
1. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. MECH IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. MECH MAKE VISUAL EXAMINATION OF ALL PARTS. REPORT FINDINGS.
4. MECH OBSERVE THE OPERATION OF THE VALVE FROM LIMIT TO LIMIT. REPORT FINDINGS.
5. MECH CHECK INDICATIONS AT THE DIALS AND POSITIONERS. REPORT FINDINGS
6. MECH LUBE MOTOR AND GEARBOX BASED ON MANUFACTURER'S RECOMMENDATIONS.
7. MECH IF PNEUMATIC, CHECK PIPING AND TUBING FOR LEAKS, BLOWDOWN THE AIR SUPPLY FILTER.

PNEUMATIC DIAPHRAGM:
1. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. MECH IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. MECH MAKE VISUAL EXAMINATION OF ALL PARTS.
4. MECH STROKE THE VALVE FROM LIMIT TO LIMIT. REPORT FINDINGS.
5. MECH CHECK INDICATIONS AT THE GAGES AND POSITIONERS. REPORT FINDINGS.
6. MECH CHECK PIPING AND TUBING FOR LEAKS, BLOWDOWN THE AIR SUPPLY FILTER.

SOLENOID
1. MECH COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. MECH IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. MECH OPERATE THE VALVE FROM ITS CONTROL PANEL AND OBSERVE ITS OPERATION. REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499;29CFR 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *165*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER CHEMICAL TREATMENT		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	CWCT-PL-A-1	Est Hours	0.25

Tasks

1. MECH CHECK WITH PERSONNEL USING THE SHOT FEEDERS FOR ANY OPERATING PROBLEMS.
2. MECH INSPECT SHOT FEEDER, COVER AND VALVES FOR LEAKS AND CORROSION. REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29CFR 1910(NFPA) NFPA-70, 70B, 70E

ID Number: *624*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	AIR SEPARATOR		
Procedure Frequency	Semi-Annual	Shop	Mechanical
Schedule Procedure Id	SEPAR-PL-SA-1	Est Hours	0.25

Tasks

1.	PL	INSPECT AIR SEPARATOR AND PIPING FOR SIGNS OF WATER LEAKAGE.
2.	PL	CHECK THAT AIR SEPARATOR BLEED VALVE IS FREE OF OBSTRUCTIONS AND DEBRIS.

Tools and Material

BASIC AND PLUMBING TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
(OSHA) 1926.28
29CFR 1910

ID Number: *168*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER PUMP		
Procedure Frequency	Monthly	Shop	Mechanical
Schedule Procedure Id	CWPUMP-MECH-M-1	Est Hours	0.5

Tasks

1. MECH VERIFY PROPER OPERATION OF PUMP AND ITS CONTROLS.
2. MECH CHECK FOR UNUSUAL NOISES, VIBRATION, HIGH TEMPERATURE AND LEAKS.
3. MECH VERFIY ALL VALVES ARE OPERATING PROPERLY.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29CFR 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *169*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER PUMP		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	CWPUMP-MECH-Q-1	Est Hours	0.25

Tasks

1.	MECH	CHECK MOTOR, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2.	MECH	USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3 AND 4.
3.	MECH	CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4.	MECH	CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5.	MECH	CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29CFR 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *171*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER PUMP MOTOR		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	CWPUMPM-MP-Q-1	Est Hours	0.25

Tasks

1.	MECH	CHECK MOTOR/PUMP FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2.	MECH	USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3 AND 4.
3.	MECH	CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4.	MECH	CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5.	MECH	CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499;CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *172*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	DISTRIBUTION SYSTEMS
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM
Nomenclature	CHILLED WATER PUMP MOTOR
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	CWPUMPM-MP-SA-1
Est Hours	2

Tasks

1. MECH CHECK MOTOR/PUMP ALIGNMENT, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3, 4 AND 10.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4. MECH CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5. MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.
6. MECH CLEAN OR FLUSH THE SUCTION STRAINERS.
7. MECH CHECK OPERATION OF PUMP DISCHARGE CHECK VALVE.
8. MECH LUBRICATE THE PUMP BEARINGS, IF APPLICABLE.
9. MECH OPERATE ALL HAND VALVES FULL RANGE (CLOSE TO OPEN). PUMP NOT IN SERVICE. IF APPLICABLE, ADJUST VALVE STEM PACKING. IF APPLICABLE, LUBRICATE THE VALVE.
10. IEL WITH THE PUMP OPERATING UNDER LOAD, RECORD CURRENT AND VOLTAGE AT EACH PHASE.
11. IEL CHECK MOTOR STARTER, AND REPORT, FOR:
    A. WORN, PITTED, OR BURNED CONTACTS.
    B. WORN OR DAMAGED CONTACTOR ARMATURE AND GUIDE.
    C. IF COIL SHOWS SIGNS OF BURNED OR SCORCHED INSULATION.
12. IEL CHECK DISCONNECT SWITCHES FOR PITTED, WORN, OR BURNED KNIFE BLADES AND CLIPS.
13. IEL FOR MOTOR:
    A. CHECK THAT AIR IS AVAILABLE FOR VENTILATION OF THE MOTOR.
    B. REMOVE DUST AND DIRT FROM EXTERIOR OF MOTOR TO ALLOW FOR HEAT TRANSFER.
    C. LUBRICATE BEARINGS, IF APPLICABLE.
    D. CHECK HOLD-DOWN BOLTS AND GROUNDING STRAPS FOR TIGHTNESS.

Tools and Material

BASIC, ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499;CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: *173*

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM		
Nomenclature	CHILLED WATER PUMP		
Procedure Frequency	Semi-Annual	Shop	Mechanical
Schedule Procedure Id	CWPUMP-MP-SA-1	Est Hours	2

Tasks

1. MECH CHECK MOTOR/PUMP ALIGNMENT, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3, 4 AND 10.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4. MECH CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5. MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.
6. MECH CLEAN OR FLUSH THE SUCTION STRAINERS.
7. MECH CHECK OPERATION OF PUMP DISCHARGE CHECK VALVE.
8. MECH LUBRICATE THE PUMP BEARINGS, IF APPLICABLE.
9. MECH OPERATE ALL HAND VALVES FULL RANGE (CLOSE TO OPEN). PUMP NOT IN SERVICE. IF APPLICABLE, ADJUST VALVE STEM PACKING. IF APPLICABLE, LUBRICATE THE VALVE.
10. IEL WITH THE PUMP OPERATING UNDER LOAD, RECORD CURRENT AND VOLTAGE AT EACH PHASE.
11. IEL CHECK MOTOR STARTER, AND REPORT, FOR:
    A. WORN, PITTED, OR BURNED CONTACTS.
    B. WORN OR DAMAGED CONTACTOR ARMATURE AND GUIDE.
    C. IF COIL SHOWS SIGNS OF BURNED OR SCORCHED INSULATION.
12. IEL CHECK DISCONNECT SWITCHES FOR PITTED, WORN, OR BURNED KNIFE BLADES AND CLIPS.
13. IEL FOR MOTOR:
    A. CHECK THAT AIR IS AVAILABLE FOR VENTILATION OF THE MOTOR.
    B. REMOVE DUST AND DIRT FROM EXTERIOR OF MOTOR TO ALLOW FOR HEAT TRANSFER.
    C. LUBRICATE BEARINGS, IF APPLICABLE.
    D. CHECK HOLD-DOWN BOLTS AND GROUNDING STRAPS FOR TIGHTNESS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; 29CFR 1910(NFPA) NFPA-70, 70B, 70E

ID Number: *147*

Facility System	HEATING, VENTILATION & AIR CONDITIONING
Facility Subsystem	DISTRIBUTION SYSTEMS
Assembly Category	CHILLED WATER DISTRIBUTION SYSTEM
Nomenclature	CONDENSER PUMP
Procedure Frequency	Semi-Annual
Shop	Mechanical
Schedule Procedure Id	CPUMP-MP-SA-1.
Est Hours	2

Tasks

1. MECH CHECK MOTOR/PUMP ALIGNMENT, FLEXIBLE COUPLING FOR WEAR, ALL MOUNTS FOR TIGHTNESS.
2. MECH USE THE BUILDING MONITORING SYSTEM, IF AVAILABLE TO OBTAIN THE ITEMS IN STEPS 3, 4 AND 10.
3. MECH CHECK TEMPERATURE OF BEARINGS. RECORD AND COMPARE WITH PRIOR READINGS.
4. MECH CHECK SUCTION AND DISCHARGE GAGES. RECORD AND COMPARE WITH PRIOR READINGS.
5. MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION.
6. MECH CLEAN OR FLUSH THE SUCTION STRAINERS.
7. MECH CHECK OPERATION OF PUMP DISCHARGE CHECK VALVE.
8. MECH LUBRICATE THE PUMP BEARINGS, IF APPLICABLE.
9. MECH OPERATE ALL HAND VALVES FULL RANGE (CLOSE TO OPEN). PUMP NOT IN SERVICE. IF APPLICABLE, ADJUST VALVE STEM PACKING. IF APPLICABLE, LUBRICATE THE VALVE.
10. IEL WITH THE PUMP OPERATING UNDER LOAD, RECORD CURRENT AND VOLTAGE AT EACH PHASE.
11. IEL CHECK MOTOR STARTER, AND REPORT, FOR:
    A. WORN, PITTED, OR BURNED CONTACTS.
    B. WORN OR DAMAGED CONTACTOR ARMATURE AND GUIDE.
    C. IF COIL SHOWS SIGNS OF BURNED OR SCORCHED INSULATION.
12. IEL CHECK DISCONNECT SWITCHES FOR PITTED, WORN, OR BURNED KNIFE BLADES AND CLIPS.
13. IEL FOR MOTOR:
    A. CHECK THAT AIR IS AVAILABLE FOR VENTILATION OF THE MOTOR.
    B. REMOVE DUST AND DIRT FROM EXTERIOR OF MOTOR TO ALLOW FOR HEAT TRANSFER.
    C. LUBRICATE BEARINGS, IF APPLICABLE.
    D. CHECK HOLD-DOWN BOLTS AND GROUNDING STRAPS FOR TIGHTNESS.

Tools and Material

BASIC, ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499;CFR29 1910 (NFPA) NFPA-70, 70B, 70E

ID Number: 436

Facility System	HEATING, VENTILATION & AIR CONDITIONING		
Facility Subsystem	DISTRIBUTION SYSTEMS		
Assembly Category	HOT WATER DISTRIBUTION SYSTEM		
Nomenclature	VALVE		
Procedure Frequency	Annual	Shop	Plumbing
Schedule Procedure Id	HWVALVE-PL-A-1	Est Hours	0.5

Tasks

MANUAL TYPE:
1. PL COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. PL OPERATE VALVE IN FULL OPEN/CLOSED POSITION. REPORT IF UNABLE TO CLOSE TIGHTLY.
3. PL CHECK FOR STICKING VALVE STEMS. LUBRICATE BASED ON MANUFACTURER'S RECOMMENDATIONS.
4. PL IF APPLICABLE, INSPECT PACKING GLAND ASSEMBLY. REPORT FINDINGS.
5. PL CHECK REMOTE OPERATION OF VALVES EQUIPPED WITH CHAIN. REPORT FINDINGS.

MOTOR OPERATED (ELECTRIC, PNEUMATIC):
1. PL COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. PL IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. PL MAKE VISUAL EXAMINATION OF ALL PARTS. REPORT FINDINGS.
4. PL OBSERVE THE OPERATION OF THE VALVE FROM LIMIT TO LIMIT. REPORT FINDINGS.
5. PL CHECK INDICATIONS AT THE DIALS AND POSITIONERS. REPORT FINDINGS
6. PL LUBE MOTOR AND GEARBOX BASED ON MANUFACTURER'S RECOMMENDATIONS.
7. PL IF PNEUMATIC, CHECK PIPING AND TUBING FOR LEAKS, BLOWDOWN THE AIR SUPPLY FILTER.

PNEUMATIC DIAPHRAGM:
1. PL COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. PL IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. PL MAKE VISUAL EXAMINATION OF ALL PARTS.
4. PL STROKE THE VALVE FROM LIMIT TO LIMIT. REPORT FINDINGS.
5. PL CHECK INDICATIONS AT THE GAGES AND POSITIONERS. REPORT FINDINGS.
6. PL CHECK PIPING AND TUBING FOR LEAKS, BLOWDOWN THE AIR SUPPLY FILTER.

SOLENOID:
1. PL COORDINATE THE FOLLOWING STEPS WITH OPERATIONS.
2. PL IF APPLICABLE, BLOWDOWN SEDIMENT STRAINER UPSTREAM OF VALVE.
3. PL OPERATE THE VALVE FROM ITS CONTROL PANEL AND OBSERVE ITS OPERATION. REPORT FINDINGS.

Tools and Material

BASIC TOOL SET

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION:
(OSHA) 1926.28 29CFR 1910

Lessor _____ Gov't _____

ID Number: *672*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomenclature	SURGE ARRESTOR GROUNDING UNIT		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	SURGE-EEL-A-1	Est Hours	1

Tasks

1. IEL OBTAIN AND REVIEW ORIGIANL INSTALLATION DRAWINGS, MANUFACTURER'S OPERATION AND MAINTENANCE DATA FOR THE SURGE ARRESTOR.
2. IEL VISUALLY INSPECT SURGE ARRESTOR FOR PHYSICAL DAMAGE AND CORROSIVE DETERIORATION.
3. IEL WHERE APPLICABLE, VISUALLY DETERMINE THAT ALL LEADS ARE CONNECTED AND SECURE. RECORD FINDINGS.
4. IEL WHERE APPLICABLE, USE AN INFRA-RED DETECTOR TO DETERMINE THE OPERATING TEMPERATURE OF THE ARRESTOR. COMPARE WITH MANUFACTURER'S DATA AND THE AMBIENT TEMPERATURE. RECORD RESULTS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *515*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomenclature	SYSTEM NEUTRAL		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	NEUTRA-EEL-A-1	Est Hours	0.2

Tasks

1. IEL IF APPLICABLE, OBTAIN AND REVIEW MANUFACTURER'S MAINTENANCE DATA.
2. IEL INSPECT NEUTRAL MAIN BONDING CONNECTION FOR THE FOLLOWING:
   A. GROUNDED CONDUCTOR (NEUTRAL) IS SOLIDLY GROUNDED.
   B. ENSURE THAT THE NEUTRAL DISCONNECT LINK IS LOCATED BETWEEN THE GROUND CONNECTION AND THE LOAD SIDE.
   C. IF AVAILABLE, IR TEST FOR OVERHEATING. RECORD FINDINGS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *239*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomenclature	EQUIPMENT GROUND		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EGRND-EEL-A-1	Est Hours	0.45

Tasks

1. IEL INSPECT GROUND STRAP(S) FOR PHYSICAL DAMAGE AND CORROSIVE DETERIORATION. REPORT FINDINGS.
2. IEL ENSURE THAT EQUIPMENT GROUNDING STRAP(S) ARE PROPERLY SECURED. RE-TORQUE AS REQUIRED.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *58*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomendature	BURIED CONDUCTOR		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	BCOND-EEL-A-1	Est Hours	0.5

Tasks

1. IEL REVIEW MANUFACTURER'S MAINTENANCE RECOMMENDATIONS AND ORGINAL INSTALLATION DRAWINGS.
2. IEL INSPECT CONDUCTOR SHEATHING, WHERE VISIBLE, FOR PHYSICAL DAMAGE AND CORROSIVE DETERIORATION.
3. IEL ENSURE THAT GROUND CONNECTION IS PROPERLY SECURED AT POINT OF ORIGIN (I.E. PANEL). RE-TORQUE AS REQUIRED.
4. IEL IF GROUNDING CONDUCTOR, VERIFY ALL VISIBLE CONDUCTORS ARE SECURE.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *543*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomenclature	POLE GROUNDING		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	PGRND-EEL-A-1	Est Hours	0.6

Tasks

1. EEL INSPECT GROUNDING SYSTEM FOR SIGNS OF PHYSICAL DAMAGE AND CORROSION.
2. EEL CHECK GROUNDING CABLE CONNECTION(S) AT MESSENGER FOR TIGHTNESS. RE-TORQUE AS REQUIRED.
3. EEL INSPECT POLE MOUNTED GROUND CONDUCTOR COVER FOR SECURE ATTACHMENT AND DAMAGE.
4. EEL ABOVE GRADE GROUND CONNECTION:
   A. ENSURE THAT GROUND CONNECTION AT GROUND ROD IS SECURE. WHERE APPLICABLE, RE-TORQUE AS REQUIRED.
5. EEL BELOW GRADE GROUND CONNECTION:
   A. ENSURE THAT THERE ARE NO SIGNS OR CORROSION ALONG THE VISIBLE PORTION OF THE GROUND CONDUCTOR. REPORT FINDINGS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *399*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	GROUNDING SYSTEM		
Assembly Category	<NA>		
Nomenclature	GROUND ROD		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	GROD-EEL-A-1	Est Hours	0.5

Tasks

1. EEL ABOVE GRADE GROUND CONNECTION:
   A. ENSURE THAT GROUND CONNECTION AT GROUND ROD IS SECURE. WHERE APPLICABLE, RE-TORQUE AS REQUIRED.
2. EEL BELOW GRADE GROUND CONNECTION:
   A. ENSURE THAT THERE ARE NO SIGNS OR CORROSION ALONG THE VISIBLE PORTION OF THE GROUND CONDUCTOR. REPORT FINDINGS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *33*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	LIGHTNING PROTECTION SYSTEM		
Assembly Category	<NA>		
Nomenclature	AIR TERMINAL		
Procedure Frequency	Annual	Shop	Multi-Purpose
Schedule Procedure Id	AIRTER-MP-A-1	Est Hours	0

Tasks

1. MP INSPECT AIR TERMINALS FOR RIGID ATTACHMENT TO SURFACE.
2. MP INSPECT FOR SIGNS OF DAMAGE AND OR DETERIORATION.
3. MP ENSURE THAT CONNECTION BETWEEN AIR TERMINAL AND ROOF CONDUCTOR IS TIGHT AND FREE OF CORROSION. RE-TORQUE AS REQUIRED.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28; (NFPA) NFPA-78

ID Number: *611*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	LIGHTNING PROTECTION SYSTEM		
Assembly Category	<NA>		
Nomendature	ROOF CONDUCTOR		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	ROOFCO-EEL-A-1	Est Hours	0.5

Tasks

1. EEL CHECK CONDUCTORS FOR CORROSION AND SIGNS OF PHYSICAL DAMAGE
2. EEL ENSURE THAT ROOF CONDUCTOR IS PROPERLY SECURED TO AIR TERMINAL AND ROOF.
3. EEL ENSURE THAT ALL CONNECTIONS, CLAMPED AND OR WELDED, ARE FREE OF CORROSION AND ARE TIGHT. RE-TORQUE CLAMPED CONNECTIONS AS REQUIRED.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28; (NFPA) NFPA-78

ID Number: 400

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	LIGHTNING PROTECTION SYSTEM		
Assembly Category	<NA>		
Nomenclature	GROUND ROD (LIGHTNING)		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	GRODL-EEL-A-1	Est Hours	0.55

Tasks

1. EEL ABOVE GRADE GROUND CONNECTION:
   A. ENSURE THAT GROUND CONNECTION AT GROUND ROD IS SECURE. WHERE APPLICABLE, RE-TORQUE AS REQUIRED.
2. EEL BELOW GRADE GROUND CONNECTION:
   A. ENSURE THAT THERE ARE NO SIGNS OR CORROSION ALONG THE VISIBLE PORTION OF THE GROUND CONDUCTOR. REPORT FINDINGS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28; (NFPA) NFPA-78

ID Number: *218*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	LIGHTNING PROTECTION SYSTEM		
Assembly Category	<NA>		
Nomenclature	DOWN CONDUCTOR		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	DOWNCO-EEL-A-1	Est Hours	0.6

Tasks

1. EEL CHECK CONDUCTORS FOR CORROSION, LOOSE OR BROKEN FASTENERS AND DAMAGED GUARDS.
2. EEL CHECK FOR PROPER ATTACHMENT TO BUILDING.
3. EEL WHERE APPLICABLE, CHECK DOWN CONDUCTOR CONDUIT OR PROTECTIVE COVERING FOR DAMAGE AND SECURE ATTACHMENT.
4. EEL ABOVE GRADE GROUND CONNECTION:
   A. ENSURE THAT GROUND CONNECTION AT GROUND ROD IS SECURE. WHERE APPLICABLE, RE-TORQUE AS REQUIRED.
5. EEL BELOW GRADE GROUND CONNECTION:
   A. ENSURE THAT THERE ARE NO SIGNS OR CORROSION ALONG THE VISIBLE PORTION OF THE GROUND CONDUCTOR. REPORT FINDINGS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28; (NFPA) NFPA-78

Lessor _____ Gov't _____

ID Number: *143*

Facility System	ELECTRICAL SYSTEM		
Facility Subsystem	LIGHTNING PROTECTION SYSTEM		
Assembly Category	<NA>		
Nomenclature	COUNTERPOISE		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	COUNTE-EEL-A-1	Est Hours	0.6

Tasks

1. EEL REVIEW ORIGINAL INSTALLATION DRAWINGS.
2. EEL WHERE APPLICABLE, CHECK FOR SYSTEM CONTINUITY UTILIZING INSPECTION WELLS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28; (NFPA) NFPA-78

ID Number: *891*

Facility System	ELECTRICAL POWER & DISTRIBUTION
Facility Subsystem	PRIMARY POWER
Assembly Category	MAIN SWITCHBOARD
Nomenclature	CURRENT BREAKER
Procedure Frequency	3 Year
Shop	Int Electrical
Schedule Procedure Id	CUBREAK-IEL-3Y-1
Est Hours	0

Tasks

SELECT A SAMPLE OF THE ENCLOSED POWER CIRCUIT BREAKERS. BASE THE NUMBER OF BREAKERS ON THE MANUFACTURER'S RECOMMENDED TESTING CYCLE. USUALLY BETWEEN 3 TO 6 YEARS.

1. IEL CHECK FOR OVER-HEATING CONNECTIONS USING AN INFRA-RED DETECTOR. RECORD FINDINGS
2. IEL COORDINATE WITH OPERATIONS AND BUILDING PERSONNEL TO HAVE UNIT TAKEN OFF-LINE.
3. IEL DE-ENERGIZE, TAG AND LOCKOUT LOAD CIRCUITS. TEST CIRCUITS BEFORE BEGINNING WORK.
4. IEL INSPECT UNIT FOR PHYSICAL DAMAGE SUCH AS DEFECTIVE WIRING INSULATION AND GENERAL CONDITION.
5. IEL CHECK TIGHTNESS OF ACCESSIBLE BOLTED ELECTRICAL CONNECTIONS AND TORQUE TO MANUFACTURER'S SPECIFICATIONS.
6. IEL VISUALLY INSPECT BREAKER FOR CRACKS AND SIGNS OF OVER-HEATING. MANUALLY OPERATE THE BREAKER SEVERAL TIMES.
7. IEL REPORT FINDINGS. REPLACE IF REQUIRED.
8 IEL ENERGIZE UNIT AND VERIFY PROPER OPERATION.

WHERE APPLICABLE, PERFORM THE FOLLOWING OVERCURRENT-TRIP TESTS. SPECIALIZED TESTING EQUIPMENT IS REQUIRED.

9. IEL COORDINATE WITH OPERATIONS AND BUILDING PERSONNEL TO HAVE UNIT TAKEN OFF-LINE.
10. IEL PERFORM TIME CURRENT CHARACTERISTIC TEST ON THE TIME DELAY ELEMENT AT THREE TIMES THE RATED CURRENT. COMPARE RESULTS WITH THOSE SPECIFIED AND RECORD.
11. IEL IF BREAKER HAS AN INSTANTANEOUS ELEMENT, CHECK THE TRIP SETTING AND TEST ACCORDINGLY, AND RECORD THE RESULTS.
12 IEL ENERGIZE UNIT AND VERIFY PROPER OPERATION.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *157*

Facility System	ELECTRICAL POWER & DISTRIBUTION		
Facility Subsystem	PRIMARY POWER		
Assembly Category	MAIN SWITCHBOARD		
Nomenclature	CURRENT BREAKER		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	CUBREAK-IEL-A-1	Est Hours	0.5

Tasks

THE FOLLOWING PROCEDURES SHOULD BE PERFORMED ON ONE-THIRD OF THE PANELS EVERY YEAR. THEREFORE CREATING A THREE YEAR ROTATION CYCLE.

1. IEL CHECK FOR OVER-HEATING CONNECTIONS USING AN INFRA-RED DETECTOR. RECORD FINDINGS.
2. IEL COORDINATE WITH OPERATIONS AND BUILDING PERSONNEL TO HAVE UNIT TAKEN OFF-LINE.
3. IEL DE-ENERGIZE, TAG, LOCKOUT LOAD CIRCUITS. TEST CIRCUITS BEFORE BEGINNING WORK.
4. IEL INSPECT UNIT FOR PHYSICAL DAMAGE SUCH AS DEFECTIVE WIRING INSULATION AND GENERAL CONDITION.
5. IEL IF APPLICABLE, CHECK TIGHTNESS OF ACCESSIBLE BOLTED ELECTRICAL CONNECTIONS AND TORQUE TO MANUFACTURER'S SPECIFICATIONS.
6. IEL BLOW OUT OR VACUUM THE INSIDE OF THE UNIT.
7. IEL VERIFY THAT CIRCUIT BREAKER SCHEDULE IS ACCURATE AND POSTED INSIDE THE PANEL DOOR.
8. IEL CHECK FOR PROPER MOUNTING OF SWITCHES AND BREAKERS.
9. IEL MANUALLY OPERATE THE BREAKERS SEVERAL TIMES. REPORT DEFICIENCIES.
10. IEL ENERGIZE UNIT AND VERIFY PROPER OPERATION.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

ID Number: *237*

Facility System	ELECTRICAL POWER & DISTRIBUTION		
Facility Subsystem	SECONDARY POWER		
Assembly Category	INTERIOR DISTRIBUTION TRANSFORMER		
Nomenclature	TRANSFORMER (DRY TYPE)		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	DXFMR-IEL-A-1	Est Hours	0.5

Tasks

1. IEL CHECK FOR OVER-HEATING CONNECTIONS USING AN INFRA-RED DETECTOR. RECORD FINDINGS.
2. IEL COORDINATE WITH OPERATIONS AND BUILDING PERSONNEL TO HAVE TRANSFORMER TAKEN OFF-LINE.
3. IEL DE-ENERGIZE, TAG, LOCKOUT AND GROUND OUT LINE AND LOAD CIRCUITS. TEST CIRCUITS BEFORE BEGINNING WORK.
4. IEL FOLLOW OSHA SAFE WORK PROCEDURES FOR ELECTRICAL MAINTENANCE.
5. IEL ALL TESTS SHALL CONFORM TO THE APPROPRIATE ASTM TEST PROCEDURE AND THE VALUES USED AS STANDARDS SHALL CONFORM TO THE MANUFACTURER'S, INTERNATIONAL ELECTRICAL TESTING ASSOICATION (NETA) AND ANSI STANDARD SPECIFICATIONS.
6. IEL INSPECT UNIT FOR PHYSICAL DAMAGE.
7. IEL CHECK TIGHTNESS OF ACCESSIBLE BOLTED ELECTRICAL CONNECTIONS AND TORQUE TO MANUFACTURER'S SPECIFICATIONS.
8. IEL BLOW OUT OR VACUUM THE INSIDE OF THE TRANSFORMER ENCLOSURE.
9. IEL WHERE APPLICABLE, CHECK AND RECORD THE OPERATION OF AUXILIARY DEVICES SUCH AS FANS AND TEMPERATURE INDICATORS.
10. IEL WHERE APPLICABLE, CHECK CORE GROUNDING STRAP(S) AND TRANSFORMER CASING GROUNDING STRAP(S) FOR TIGHTNESS OF BOLTED CONNECTIONS.
11. IEL PERFORM THE FOLLOWING ELECTRICAL TESTS AND RECORD FINDINGS:
    A. NON-DESTRUCTIVE INSULATION TESTING WITH A MEGOHMMETER: WINDING TO WINDING, WINDING TO GROUND.
    B. WHERE APPLICABLE, ADJUST CONTROLS FOR FANS AND ALARM FUNCTIONS.
12. IEL CLEAN TRANSFORMER EXTERIOR AND THE SURROUNDING AREA.
13. IEL ENERGIZE UNIT AND VERIFY PROPER SECONDARY VOLTAGES BEFORE LOADING.
14. IEL USE SOUND LEVEL METER AND RECORD NOISE LEVELS. VIBRATIONS CAN BE CAUSED BY LOOSE PARTS, OVERLOADS, POOR COOLING.

ONCE EVERY FIVE YEARS:

DUE TO THE SPECIALIZED TESTING EQUIPMENT REQUIRED, IT IS RECOMMENDED THAT A TESTING CONTRACTOR BE HIRED TO PERFORM THE FOLLOWING:

15. IEL COORDINATE WITH OPERATIONS AND BUILDING PERSONNEL TO HAVE TRANSFORMER TAKEN OFF-LINE.
16. IEL PERFORM THE FOLLOWING ELECTRICAL TESTS AND RECORD FINDINGS:
    A. RATIO TEST ON THE RATED VOLTAGE CONNECTION AND ON TAP CONNECTIONS.
    B. POLARITY AND PHASE-RELATION TESTS ON THE RATED VOLTAGE CONNECTION.
    C. APPLIED POTENTIAL TEST.
    D. INDUCED POTENTIAL TESTS.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E

Lessor _____ Gov't _____

ID Number: *51*

Facility System	ELECTRICAL POWER & DISTRIBUTION		
Facility Subsystem	SPECIAL SYSTEM		
Assembly Category	UNINTERRUPTABLE POWER SUPPLY (UPS)		
Nomenclature	BATTERY		
Procedure Frequency	Monthly	Shop	Int Electrical
Schedule Procedure Id	BATT-IEL-M-1	Est Hours	0.5

Tasks

1. IEL CHECK ELECTROLYTE LEVEL OF BATTERIES; ADD WATER AS REQUIRED. CHECK TERMINALS FOR CORROSION, CLEAN AS REQUIRED.
2. IEL CHECK 25% OF THE BATTERIES FOR CHARGE AND ELECTROLYTE SPECIFIC GRAVITY.
3. IEL CHECK BATTERIES FOR CRACKS AND LEAKS.
4. IEL CHECK 25% OF THE TERMINAL TO CELL CONNECTION RESISTANCE; REHABILITATE CONNECTIONS AS REQUIRED. ADD ANTI-CORROSION GREASE TO BATTERY TERMINALS.
5. IEL MEASURE AND RECORD INDIVIDUAL CELL AND STRING FLOAT VOLTAGES.
6. IEL CHECK INTEGRITY OF BATTERY RACK.
7. IEL CHECK BATTERY ROOM TEMPERATURE AND VENTILATION SYSTEMS.
8. IEL CLEAN AROUND BATTERIES AND UPS MODULE.
9. IEL IF GEL CELL BATERIES ARE USED, CHECK BATTERIS FOR DEFORMATIONS ALSO.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-70, 70B, 70E, 110

Lessor _____ Gov't _____

ID Number: *278*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	GENERATOR PLANT TEST		
Procedure Frequency	Monthly	Shop	Int Electrical
Schedule Procedure Id	EPGPT-IEL-M-1	Est Hours	4

Tasks

1: IEL CONFIRM COORDINATION WITH MANAGEMENT
2: IEL ACTIVATE ATS TEST CIRCUIT TO INITIATE GENERATOR START
3: IEL DO NOT INTERRUPT COMMERCIAL POWER FOR TEST
4: IEL MONITOR OPERATION FOR MINIMUM 2-HOUR TEST
5: IEL RECORD ALL PERTINENT READINGS
6: IEL FILE TEST RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *262*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE BATTERY CHARGERS		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPBATCHG-A	Est Hours	1

Tasks

1: IEL OPEN CIRCUIT BREAKER FEEDING CHARGER
2: IEL REMOVE AC AND DC FUSES
3: IEL CLEAN CHARGER THOROUGHLY
4: IEL VISUALLY INSPECT FOR THERMAL OR PHYSICAL DAMAGE
5: IEL CHECK ALL FUSES
6: IEL CHECK ALL CONNECTIONS FOR TIGHTNESS/DAMAGE
7: IEL CLOSE CIRCUIT BREAKER
8: IEL CHECK COOLING FAN OPERATION
9: IEL CONDUCT OPERATIONAL TEST

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *263*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE BATTERIES		
Procedure Frequency	Monthly	Shop	Int Electrical
Schedule Procedure Id	EPBAT-M	Est Hours	0.5

Tasks

1: IEL VISUALLY INSPECT BATTERIES
2: IEL CHECK ELECTROLYTE LEVELS
3: IEL PERFORM SPECIFIC GRAVITY CHECK AND RECORD READINGS
4: IEL PERFORM LOAD TEST
5: IEL REPLACE IMMEDIATELY IF FAILS TEST
6: IEL FILE RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *264*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE BATTERIES		
Procedure Frequency	Weekly	Shop	Int Electrical
Schedule Procedure Id	EPBAT-W	Est Hours	0.25

Tasks

1: IEL VISUALLY INSPECT BATTERIES

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *266*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	AUTOMATIC TRANSFER BYPASS/ISOLATION SWITCHES
Procedure Frequency	Annual
Shop	Int Electrical
Schedule Procedure Id	EPD-ATBPI-IEL-A-1
Est Hours	2

Tasks

1. IEL SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
2. IEL VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
   A. HIGH VOLTAGE GLOVES
   B. HOT STICK WITH GROUNDING DRAIN CABLE
   C. INSULATING BLANKET
3. IEL OPEN FRONT COVERS OF ATS

CAUTION: ATS WILL REMAIN ENERGIZED DURING MAINTENANCE PROCEDURES

4. IEL PERFORM IR SURVEY ON ATS
5. IEL VISUALLY INSPECT FOR ANY UNUSUAL CONDITIONS:
   A. BURN MARKS
   B. ABNORMAL WEAR
   C. LOOSE CONNECTIONS, OR
   D. DAMAGED COMPONENTS
6. IEL CLEAN THE ENERGIZED ATS USING:
   A. SHOP VACUUM WITH NON-METALLIC ATTACHMENTS
   B. AIR COMPRESSOR
7. IEL CHECK ALL LUBE POINTS ON ATS FOR THE PROPER AMOUNT OF GREASE
8. IEL DO NOT OVER LUBRICATE THE ATS
9. IEL VISUALLY INSPECT CONTACTS FOR ABNORMAL PITTING, WEAR OR SCORCHING.....
10. IEL IF EXCESSIVE, ATS WILL HAVE TO BE BYPASSED FOR MORE EXTENSIVE MAINTENANCE
11. IEL RECORD DATE OF CURRENT-MONTH FULL-LOAD TEST ON ATS MAINTENANCE FORM
12. IEL DISCONNECT GENERATOR START LEADS
13. IEL CHECK AND RECORD GENERATOR START TIME DELAY ON THE ATS MAINTENANCE FORM
14. IEL RE-CONNECT GENERATOR START LEADS
15. IEL RETURN ATS TO NORMAL STATUS
16. IEL CLOSE FRONT COVERS OF ATS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *267*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	EPD AUTOMATIC TRANSFER SWITCH		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPD-ATS-A	Est Hours	2

Tasks

0: IEL SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1: IEL VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2: IEL A. HIGH VOLTAGE GLOVES
3: IEL B. HOT STICK WITH GROUNDING DRAIN CABLE
4: IEL C. INSULATING BLANKET
5: IEL OPEN FRONT COVERS OF ATS
6: IEL CAUTION: ATS WILL REMAIN ENERGIZED DURING MAINTENANCE PROCEDURES
7: IEL PERFORM IR SURVEY ON ATS
8: IEL VISUALLY INSPECT FOR ANY UNUSUAL CONDITIONS:
9: IEL A. BURN MARKS
10: IEL B. ABNORMAL WEAR
11: IEL C. LOOSE CONNECTIONS, OR
12: IEL D. DAMAGED COMPONENTS
13: IEL CLEAN THE ENERGIZED ATS USING:
14: IEL A. SHOP VACUUM WITH NON-METALLIC ATTACHMENTS
15: IEL B. AIR COMPRESSOR
16: IEL CHECK ALL LUBE POINTS ON ATS FOR THE PROPER AMOUNT OF GREASE
17: IEL DO NOT OVER LUBRICATE THE ATS
18: IEL VISUALLY INSPECT CONTACTS FOR ABNORMAL PITTING, WEAR OR SCORCHING.....
19: IEL IF EXCESSIVE, ATS WILL HAVE TO BE BYPASSED FOR MORE EXTENSIVE MAINTENANCE
20: IEL RECORD DATE OF CURRENT-MONTH FULL-LOAD TEST ON ATS MAINTENANCE FORM
21: IEL DISCONNECT GENERATOR START LEADS
22: IEL CHECK AND RECORD GENERATOR START TIME DELAY ON THE ATS MAINTENANCE FORM
23: IEL RE-CONNECT GENERATOR START LEADS
24: IEL RETURN ATS TO NORMAL STATUS
25: IEL CLOSE FRONT COVERS OF ATS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *270*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	EPD SWITCHBOARDS		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPD-PANEL-A	Est Hours	1

Tasks

0: IEL SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1: IEL VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2: IEL A. HIGH VOLTAGE GLOVES
3: IEL B. HOT STICK WITH GROUNDING DRAIN CABLE
4: IEL C. INSULATING BLANKET
5: IEL OPEN SWITCHBOARD
6: IEL BLOW OUT OR VACUUM THE INSIDE OF THE UNIT
7: IEL CHECK FOR OVER-HEATING CONNECTIONS USING AN INFRARED CAMERA
8: IEL INSPECT UNIT FOR GENERAL CONDITION/PHYSICAL DAMAGE/DEFECTIVE WIRING INSULATION
9: IEL CLOSE SWITCHBOARD

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *271*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	ENGINE
Procedure Frequency	Annual
Shop	Int Electrical
Schedule Procedure Id	EPENG-A
Est Hours	15

Tasks

0:	MECH	SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1:	MECH	LOCK OUT/TAG OUT THE GENERATOR SET
10:	MECH	LUBRICATING SYSTEM:
11:	MECH	CHECK FOR LEAKS
12:	MECH	CHECK ENGINE OIL LEVEL & PRESSURE
13:	MECH	CHECK FULL FLOW & BYPASS OIL FILTERS
14:	MECH	CHANGE OIL FILTERS AND OIL IF DETERMINED BY ENGINE OIL ANALYSIS
15:	MECH	CHECK HYDRAULIC/MECHANICAL GOVERNOR OIL LEVELS
20:	MECH	COOLING SYSTEM
21:	MECH	CHECK FOR LEAKS
22:	MECH	CHECK WATER PUMP
23:	MECH	CHECK COOLANT LEVEL & ANTIFREEZE POINT
24:	MECH	CHECK SCA INHIBITOR LEVEL
25:	MECH	CHECK COOLANT CONDITION
26:	MECH	CHECK COOLANT HEATER OPERATION
27:	MECH	CHECK HOSE CONDITION AND CONNECTIONS
28:	MECH	CHANGE COOLANT FILTER
29:	MECH	CHECK MOTOR OR MECHANICAL LOUVER OPERATION
30:	MECH	AIR INTAKE SYSTEM
31:	MECH	CHECK FOR LEAKS
32:	MECH	CHECK AIR CLEANER RESTRICTION AT INDICATOR
33:	MECH	CHECK AIR CLEANER ELEMENT & HOUSING
34:	MECH	CHECK ALL AIR INTAKE PIPING
35:	MECH	CLEAN CRANKCASE BREATHER ELEMENT
40:	MECH	FUEL SYSTEM
41:	MECH	CHECK FOR LEAKS
42:	MECH	CHECK FUEL LINES & CONNECTIONS
43:	MECH	CHECK GOVERNOR CONTROL LINKAGE
44:	MECH	CHECK FUEL TRANSFER PUMPS FOR LEAKS AND OPERATION
45:	MECH	CHECK DAY TANK FUEL LEVEL
46:	MECH	CHECK FOR WATER CONTAMINATION IN DAY TANK
47:	MECH	CHANGE FUEL FILTERS
50:	MECH	EXHAUST SYSTEM
51:	MECH	CHECK FOR LEAKS
52:	MECH	DRAIN EXHAUST CONDENSATION TRAP
53:	MECH	CHECK RAIN CAP
60:	IEL	ELECTRICAL SYSTEM
61:	IEL	CHECK CHARGING SYSTEM, ALTERNATOR CHARGE RATE & BATTERY CHARGER RATE
62:	IEL	CHECK BATTERY CONNECTIONS & TERMINALS
63:	IEL	CHECK ENGINE SAFETY CONTROLS, ALARMS AND WIRING
70:	MECH	RELATED SYSTEMS
71:	MECH	CHECK FOR VIBRATION & METAL CRACKS
72:	MECH	CHECK ENGINE-MOUNTING HARDWARE & TIGHTEN
73:	MECH	CHECK ENGINE FOR DIRT/DEBRIS AND CLEAN BLOW BY VENTS
80:	IEL	AFTER RUN TEST
81:	IEL	CHECK ALL CONTROL SWITCHES IN "AUTO" & CIRCUIT BREAKERS CLOSED
82:	IEL	CHECK START SWITCH IN "AUTO"
83:	IEL	ENSURE SERVICE CONTRACT STICKER WITH 24-HOUR PHONE NUMBER IS ATTACHED

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *276*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	GENERATOR PLANT TEST
Procedure Frequency	3 Year
Shop	Int Electrical
Schedule Procedure Id	EPGPT-IEL-3Y
Est Hours	10

Tasks

1: IEL CONFIRM COORDINATION WITH MANAGEMENT
2: IEL ACTIVATE ATS TEST CIRCUIT TO INITIATE GENERATOR START
3: IEL DO NOT INTERRUPT COMMERCIAL POWER FOR TEST
4: IEL MONITOR OPERATION FOR MINIMUM 6-HOUR TEST
5: IEL RECORD ALL PERTINENT READINGS
6: IEL FILE TEST RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *261*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE BATTERIES		
Procedure Frequency	Bi-Annual	Shop	Int Electrical
Schedule Procedure Id	EPBAT-BA	Est Hours	2

Tasks

1: IEL REPLACE ENGINE BATTERIES if necessary

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: 277

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	GENERATOR PLANT TEST (ACTUAL OUTAGE)		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPGPT-IEL-A-1A	Est Hours	80

Tasks

1:

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

IN ACCORDANCE WITH NFPA-99 ANNEX C

ID Number: *313*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	EPS UST MONITORING SYSTEM		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPUSTMON-A	Est Hours	4

Tasks

1: IEL CHECK FOR PROPER OPERATION OF INDICATING SYSTEM
2: IEL VERIFY THAT ALL INDICATING LAMPS AND LED'S ARE OPERATIONAL
3: IEL VERIFY THAT ALL AUDIBLE ALARMS FUNCTION PROPERLY
4: IEL VERIFY THAT ALL ELECTRICAL CONNECTIONS ARE TIGHT
5: IEL VERIFY THAT ALL MONITORING WELLS AND TANK COLLARS ARE CLEAR OF DEBRIS AND WATER
6: IEL INSPECT MONITORING SENSORS IAW MANUFACTURER'S RECOMMENDATIONS
7: IEL IF APPLICABLE, INSPECT RELAYS FOR SIGNS OF PITTING AND CORROSION

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *301*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	MOLDED CASE CIRCUIT BREAKERS
Procedure Frequency	Annual
Shop	Int Electrical
Schedule Procedure Id	EPMCCB-A
Est Hours	1

Tasks

1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	PERFORM COMPLETE INFRA-RED SURVEY ON ENTIRE SWITCHGEAR/SWITCHBOARD ASSEMBLY
6:	IEL	INVESTIGATE ALL HOTSPOTS AND RECORD RESULTS ON TEST FORM
7:	IEL	ISOLATE CIRCUIT BREAKER IAW LOCAL LOCK OUT/TAG OUT PROCEDURES
8:	IEL	VISUALLY INSPECT AND CLEAN TERMINAL LUGS AND CASE
9:	IEL	PERFORM CONTACT RESISTANCE TEST ON ALL THREE PHASES
10:	IEL	VERIFY RESISTANCE IS WITHIN MANUFACTURER'S RECOMMENDED TOLERANCES
11:	IEL	RECORD ALL RESULTS ON TEST FORM
12:	IEL	PERFORM INSULATION RESISTANCE TEST
13:	IEL	VERIFY RESISTANCE IS WITHIN MANUFACTURER'S RECOMMENDED TOLERANCES
14:	IEL	RECORD RESULTS ON TEST FORM
15:	IEL	PERFORM TIME/CURRENT TESTING ON ALL THREE PHASES IAW MFR. RECOMMENDATIONS:
16:	IEL	AT 300% AND 400% OF RATED CURRENT FOR LONG TIME DELAY CURVE AND
17:	IEL	AT 600% TO 1000% OF RATED CURRENT FOR INSTANTANEOUS CURVE
18:	IEL	RECORD ALL RESULTS ON TEST FORM
19:	IEL	PLACE MOLDED CASE CIRCUIT BREAKER BACK INTO IT'S ENCLOSURE
20:	IEL	RECONNECT ALL LUGS AND TERMINALS
21:	IEL	RETURN CB TO IT'S NORMAL OPERATING CONDITION IAW LOCAL LOCK OUT/TAG OUT PROC.

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *302*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	FUEL OIL LEVEL INDICATING SYSTEM		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPOILLEVEL-A	Est Hours	3

Tasks

1: IEL CHECK FOR PROPER OPERATION OF INDICATING SYSTEM
2: IEL VERIFY THAT ALL INDICATING LAMPS ARE OPERATIONAL
3: IEL VERIFY THAT ALL AUDIBLE ALARMS FUNCTION PROPERLY
4: IEL VERIFY THAT THE FUEL OIL LEVEL INDICATORS ARE CALIBRATED PROPERLY
5: IEL VERIFY THAT ALL ELECTRICAL CONNECTIONS ARE TIGHT
6: IEL IF APPLICABLE, INSPECT RELAYS FOR SIGNS OF PITTING AND CORROSION

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *303*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	POWER ANALYSIS		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPPA-A	Est Hours	3

Tasks

0:	IEL	SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	OPEN REAR COVER OF BUS WORK SECTION FEEDING THE CIRCUIT BREAKER BEING ANALYZED
6:	IEL	EXERCISE EXTREME CAUTION; THE BUS WORK IS ENERGIZED!
7:	IEL	LOCATE THE BRANCH CIRCUIT BREAKER OUTPUT CABLES
8:	IEL	CONFIRM PROPER CLEARANCE TO INSTALL TEST LEADS, BOTH VOLTAGE AND CURRENT
9:	IEL	INSTALL ALL ANALYZER TEST LEADS
10:	IEL	VERIFY THAT THE CORRECT RANGE OF CT'S ARE BEING USED
11:	IEL	CONFIRM THAT ALL CONNECTIONS ARE GOOD
12:	IEL	SUPPORT ALL TEST LEAD LINES LEADING BACK TO THE ANALYZER WITH CABLE TIES
13:	IEL	CONFIRM THAT SUPPORTS PRECLUDE LINES/LEADS FROM CONTACTING LIVE BUS BARS
14:	IEL	AFTER 24 HRS., ANALYZE ALL READINGS AND RECORD RESULTS TO APPLICABLE WORK SHEET
15:	IEL	WHILE EXERCISING ALL OF THE ABOVE MENTIONED SAFETY PROCEDURES, REMOVE TEST LEADS
16:	IEL	CLOSE REAR BUS WORK ACCESS COVER

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *305*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	PROTECTIVE RELAYS		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPPR-A	Est Hours	1.5

Tasks

1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	REMOVE CASE COVER, INSPECT COVER GASKET
6:	IEL	CLEAN COVER AND GLASS WINDOW
7:	IEL	REMOVE RELAY FROM CASE BY:
8:	IEL	A. OPENING RED-HANDLED SWITCH
9:	IEL	B. OPEN ALL REMAINING SWITCHES
10:	IEL	C. OPEN LATCHES ON SIDES OF RELAY
11:	IEL	D. REMOVE RELAY FROM CASE AND PLACE ON TEST STAND
12:	IEL	PERFORM VISUAL INSPECTION OF RELAY FOR:
13:	IEL	A. LOOSE CONNECTIONS, FOREIGN MATERIAL, MOISTURE, RUST
14:	IEL	B. DISC CLEARANCE, BEARING END-PLAY, AND BEARING CONDITION
15:	IEL	RECORD ALL RESULTS ON TEST FORM
16:	IEL	RECORD ALL SETTINGS: TAP, TIME DIAL, INSTANTANEOUS, DC TARGET
17:	IEL	RECORD DATA PLATE INFORMATION ON TEST FORM
18:	IEL	PERFORM ZERO CHECK ON RELAY INDUCTION DISC CONTACTS:
19:	IEL	A. USING EITHER RELAY TEST SET OR OHMMETER, AND
20:	IEL	B. RECORD RESULTS ON TEST FORM
21:	IEL	PERFORM INSULATION RESISTANCE TEST ON RELAY USING RELAY TEST SET
22:	IEL	RECORD RESULTS ON TEST FORM
23:	IEL	USING THE RELAY TEST SET:
24:	IEL	A. DETERMINE PICK-UP AND DROP-OUT POINTS OF THE INDUCTION UNIT
25:	IEL	B. COMPARE RESULTS TO MANUFACTURER'S RECOMMENDED TOLERANCES
26:	IEL	C. RECORD BOTH TOLERANCES AND RESULTS ON TEST FORM
27:	IEL	USING THE RELAY TEST SET:
28:	IEL	A. PERFORM TIME/CURRENT TESTS OF RELAY INDUCTION UNIT
29:	IEL	B. AT THE INDUSTRY STANDARD VALUES OF 300%, 400%, AND 500%
30:	IEL	C. COMPARE RESULTS WITH MANUFACTURER'S TIME/CURRENT CURVES AND TOLERANCES
31:	IEL	D. RECORD BOTH THE TIME/CURRENT CURVE VALUES AND TEST RESULTS ON TEST FORM
32:	IEL	USING THE RELAY TEST SET:
33:	IEL	A. DETERMINE RELAY INSTANTANEOUS UNIT PICK-UP VALUE AND TIME
34:	IEL	B. COMPARE PICK-UP VALUE AND TIME WITH MANUFACTURER'S RECOMMENDED VALUES
35:	IEL	C. RECORD BOTH ON TEST FORM
36:	IEL	DETERMINE INDICATING CONTACTOR SWITCH'S PICK-UP, SEAL-IN AND DROP-OUT VALUES
37:	IEL	A. COMPARE TO MANUFACTURER'S RECOMMENDED TOLERANCES
38:	IEL	B. RECORD BOTH RECOMMENDED AND ACTUAL VALUES ON TEST FORM
39:	IEL	REMOVE ALL TEST LEADS FROM RELAY, RESET ICS AND IIT INDICATORS
40:	IEL	REINSTALL RELAY AND CLOSE CASE LATCHES ON SIDES OF RELAY
41:	IEL	CLOSE ALL SWITCHES ON FRONT OF RELAY, INSURING RED SWITCH IS LAST ONE CLOSED
42:	IEL	REPLACE CASE COVER AND VERIFY INDICATOR RESET IS ALIGNED

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *311*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	MAGNETIC SPEED SENSOR
Procedure Frequency	Semi-Annual
Shop	Int Electrical
Schedule Procedure Id	EPSMPU-SA
Est Hours	4

Tasks

0:	IEL	SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	LOCKOUT/TAGOUT GENERATOR SET
6:	IEL	REMOVE SENSOR FROM GENERATOR
7:	IEL	CLEAN MAGNETIC PICKUP WITH ALCOHOL
8:	IEL	REINSTALL SENSOR TO BOTTOM: BACK OFF ¾ TURN
9:	IEL	START DIESEL GENERATOR
10:	IEL	ADJUST SENSOR IN/OUT TO OBTAIN 12V READING AND CORRECT FREQUENCY READING
11:	IEL	PLACE GENERATOR BACK IN AUTO CONFIGURATION
12:	IEL	REMOVE LOCKOUT/TAGOUT

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *280*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	LOW VOLTAGE CIRCUIT BREAKERS		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPLVCB-A	Est Hours	1.5

Tasks

1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	ISOLATE CIRCUIT BREAKER IAW LOCAL LOCK OUT/TAG OUT PROCEDURES
6:	IEL	OPEN CABINET AND RACK CB OUT TO TEST POSITION
7:	IEL	IF POSSIBLE, OPERATE ELECTRICALLY SEVERAL TIMES
8:	IEL	VERIFY REMOTE OPERATION OF CB, AND CHARGING MOTOR
9:	IEL	RACK OUT CB COMPLETELY
10:	IEL	VERIFY THAT CLOSING SPRINGS DISCHARGE AS BREAKER AS RACKS OUT
11:	IEL	REMOVE CB FROM RACKING MECHANISM
12:	IEL	VISUALLY INSPECT CB FOR OBVIOUS SIGNS OF DAMAGE
13:	IEL	PLACE CB ON TESTING SURFACE
14:	IEL	REMOVE ARC CHUTES AND PHASE SHIELDS AND INSPECT FOR DAMAGE
15:	IEL	INSPECT AND CLEAN BOTH MAIN AND ARCING CONTACTS FOR ALL THREE PHASES
16:	IEL	MEASURE THE GAP AND WIPE FOR ALL THREE PHASES
17:	IEL	VERIFY THAT THEY ARE WITHIN MANUFACTURER'S RECOMMENDED TOLERANCES
18:	IEL	DISASSEMBLE, CLEAN, AND METER THE A/B CONTACTS
19:	IEL	CHECK ALL NINE LUBRICATION POINTS FOR EACH PHASE
20:	IEL	DO NOT ADD LUBRICANT, UNLESS NECESSARY
21:	IEL	IF LUBRICANT MUST BE ADDED, MAKE SURE ALL EXCESS IS WIPED OFF
22:	IEL	USE ONLY APPROVED LUBRICANT
23:	IEL	MANUALLY CLOSE CB AND PERFORM CONTACT RESISTANCE TEST
24:	IEL	VERIFY RESISTANCE IS WITHIN MANUFACTURER'S RECOMMENDED TOLERANCES
25:	IEL	RECORD RESULTS ON TEST FORM
26:	IEL	OPEN CB AND REPLACE ARC CHUTES AND PHASE SHIELDS
27:	IEL	PERFORM TIME/CURRENT TESTS ON ALL THREE PHASES:
28:	IEL	AT 300% AND 400% OF COIL RATING FOR LONG TIME DELAY CURVE, AND
29:	IEL	AT 600% FOR SHORT TIME DELAY CURVE
30:	IEL	VERIFY THAT RESULTS ARE WITHIN MANUFACTURER'S ALLOWABLE TOLERANCES
31:	IEL	RECORD RESULTS ON TEST FORM
32:	IEL	REMOVE TEST SET, METER CT'S FOR CONTINUITY, AND THEN REPLACE TEST POINT COVER
33:	IEL	FOR EACH PHASE:
34:	IEL	PERFORM AN INSULATION RESISTANCE TEST AT 1000V DC WITH CONTACTS OPEN
35:	IEL	PERFORM AN INSULATION RESISTANCE TEST PHASE TO GROUND WITH CONTACTS CLOSED
36:	IEL	PLACE CB BACK ON THE RAILS OF THE RACKING MECHANISM
37:	IEL	ENSURE CB IS CORRECTLY ALIGNED
38:	IEL	RACK CB INTO THE TEST POSITION
39:	IEL	TEST GFR CIRCUIT, IF INSTALLED
40:	IEL	OPERATE CB ELECTRICALLY SEVERAL TIMES TO VERIFY OPERATIONAL STATUS
41:	IEL	RACK CB INTO FULLY CONNECTED POSITION
42:	IEL	VERIFY PROPER CONNECTION OF PRIMARY STABS
43:	IEL	VERIFY PROPER FIT/CLEARANCE OF CB IN CUBICLE
44:	IEL	RETURN CB TO NORMAL OPERATIONAL POSITION (OPEN OR CLOSED) IAW LO/TO PROCEDURES
45:	IEL	PERFORM IR SURVEY OF BUSWORK/CONNECTIONS BEHIND CB
46:	IEL	RECORD RESULTS ON TEST FORM

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *310*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	GENERATOR UNIT		
Procedure Frequency	Annual	Shop	Int Electrical
Schedule Procedure Id	EPSGEN-A	Est Hours	14

Tasks

0: IEL SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1: IEL VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2: IEL A. HIGH VOLTAGE GLOVES
3: IEL B. HOT STICK WITH GROUNDING DRAIN CABLE
4: IEL C. INSULATING BLANKET
5: IEL PLACE GENERATOR CONTROL SWITCH IN THE OFF POSITION
6: IEL LOCK OUT/TAG OUT THE GENERATOR CONTROL PANEL, IAW LOCAL PROCEDURES
7: IEL REMOVE ALL GENERATOR CONDUIT BOX COVERS
8: IEL CLEAN ALL ELECTRICAL CONNECTIONS AND BUS BARS
9: IEL CHECK ALL CONNECTIONS FOR TIGHTNESS
10: IEL DISCONNECT THE THREE STANDARD POLARITY DIODES
11: IEL METER STANDARD POLARITY DIODES FOR OPERATIONAL STATUS
12: IEL DISCONNECT THE THREE REVERSE POLARITY DIODES
13: IEL METER REVERSE POLARITY DIODES FOR STATUS
14: IEL REPLACE ALL DIODES WHICH SHOW LESS THAT 5 MEGOHMS BLOCKING RESISTANCE
15: IEL RECORD RESULTS ON TEST FORM
16: IEL DISCONNECT AND METER SURGE ARRESTER LOCATED BETWEEN RECTIFIER PLATES FOR STATUS
17: IEL REPLACE IF SURGE ARRESTER SHOWS LESS THAN 100 KILOHMS
18: IEL RECORD RESULTS ON TEST FORM
19: IEL DISCONNECT THE FIELD WINDING LEADS (REFER TO EQUIPMENT WIRING DIAG FOR LOCATION)
20: IEL SHORT THE LEADS TOGETHER AND MEGGER TO CASE GROUND
21: IEL TAKE READINGS AT 30SEC, 1MIN, 2MIN...10MIN
22: IEL RECORD RESULTS IN APPLICABLE BLOCKS ON TEST FORM
23: IEL DISCONNECT ALL NEUTRAL WINDING CONNECTIONS (REFER TO EQUIP WIRING DIAG FOR LOCATION)
24: IEL DISCONNECT PT WIRES (REFER TO EQUIP WIRING DIAG FOR LOCATION)
25: IEL OPEN THE PT CB (ABOVE GEN MAIN CB)
26: IEL MEGGER EACH PHASE TO GROUND, TAKING READINGS AT 30SEC, 1MIN, 2MIN...10MIN
27: IEL RECORD ALL READINGS, BY PHASE, IN THE APPLICABLE BLOCKS OF THE TEST FORM
28: IEL DIVIDE THE 1MIN/30SEC READINGS TO DETERMINE THE DIELECTRIC ABSORPTION RATIO....
29: IEL ....(DAR) FOR THE FIELD WINDINGS AND ALL THREE PHASES
30: IEL RECORD RESULTS ON TEST FORM
31: IEL DIVIDE THE 10MIN/1MIN READINGS TO DETERMINE THE POLARIZATION INDEX (PI) .....
32: IEL .....FOR THE FIELD WINDINGS AND ALL THREE PHASES
33: IEL RECORD RESULTS ON TEST FORM
34: IEL REMOVE THE GENERATOR BEARING FILL AND DRAIN PLUGS
35: IEL INSERT A 1/8 IN. N.P.T. GREASE FITTING INTO THE FILL PIPE
36: IEL FILL WITH APPROXIMATELY 2.4OZ. OF SRI #2 OR OTHER COMPARABLE GREASE (VERIFY WITH...
...EQUP INFORMATION)
37: IEL REMOVE GREASE FITTING AND REPLACE BOTH PLUGS
38: IEL RECONNECT ALL LEADS TO THEIR ORIGINAL POSITIONS:
39: IEL A. NEUTRAL WINDING CONNECTION LEADS
40: IEL B. PT WIRES
41: IEL C. FIELD WINDING LEADS
42: IEL D. SURGE ARRESTER LEADS
43: IEL E. ALL SIX DIODE LEADS
44: IEL CLEAN BOTH UPPER AND LOWER GENERATOR CONDUIT BOX COMPARTMENTS
45: IEL DOUBLE-CHECK ALL RECONNECTED LEADS FOR TIGHTNESS AND CORRECT CONNECTIONS
46: IEL REPLACE BOTH UPPER AND LOWER GENERATOR CONDUIT BOX COVERS
47: IEL REMOVE AND INSPECT BOTH GENERATOR AIR FILTERS
48: IEL IF FILTER IS TOO DIRTY, REPLACE IT. DO NOT ATTEMPT TO CLEAN FILTER
49: IEL REMOVE AND CLEAN ALL FUEL SYSTEM INTAKE STRAINERS (ONE SIDE AT A TIME)
50: IEL REMOVE AND CLEAN THE INDIVIDUAL UNIT WATER INTAKE STRAINERS
51: IEL REMOVE CLEARANCE TAG FROM GENERATOR CONTROL PANEL IAW LOCAL PROCEDURES
52: IEL PLACE GENERATOR CONTROL SWITCH INTO THE TEST/OFFLINE POSITION
53: IEL OPERATE GENERATOR TO VERIFY OPERATIONAL STATUS
54: IEL PAY STRICT ATTENTION TO THE VOLTAGE LEVEL AND STABILITY

55: IEL TURN GENERATOR OFF; REPLACE GENERATOR CONTROLS TO THEIR ORIGINAL POSITIONS (AUTO

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *308*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	GENERATOR SWITCHGEAR
Procedure Frequency	Annual
Shop	Int Electrical
Schedule Procedure Id	EPSG-A
Est Hours	11

Tasks

0:	IEL	SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1:	IEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	IEL	A. HIGH VOLTAGE GLOVES
3:	IEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	IEL	C. INSULATING BLANKET
5:	IEL	LOCKOUT/TAGOUT GENERATOR SET
10:	IEL	SWITCHGEAR AND HOUSING:
11:	IEL	PERFORM CIRCUIT BREAKER MAINTENANCE IAW APPROPRIATE CB PROCEDURE
12:	IEL	INSPECT/CLEAN ACCUMULATED DIRT FROM HOUSING
13:	IEL	INSPECT CABLE CONNECTIONS
20:	IEL	BATTERY SYSTEM:
21:	IEL	INSPECT FOR CORROSION
22:	IEL	RECORD BATTERY SYSTEM VOLTAGE
23:	IEL	RECORD PILOT CELL VOLTAGE
24:	IEL	CHECK INTEGRITY OF BATTERY RACK; TIGHTEN HARDWARE
25:	IEL	RECORD RESULTS
30:	IEL	BATTERY CHARGER:
31:	IEL	OPEN CIRCUIT BREAKER FEEDING CHARGER
32:	IEL	REMOVE AC AND DC FUSES
33:	IEL	CLEAN CHARGER THOROUGHLY
34:	IEL	VISUALLY INSPECT FOR THERMAL OR PHYSICAL DAMAGE
35:	IEL	CHECK ALL FUSES
36:	IEL	CHECK ALL CONNECTIONS FOR TIGHTNESS/DAMAGE
37:	IEL	CLOSE CIRCUIT BREAKER
38:	IEL	CHECK COOLING FAN OPERATION
39:	IEL	CONDUCT OPERATIONAL TEST
40:	IEL	INSTRUMENTS, RELAYS, CONTROL DEVICES:
41:	IEL	INSPECT/CLEAN ALL COMPONENTS
42:	IEL	CHECK OPERATION OF DISC/TARGET DROPS
43:	IEL	BENCH TEST SUSPECTED RELAYS
44:	IEL	CHECK/REPLACE GROUND FAULT TEST PANEL
50:	IEL	SECONDARY CONTROL WIRING
51:	IEL	CHECK WIRING CONNECTIONS FOR TIGHTNESS/CONTINUITY

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *309*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	GENERATOR SWITCHGEAR BATTERIES		
Procedure Frequency	Monthly	Shop	Int Electrical
Schedule Procedure Id	EPSGBAT-M	Est Hours	1

Tasks

1: IEL INSPECT FOR CORROSION
2: IEL RECORD BATTERY SYSTEM VOLTAGE
3: IEL RECORD PILOT CELL VOLTAGE
4: IEL CHECK INTEGRITY OF BATTERY RACK; TIGHTEN HARDWARE
5: IEL RECORD AND FILE RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *269*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	DRY TYPE TRANSFORMERS		
Procedure Frequency	Annual	Shop	Ext Electrical
Schedule Procedure Id	EPD-DTXMFR-A	Est Hours	3

Tasks

0:	EEL	SAFETY PROCEDURE HVELEC-SAF APPLIES TO THIS ACTION
1:	EEL	VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2:	EEL	A. HIGH VOLTAGE GLOVES
3:	EEL	B. HOT STICK WITH GROUNDING DRAIN CABLE
4:	EEL	C. INSULATING BLANKET
5:	EEL	DE-ENERGIZE TRANSFORMER CIRCUIT AT BOTH THE HIGH AND LOW SIDES
6:	EEL	TAG OUT BOTH THE HIGH AND LOW SIDE CIRCUIT BREAKERS IAW LOCAL PROCEDURES
7:	EEL	OPEN AIR SWITCH
8:	EEL	TRANSFORMER MUST BE COMPLETELY ISOLATED PRIOR TO TESTING
9:	EEL	REMOVE BOTH FRONT AND REAR COVERS FROM TRANSFORMER ENCLOSURE
10:	EEL	USE CAUTION DURING COVER REMOVAL:
11:	EEL	A. TRANSFORMER IS HOT
12:	EEL	B. COVERS ARE A TWO-MAN CARRY
13:	EEL	WAIT FIVE (5) MINUTES
14:	EEL	USING A HIGH VOLTAGE DRAIN ROD, HV GLOVES, AND A SAFETY MAN:
15:	EEL	BLEED OFF ANY CAPACITIVE CHARGE FROM ALL PHASES ON HIGH AND LOW SIDES
16:	EEL	VISUALLY INSPECT TRANSFORMER COMPONENTS FOR SIGNS OF ARCING/TRACKING
17:	EEL	USING A THREE PHASE TTR, TAKE READINGS ON ALL THREE PHASES AS FOLLOWS:
18:	EEL	A. TTR GROUND
19:	EEL	B. CONNECT HIGH SIDE LEADS TO THE APPROPRIATE BUSHINGS
20:	EEL	C. NEUTRAL MUST BE ISOLATED
21:	EEL	D. CONNECT LOW SIDE LEADS TO THE CORRECT BUSHINGS
22:	EEL	E. TAKE READINGS ON ALL THREE PHASES, AND RECORD THEM ON THE TEST FORM
23:	EEL	F. REMOVE ALL LEADS FROM THE TRANSFORMER (INCLUDING TTR GROUND)
24:	EEL	SHORT OUT ALL HIGH SIDE PHASES (A TO B TO C)
25:	EEL	SHORT OUT ALL LOW SIDE PHASES (A TO B TO C)
26:	EEL	CONNECT THE RED (HOT) LEAD FROM A 5KV MEGGER TO HIGH SIDE OF TRANSFORMER
27:	EEL	CONNECT THE BLACK (SENSING) LEAD, AND THE SAFETY (GUARD) LEAD TO GROUND GRID
28:	EEL	MEGGER THE TRANSFORMER AT 5KV FOR TEN MINUTES
29:	EEL	RECORD RESULTS ON TEST FORM
30:	EEL	TURN OFF MEGGER
31:	EEL	BLEED CAPACITIVE CHARGE FROM THE TRANSFORMER USING DRAIN ROD AND HOT GLOVES
32:	EEL	CONNECT THE MEGGER RED LEAD TO HIGH SIDE OF TRANSFORMER
33:	EEL	CONNECT BLACK LEAD TO LOW SIDE OF TRANSFORMER
34:	EEL	MEGGER AT 5KV FOR TEN MINUTES
35:	EEL	RECORD RESULTS ON TEST FORM
36:	EEL	TURN OFF MEGGER
37:	EEL	BLEED CAPACITIVE CHARGE FROM THE TRANSFORMER USING DRAIN ROD AND HOT GLOVES
38:	EEL	REMOVE THE MEGGER RED LEAD FROM HIGH SIDE OF TRANSFORMER
39:	EEL	CONNECT RED LEAD TO LOW SIDE OF TRANSFORMER
40:	EEL	REMOVE MEGGER BLACK LEAD FROM LOW SIDE
41:	EEL	CONNECT BLACK LEAD TO THE GROUND GRID
42:	EEL	MEGGER AT 500V FOR TEN MINUTES
43:	EEL	RECORD RESULTS ON TEST FORM
44:	EEL	TURN OFF MEGGER
45:	EEL	BLEED CAPACITIVE CHARGE FROM THE TRANSFORMER USING DRAIN ROD AND HOT GLOVES
46:	EEL	REMOVE ALL TEST LEADS, JUMPERS BETWEEN PHASES, AND JUMPERS/SHORTS TO GROUND
47:	EEL	RECONNECT NEUTRAL PHASE
48:	EEL	CLEAN OFF ALL BUSHINGS USING APPROVED (NO RESIDUE) CLEANER
49:	EEL	VACUUM OUT ENCLOSURE
50:	EEL	CHECK ALL CONNECTIONS FOR PROPER TORQUE
51:	EEL	VERIFY CORRECT INSTALLATION OF MOUNTING BOLTS
52:	EEL	INSPECT THE THERMAL ELEMENT CIRCUIT FROM TRANSFORMER TO CONTROL PANEL
53:	EEL	CHECK ALL CONNECTIONS, ESPECIALLY ON TE TERMINAL BOARD LOCATED OVER TRANSFORMER
54:	EEL	VISUALLY INSPECT ENCLOSURE FOR DEBRIS OR TOOLS
55:	EEL	REPLACE BOTH FRONT AND REAR COVERS OF TRANSFORMER ENCLOSURE

56: EEL ENERGIZE TRANSFORMER BY REMOVING LOCKS/TAGS, CLOSING CBS AND AIR SWITCHES

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *279*

Facility System	EMERGENCY POWER & LIGHTING
Facility Subsystem	EMERGENCY POWER
Assembly Category	<NA>
Nomenclature	HIGH VOLTAGE VACUUM CONTACTOR CIRCUIT BREAKERS (ANNUAL)
Procedure Frequency	Annual
Shop	Ext Electrical
Schedule Procedure Id	EPHVCB -A
Est Hours	4

Tasks

1: EEL VERIFY THAT ALL APPLICABLE SAFETY EQUIPMENT IS ON HAND:
2: EEL A. HIGH VOLTAGE GLOVES
3: EEL B. HOT STICK WITH GROUNDING DRAIN CABLE
4: EEL C. INSULATING BLANKET
5: EEL ISOLATE CIRCUIT BREAKER IAW LOCAL LOCK OUT/TAG OUT PROCEDURES
6: EEL OPEN CABINET AND PLACE CB IN THE OPEN POSITION
7: EEL RECORD THE NUMBER OF OPERATIONS ON TEST FORM
8: EEL RACK CB COMPLETELY OUT AND PLACE ON TEST STAND/AREA
9: EEL VERIFY SPRINGS ARE DISCHARGED
10: EEL PLACE CB PORTION OF RACKING DEVICE TO CONNECTED POSITION
11: EEL CONNECT TEST BLOCK AND OPERATE CB ELECTRICALLY SEVERAL TIMES
12: EEL VERIFY REMOTE OPERATION
13: EEL DISCONNECT TEST BLOCK AND DISCHARGE CLOSING SPRINGS
14: EEL CLEAN ALL INSULATING SURFACES OF POLE UNITS WITH APPROVED (FOR HV) CLEANER
15: EEL CHECK ALL SIX LUBRICATION POINTS ON EACH PHASE
16: EEL DO NOT ADD LUBRICANT UNLESS NEEDED AND WIPE OFF ALL EXCESS
17: EEL USE ONLY APPROVED LUBRICANT
18: EEL PERFORM CONTACT WEAR GAP CHECK ON ALL THREE PHASES
19: EEL RECORD RESULTS ON TEST FORM
20: EEL PERFORM PRIMARY CIRCUIT INSULATION INTEGRITY CHECK AT THE RECOMMENDED VOLTAGE
21: EEL VERIFY OTHER PHASES AND FRAME ARE WELL GROUNDED PRIOR TO ENERGIZING HY-POT
22: EEL AFTER EACH TEST, USE GROUND DRAIN CABLE, WITH HOTSTICK, AND HV GLOVES:
23: EEL BLEED OFF ANY CAPACITIVE CHARGE ON BREAKER BEFORE PROCEEDING
24: EEL RECORD ALL RESULTS ON TEST FORM
25: EEL PERFORM VACUUM INTERRUPTER INTEGRITY TEST AT RECOMMENDED VOLTAGE FOR ONE MINUTE
26: EEL VERIFY BOTTOM PRIMARY STABS AND FRAME ARE GROUNDED PRIOR TO ENERGIZING HY-POT
27: EEL AFTER EACH TEST, USE GROUND DRAIN CABLE, WITH HOTSTICK, AND HV GLOVES:
28: EEL BLEED OFF ANY CAPACITIVE CHARGE ON BREAKER BEFORE PROCEEDING
29: EEL RECORD RESULTS ON TEST FORM
30: EEL PERFORM CONTACT RESISTANCE TEST ON ALL THREE PHASES
31: EEL VERIFY CONTACT RESISTANCE IS 60 MICRO-OHMS OR LESS
32: EEL RECORD RESULTS ON TEST FORM
33: EEL RE-CONNECT TEST BLOCK TO CB
34: EEL OPERATE ELECTRICALLY SEVERAL TIMES TO VERIFY OPERATIONAL STATUS
35: EEL REMOVE TEST BLOCK, OPEN CB, AND MAKE SURE SPRINGS ARE DISCHARGED
36: EEL RETURN CB PORTION OF RACKING MECHANISM TO REMOVED POSITION
37: EEL RETURN CB TO CABINET RACKING MECHANISM
38: EEL VERIFY CB IS CORRECTLY ALIGNED ON RAILS
39: EEL RACK CB INTO FULLY CONNECTED POSITION
40: EEL VERIFY PROPER CONNECTION OF PRIMARY STABS
41: EEL RETURN CB TO ORIGINAL CONDITION (OPEN/CLOSED) IAW LO/TO PROCEDURES AND RESET
42: EEL RECORD NUMBER OF OPERATIONS ON TEST FORM AND CLOSE CABINET

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *312*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE OIL ANALYSIS		
Procedure Frequency	Quarterly	Shop	Mechanical
Schedule Procedure Id	EPSOIL-A	Est Hours	1

Tasks

1: MECH PERFORM JOB PLAN AFTER A GENERATOR RUN (HOT)
2: MECH COLLECT ENGINE OIL SAMPLES FOR ENGINE OIL ANALYSIS
3: MECH SUBMIT OIL SAMPLES FOR ANALYSIS
4: MECH FILE RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *265*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	EPS ENGINE COOLING PUMPS		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	EPCOOLPUMP-A	Est Hours	1.25

Tasks

1: MECH CHECK MOTOR/PUMP ALIGNMENT
2: MECH CHECK FLEXIBLE COUPLING FOR WEAR
3: MECH CHECK ALL MOUNTS FOR TIGHTNESS
4: MECH CHECK TEMPERATURE OF BEARINGS DURING OPERATING CONDITIONS
5: MECH RECORD BEARING TEMPERATURE READINGS AND COMPARE WITH PRIOR READINGS
6: MECH CHECK SUCTION AND DISCHARGE PRESSURE GAUGES
7: MECH RECORD PRESSURE READINGS AND COMPARE WITH PRIOR READINGS
8: MECH CHECK SHAFT SEAL (PACKING) FOR PROPER OPERATION

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *306*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE COOLANT ANALYSIS		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	EPSCOOL-A	Est Hours	1

Tasks

1: MECH PERFORM JOB PLAN IN CONJUNCTION WITH A GENERATOR RUN
2: MECH COLLECT ENGINE COOLANT SAMPLES FOR ENGINE COOLANT ANALYSIS
3: MECH SUBMIT COOLANT SAMPLES FOR ANALYSIS
4: MECH FILE RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: 272

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	FUEL OIL PUMP		
Procedure Frequency	Annual	Shop	Mechanical
Schedule Procedure Id	EPFUELPUMP-A	Est Hours	0.75

Tasks

1:	MECH	CHECK FUEL OIL PUMP OPERATION:
2:	MECH	A. RECORD DISCHARGE SETTING
3:	MECH	B. RECORD FUEL OIL PUMP RELIEF VALVE SET POINT
4:	MECH	C. RECORD AMPERAGE AND VOLTAGE WITH UNIT OPERATING
5:	MECH	CHECK PUMP SHAFT SEAL
6:	MECH	CHECK MOTOR/PUMP FLEXIBLE COUPLING AND ALIGNMENT
7:	MECH	IF APPLICABLE, LUBRICATE MOTOR BEARINGS IAW MANUFACTURER'S RECOMMENDATIONS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *273*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	FUEL OIL ANALYSIS		
Procedure Frequency	Semi-Annual	Shop	Mechanical
Schedule Procedure Id	EPFUELSAMPLE-SA	Est Hours	0.5

Tasks

1:	MECH	PERFORM JOB PLAN IN CONJUNCTION WITH A GENERATOR RUN
2:	MECH	MANUALLY CHECK DEPTH OF FUEL
3:	MECH	CHECK FOR WATER COLLECTION AT TANK BOTTOM
4:	MECH	VISUALLY INSPECT MONITOR WELL FOR TANK INTEGRITY
5:	MECH	COLLECT FUEL OIL SAMPLE FOR FUEL OIL ANALYSIS
6:	MECH	SUBMIT FUEL OIL SAMPLES FOR ANALYSIS
7:	MECH	RECORD AND FILE RESULTS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

ID Number: *307*

Facility System	EMERGENCY POWER & LIGHTING		
Facility Subsystem	EMERGENCY POWER		
Assembly Category	<NA>		
Nomenclature	ENGINE HEAT EXCHANGER		
Procedure Frequency	Bi-Annual	Shop	Mechanical
Schedule Procedure Id	EPSEXCHG2-MECH-A	Est Hours	3

Tasks

1: MECH CLEAN TUBES ON DIESEL GENERATOR HEAT EXCHANGERS

Tools and Material

BASIC AND ELECTRICAL TOOL SETS

SafetyPrecautions

PERSONNEL SHOULD REFER TO AND BE FAMILIAR WITH THE FOLLOWING CODE(S) FOR SAFETY AND MAINTENANCE INFORMATION: (OSHA) 1926.28, 1926.400-499; (NFPA) NFPA-30, 54, 70, 70B, 70E, 110, 110A

REGULATORY CODES: NFPA 99 & NFPA 110

Building Access Control System Requirements

The Building Access Control System (BAS) Overview: The BAS Network Security System is a state-of-the-art access control system, which has been installed at over 158 FDA facilities nation-wide. This system uses HSPD-12 PIV-II card readers to control access throughout buildings. Badges have been pre-programmed by FDA HQ (via the identity management system). If a card reader correctly identifies the badge as having access to the protected area, it deactivates the locking device and grants access. The BAS system is monitored by the Agency's Security Command Center to ensure when alarms and or intrusion is detected the appropriate responding officials are notified.

The BAS has many components, but the most important component is the Field Data Control Panel (FDCP). This is a box-like panel that serves as the brain of the BAS. As the brain, it serves as the termination point for all front end security monitoring components (i.e. card readers, glass break sensors, contacts, keypads and locking hardware). In lieu of this, the FDCP must be properly safeguarded and located in a secured area with access control and high security locking hardware. The FDCP communicates intrusion detection information to the Agency's Security Command Center via the Local Area Network (LAN) connection, while also maintaining access control information locally within the internal built-in processor.

Throughout this document will be the necessary BAS security system **rough-in** requirements, please take the time to review and comply with those that pertain to your discipline(s).

1. **LAN Connectivity:**

   a. A dedicated IP Address shall be provided for each FDCP panel separately. (The IP addresses shall be supplied by the **FDA IT Department**, and an IP drop shall be located at each location/room where an FDCP will be located for proper connectivity.
   b. All IP addresses – (i.e. Address, Gateway and Subnet Mask), shall be forwarded to the appropriate Physical Security Specialist assigned to the project for programming purposes, and all IP drops shall be furnished by the **FDA IT Department**.

   Note: The temperature in the room where the FDCP is located can never exceed (140 degrees F) at given anytime, adequate temperature control will be the responsibility of the **General Contractor**. The actual heat output for the FDCP itself will be minimal and should not adversely affect or interfere with any other surrounding equipment (i.e. LAN/Telecom).

2. **Electrical Requirements:**

a. **Security Wiring:** Wiring for security devices (i.e. card readers, keypads, magnetic locks, electric strikes, etc.), shall be in conduit and each access control door shall have two 3/4" conduits, one for low voltage power and one for data to be provided by the **General Contractor** as part of the security **rough-in** requirement.

b. **Electric Strikes**: Shall be fail-secure with (24 volts DC) of power supplied at each electric strike location, free egress from interior lockset will be the standard to comply with fire safety codes.

c. **Aiphone Substations**: One single quad outlet at (20 Amp /110 Volts) shall be installed at each Aiphone substation location. The Aiphone substations will automatically communicate with the Aiphone door station whenever it is activated.

d. **Magnetic Locks**: When magnetic locks are required for access control, the **Building Engineer** or the **General Contractor** shall run a set of dry contacts from the building's fire alarm panel to the location where the FDCP will be installed. These dry contacts will be tied into the BAS panel by the Agency's security contractor at the time of installation and tested to ensure magnetic locks are automatically released by the security system panel in the event the fire alarm is activated. The **General Contractor** shall obtain all necessary electrical permits, which shall also include the magnetic lock permit as part of the security **rough-in** requirement.

Note: Fire alarms will not be monitored by the Agency's Security Command Center, only the intrusion alarms which are tied into the BAS security panel. The dry contacts referenced above are required to tied into the Agency's security system panel to automatically release the magnetic locks in the event the fire alarm is activated, and is a fire/safety requirement.

e. **FDCP Mounting:** A (4 x 8) piece of plywood shall to be furnished and mounted by the **General Contractor** in all locations where FDCP(s) will be installed. The FDCP plywood shall be a minimum of 3' away from any device that may produce electrical interference (i.e. transformers, etc.). All entry doors to rooms a FDCP will be located shall be equipped with high security quality lock hardware, door closure, jimmy plate and a card reader. FDCP plywood shall be coated with "fire retardant" paint to meet local fire code.

f. **FDCP Power Requirements:** Each FDCP will need one quad outlet. Each quad outlet shall be a dedicated circuit rated at (20 amps/120 volts AC), and be connected to the building's dedicated emergency power circuit. These quad outlets shall be located directly under the (4 x 8) piece of plywood for convenient connectivity of the FDCP panel's AC power. The hardwired power supply will be connected to the transformer supplied by the Agency's security installation contractor.

g. **Surveillance Cameras**: There shall be (110 volts) supplied at each camera location, and a dedicated quad outlet installed at each the camera monitoring

location. Each camera and monitoring location shall be wired to the same building phase.

h. **Electrified Panic Egress Bars**: Shall be installed at emergency egress points within the secured area and require a (110 volt) dedicated circuit be installed above the door.

Note: All power requirements referenced above shall be supplied and terminated at the proposed security device point(s) by the **General Contractor** as part of the security **rough-in** requirement, and shall be located on the secured side of the Agency's space on a dedicated circuit.

3. **Conduit & Junction Boxes:**

a. Conduit size for all security devices shall be **1"** and shall run from the junction box location to the top of door frame. All conduits shall be stubbed at ceiling (unless Item e. referenced below applies).
b. For "large jobs" (i.e. more that eight card readers to be installed), conduit shall be **1 1/2"** in diameter at the backbone leading back to FDCP.
c. Single gang junction boxes are required for all security devices.
d. The conduit shall be painted blue every 10 feet, be free & clear, have pull string, and a junction box every 75 feet.
e. All junction boxes and conduit shall be supplied and installed by the **General Contractor** as part of the security **rough-in** requirement, and shall be located on the secured side of the Agency's space.

Note: In areas where security wires will cross over unsecured spaces (i.e. hallways, between floors, common areas, etc.), that wiring shall be put in **1"** conduit separate from other building wiring and be terminated within the Agency's secured space. All security system conduit shall be furnished and installed by **General Contractor** as part of the security **rough-in** requirement.

4. **Card Reader Door Requirements:**

a. All doors equipped with card readers shall have heavy duty door closures installed, to be supplied by **General Contractor**.
b. All doors equipped with card readers shall have jimmy plates installed on the exterior side of the door, to be supplied by **General Contractor**.
c. All perimeter doors equipped with card readers shall either have interior door hinges, or have the exterior hinges pinned or spot welded to prevent pins from being removed and the responsibility of the **General Contractor**.
d. All doors with cards readers shall be equipped with electric strike, store room function leverset, Schlege large format cores with high security hardware with override keys and locks shall be keyed alike.
e. **General Contractor** shall not fill in the headers of metal door frames with concrete on any access controlled door, as this will prevent necessary security wiring from passing through.

Note: On doors where an electric strike cannot be installed (i.e. glass frameless doors), magnetic locks shall be required. These door frames will need to be reinforced with metal headers and fitted with channels for the proper mounting of equipment. If this method is prohibited, a waiver will be requested authorizing the Agency's security installer to secure the magnetic locks using an industrial adhesive. The Agency must have this waiver prior to installing the hardware.

f. Emergency exit doors shall have exterior handles removed by Building Engineer or **General Contractor**, and be properly labeled "**Emergency Exit**".
g. Junction boxes for access readers shall be installed Mounting height of 42" to center off the floor (or per specific codes requirements) as required by ADA, and shall be installed on the same side as the door handle on single doors, and on the hinge side (of the opening door), for double doors.
h. Junction boxes for keypads shall be installed **50"** high to center as required by ADA, and shall be installed on the secured side of the door.
i. Junction boxes for (Aiphone) door annunciation equipment shall be **42"** to center off the floor and be installed on the same side as the door handle on single doors and on the hinge side (of the opening door) for double doors.
j. Junction boxes for glass break sensors shall be located above the ceiling, unless otherwise specified.

Note: All junction boxes shall be furnished and installed by the **General Contractor** as part of the security **rough-in** requirement.

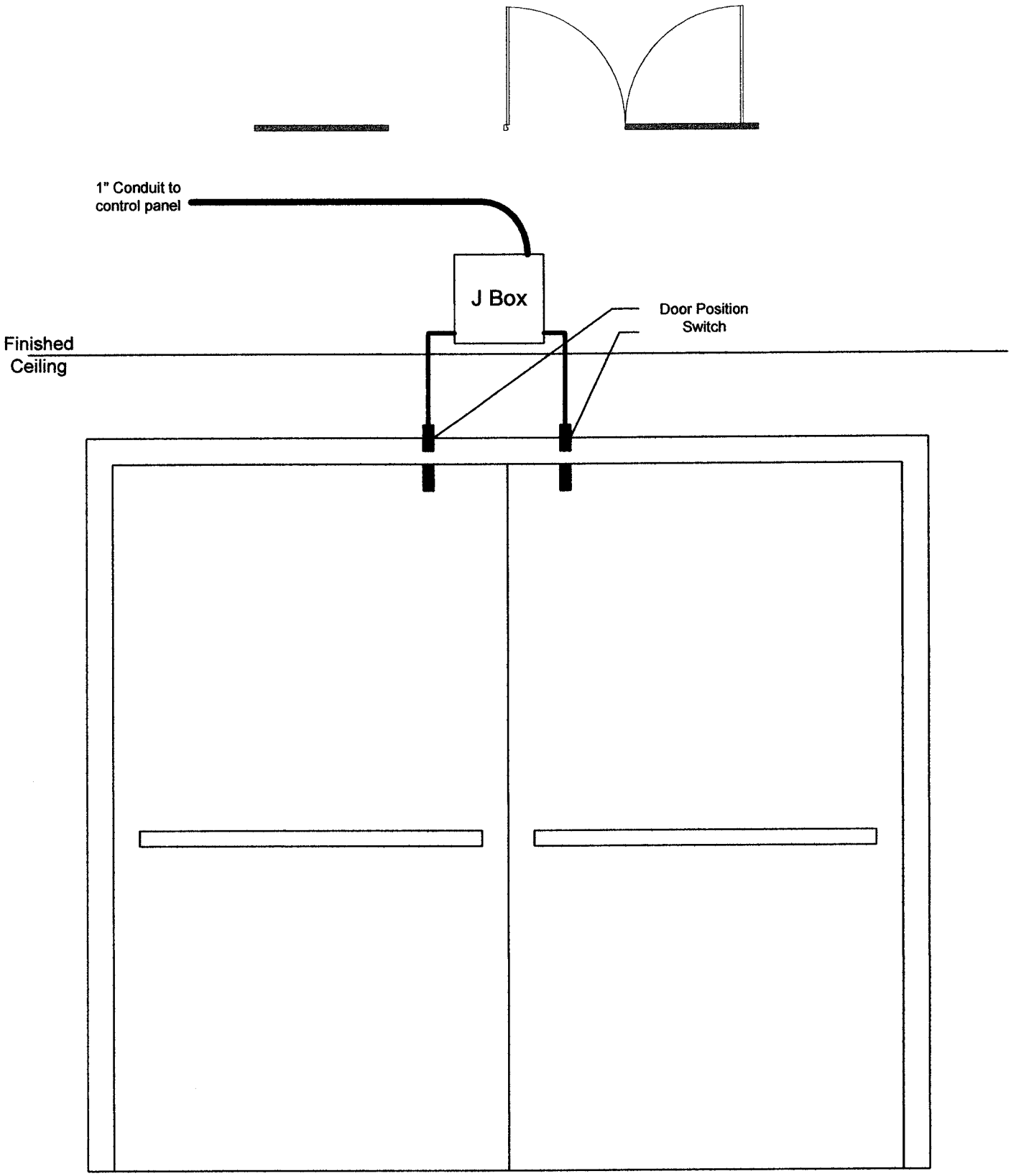
5. **BAS Equipment Dimensions:**

a. FDCP 3 ½" D x 18 ½" W x 26 ½" H
b. Card Reader: 4 ½' W x 4 ½" H
c. Exit Button: 2 ½" W x 4" H
d. Mag Lock (Indoor): 8" x 1 ½" x 1 5/8"
e. Mag Lock (Exterior) 8" x 2 15/16" x 1 ¾"
f. Exit Sensor (REX): 1.5"h x 6.25" w x 1.5" D
g. Contacts: 1" diameter
h. Aiphones: 2 ¾" D x 5 ½" H x 10" W

See detail drawings below.

Prepared by:
Karl Thrash
FDA Physical Security

Lessor _____ Gov't _____

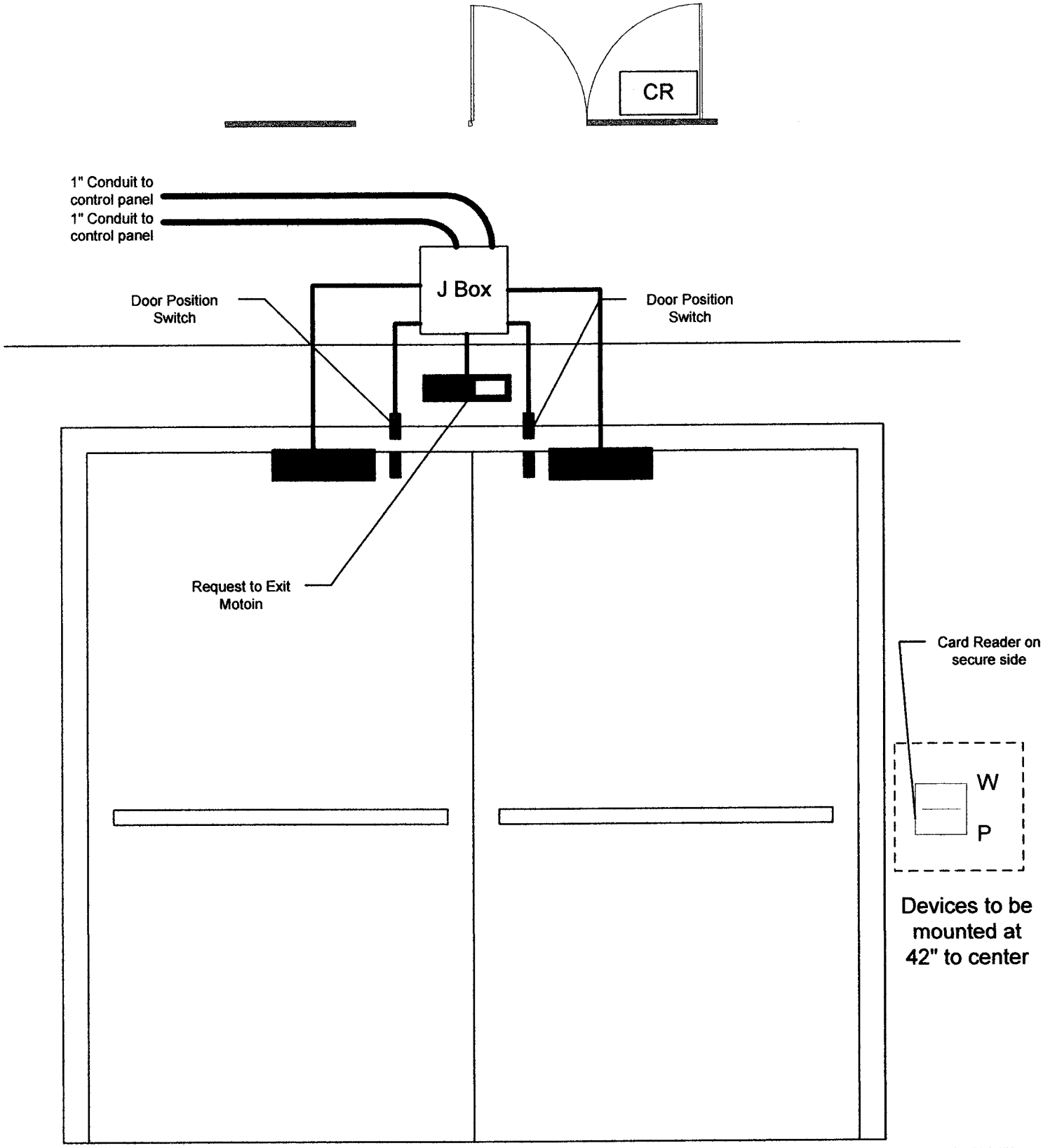


Double Door Alarm Only

Secure Side of Door

Drawn By KT	SIZ Lessor SC	FSCM NO	Gov't DWG NO FDA S-1 SH	RE
Reviewed DK	AL E 1 : 1		EE T 1 OF 13	

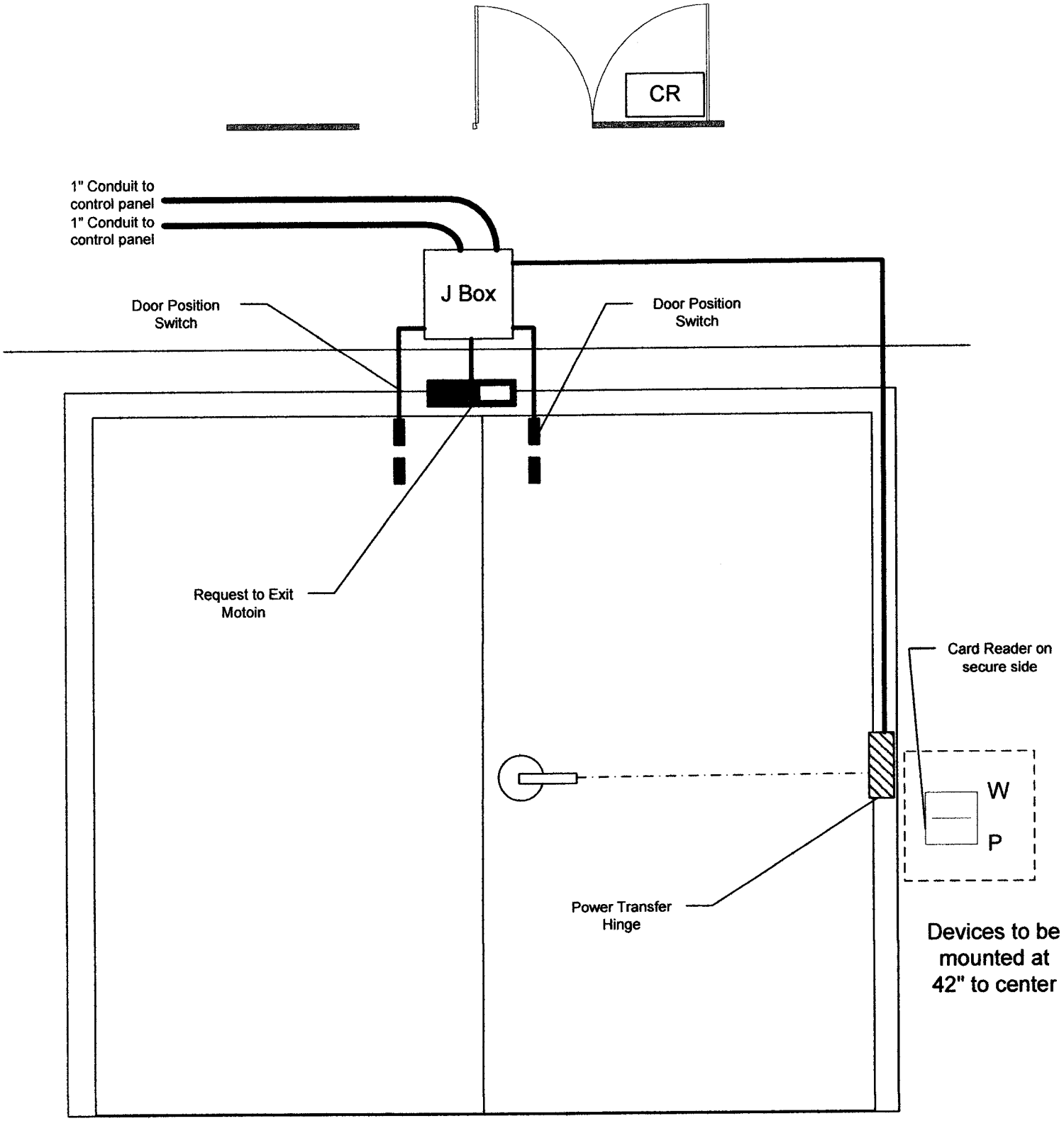
Lease GS-06P-LKS00076: Exhibit Q



	Double Door with Mag Lock and Reader			
	Non-Secure Side of Door			
Drawn By KT	SIZ – SC	FSCM NO	DWG NO FDA S-1 SH	RE
Reviewed DK	AL E		EE T	2 OF 13

Lessor _____ Gov't _____

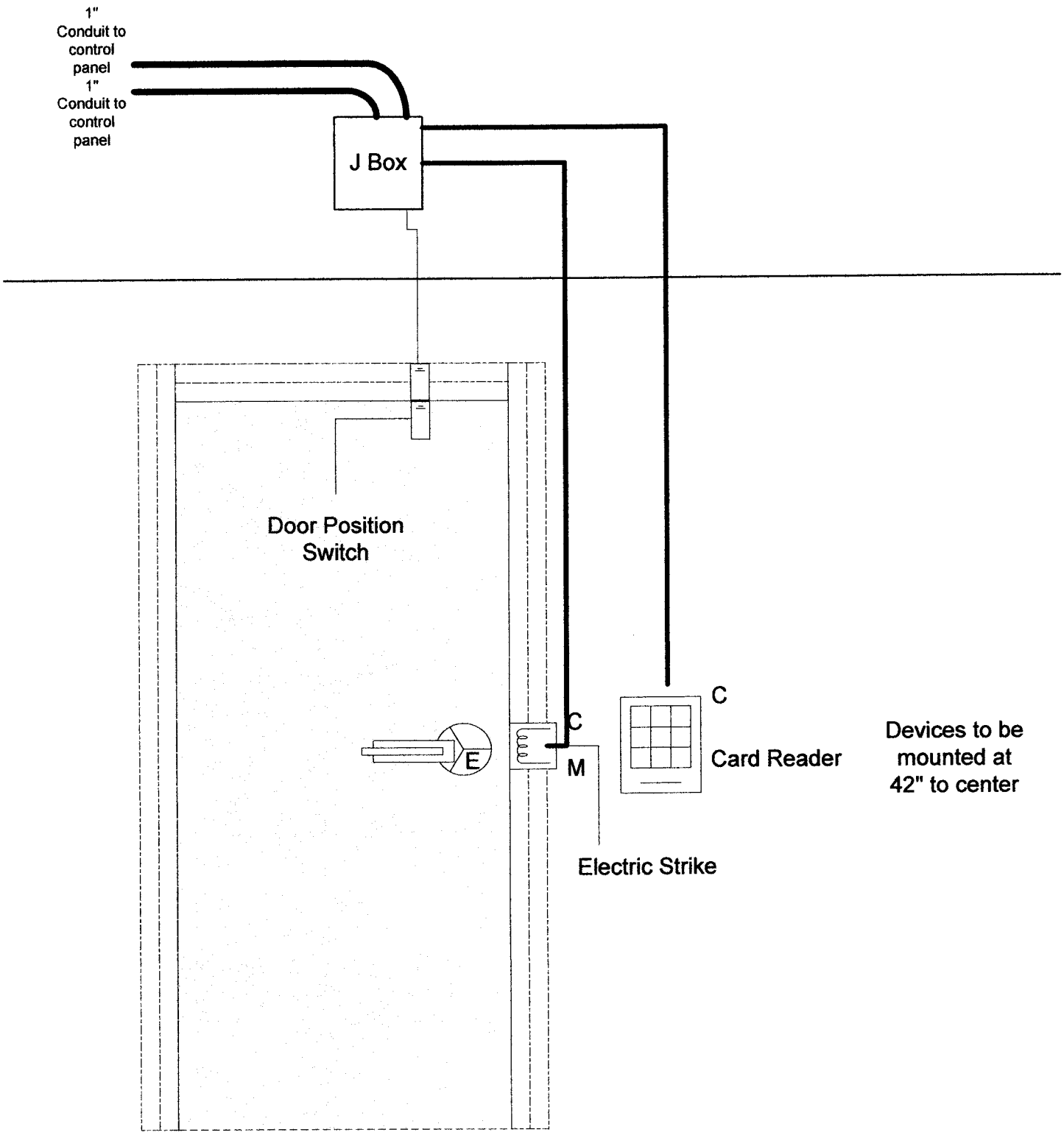
Lease GS-06P-LKS00076: Exhibit Q



	Double Door Electrified Lockset and Reader			
	Non-Secure Side of Door			
Drawn By KT	SIZ - SC	FSCM NO	DWG NO FDA S-1 SH	RE
Reviewed DK	AL E	1 : 1	EE	3 OF 13

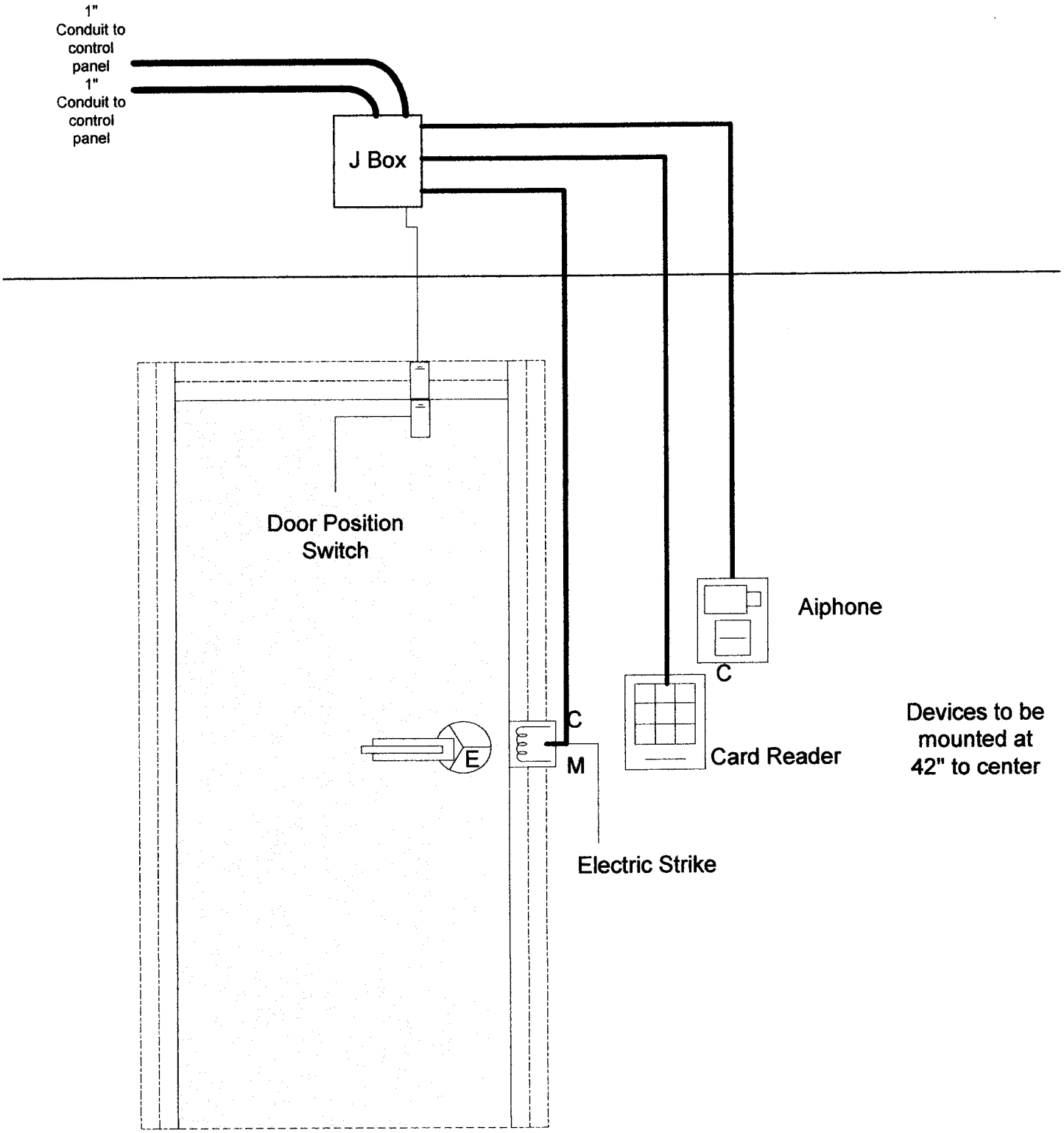
Lessor _____ Gov't _____

Lease GS-06P-LKS00076: Exhibit Q



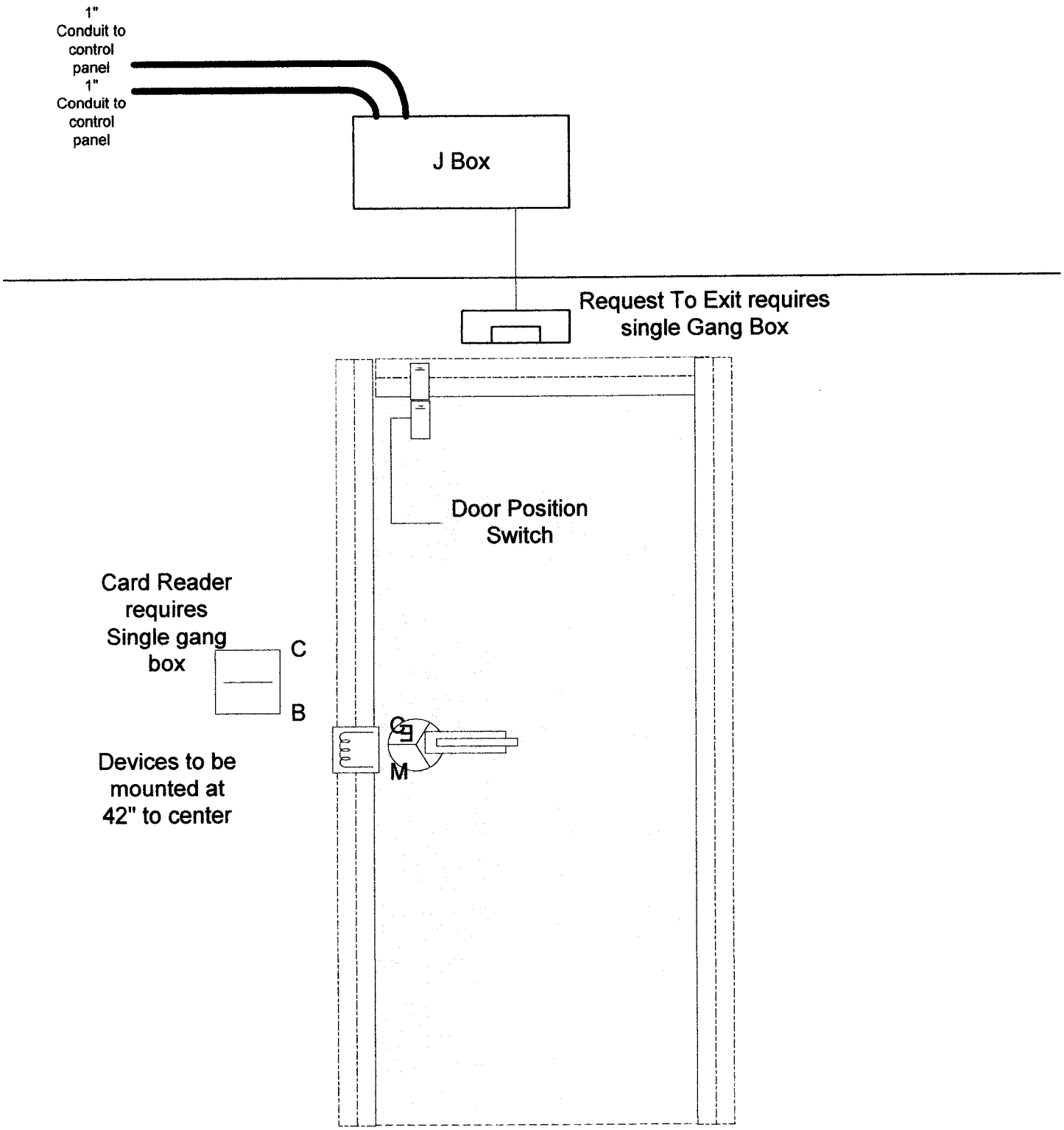
	Single Door Access Control Exterior View				
	Unsecure Side of Door				
Drawn By DK	SIZE	FSCM NO	Lessor	DWG NO FDA S-7 Gov't	REV
Reviewed KT	SCALE 1 : 1			SHEET 4 OF 13	

Lease GS-06P-LKS00076: Exhibit Q



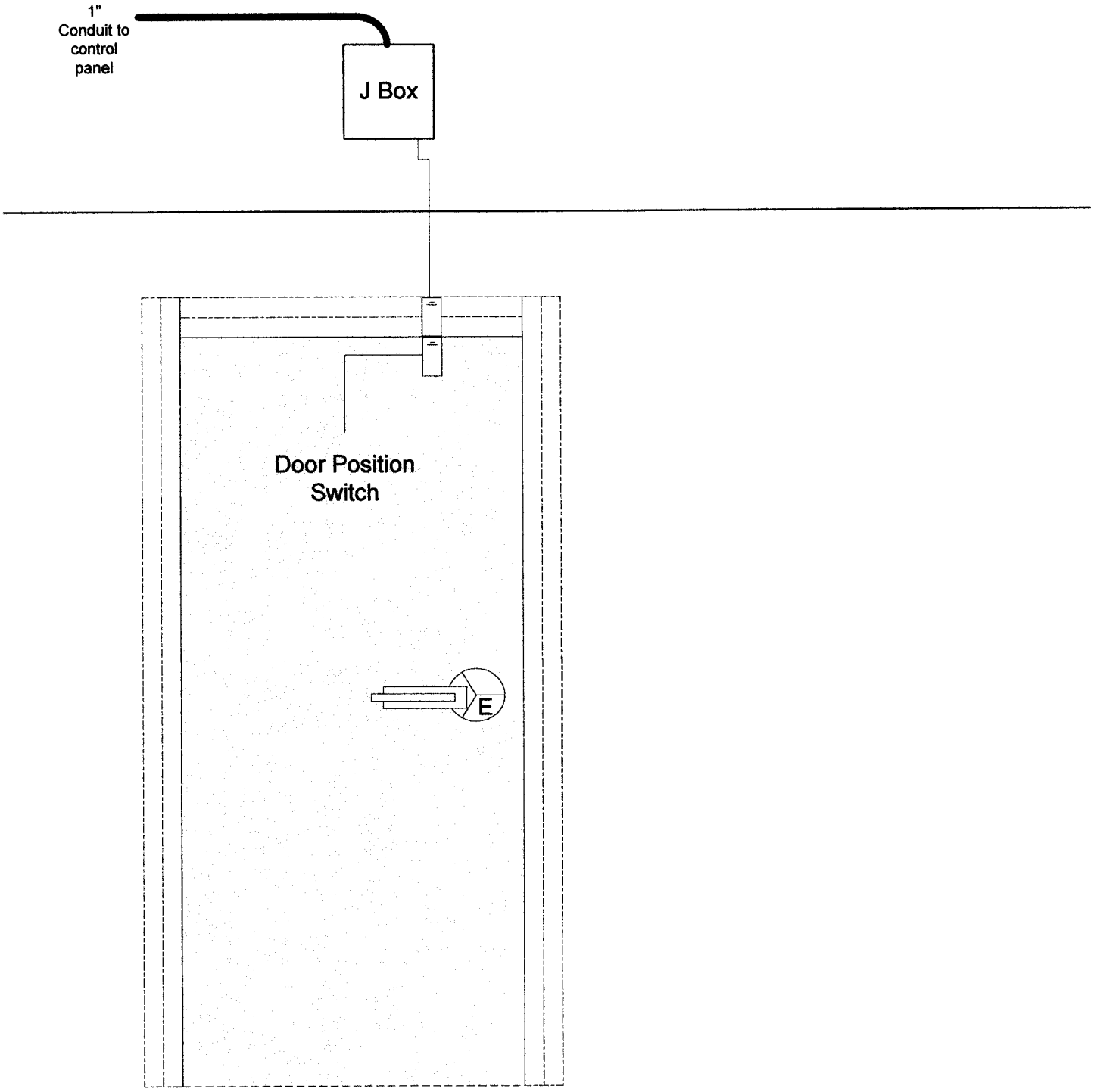
	Single Door w Aiphone Exterior View			
	Unsecure Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 5 OF 13	

Lessor EE Gov't KM



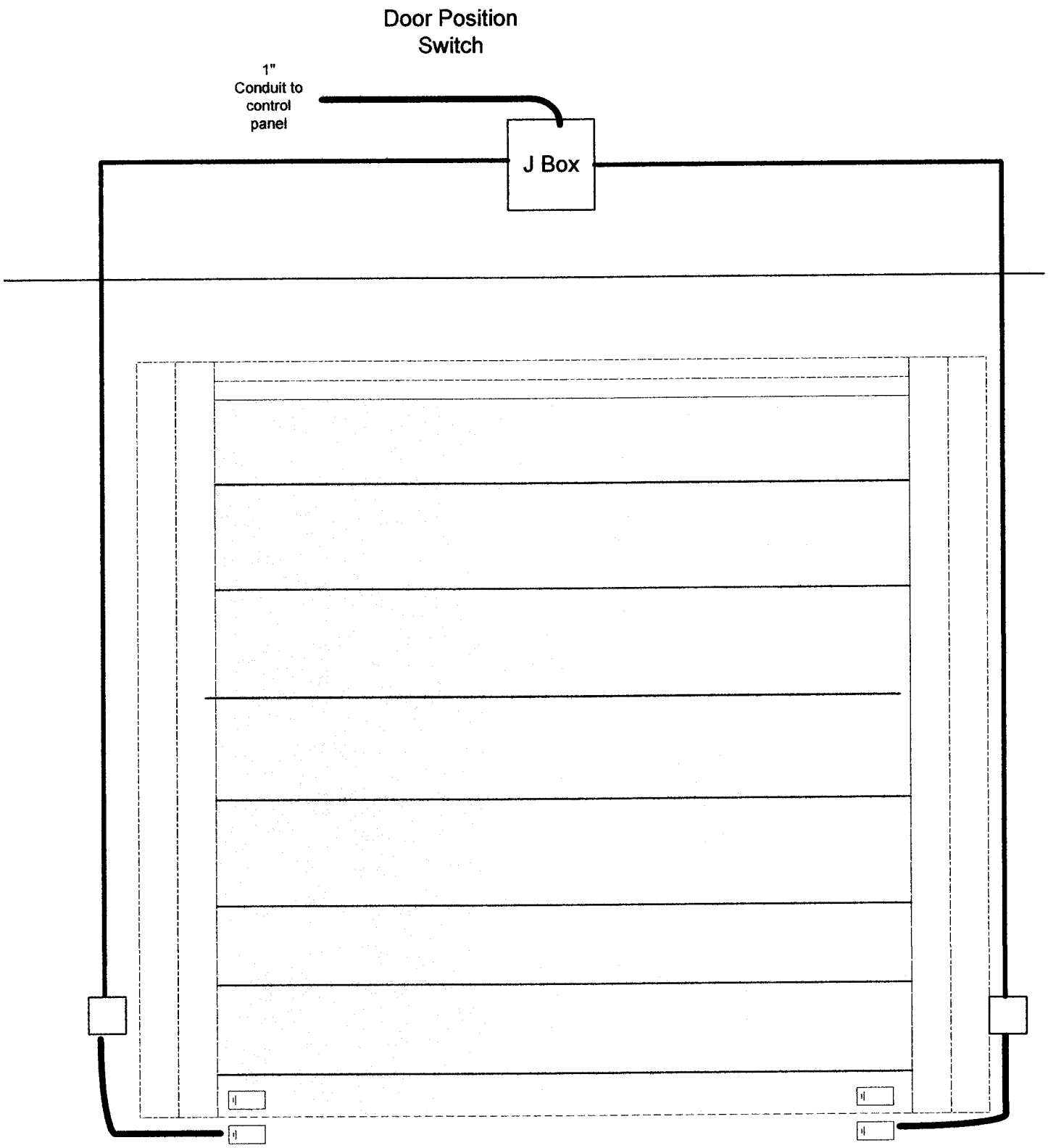
	Single Door Access Control Exterior View			
	Unsecure Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 6 OF 13	

Lessor _____ Gov't _____



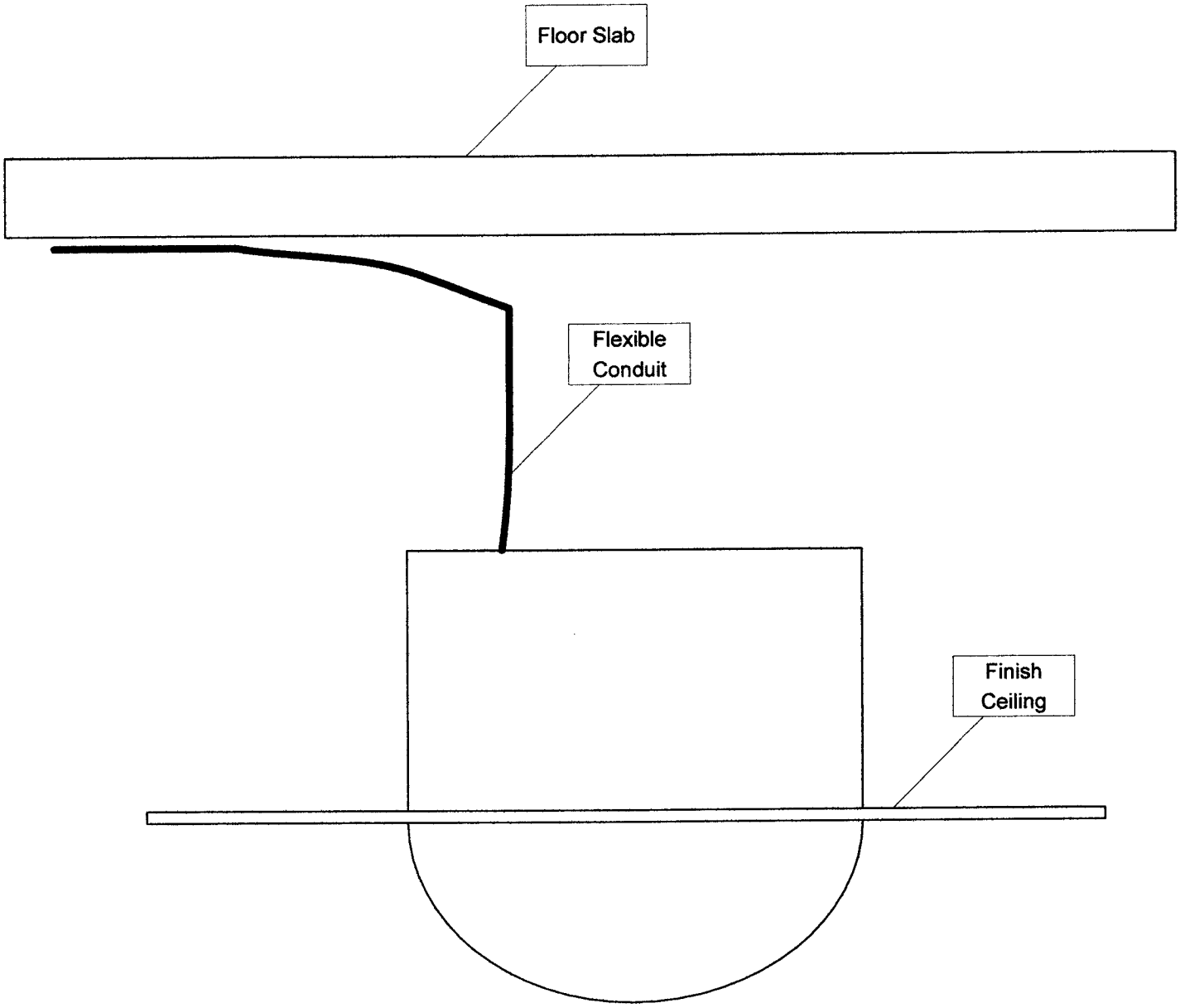
	Single Door Door Contact			
	Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 7 OF 13	

Lessor _____ Gov't _____



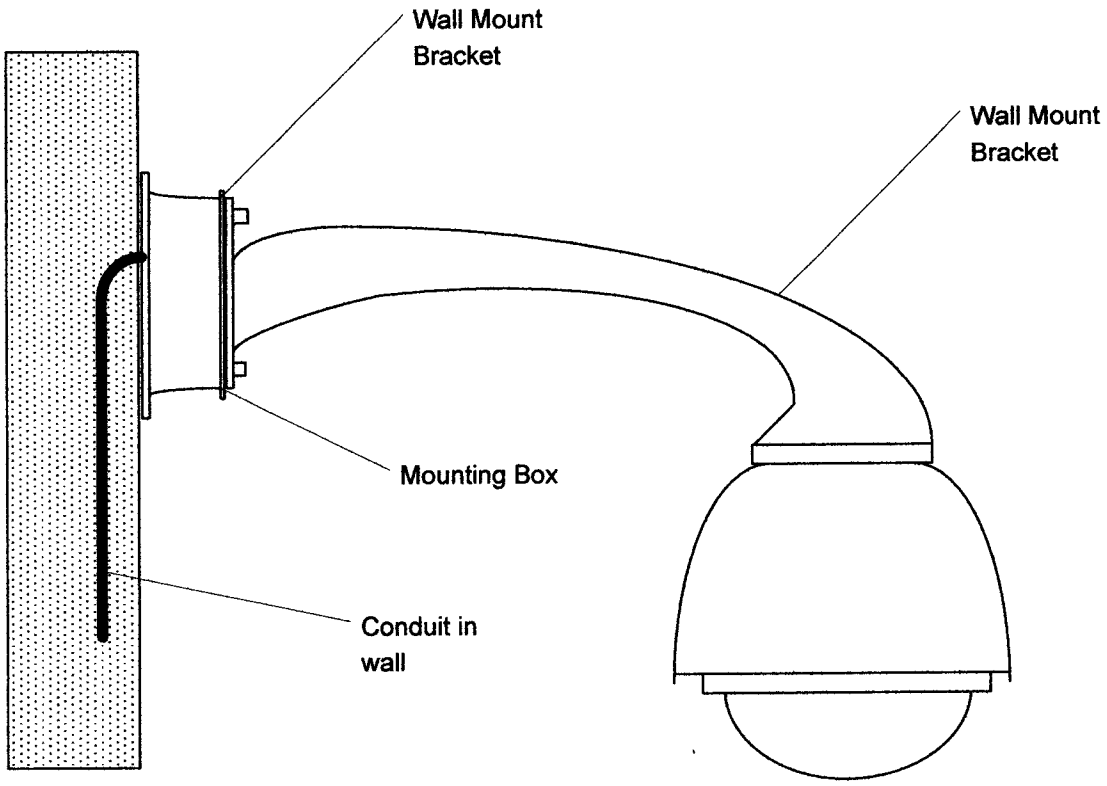
	Over Head Door				
	Side of Door				
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1		REV
Reviewed KT	SCALE 1 : 1			SHEET 8 OF 13	

Lessor _____ Govt _____

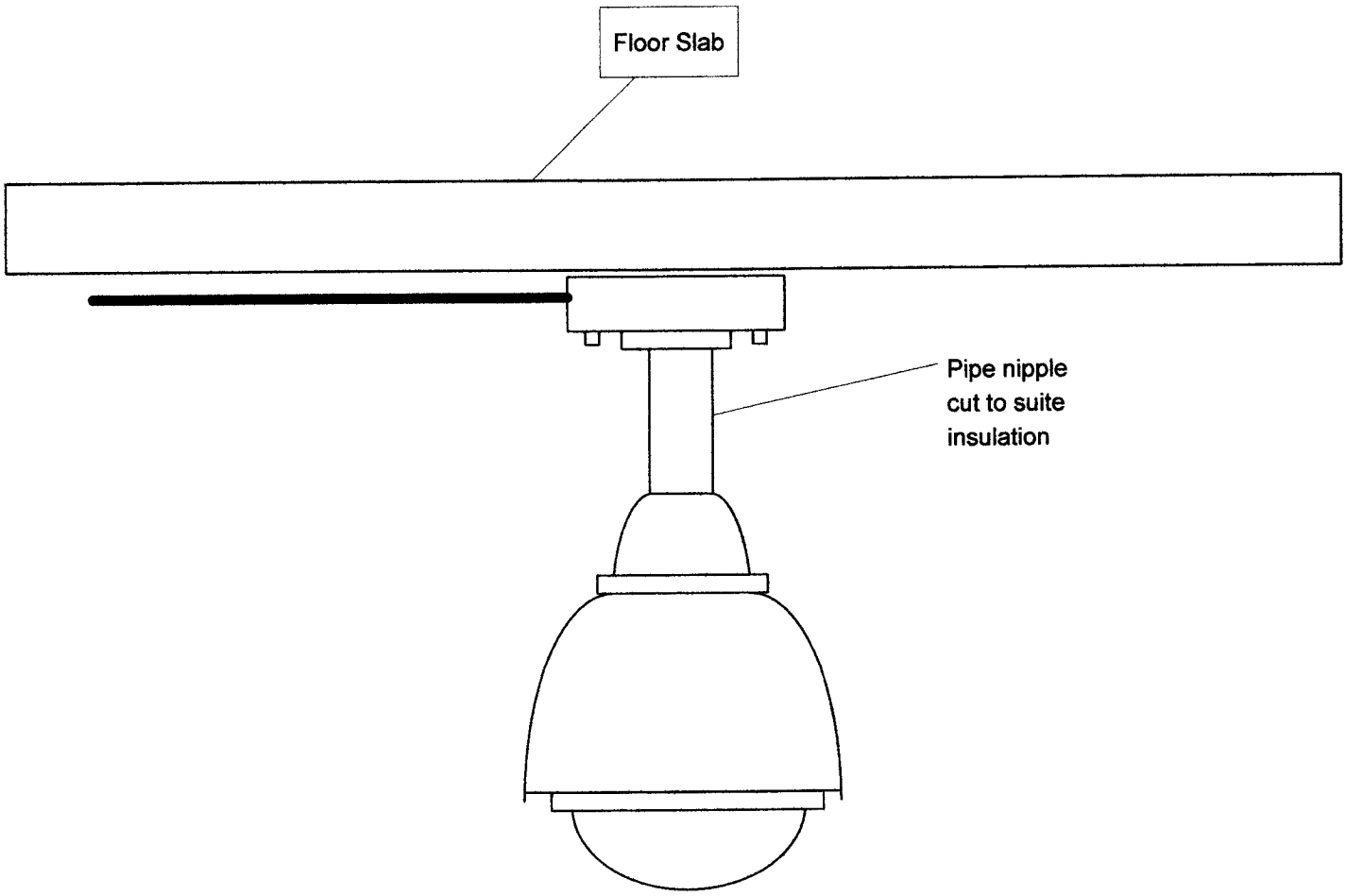


	Interior Flush Ceiling Mount PTZ Camera			
Drawn By KT	SIZE	FSCM NO	DWG NO FDA C1	REV
Reviewed KT	SCALE 1 : 1		SHEET 9 OF 13	

Lessor _____ Govt _____

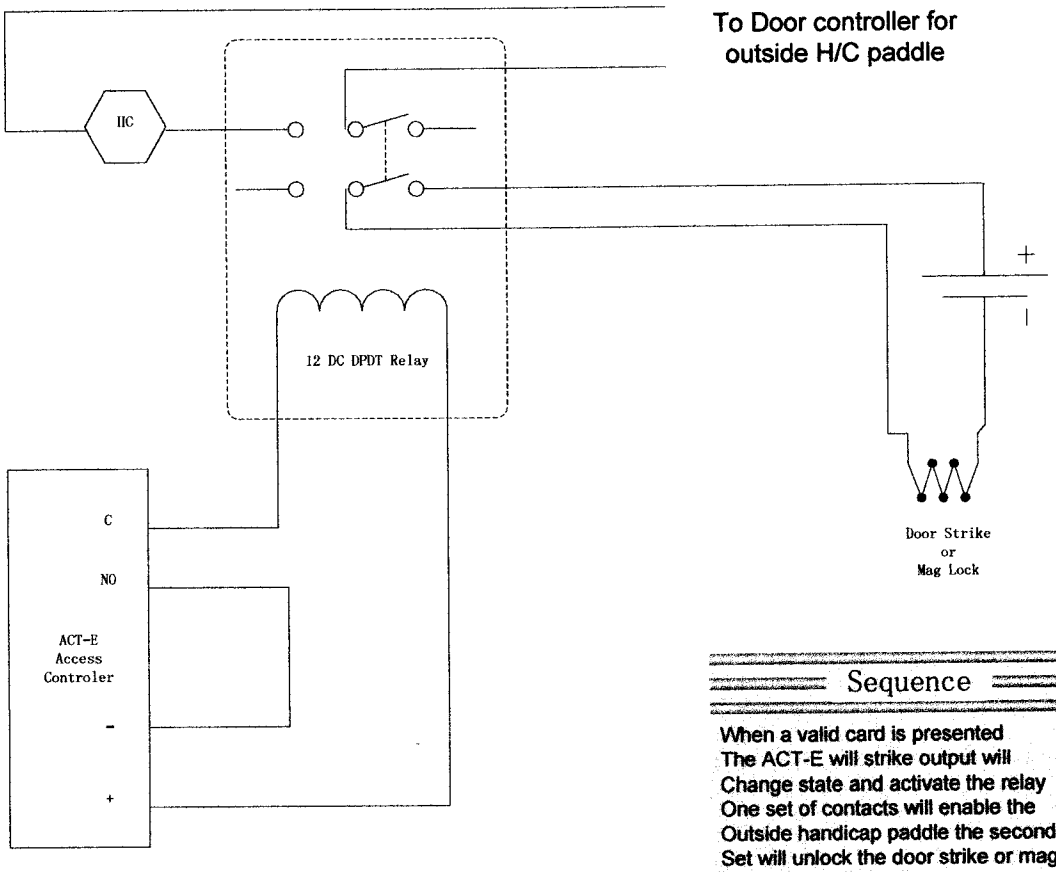


	Interior Column Mount PTZ Camera				
Drawn By KT	SIZE	FSCM NO		DWG NO FDA C1	REV
Reviewed KT	SCALE 1 : 1	Lessor	Gov't	SHEET 10 OF 13	



	Interior Ceiling Mounted PTZ			
Drawn By KT	SIZE	FSCM NO	DWG NO FDA C1	REV
Reviewed KT	SCALE 1 : 1	Lessor	SHEET 11 OF 13 Gov't	

FDA Handicap Door Interconnect



Sequence

When a valid card is presented
The ACT-E will strike output will
Change state and activate the relay
One set of contacts will enable the
Outside handicap paddle the second
Set will unlock the door strike or mag
Lock. The set of contacts for the door
May have to be swaped depending
On if a strike or mag lock is used
The ACT-E must have strike on REX
Firmware.

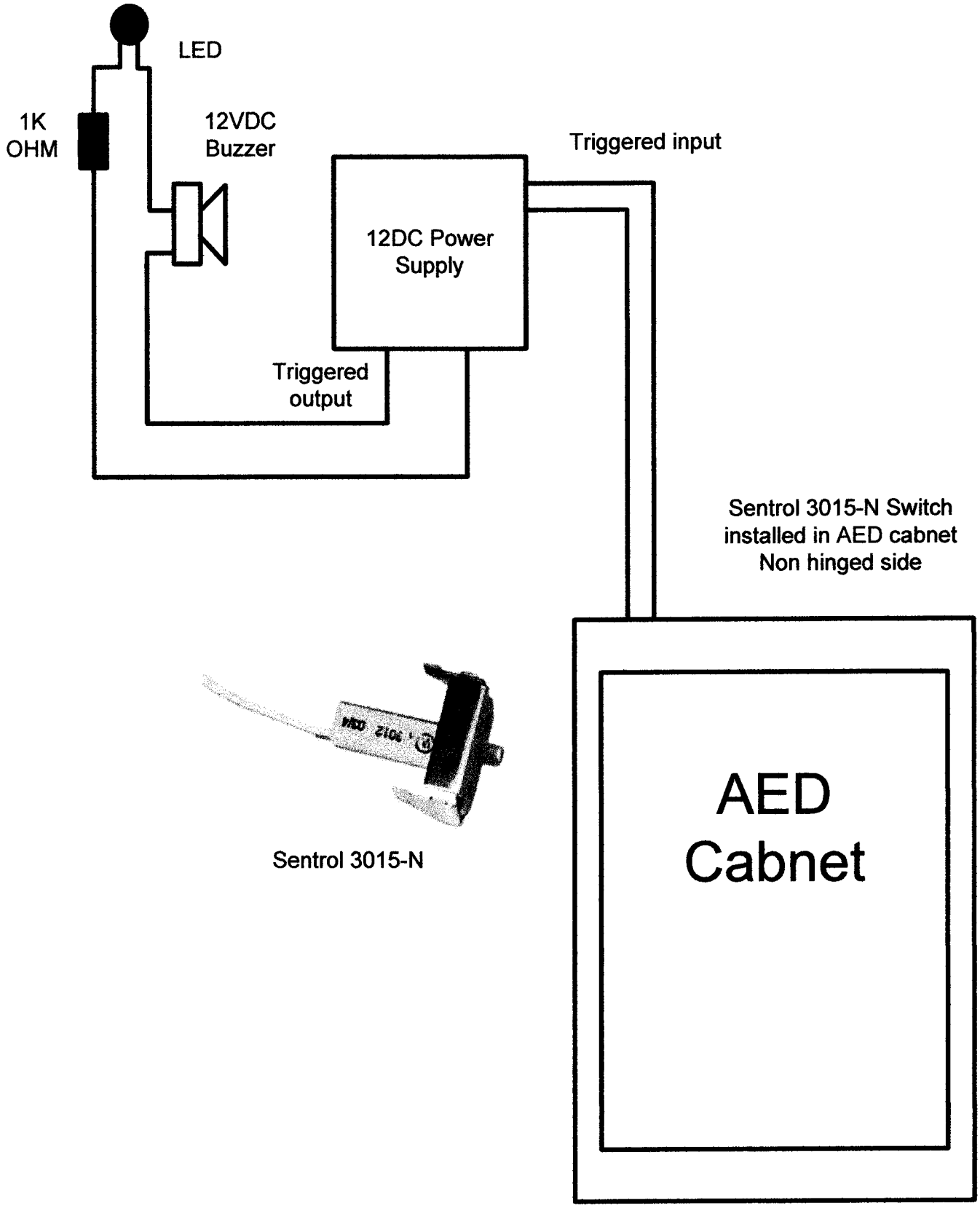
FDA Physical
Security

2/1/2016

Prepaired by:
Karl Thrash

[redacted] 5 U.S.C. (b)(4)

Lessor Gov't



	AED				
Drawn By KT	SIZE	FSCM NO	DWG NO FDA C1		REV
Reviewed KT	SCALE 1 : 1	Lessor	Gov't	SHEET 13 OF 13	

PHYSICAL SECURITY REQUIREMENTS/SPECIFICATIONS FOR FDA FACILITIES

Prepared by: FDA Physical Security Branch

Date: 7/14/09

G:\DPD\DPD Shared

Lessor CR Gov't KYJ

PHYSICAL SECURITY REQUIREMENTS/SPECIFICATIONS
FOR
FDA-OCCUPIED SPACE

I. INTRODUCTION

The following physical security requirements and specifications have been developed to assist in the development of the Program of Requirements (POR) for new facilities, and/or solicitation requirements involving GSA leasing agreements where a relocation is required.

Specific use of brand names or model type may be included in some instances as a guide to the type of equipment required, and should not be misconstrued as a specific requirement, unless a specific type or model has been noted as part of the requirement. Specific security requirements will be determined upon selection of facility.

All facilities will meet the minimum-security standards as set forth in the **U.S. Department of Justice Vulnerability Assessment of Federal Facilities** issued June 28, 1995. These categories are based on such factors as size of a facility, number of employees, and use and mission of the agency. These categories range from **Level I** to **Level V**.

In addition, **ISC Security Design Criteria for New Federal Office Buildings and Major Modernization Projects**, dated June 2009 must be followed.

For further guidelines pertaining to physical security protection refer to the **Code of Federal Regulations** sections reference below.

- **41 CFR 101-20.103-1**; Standard Protection
- **41 CFR 101-20.103-2**; Special Protection

II. CONTENTS

SECTION I FDA Sole Occupant
SECTION II FDA Occupant in Multi-Tenant Building **(Multi-tenant space with commercial tenants is not recommended. Housing FDA in a federal facility with other Government agencies is preferred. FDA will not share or occupy office space with any non-FDA occupants).**
ATTACHMENT A Special Contract Requirements

Note: **Mandatory** minimum requirements for spaces housing **less** than twenty **(20)** federal employees are "specifically" addressed (under **Section II.**), of this document.

SECTION I. FDA SOLE OCCUPANT

PERIMETER FENCING

LESSOR REQUIREMENTS

1. The perimeter fence will be 8' chain link fence, zinc-coated, No. 9 gauge fabric, mesh opening not larger than 2", twisted and barbed selvage at top and bottom. Top rail or top tension wire should be provided in addition to bottom tension wire if a bottom rail is not utilized. Fence should include a double overhang top guard extending 45 degrees outward and inward, 12 gauge three strand barbed wire six inches apart affixed to top of fence post running the entire perimeter fence line, to include gate(s).
2. Gates will consist of the above specifications (fabric) and overhang top guard. Gate opening, (swing, slide, single, or double) will be determined prior to construction.

PERIMETER LIGHTING

LESSOR REQUIREMENTS

1. The FDA standard for foot candles, horizontal plane at ground level is from 2.5 and shall be used for perimeter lighting, exact illumination will be determined for the following areas once the building site has been selected:
   - Perimeter of outer Area (fence line)
   - Vehicle entrance
   - Building face boundary
   - Parking lot
   - Pedestrian entrance/exit
   - Shipping & receiving area
2. Perimeter security lighting should be placed on the Emergency Power Backup Supply.

FIRST FLOOR WINDOWS

LESSOR REQUIREMENTS

1. Permanently sealed.
2. Windows shall be covered with **mylar film**.

FDA REQUIREMENTS

3. Alarmed shock sensors or glass breakage detectors monitored into a central alarm station (local or remote.)

PERIMETER DOORS

LESSOR REQUIREMENTS

1. Doors will be equipped with interior hinges. If hinges are exterior, hinges will be "pinned" or "spot-welded" to prevent pins or door from being removed. Interior hinges are preferred.
2. If entrance doors are glass, or entryways contain glass panels, all glass will be equipped with alarmed shock sensors or glass break detectors monitored into a central alarm station (local or remote.)
3. If entrance doors are glass, doors shall be equipped with a frame that is capable of accommodating an electric strike (fail secure).

4. "Jimmy plates", or "astragals" will be permanently affixed to entry doors over locking mechanism to prevent tampering with door lock.
5. Doors shall be equipped with high security locks (i.e. Medeco, Abloy, Best, etc.). High security locks shall be keyed separately from the interior building master key system. All card reader doors will be keyed alike on a separate master system.
6. Doors equipped with card readers will require locking hardware which will be electric strikes (fail secure).

FDA REQUIREMENTS

7. All perimeter doors will be equipped with recessed magnetic door intrusion alarm contacts including doors with card readers.
8. Door alarms will be monitored into a central alarm station.

FIRE DOORS

LESSOR REQUIREMENTS

1. Fire doors will meet all fire standards/codes, (**NFPA or local codes**).
2. Doors will have, as a minimum, two-point locking latch.
3. Interior hinges.
4. Exterior knob sets, handles, or latches will not be installed, or removed if present.

FDA REQUIREMENTS

5. Doors will be equipped with recessed magnetic door intrusion alarm contacts.
6. Door alarms will be monitored into a central alarm station (local or remote.)

SHIPPING AND RECEIVING DOORS (SOLE OCCUPANT ONLY)

LESSOR REQUIREMENTS

1. Metal type roll-up door.
2. Electrically powered with key-controlled "on/off" system.
3. Manual chain in the event of power failure.

FDA REQUIREMENTS

4. Floor mounted/door mounted balanced magnetic door intrusion alarm contacts.
5. Door alarm(s) will be monitored into a central alarm station (local or remote).

MAIN ENTRANCE (ACCESS CONTROL SYSTEM) (More than one entry may be controlled)

LESSOR REQUIREMENTS

1. Locking hardware will be electric strikes (fail secure).
2. System will have a key override feature to deactivate door lock if required.
3. Card access system will be tied into generator and UPS system.

FDA REQUIREMENTS

4. Install Monitor Dynamics, Inc. (MDI) card access system.
5. Interior shunt (mounted in panic hardware) to deactivate alarm upon egress during security hours.
6. Access system will have minimum 24-hour back-up battery for system memory in the event of power failure.

ROOF HATCHES/ROOF DOOR (APPLIES FOR SOLE TENANT OR OCCUPATION OF TOP FLOOR)

LESSOR REQUIREMENTS

1. Hollow metal.
2. Interior hinges.
3. Locking mechanism will be a double cylinder Medeco or similar high security lock (deadbolt) with a minimum1 inch-bolt throw. Lock will not be keyed on the master perimeter system.
4. Card reader doors will be keyed alike.

FDA REQUIREMENTS

5. Doors will be equipped with card reader.
6. Door will be equipped with recessed magnetic intrusion door alarm contacts that are monitored into a central alarm station (local or remote.)

GARAGE AREA (INSIDE PARKING)

LESSOR REQUIREMENTS

1. Same specifications as shipping and receiving door(s).

FDA REQUIREMENTS

2. If a pedestrian door is part of the overhead door, or is separate, it will be equipped with recessed magnetic door intrusion alarm contacts.
3. Garage door will be equipped with heavy-duty floor mounted contacts.
4. Door alarm will be remoted to a central station (local or remote).
5. Card access will be required to access garage with loop detector for egress from garage.

SECURED AREA FOR GOVERNMENT VEHICLES

LESSOR REQUIREMENTS

1. If an outside, secured area has been provided for government vehicles, i.e. fenced area, the same specifications shall be used as outlined in perimeter fencing except that the height may be 6 feet in lieu of 8 feet.
2. Gate type will be developed during construction, i.e. swing, slide, double or single gates, etc.
3. Lighting requirements must meet lighting standards for parking lots.

PERIMETER PARKING

LESSOR REQUIREMENTS

1. All FDA facilities must have minimum set back requirements as specified under the **Department of Justice Vulnerability Assessment Study of Federal Facilities and ISC Security Design Criteria for New Federal Office Buildings and Major Modernization Projects.**
2. Control of parking to include tiger teeth, gates, bollards, and physical barriers, arms, guard houses, loop detectors, etc.
3. Control of adjacent parking where necessary.
4. Poles for camera installation.

FDA REQUIREMENTS

5. Card readers for gate or arm entrance.

6. Closed circuit television (CCTV) surveillance cameras with digital recorders and emergency call stations if necessary.

INTERIOR CONTROLLED AREAS

The following areas have been designated as Controlled Areas:

- Solvent storage area/alcohol storage
- IT and IT equipment room
- Drug vault or drug storage room
- Sample storage room
- Document room

LESSOR REQUIREMENTS

1. Perimeter walls shall be true "slab-to-slab".
2. Entrance doors to these areas will be hollow metal or solid wood.
3. Interior hinges, or "pinned" or "spot-welded" pins if exterior hinges.
4. Locking mechanism for these areas will be high-security type lock such as Medeco, Abloy or Best. Locks will be "keyed" separately and not be on the building master system.
5. Doors with card readers must be equipped with an electric strike (fail secure) and a store room function knob lock with a high security cylinder as noted in number 4.

FDA REQUIREMENTS

6. Doors will be equipped with card readers, recessed magnetic contacts where applicable.

ADDITIONAL ELECTRONIC ALARM /SURVEILLANCE EQUIPMENT

FDA REQUIREMENTS

1. Closed Circuit Television (CCTV) with monitors and digital video recorders are required at entrances, parking areas, shipping and receiving, and isolated areas needing additional protection or surveillance.
2. Intrusion Detection Systems are required, (i.e. document areas, IT areas, etc. and any other controlled areas).

GUARD SERVICE

LESSOR/FDA/GSA REQUIREMENTS

1. If guard service is not provided by GSA or the building owner, FDA will have the option to request the delegation for contract guard service. Guards/Contract will meet all requirements set forth for contract guards as outlined by **Department of Homeland Security (DHS) and (FDA)**.

CLEANING PERSONNEL

LESSOR REQUIREMENTS

1. Under **Section 301(j)** of the Food, Drug, and Cosmetics Act, to protect non-public and trade secret information all **cleaning** of FDA space will be done during normal work hours **Monday through Friday between 8:00 a.m. to 4:30 p.m.** All controlled areas will be cleaned under the **escort of a guard or a FDA employee**.

2. All cleaning personnel must complete and pass local police checks or background investigations in accordance with **FDA, GSA and Presidential Directive HSPD-12.** (See **Attachment A.**)

MAINTENANCE PERSONNEL

LESSOR REQUIREMENTS

1. Maintenance personnel will also be required to complete and pass local police checks or background investigations in accordance with both **FDA, GSA and HSPD-12** requirements as specified under Presidential directive. (See **Attachment A.**)

OVERALL SECURITY

- FDA will not share or occupy office space with any non-FDA occupants.

INTERIOR WALLS/CORRIDOR WALLS

LESSOR REQUIREMENTS

1. Where FDA space (perimeter walls) abuts a non-FDA tenant, that perimeter wall will be "true" slab-to-slab. If current walls are not slab-to slab, walls should be extended with expanded metal placed between drywall to prevent access through wall(s) and/or over "drop ceiling".

FDA REQUIREMENTS

2. When FDA occupies more than one floor, controlled access is required on entrance doors and stairwell side of stairwell doors, i.e. keypads.

WINDOWS

1. Whenever windows grant access to FDA space (first floor windows), they should be modified to reduce that possibility, e.g. permanently sealed or window security locks.

LIGHTING

1. Adequate perimeter lighting will be checked to ensure all exit/entrance doors have sufficient lighting and that they are working properly. Lighting levels should be **2.5 foot-candle**.

   NOTE: This includes emergency/fire doors if applicable.

PERIMETER DOORS TO FDA SPACE

Where applicable, the selection of perimeter doors should include:

1. Solid wood or hollow metal doors.
2. Interior door hinges. If existing doors have exterior door hinges, they should be "pinned" or "spot welded" to prevent removal of pins and/or doors.

3. Locking hardware should include "**high security**" knob-sets (eg. Medeco, Abloy or Best), in addition to single cylinder **dead bolts**, minimum bolt throw 1" mounted above knob set. Both knob-set and dead bolt should be keyed-alike.
4. Jimmy plates shall be installed over all perimeter locks if dead-bolt locks.
5. All interior locks will be keyed different from building master key for all FDA space.
6. All perimeter doors will be checked to ensure heavy duty **door closures** are installed, working properly and that existing doors are not warped, preventing them from normal closing and proper locking.

INTRUSION DETECTION/ACCESS CONTROL SYSTEM

1. Card readers will be utilized on all perimeter door entrances.
2. Intrusion alarms, door contacts, and window sensors will be utilized to protect all FDA space.
3. Video intercoms with remote release stations may be utilized.

PROTECTION OF GOVERNMENT VEHICLES

LESSOR RESPONSIBILITY

1. Protection should be afforded to government vehicles leased from GSA.
2. Protection shall be by means of protective fencing and/or enclosed garage or parking areas that can be properly secured during non-working hours. (For further guidelines refer to the **Code of Federal Regulations** reference below).
    - **41 CFR 101-20.103-1**; Standard Protection
    - **41 CFR 101-20.103-2**; Special Protection

SECTION II. FDA OCCUPANT IN MULTI-TENANT BUILDING

Note: Multi-tenant space with commercial tenants is not recommended. Housing FDA in a federal facility with other Government agencies is preferred.

- **In spaces where the total number of federal employees is less than twenty (20), only the security requirements listed here in Section II. are mandatory minimum requirements.**

OVERALL SECURITY

- FDA shall **not** share or occupy office space with any **non-FDA** occupants/tenants.

INTERIOR WALLS/CORRIDOR WALLS

LESSOR REQUIREMENTS

1. Whenever FDA (perimeter walls/space) abuts a non-FDA tenant, that perimeter wall shall be true "**slab-to-slab**" construction. If not, "**expanded metal**" shall be installed between the top of the wall and the slab above to prevent access.

LESSOR REQUIREMENTS

Under **Section 301(j)** of the Food, Drug, and Cosmetics Act, to protect non-public and trade secret information all **cleaning** of FDA space will be done during normal work hours **Monday through Friday between 8:00 a.m. to 4:30 p.m.** All controlled areas will be cleaned under the **escort of a guard or a FDA employee.**

All cleaning personnel must complete and pass local police checks or background investigations in accordance with **FDA, GSA and Presidential Directive HSPD-12.** (See **Attachment A.**)

WINDOWS

1. Whenever windows grant access to FDA space (ie. first floor windows), they shall be modified to prevent that possibility, (e.g. permanently sealed or have window security locks installed).

LIGHTING

1. Adequate perimeter lighting will be checked to ensure all exit/entrance doors have sufficient lighting and that they are working properly. Lighting levels shall be no less than **2.5 foot-candle.**

Note: This requirement shall include emergency/fire doors whenever applicable.

PERIMETER DOORS TO FDA SPACE

Where applicable, the selection/hardware setup of the perimeter doors should include:

1. Solid wood or hollow metal doors.
2. Interior door hinges. If existing doors have exterior door hinges, they should be "pinned" or "spot welded" to prevent **removal** of pins and/or doors.
3. Locking hardware should include "**high security**" knob-sets (eg. Medeco, Abloy or Best), in addition to single cylinder **dead bolts**, minimum bolt throw 1" mounted above knob set. Both knob-set and dead bolt should be keyed-alike.
4. **Jimmy plates** shall be installed over all perimeter locks if dead-bolt locks.
5. All interior locks will be **keyed different** from building master key for all FDA space.
6. All perimeter doors will be checked to ensure heavy duty **door closures** are installed, working properly and that existing doors are not warped, preventing them from normal closing and proper locking.

ATTACHMENT A

SPECIAL CONTRACT REQUIREMENTS

Security Clearance Requirements for (Janitorial, Maintenance, Etc.)

I. All FDA Locations

A. Contractors shall contact the **FDA Personnel Security Branch,** (Lanise Giles **301-796-4595**) to obtain the necessary forms needed for the "security clearance" process.
B. These forms are required for all replacement employees before entrance on duty.
C. The Government shall have and exercise full and complete control over granting, denying, withholding or terminating clearances for Contractor employees.
D. If the Contracting Officer receives an **unsuitable** report of any employee after processing the required forms, or if the Contracting Officer's Representative finds a prospective employee to be unsuitable or unfit for his assigned duties, the contractor shall be advised immediately that such employee **cannot** continue to work or be assigned to work under the contract.
E. For employees cleared through this process while employed by a contractor who is subsequently replaced by another contractor, in the same building, the new contractor shall only be required to submit another set of these forms if the employee has not been cleared within the last **2 years**.
F. Only upon completion of all the required forms and a receipt of a "favorable" fingerprint certification will a contractor be cleared to receive an **FDA access badge**.

Large Computer Room General Requirements
Ver. 10.20.2010

General Requirements:

1. The computer room should be placed within the FDA office space in as central a location as possible in order to equalize the plant wiring runs from the switches to the wall plates.
   (Planning for this requirement is to be provided by Local FDA management)

2. The computer room shall be equipped with a lockable door, keyed independently from other office doors to limit access to unauthorized personnel.
   (To be provided during the build out by the General Contractor or Electrician)

3. The computer room shall be equipped with a card key access controlled and monitored by Headquarters, in order to provide a record of entry into the space.
   (To be provided during the build out by Headquarters Security office)

4. The computer room shall have no door which opens to public space. Public space is defined as any space not under the local FDA office direct control. Public space will include but is not limited to public hallways, corridors, common building space or any other building occupants leased space.
   (Planning for this requirement is to be provided by Local FDA management)

5. The wall construction around the perimeter of the computer room must be floor slab to floor slab in order to prevent access to the room by crawling over the wall above the suspended ceiling.
   (To be provided during the build out by the General Contractor or Electrician)

6. The computer room must provide a raised floor in order to promote sufficient air flow for cooling and provide a means to manage the necessary cabling, both data and electrical, that will be required by the systems installed within.
   (To be provided during the build out by the General Contractor or Electrician)

7. The computer room raised floor(preferred) shall have a light colored, non-conductive floor covering, such as linoleum or tiles. Carpet of any type will not be acceptable.
   (To be provided during the build out by the General Contractor or Electrician)

8. The entry door of the computer room shall swing outward to minimize the impact on the room's interior space.
   (To be provided during the build out by the General Contractor or Electrician)

9. The size of the computer room shall be a minimum of 200 SF and used to house only IT WAN equipment, LAN equipment, VoIP equipment and Headquarters Security equipment.
   (To be provided during the build out by the General Contractor or Electrician)

10. Two or more, two post, floor mounted racks installed in a way to facilitate future growth, with cable and power management systems and ceiling ladders as necessary meet the entire floor data connection requirements , floor mounted with rear and side clearance to provide access and ventilation.
    (To be provided by O'Connor Technologies)

11. Space on the rack for as many RJ-45 Patch Panels as necessary to meet the entire floor data connection requirements.
    (To be provided by O'Connor Technologies)

12. In addition to patch panels, space on each rack for one router, plus one, with expansion to four, Cisco 3750 POE switches or one Cisco 4507 POE switch and their related UPS units.
    (Switches to be provided by the VoIP Upgrade Project)

13. Provide one, 120v / 20amp dedicated electrical circuit per each required device listed below. Receptacles are to be installed on the ends of flexible conduit runs and will be placed under the raised flooring to allow for movement to the desired locations as needed. Devices: Small VoIP switch UPS units, LabSAN Server UPS units, District Server UPS units and the SMS Server UPS units.
    (To be provided during the build out by the General Contractor or Electrician)

14. Provide one, 220v / 20amp dedicated electrical circuit and one 220v / 30amp dedicated electrical circuit per each required Cisco 4507 switch UPS. Specific NEMA type receptacles are to be installed on the ends of flexible conduit runs and will be placed under the raised flooring to allow for movement to the desired locations as needed. These circuits will be used to provide electric service for the large VoIP Cisco 4507 switch UPS units.
    (To be provided during the build out by the General Contractor or Electrician)

15. Provide, one, 4'x8', 3/4" plywood panel, installed long side to the floor and wall mounted behind the rack. Dry wall compound skim coated and painted to match room color. Skin coating to be applied after code inspection to allow verification the plywood has the proper fire rating.
    (To be provided during the build out by the General Contractor or Electrician)

16. Provide, one 4X4, 120v / 20amp dedicated quad box, mounted on the plywood panel to service wall mounted equipment. Mount quad box high on the plywood panel to support Telco gear and the FDA security system.
    (To be provided during the build out by the General Contractor or Electrician)

17. Provide ample electrical service to power future equipment needs within reason. We suggest wall mounted duplex receptacles every 8 foot if space permits.
    (To be provided during the build out by the General Contractor or Electrician)

18. A supplemental HVAC system is required for all large computer rooms. Thermostat controlled exhaust fans are not to be considered a substitute for supplemental cooling. IT network and VoIP equipment generates considerable heat and the BTU heat loading is substantial. A copy of the BTU loading will be included with this document.
    (To be provided during the build out by the General Contractor or Electrician)

19. Provide a pathway for 25, 50 or 100 4-pair copper trunks and/or fiber optic runs from the building de-mark to the FDA computer room. This pathway shall terminate on the top of the FDA de-mark board referenced in item # 15 and slightly below the ceiling grid.
    (To be provided during the build out by the General Contractor or Electrician)

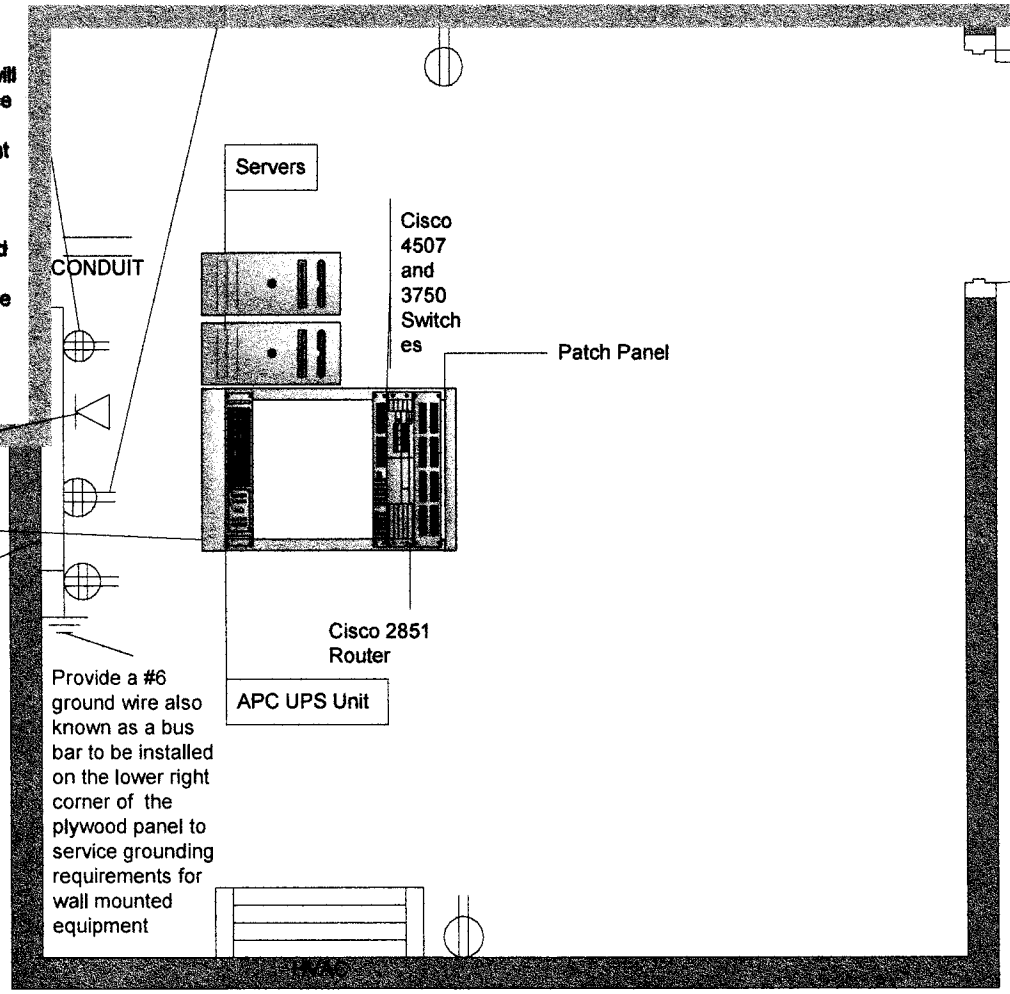
1. Provide one, 220v / 20amp dedicated electrical circuit and one 220v / 30amp dedicated electrical circuit per each required Cisco 4507 switch UPS. Specific NEMA type receptacles are to be installed on the ends of flexible conduit runs and will be placed under the raised flooring to allow for movement to the desired locations as needed. These circuits will be used to provide electric service for the large VoIP Cisco 4507 switch UPS units.

2. Provide, one, 4'x8', 3/4" plywood panel, installed long side to the floor and wall mounted behind the rack. Dry wall compound skim coated and painted to match room color. Skin coating to be applied after code inspection to allow verification the plywood has the proper fire rating.

1. The size of the computer room shall be a minimum of 200 SF and used to house only IT WAN equipment, LAN equipment, VoIP equipment and Headquarters Security equipment.

2. Provide one, 220v / 20amp dedicated electrical circuit and one 220v / 30amp dedicated electrical circuit per each required Cisco 4507 switch UPS. Specific NEMA type receptacles are to be installed on the ends of flexible conduit runs and will be placed under the raised flooring to allow for movement to the desired locations as needed. These circuits will be used to provide electric service for the large VoIP Cisco 4507 switch UPS units.

1. Two or more, two post, floor mounted racks installed in a way to facilitate future growth, with cable and power management systems and ceiling ladders as necessary meet the entire floor data connection requirements , floor mounted with rear and side clearance to provide access and ventilation.



1. The computer room shall be equipped with a lockable door, keyed independently from other office doors to limit access to unauthorized personnel.

1. The computer room shall be equipped with a card key access controlled and monitored by Headquarters, in order to provide a record of entry into the space.

1. Provide, one, 4'x8', 3/4" plywood panel, installed long side to the floor and wall mounted behind the rack. Dry wall compound skim coated and painted to match room color. Skin coating to be applied after code inspection to allow verification the plywood has the proper fire rating.

1. The computer room shall have no door which opens to public space. Public space is defined as any space not under the local FDA office direct control. Public space will include but is not limited to public hallways, corridors, common building space or any other building occupants leased space.

Provide a separate, 24 hour, HVAC system adequate to provide proper ventilation for the installed of all VoIP, IT and Security equipment. Proper ventilation is considered to be temperature maintained between 68 and 72 degrees @ 50% RH. The system will require a minimum of both one air inlet and one outlet in the LAN area or the utilization of a ductless HVAC system. Thermostat controlled exhaust fans are not to be considered a substitute for the supplemental cooling system

1. The computer room must provide a raised floor in order to promote sufficient air flow for cooling and provide a means to manage the necessary cabling, both data and electrical, that will be required by the systems installed within. Raised floor request can be relaxed

2. The computer room raised floor shall have a light colored, non-conductive floor covering, such as linoleum or tiles. Carpet of any type will not be acceptable.

Lessor ____ Gov't ____

Computer Rm BTU Loading Worksheet (Rev. 11.26.2012)

Manufacturer	Function	Model	BTU/HR or Wattage	Qty	BTU/Hr	Extended BTU/Hr
Cisco	VoIP Switch	C3750G-24PS	2440 BTU/hr @ 715W	0	2440	0
Cisco	VoIP Switch	4507R-E	2387 BTU/hr @ 2333W	2	2387	4774
Cisco	Network Router	3845	1890 BTU/hr @ 555W	0	1890	0
Cisco	Network Router	2851	197 BTU/hr @ 58W	0	197	0
Cisco	Network Router	ISR4451	1800 BTU/hr @1000W	1	1800	1800
Cisco	Network Router	ISR4431	1000 BTU/hr @500W	0	0	0
Cisco	Analog Device	VG-224	204 BTU/hr @ 60W	1	204	204
Cisco	Media Delivery System Server	MDE 1100	3490 BTU/hr @ 800W	1	3490	3490
APC	VoIP Switch UPS	SUA2200XL	6312 BTU/hr @1850W	0	6312	0
APC	VoIP Switch UPS	SURTD5000RMXLT-1TF5	11942 BTU/hr @ 3500W	1	11942	11942
Cisco	VoIP CRS/TAPS Server	N/A	3490 BTU/hr @ 800W	0	3490	0
Cisco	VoIP CCM Subscriber	N/A	1710 BTU/hr @ 420W	0	1710	0
Cisco	VoIP CCM Publisher	N/A	1710 BTU/hr @ 420W	0	1710	0
Unknown	VoIP IP Celerate (paging) Server	N/A	1826 BTU/hr @ 350W	0	1826	0
Dell	District Server	Poweredge T410	1365 BTU/hr @ 400W	1	1365	1365
Dell	LABSAN Server	Poweredge T310	1280 BTU/hr @375W	0	1280	0
Dell	LABSAN Server	Poweredge T410	1365 BTU/hr @ 400W	2	1365	2730
Dell	SCCM Server	Poweredge T310	1280 BTU/hr @375W	0	1280	0
APC	SCCM UPS	Smart-UPS 1500	3412 BTU/hr @ 1000W	1	3412	3412
Dell	Axas|}	Dimension 2400	853 BTU/hr	0	853	0
Dell	Monitor, TepSys / SMS	N/A	Minimal	1	0	0
HP	SANs, VC	ProLiant DL380	3530 BTU/hr @ 850W	1	3530	3530
HP	SANs ESX	ProLiant DL380	3530 BTU/hr @ 850W	1	3530	3530
HP	SANs ESX	ProLiant DL380	3530 BTU/hr @ 850W	1	3530	3530
HP	Domain Controller	ProLiant DL380	3530 BTU/hr @ 850W	1	3530	3530
HP	SANs KVM	IP Server Console Switch	Minimal	1	0	0
HP	SANs MSA Controller	MSA 2012 fc, 12 HDs	1622 BTU/hr @ 475W	1	1622	1622
HP	SANs MSA, Drive Enclosure 1	MSA 30 SB Storage, 12 HDs	1232 BTU/hr	1	1232	1232
HP	SANs MSA, Drive Enclosure 2	MSA 30 SB Storage, 12 HDs	1232 BTU/hr	1	1232	1232
HP	SANs MSA, Drive Enclosure 3	MSA 30 SB Storage, 12 HDs	1232 BTU/hr	1	1232	1232
HP	SANs Backup Tape Library	MSL4048 2 Ultrium 960	1065 BTU/hr @312 Watts	1	0	0
HP	SANs Fibre Channel Switch	HP StorageWorks 4/16 SANs Switch	266 BTU/hr @ 75W	1	266	266
Tripp Lite	SMART UPS PRO	Smart UPS	198 BTU/hr @2250	1`	2250	2250
Check Point	LIMS Firewall	4800 Series	426 BTU/hr @275W	1	426	426
Cisco	SANs Gigabit Switch	2960, 24 port	244 BTU/hr @ 72W	4	244	976
Riverbed	WAN Optimizer	6050 Series 310 MPBS	1670@352W	1	1670	1670
Riverbed	WAN Optimizer	3500 Series 45 MPBS	1450 BTU/HR @435	0	1450	0
Riverbed	WAN Optimizer	1500 Series 4 MPBS	508 BTU/hr @ 149W	0	508	0
					Total BTU Per Hour	**54,743**

Note - With Redundant PSs

SECURITY REQUIREMENTS - FACILITY SECURITY LEVEL II

THESE PARAGRAPHS CONTAIN ADDITIONAL SECURITY REQUIREMENTS, AND, UNLESS INDICATED OTHERWISE, ARE TO BE PRICED AS PART OF THE BUILDING SPECIFIC AMORTIZED CAPITAL (BSAC). WHERE THEY ARE IN CONFLICT WITH ANY OTHER REQUIREMENTS ON THIS LEASE, THE STRICTEST SHALL APPLY.

DEFINITIONS:

CRITICAL AREAS - The areas that house systems that if damaged or compromised could have significant adverse consequences for the facility, operation of the facility, or mission of the agency or its occupants and visitors. These areas may also be referred to as "limited access areas," "restricted areas," or "exclusionary zones." Critical areas do not necessarily have to be within Government-controlled space (e.g., generators, air handlers, electrical feeds which could be located outside Government-controlled space).

SENSITIVE AREAS – Sensitive areas include vaults, SCIFs, evidence rooms, war rooms, and sensitive documents areas. Sensitive areas are primarily housed within Government-controlled space.

FACILITY ENTRANCES, LOBBY, COMMON AREAS, NON-PUBLIC, AND UTILITY AREAS.

FACILITY ENTRANCES AND LOBBY

EMPLOYEE ACCESS CONTROL AT ENTRANCES (SHELL)
The Lessor shall provide key or electronic access control for the entrance to this building. All Government employees, under this lease, shall be allowed access to the leased space (including after-hours access).

COMMON AREAS, NON-PUBLIC, AND UTILITY AREAS.

PUBLIC RESTROOM ACCESS (SHELL)
The Government reserves the right to control access to public restrooms located within the Space.

SECURING CRITICAL AREAS (SHELL)
The Lessor shall secure areas designated as Critical Areas to restrict access:

A. Keyed locks, keycards, or similar security measures shall strictly control access to mechanical areas. Additional controls for access to keys, keycards, and key codes shall be strictly maintained. The Lessor shall develop and maintain accurate HVAC diagrams and HVAC system labeling within mechanical areas.

B. Roofs with HVAC systems shall also be secured. Fencing or other barriers may be required to restrict access from adjacent roofs based on a Government Building Security Assessment. Roof access shall be strictly controlled through keyed locks, keycards, or similar measures. Fire and life safety egress shall be carefully reviewed when restricting roof access.

C. At a minimum, Lessor shall secure building common areas including sprinkler rooms, electrical closets, telecommunications rooms.

VISITOR ACCESS CONTROL (SHELL)
Entrances are open to the public during business hours. After hours, visitor entrances are secured, and have a means to verify the identity of persons requesting access prior to allowing entry into the Space.

INTERIOR (GOVERNMENT SPACE)

DESIGNATED ENTRANCES (SHELL)
The Government shall have a designated main entrance.

IDENTITY VERIFICATION (SHELL)
The Government reserves the right to verify the identity of persons requesting access to the Space prior to allowing entry.

FORMAL KEY CONTROL PROGRAM (SHELL)
The Government reserves the right to implement a formal key control program. The Lessor shall have a means of allowing the electronic disabling of lost or stolen access media, if electronic media is used.

SITES AND EXTERIOR OF THE BUILDING

SIGNAGE

POSTING OF SIGNAGE IDENTIFYING THE SPACE AS GOVERNMENTAL (SHELL)
The Lessor shall not post sign(s) or otherwise identify the facility and parking areas as a Government, or specific Government tenant, occupied facility, including during construction, without written Government approval.

POSTING OF REGULATORY SIGNAGE (SHELL)
The Government may post or request the Lessor to post regulatory, statutory, sensitive areas and site specific signage.

LANDSCAPING

LANDSCAPING REQUIREMENTS (SHELL)
Lessor shall maintain landscaping (trees, bushes, hedges, land contour, etc,) around the facility. Landscaping shall be neatly trimmed in order to minimize the opportunity for concealment of individuals and packages/containers. Landscaping shall not obstruct the views of security guards and CCTV cameras, or interfere with lighting or IDS equipment.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (SHELL)
The Lessor shall separate from public access, restricted areas as designated by the Government, through the application of Crime Prevention Through Environmental Design (CPTED) principles by using trees, hedges, berms, or a combination of these or similar features, and by fences, walls, gates and other barriers, where feasible and acceptable to the Government.

HAZMAT STORAGE
If there is HAZMAT storage, Lessor shall locate it in a restricted area or storage container away from loading docks, entrances, and uncontrolled parking.

PLACEMENT OF RECEPTACLES, CONTAINERS, AND MAILBOXES
Trash receptacles, containers, mailboxes, vending machines, or other fixtures and/or features that could conceal packages, brief cases, or other portable containers shall be located 10 feet away from building.

SECURITY SYSTEMS

CLOSED CIRCUIT TELEVISION SYSTEM (CCTV)

LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE
The lessor shall design, install, and maintain a Closed Circuit Television (CCTV) system as described in this section. The CCTV system will support the entry control system (at entrances and exits to the space), with time lapse video recording, that will allow Government employees

to view and communicate remotely with visitors before allowing access to the Space. As determined by the Government the CCTV system shall provide unobstructed coverage of designated pedestrian entrances and exits. Technical review of the proposed system shall be coordinated with the Government security representative, at the direction of the Contracting Officer, prior to installation. CCTV system testing and acceptance shall be conducted by the Government prior to occupancy. The CCTV system shall comply with the Architectural Barriers Act, section F230.0. The Government will centrally monitor the CCTV system. Government specifications are available from the Lease Contracting Officer. CCTV system components which fail or require maintenance or which fail during testing should be serviced in accordance with the Security System Maintenance Criteria listed below.

Security System Maintenance Criteria: The Lessor, in consultation and coordination with a security provider, either internal or external, as determined by the Lease Contracting Officer, and the Government security representative, shall implement a preventive maintenance program for all security systems the Lessor has installed. Any critical component that becomes inoperable must be replaced or repaired by the Lessor within 5 business days. Critical components are those required to provide security (IDS, CCTV, access control, etc.) for a perimeter access point or critical area. "Replacement" may include implementing other temporary measures in instances where the replacement or repair is not achievable within the specified time frame (e.g. a temporary barrier to replace an inoperable pop-up vehicle barrier, etc.). Failure by the Lessor to provide sufficient replacement measures within the timeframe identified above may result in the Government's providing guard service, the cost of which must be reimbursed by the Lessor.

INTRUSION DETECTION SYSTEM (IDS)

LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE

The Lessor shall design, install, and maintain an Intrusion Detection System (IDS) as described in this section. The Government requires an IDS, which will cover perimeter entry and exit doors, and operable ground-floor windows. Basic Security-in-Depth IDS components include: magnetic door switch(s), alarm system keypad, passive infrared sensor(s) (PIR), an alarm panel (to designated monitoring center) and appropriate communication method i.e. telephone and/or Internet connection, glass-break detector, magnetic window switches or shock sensors. Technical review of the proposed system shall be coordinated with the Government security representative, at the direction of the Lease Contracting Officer, prior to installation. System testing and acceptance shall be conducted by the Government prior to occupancy.

Basic Security-in-Depth IDS shall be connected to and monitored at a central station operated by the Department of Homeland Security Megacenter. Emergency notification lists shall be coordinated with the monitoring station to include all applicable Government and lessor points of contact. Monitoring shall be designed to facilitate a real-time detection of an incident, and to coordinate an active response to an incident. The Lessor must complete the Megacenter Alarm Requirements (MAR) application process specified by the Government to meet the monitoring requirements for a functional IDS. Components which fail or require maintenance or which fail

during testing shall be serviced in accordance with the Security System Maintenance Criteria listed below..

Security System Maintenance Criteria: The Lessor, in consultation and coordination with a security provider, either internal or external, as determined by the Lease Contracting Officer, and the Government security representative, shall implement a preventive maintenance program for all security systems the Lessor has installed. Any critical component that becomes inoperable must be replaced or repaired by the Lessor within 5 business days. Critical components are those required to provide security (IDS, CCTV, access control, etc.) for a perimeter access point or critical area. "Replacement" may include implementing other temporary measures in instances where the replacement or repair is not achievable within the specified time frame (e.g. a temporary barrier to replace an inoperable pop-up vehicle barrier, etc.). Failure by the Lessor to provide sufficient replacement measures within the timeframe identified above may result in the Government's providing guard service, the cost of which must be reimbursed by the Lessor.

DURESS ALARM

LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE

The Lessor shall design, install, and maintain a duress alarm system as described Technical review shall be coordinated with the Government security representative, at the direction of the Contracting Officer, prior to installation. System testing and acceptance shall be conducted by the Government prior to occupancy. This system shall comply with the Architectural Barriers Act, section F230.0.

The Lessor in consultation and coordination with the security provider and Government shall conduct security system performance testing annually. Testing must be based on established, consistent agency-specific protocols, documented and furnished to the Contracting Officer. Components which fail or require maintenance or which fail during testing should be serviced in accordance with the Security System Maintenance Criteria listed below.

Security System Maintenance Criteria: The Lessor in consultation and coordination with a security provider, either internal or external, as determined by the Lease Contracting Officer, and the Government security representative shall implement a preventive maintenance program for all security systems they have installed. Any critical component that becomes inoperable must be replaced or repaired within 5 business days. Critical components are those required to provide security (IDS, CCTV, access control, etc.) for a perimeter access point or critical area. "Replacement" may include implementing other temporary measures in instances where the replacement or repair is not achievable within the specified time frame (e.g. a temporary barrier to replace an inoperable pop-up vehicle barrier, etc.). Failure by the Lessor to provide sufficient replacement measures within the timeframe identified above may result in the Government's providing guard service, the cost of which must be reimbursed by the Lessor.

STRUCTURE

WINDOWS

SHATTER-RESISTANT WINDOW PROTECTION

The Lessor shall provide and install, shatter-resistant material not less than 0.18 millimeters (7 mil) thick on all exterior windows in Government-occupied space meeting the following properties - Film composite strength and elongation rate measured at a strain rate not exceeding 50% per minute shall not be less than the following:

- Yield Strength: 12,000 psi
- Elongation at yield: 3%
- Longitudinal Tensile strength: 22,000 psi
- Traverse Tensile strength: 25,000 psi
- Longitudinal Elongation at break: 90%
- Traverse Elongation at break: 75%

THE ALTERNATIVE METHOD is for the Lessor to provide a window system that conforms to a minimum glazing performance condition of "3b" for a high protection level and a low hazard level. Window systems shall be certified as prescribed by WINGARD PE 4.3 or later to GSA performance condition 3b (in accordance with the GSA Standard Test Method for Glazing and Window Systems Subject to Dynamic Loadings or Very Low Hazard (in accordance with ASTM F 1642, Standard Test Method for Glazing or Glazing Systems Subject to Air Blast Loading) in response to air blast load of 4 psi/28 psi-msec.

If the Lessor chooses the Alternative Method, they shall provide a description of the shatter-resistant window system and provide certification from a licensed professional engineer that the system as offered meets the above standard. Prior to installation, this will be provided for evaluation by the Government, whose approval shall not be unreasonably withheld.

OPERATIONS AND ADMINISTRATION

LESSOR TO WORK WITH FACILITY SECURITY COMMITTEE (FSC) (SHELL)

The Lessor shall cooperate and work with the buildings Facility Security Committee (FSC) throughout the term of the lease.

ACCESS TO BUILDING INFORMATION (SHELL)

Building Information—including mechanical, electrical, vertical transport, fire and life safety, security system plans and schematics, computer automation systems, and emergency operations procedures—shall be strictly controlled. Such information shall be released to authorized personnel only, approved by the Government, by the development of an access list

and controlled copy numbering. The Contracting Officer may direct that the names and locations of -Government tenants not be disclosed in any publicly accessed document or record. If that is the case, the Government may request that such information not be posted in the building directory.

Lessor shall have emergency plans and associated documents readily available in the event of an emergency.

SECURITY UNIT PRICE LIST (FSL II)

REQUEST FOR LEASE PROPOSAL 5KS0070

31-Oct-16

FDA

LENEXA, KS

	Lease Security Standards Section	*Unit Price*	*Quantity*	*Total*
	FACILITY ENTRANCES			
	FACILITY ENTRANCES AND LOBBY			
	EMPLOYEE ACCESS CONTROL AT ENTRANCES			
	COMMON AREAS, NON-PUBLIC, AND UTILITY AREAS			
	PUBLIC RESTROOM ACCESS			
	SECURING "CRITICAL AREAS"			
	VISITOR ACCESS CONTROL			
	INTERIOR OF SPACE (GOVERNMENT)			
	DESIGNATED ENTRANCES			
	IDENTITY VERIFICATION			
	FORMAL KEY CONTROL PROGRAM			
	SITE AND EXTERIOR OF BUILDING			
	SIGNAGE			
	POSTING OF SIGNAGE IDENTIFYING THE SPACE AS GOVERNMENTAL			
	POSTING OF REGULATORY SIGNAGE			

Lessor _____ Gov't _____

LANDSCAPING AND ENTRANCES			
LANDSCAPING REQUIREMENTS	[redacted]		
CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN	[redacted]		
HAZMAT STORAGE	1	LS	[redacted]
PLACEMENT OF RECEPTACLES, CONTAINERS, AND MAILBOXES	N/A	N/A	N/A
SECURITY SYSTEMS			
CLOSED CIRCUIT TELEVISION			
LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE - LEVEL II	1	LS	$[redacted]
GOVERNMENT PROVIDED PRODUCT, INSTALLATION, AND MAINTENANCE	N/A	N/A	N/A
INTRUSION DETECTION SYSTEM			
LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE - LEVEL II	1	LS	$[redacted]
GOVERNMENT PROVIDED PRODUCT, INSTALLATION, AND MAINTENANCE	N/A	N/A	N/A
DURESS ALARM			
LESSOR PROVIDED DESIGN, INSTALLATION, AND MAINTENANCE - LEVEL II	1	LS	$[redacted]
GOVERNMENT PROVIDED PRODUCT, INSTALLATION, AND MAINTENANCE	N/A	N/A	N/A
STRUCTURE			
WINDOWS			
SHATTER-RESISTANT WINDOW PROTECTION	1	LS	$[redacted]
OPERATIONS AND ADMINISTRATION			
LESSOR TO WORK WITH THE FACILITY SECURITY COMMITTEE (FSC)	[redacted]		
ACCESS TO BUILDING INFORMATION	[redacted]		
TOTAL COSTS	$[redacted]		

5 U.S.C. (b)(4)

5 U.S.C. (b)(4)

Lessor _____ Gov't _____

MDI Access Control System Requirements

Monitor Dynamics Incorporated (MDI) Access Control System Overview: The MDI Network Security System is a state-of-the-art access control system, which has been installed at over 158 FDA facilities nation-wide. This system uses encoded magnetic strip badges and remote card readers to control access throughout buildings. Badges have been pre-programmed by FDA HQ (via the magnetized strip). If a card reader correctly identifies the badge as having access to the protected area, it deactivates the locking device and grants access. The MDI system is monitored by the Agency's Security Command Center to ensure when alarms and or intrusion is detected the appropriate responding officials are notified.

The MDI access control system has many components, but the most important component is the Remote Terminal Unit (RTU) / Integrated Digital Controller (IDC). This is a box-like panel that serves as the brain of the MDI system. As the brain, it serves as the termination point for all front end security monitoring components (i.e. card readers, glass break sensors, contacts, keypads and locking hardware). In lieu of this, the RTU/IDC must be properly safeguarded and located in a secured area with access control and high security locking hardware. The RTU/IDC communicates intrusion detection information to the Agency's Security Command Center via the Local Area Network (LAN) connection, while also maintaining access control information locally within the internal built-in processor.

Throughout this document will be the necessary MDI security system **rough-in** requirements, please take the time to review and comply with those that pertain to your discipline(s).

1. **LAN Connectivity:**

   a. A dedicated IP Address shall be provided for each RTU/IDC panel separately. (The IP addresses shall be supplied by the **FDA IT Department**, and an IP drop shall be located at each location/room where an RTU/IDC will be located for proper connectivity.
   b. All IP addresses – (i.e. Address, Gateway and Subnet Mask), shall be forwarded to the appropriate Physical Security Specialist assigned to the project for programming purposes, and all IP drops shall be furnished by the **FDA IT Department**.

   Note: The temperature in the room where the RTU/IDC is located can never exceed (140 degrees F) at given anytime, adequate temperature control will be the responsibility of the **General Contractor**. The actual heat output for the

RTU/IDC itself will be minimal and should not adversely affect or interfere with any other surrounding equipment (i.e. LAN/Telecom).

2. **Electrical Requirements:**

a. **Security Wiring:** Wiring for security devices (i.e. card readers, keypads, magnetic locks, electric strikes, etc.), shall be in conduit and each access control door shall have two 3/4" conduits, one for low voltage power and one for data to be provided by the **General Contractor** as part of the security **rough-in** requirement.

b. **Electric Strikes**: Shall be fail-secure with (24 volts) of power supplied at each electric strike location, free egress from interior lockset will be the standard to comply with fire safety codes.

c. **Aiphone Substations**: One single quad outlet at (20 Amp /110 Volts) shall be installed at each Aiphone substation location. The Aiphone substations will automatically communicate with the Aiphone door station whenever it is activated.

d. **Magnetic Locks**: When magnetic locks are required for access control, the **Building Engineer** or the **General Contractor** shall run a set of dry contacts from the building's **FIRE ALARM PANEL** to the location where the RTU/IDC will be installed. These dry contacts will be tied into the MDI Security System panel by the Agency's security contractor at the time of installation and tested to ensure magnetic locks are automatically released by the security system panel in the event the fire alarm is activated. The **General Contractor** shall obtain all necessary electrical permits, which shall also include the magnetic lock permit as part of the security **rough-in** requirement.

Note: Fire alarms will not be monitored by the Agency's Security Command Center, only the intrusion alarms which are tied into the MDI security panel. The dry contacts referenced above are required for connection into the Agency's security system panel to automatically release the magnetic locks in the event the fire alarm is activated, and is a fire/safety requirement.

e. **RTU/IDC Mounting:** A (4 x 8) piece of plywood shall to be furnished and mounted by the **General Contractor** in all locations where RTU/IDC(s) will be installed. The RTU/IDC plywood shall be a minimum of 3' away from any device that may produce electrical interference (i.e. transformers, etc.). All entry doors to rooms a RTU/IDC will be located shall be equipped with high security quality lock hardware, door closure, jimmy plate and a card reader. RTU/IDC plywood shall be coated with "fire retardant" paint to meet local fire code.

f. **RTU/IDC Power Requirements:** Each RTU/IDC will need one quad outlet. Each quad outlet shall be a dedicated circuit rated at (20 amps/120 volts AC), and be connected to the building's dedicated emergency power circuit. These quad outlets shall be located directly under the (4 x 8) piece of plywood for convenient connectivity of the RTU/IDC panel's AC power. The hardwired

power supply will be connected to the transformer supplied by the Agency's security installation contractor.

g. **Surveillance Cameras**: There shall be (110 volts) supplied at each camera location, and a dedicated quad outlet installed at each the camera monitoring location. Each camera and monitoring location shall be wired to the same building phase.
h. **Electrified Panic Egress Bars**: Shall be installed at emergency egress points within the secured area and require a (110 volt) dedicated circuit be installed above the door.

Note: All power requirements referenced above shall be supplied and terminated at the proposed security device point(s) by the **General Contractor** as part of the security **rough-in** requirement, and shall be located on the secured side of the Agency's space on a dedicated circuit.

3. **Conduit & Junction Boxes:**

a. Conduit size for all security devices shall be ¾" and shall run from the junction box location to the top of door frame. All conduits shall be stubbed at ceiling (unless Item e. referenced below applies).
b. For "large jobs" (i.e. more that eight card readers to be installed), conduit shall be **1"** in diameter at the backbone leading back to RTU/IDC.
c. Single gang junction boxes are required for all security devices.
d. A (12 x 12) junction box shall be located above each door with a card reader.
e. The conduit shall be painted blue every 10 feet, be free & clear, have pull string, and a junction box every 75 feet.
f. All junction boxes and conduit shall be supplied and installed by the **General Contractor** as part of the security **rough-in** requirement, and shall be located on the secured side of the Agency's space.

Note: In areas where security wires will cross over unsecured spaces (i.e. hallways, between floors, common areas, etc.), that wiring shall be put in **1"** conduit separate from other building wiring and be terminated within the Agency's secured space. All security system conduit shall be furnished and installed by **General Contractor** as part of the security **rough-in** requirement.

4. **Card Reader Door Requirements:**

a. All doors equipped with card readers shall have heavy duty door closures installed, to be supplied by **General Contractor**.
b. All doors equipped with card readers shall have jimmy plates installed on the exterior side of the door, to be supplied by **General Contractor**.
c. All perimeter doors equipped with card readers shall either have interior door hinges, or have the exterior hinges pinned or spot welded to prevent pins from being removed and the responsibility of the **General Contractor**.

d. All doors with cards readers shall be equipped with electric strike, store room function lever-set, high security hardware with override keys and locks shall be keyed alike.
e. **General Contractor** shall not fill in the headers of metal door frames with concrete on any access controlled door, as this will prevent necessary security wiring from passing through.

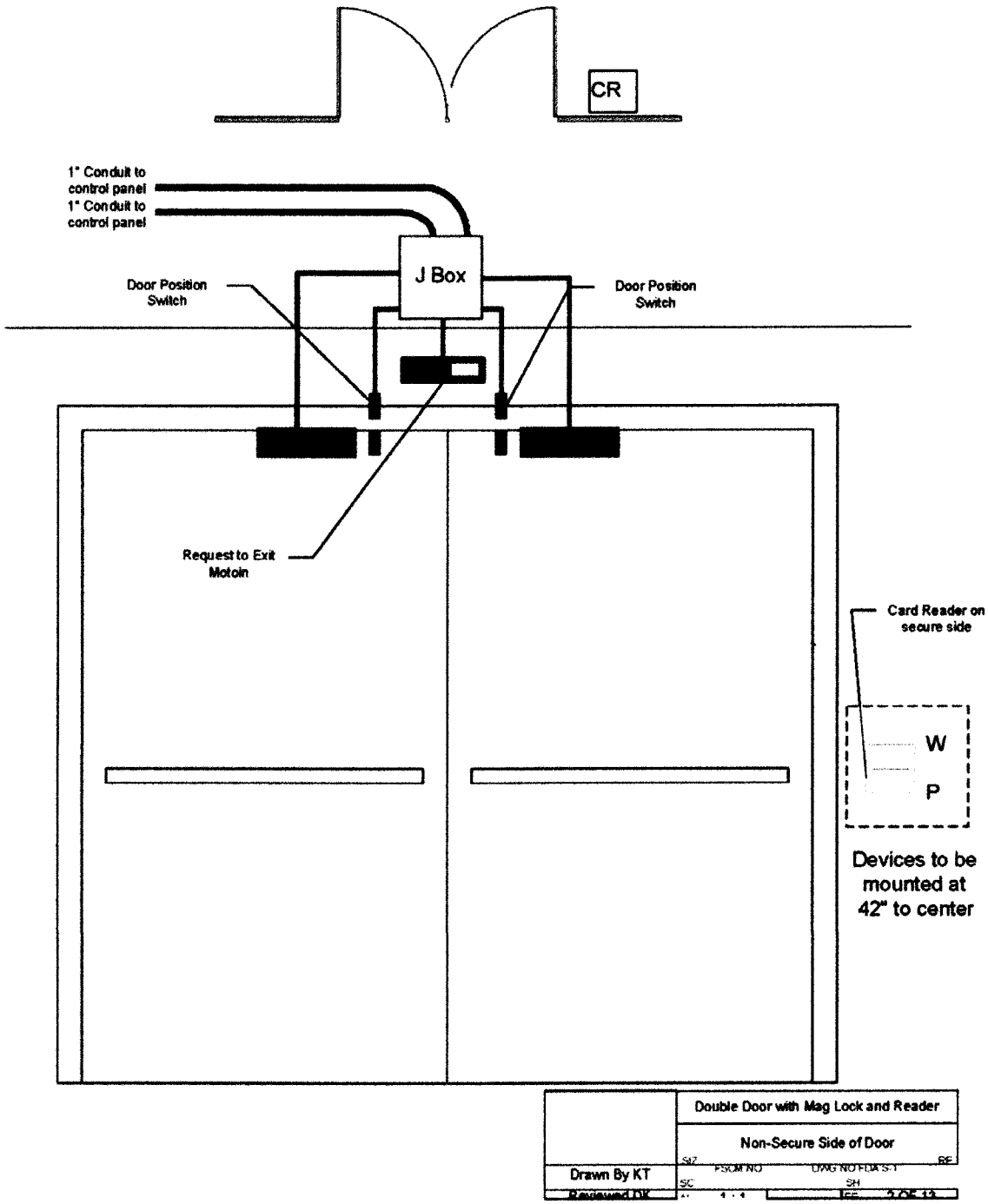
Note: On doors where an electric strike cannot be installed (i.e. glass frameless doors), magnetic locks shall be required. These door frames will need to be reinforced with metal headers and fitted with channels for the proper mounting of equipment. If this method is prohibited, a waiver will be requested authorizing the Agency's security installer to secure the magnetic locks using an industrial adhesive. The Agency must have this waiver prior to installing the hardware.

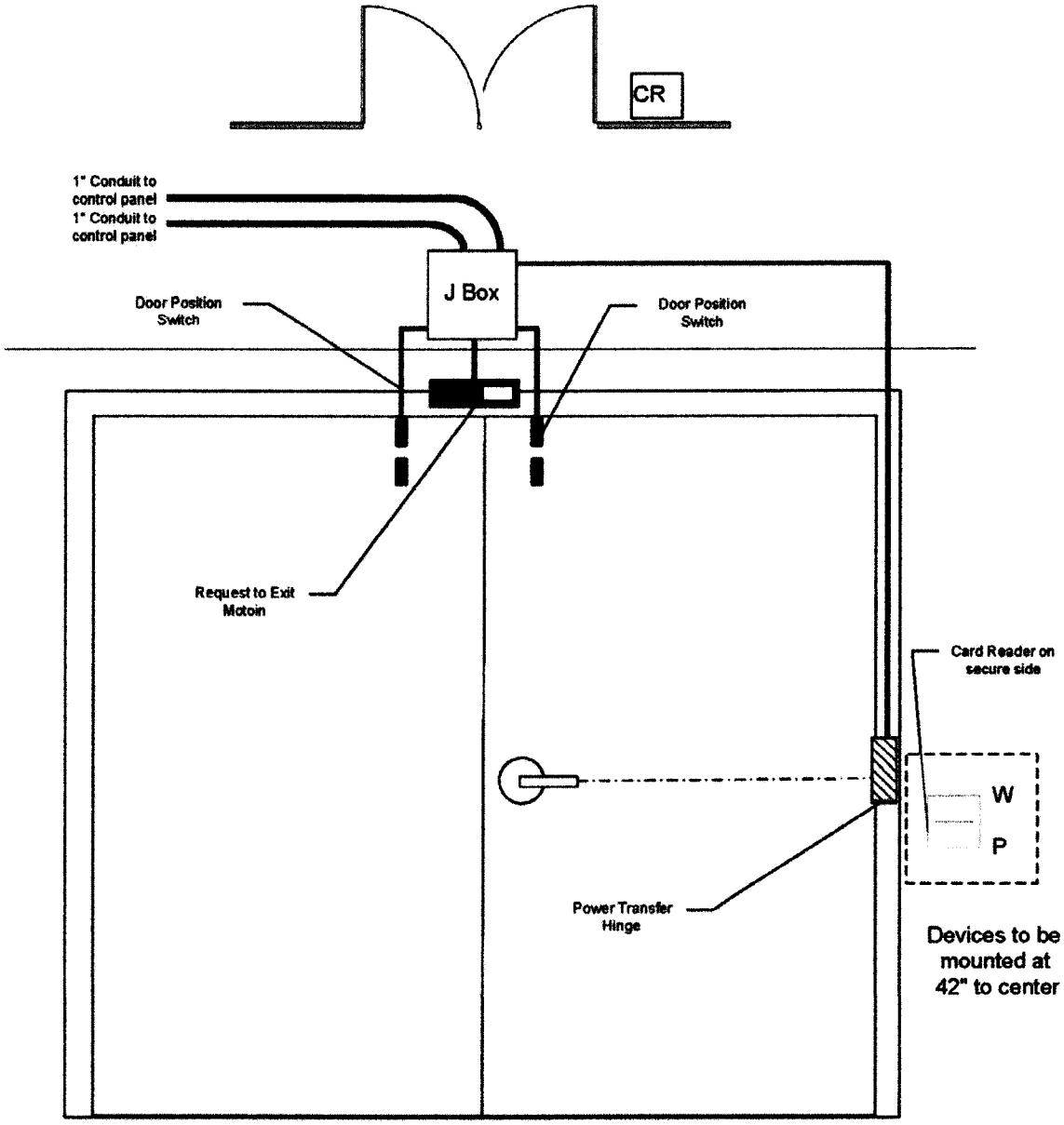
f. Emergency exit doors shall have exterior handles removed by Building Engineer or **General Contractor**, and be properly labeled "**Emergency Exit**".
g. Junction boxes for access readers shall be installed **48"** high as required by ADA, and shall be installed on the same side as the door handle on single doors, and on the hinge side (of the opening door), for double doors.
h. Junction boxes for keypads shall be installed **52"** high to center as required by ADA, and shall be installed on the secured side of the door.
i. Junction boxes for (Aiphone) door annunciation equipment shall be **58"** high and be installed on the same side as the door handle on single doors and on the hinge side (of the opening door) for double doors.
j. Junction boxes for glass break sensors shall be located above the ceiling, unless otherwise specified.

Note: All junction boxes shall be furnished and installed by the **General Contractor** as part of the security **rough-in** requirement.

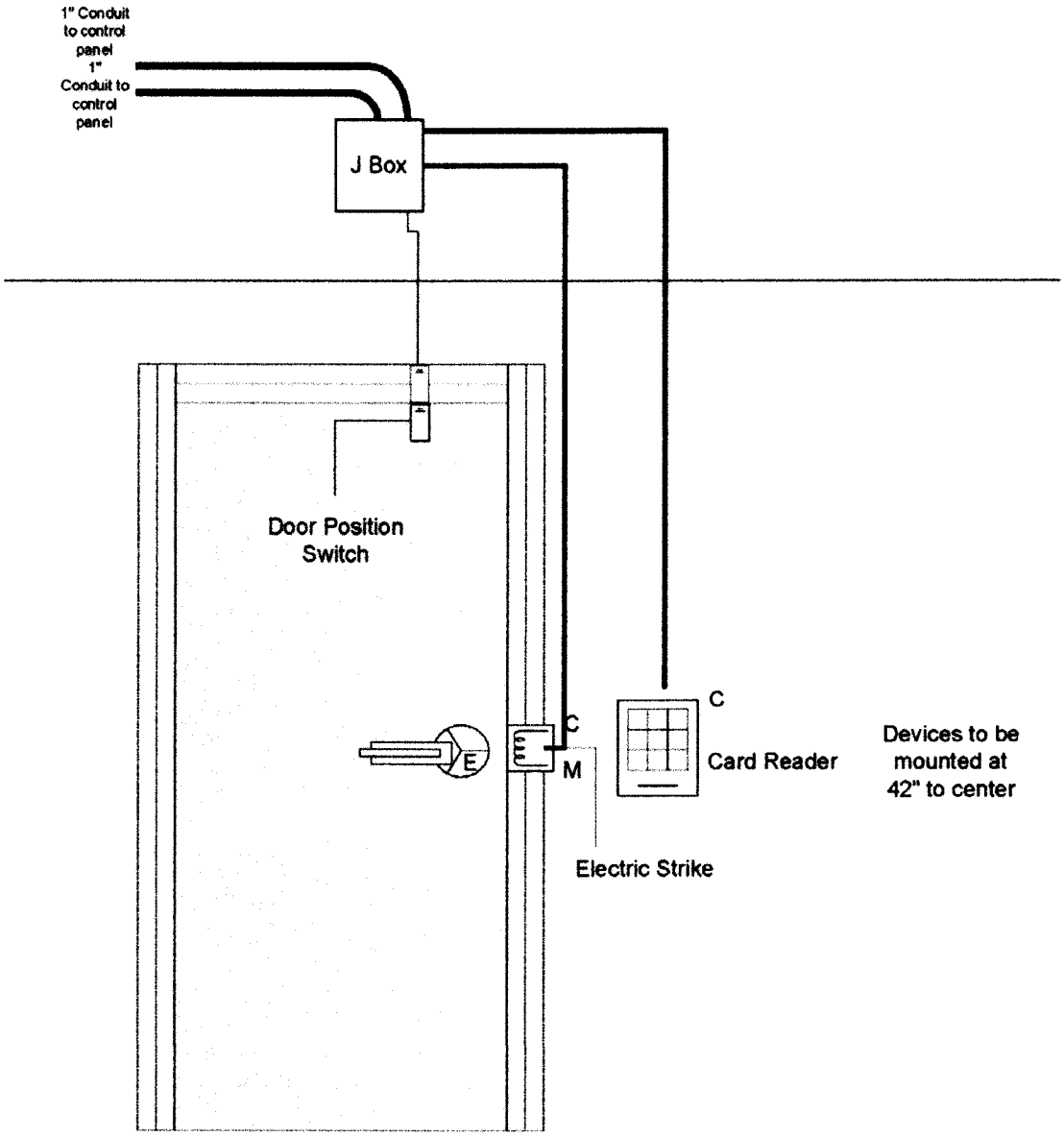
5. **MDI Equipment Dimensions:**

a. Remote Terminal Unit (RTU): 3 ½" D x 18 ½" W x 26 ½" H
b. Card Reader: 4 ½' W x 4 ½" H
c. Exit Button: 2 ½" W x 4" H
d. Mag Lock (Indoor): 8" x 1 ½" x 1 5/8"
e. Mag Lock (Exterior) 8" x 2 15/16" x 1 ¾"
f. Exit Sensor (REX): 1.5"h x 6.25" w x 1.5" D
g. Contacts: 1" diameter
h. Aiphones: 2 ¾" D x 5 ½" H x 10" W

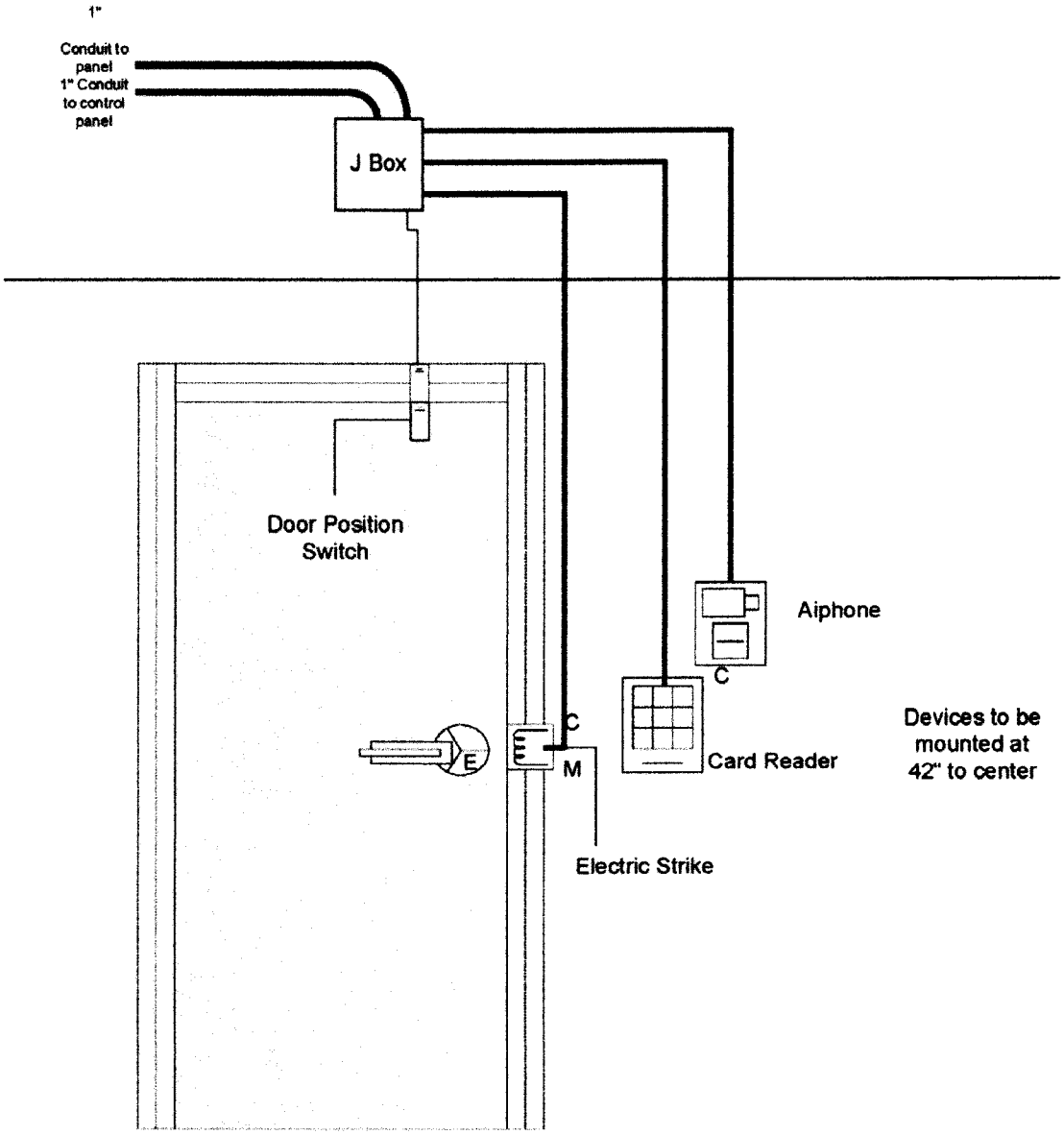

CR
1" Conduit to control panel
1" Conduit to control panel
J Box
Door Position Switch
Door Position Switch
Request to Exit Motoin
Card Reader on secure side
W
P
Devices to be mounted at 42" to center
Double Door with Mag Lock and Reader
Non-Secure Side of Door
Drawn By KT



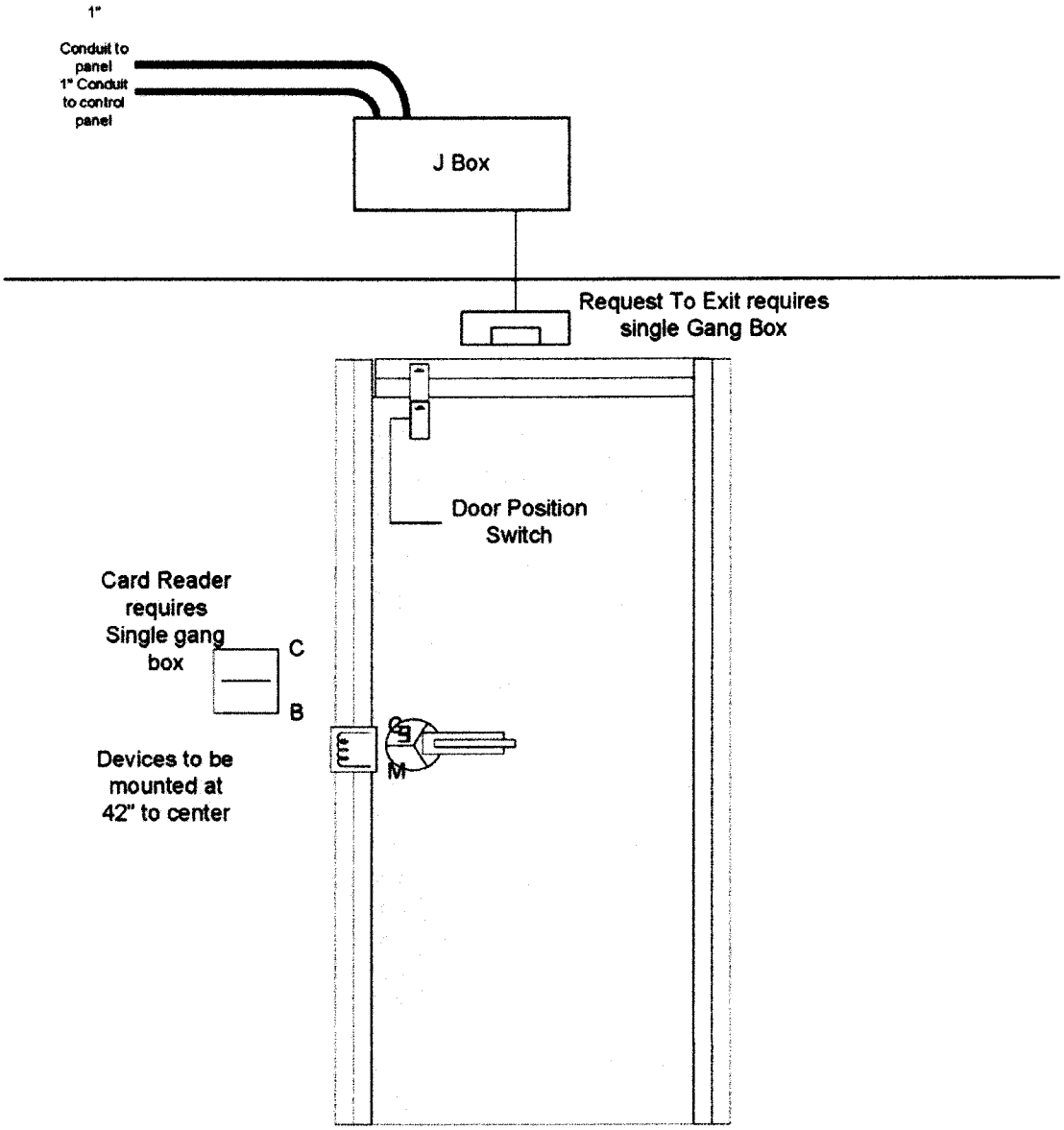
	Double Door Electrified Lockset and Reader
	Non-Secure Side of Door
Drawn By KT	SIZE FSCM NO DWG NO FDA S-1
Reviewed DK	SC SH
	AL 1 : 1 EE 3 OF 13



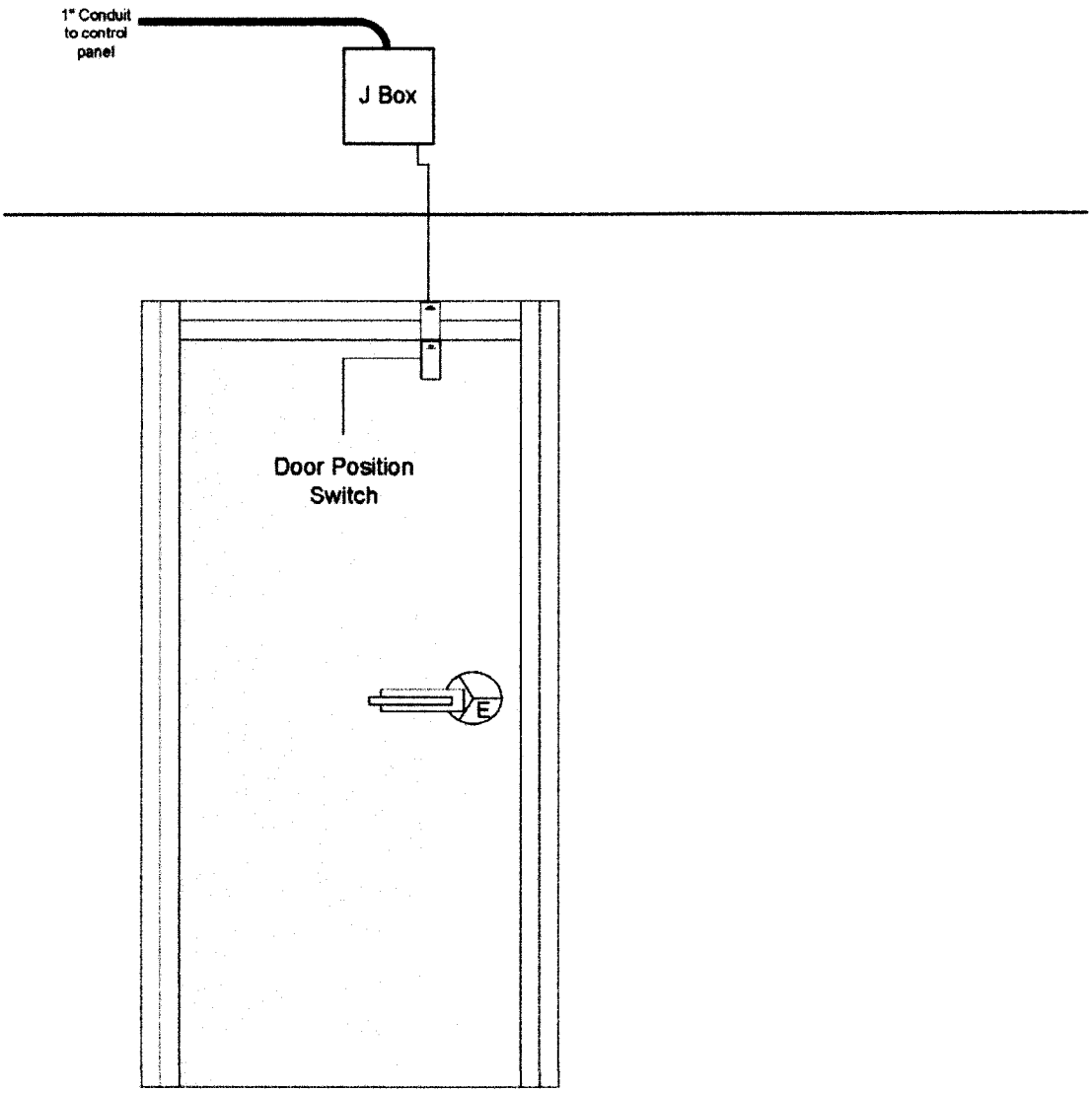
	Single Door Access Control Exterior View			
	Unsecure Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 4 OF 13	



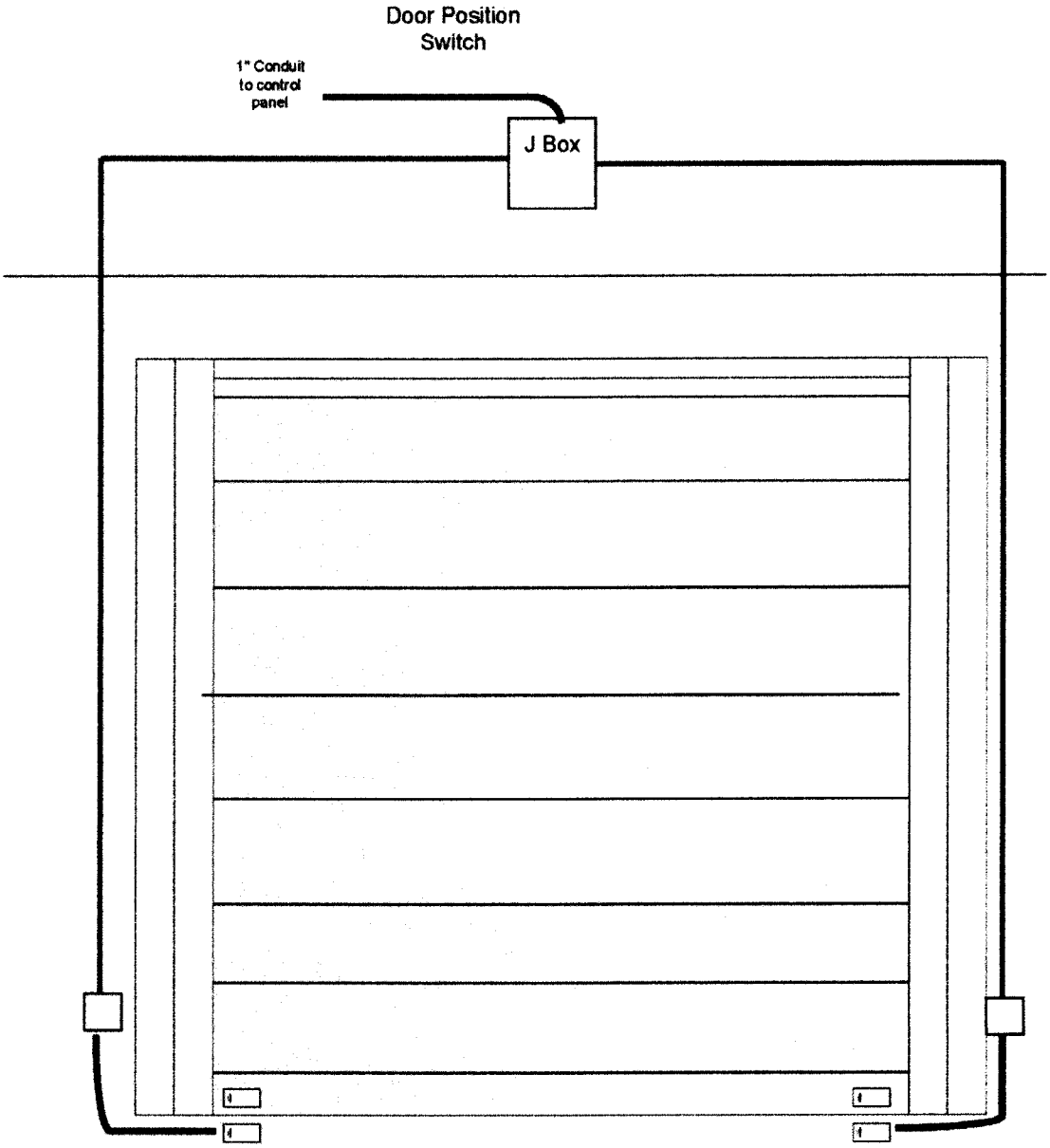
	Single Door w Aiphone Exterior View			
	Unsecure Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA S-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 5 OF 13	



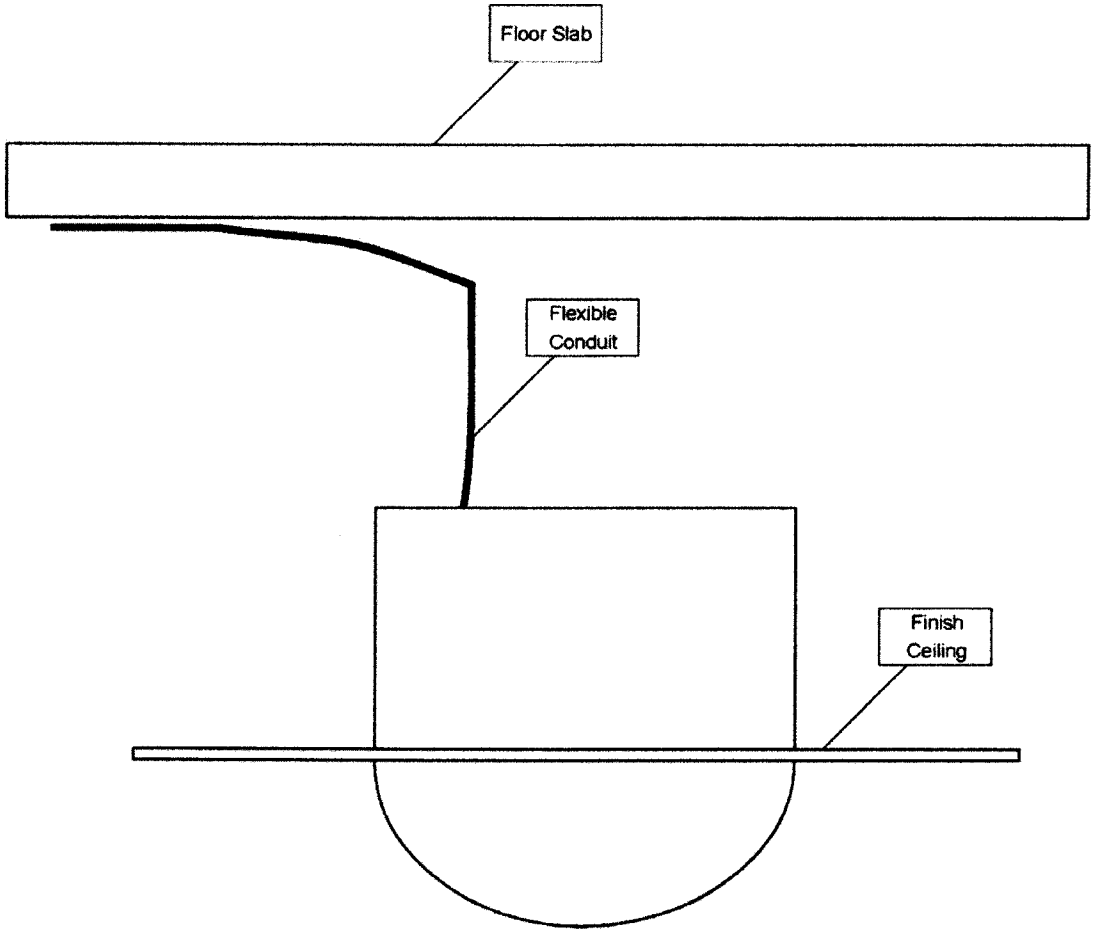
	Single Door Access Control Exterior View
	Unsecure Side of Door
Drawn By DK	SIZE FSCM NO DWG NO FDA S-1 REV
Reviewed KT	SCALE 1 : 1 SHEET 6 OF 13



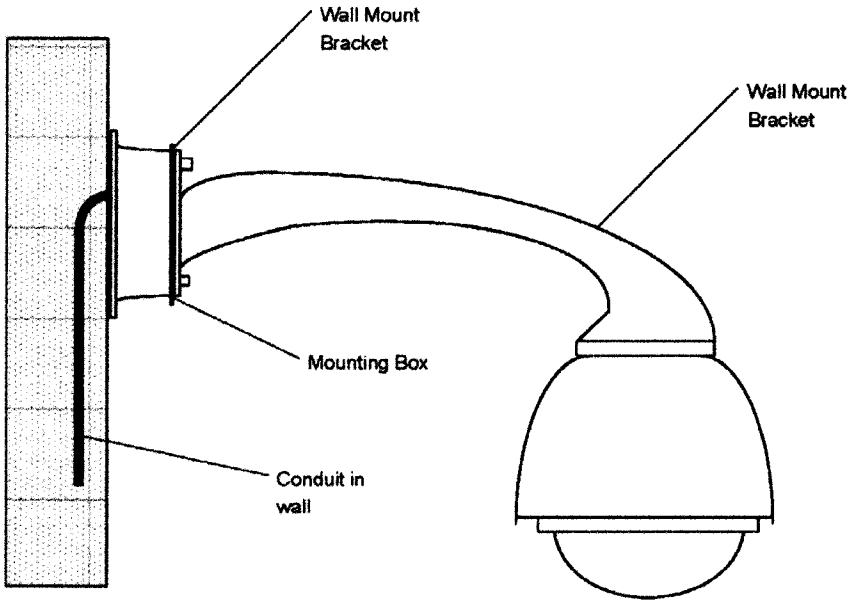
	Single Door Door Contact
	Side of Door
Drawn By DK	SIZE FSCM NO DWG NO FDA 5-1 REV
Reviewed KT	SCALE 1 : 1 SHEET 7 OF 13



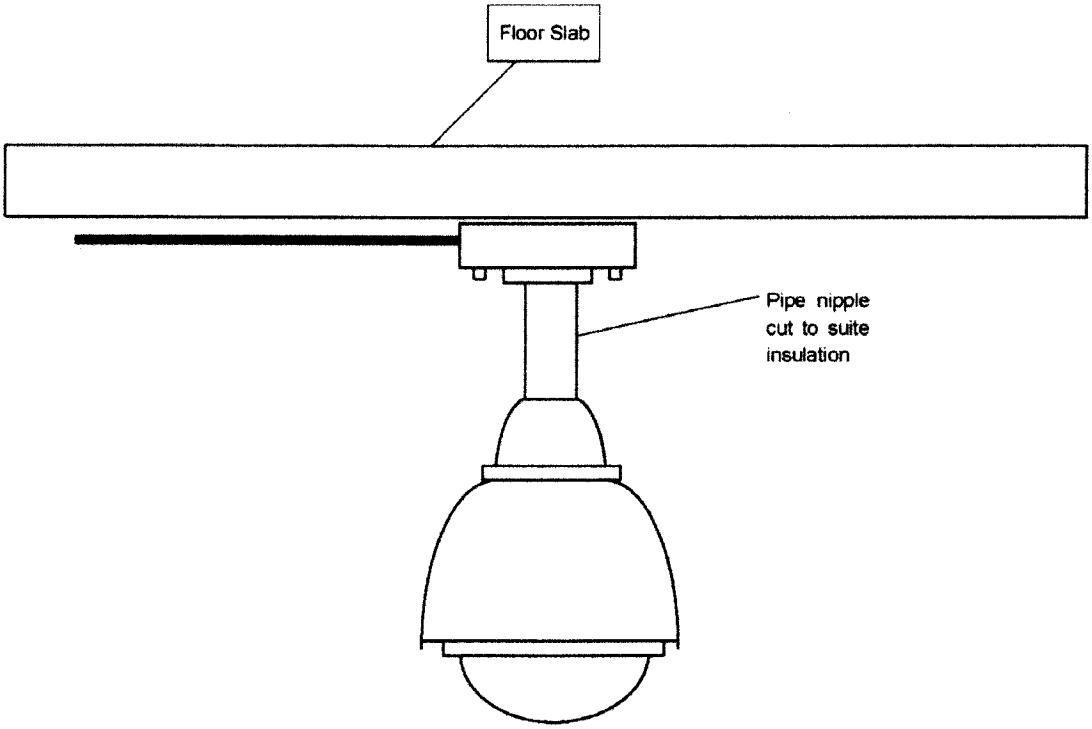
	Over Head Door			
	Side of Door			
Drawn By DK	SIZE	FSCM NO	DWG NO FDA 5-1	REV
Reviewed KT	SCALE 1 : 1		SHEET 8 OF 13	



	Interior Flush Ceiling Mount PTZ Camera
Drawn By KT	SIZE FSCM NO DWG NO FDA CT REV
Reviewed KT	SCALE 1 : 1 SHEET 9 OF 13



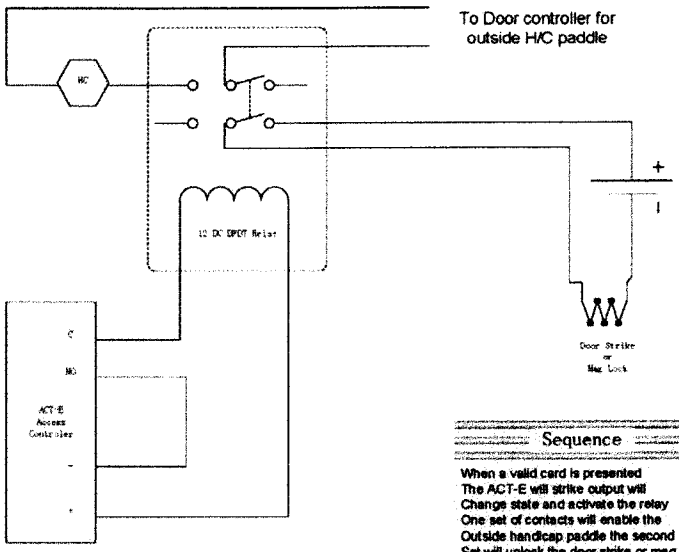
	Interior Column Mount PTZ Camera			
Drawn By KT	SIZE	FSCM NO	DWG NO FDA CI	REV
Reviewed KT	SCALE 1 : 1		SHEET	10 OF 13



	Interior Ceiling Mounted PTZ			
Drawn By KT	SIZE	FSCM NO	DWG NO FDA C1	REV
Reviewed KT	SCALE 1 : 1		SHEET 11 OF 13	

FDA Handicap Door Interconnect

[redacted]



Sequence

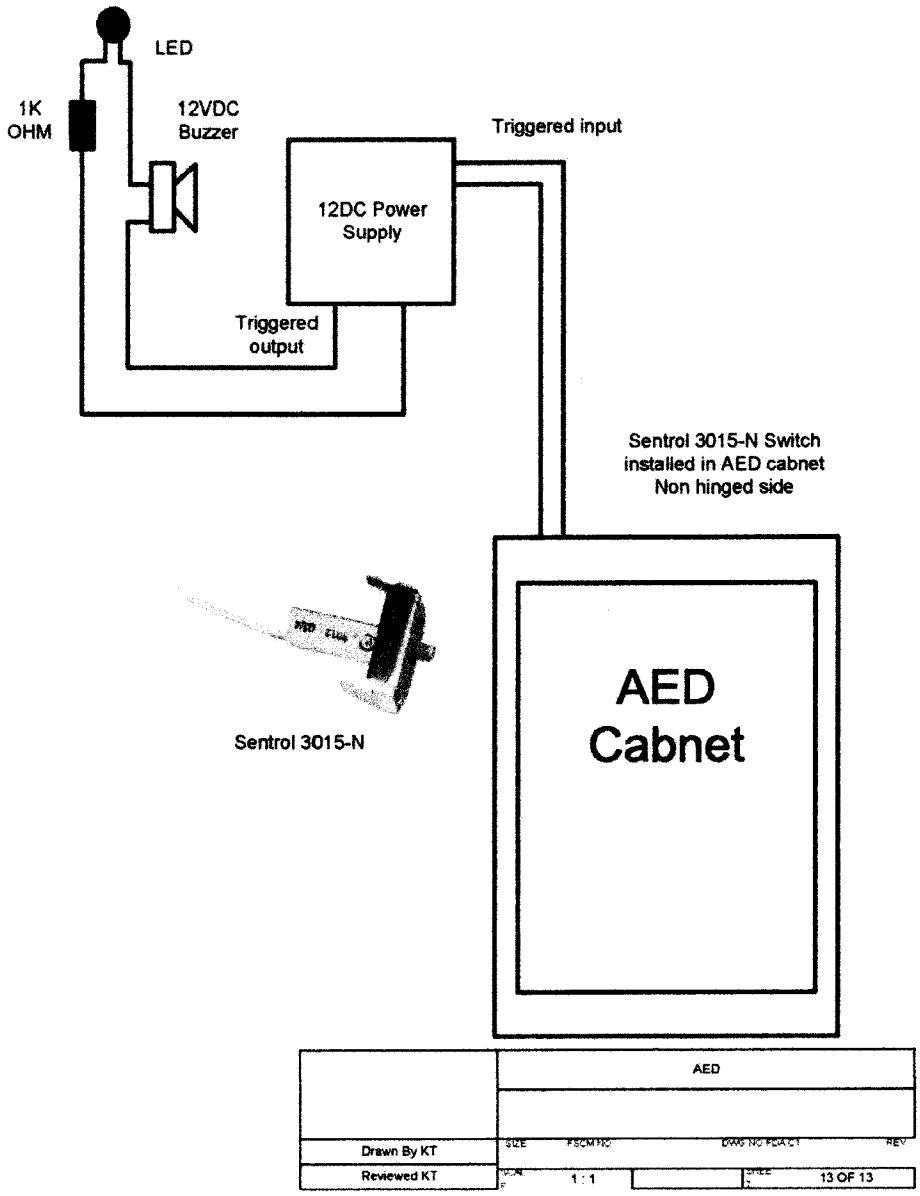
When a valid card is presented
The ACT-E will strike output will
Change state and activate the relay
One set of contacts will enable the
Outside handicap paddle the second
Set will unlock the door strike or mag
Lock. The set of contacts for the door
May have to be swaped depending
On if a strike or mag lock is used
The ACT-E must have strike on REX
Firmware.

FDA Physical
Security

2/1/2016

Prepaired by:
Karl Thrash
[redacted]

5 U.S.C. (b)(4)


LED
1K
OHM
12VDC
Buzzer
Triggered input
12DC Power
Supply
Triggered
output
Sentrol 3015-N Switch
installed in AED cabnet
Non hinged side
Sentrol 3015-N
AED
Cabnet
AED
Drawn By KT
Reviewed KT
1 : 1
13 OF 13

Lessor _____ Gov't _____

Program of Requirements
Laboratory Space for Food and Drug Administration
Johnson County, KS
Comments on 100% POR
November 30, 2016

Civil and Structural

1. Civil and Structural Engineering components of the building shall be evaluated per NIH Design Requirements Manual, version 5-13, Chapter 6.
2. It is recommended that safety and security measures for the existing facility shall be submitted for evaluation. Submission should include, but is not limited to, site plan with exterior campus lighting including lighting levels, fencing and existing surveillance measures.
3. It is recommended that site plan indicating parking, paved vehicle routes and sidewalks be submitted for evaluation and assessment for new personnel and facility requirements.
4. During design phase, studies shall be conducted to create sediment and erosion control, as well as storm water management plans to be executed during construction.
5. Design documents will be required to include landscaping plan, which should take into account views from offices and labs of personnel as well as the quality of pedestrian walkways.
6. Information for utility providers for existing building shall be submitted for evaluation of reliability and quality.
7. Design loads for existing building shall be submitted for evaluation and meet minimum requirement of NIH Chapter 5 and local code requirements. Loads to be submitted are snow loads, wind loads, seismic loads and drift.
8. Existing building occupancy category, as per the IBC, shall be submitted for evaluation.
9. Future expansion plans, including assumed type of construction and live loads shall be shown on the drawings. With view to potential expansion of mechanical areas to adjoining roof areas, use the mechanical area design live load, for that roof area.
10. The potential routing or pathways for the addition or relocation of heavy equipment shall be identified during the planning phase, so that floor loading can be accommodated during the design phase.
11. Existing floor flatness and floor levelness numbers shall be specified on new plans and indicated on existing plans for existing buildings.
12. Buildings that will house vibration-sensitive research shall require evaluation of the framing ***during design**** by a vibration consultant for compatibility with the research equipment vibration limitation tolerances. * *(modified per RLP Amend #4)*
13. Existing building shall be evaluated for the ease at which architectural, mechanical and electrical components can be anchored to the building to resist seismic forces.
14. Security level of design for all biomedical laboratories and animal facilities shall be based off of the result of a project specific risk assessment.
15. Minimum floor height to be 16' clear from deck to deck.

16. The live loads and superimposed dead loads of existing building shall be submitted and evaluated for the minimum live loads for the individual types of space, reference Section 5-2 of the NIH.
17. Vibration of the existing building shall be addressed during design to control vibration transmitted into laboratory and animal research facility space, reference Section 5-2 of the NIH.

Electrical

1. Emergency Power - Consider providing 100% generator back-up for facilities where the required loads encompass the majority of the entire facility. A local generator dedicated to the facility shall be provided. Emergency/standby power provided by a remote generator farm (with redundant generators) may also be acceptable. Refer to Chapter 10 of the NIH Design Requirements Manual for additional information.

   1.1. Life safety loads shall be wired separately from normal powered, legally required and optional standby loads. The following indicated devices shall be connected to the life safety emergency power system:
   - 1.1.1. Emergency egress lighting.
   - 1.1.2. Egress signage.
   - 1.1.3. Communications systems (including PA systems).
   - 1.1.4. Fire alarm systems.
   - 1.1.5. Self-contained, battery-powered lighting at generator set location
   - 1.1.6. Medical gas alarm systems
   - 1.1.7. Fire suppression systems (fire pumps, compressors, valves, etc).
   - 1.1.8. Security, intrusion detection and access control systems.
   - 1.1.9. Building Automation Systems including control air compressor (Buildings with smoke evacuation or animal facilities).
   - 1.1.10. Automatic doors used for egress.
   - 1.1.11. Elevator cab lighting, control, communication and signal systems
   - 1.1.12. Generator day tank pump

   1.2. The following systems shall be considered legally required standby loads and shall be connected to the emergency power system:
   - 1.2.1. Fire department receptacles.
   - 1.2.2. Pumps, components and all devices associated with fuel stored in large storage tanks serving the emergency generator.
   - 1.2.3. Sewage ejector systems.
   - 1.2.4. Sump pumps.
   - 1.2.5. Sump dewatering pumps.
   - 1.2.6. Lighting provided at the generator.
   - 1.2.7. Critical supply and exhaust fans.

1.2.8. Operating rooms.

1.2.9. One elevator per bank of elevators. All elevators shall be on emergency power with only one elevator per each bank of elevators to run at a given time. The lock-out of the elevators shall be provided by the elevator controller.

1.2.10. Building Automation Systems including control air compressor

1.2.11. Air handling system serving the elevator machine room when elevators are on emergency power.

1.2.12. Air handling systems associated with active smoke purge/evacuation systems.

1.2.13. Medical Gas systems.

1.2.14. Fume hood exhaust fans.

1.3. The following systems shall be considered optional stand-by loads and shall be connected to the emergency power system:

1.3.1. UPS systems.

1.3.2. Automatic temperature control system components.

1.3.3. Auxiliary mechanical equipment that supports heating and cooling systems.

1.3.4. One light fixture per module per laboratory minimum.

1.3.5. Biosafety cabinets, incubators, bio bubbles, containment devices, etc.

1.3.6. Supply and exhaust fans for animal areas.

1.3.7. Laboratory equipment alarm monitoring system.

1.3.8. High-value specimen refrigerators, freezers, cold rooms, warm rooms, etc.

1.3.9. Closed circuit television cameras and associated equipment.

1.3.10. Lighting control systems.

1.3.11. Select lighting in electrical distribution equipment and mechanical rooms.

1.3.12. Lighting in animal facilities, if defined by program requirements.

1.3.13. Computer room air handling units

1.3.14. Air-conditioning units serving main telecommunication room.

1.3.15. Water chillers, cooling towers, pumps and associated systems, which serve critical areas.

1.3.16. Heating systems including: boilers, heating water pumps and associated fuel oil system.

1.3.17. Steam condensate pumps.

1.3.18. Domestic water pumps

1.3.19. Hands free toilet flushers and lavatory faucets.

1.3.20. Electrical heat tracing for hydronic piping

1.3.21. Critical scientific equipment identified by program requirements.

2. Laboratory power distribution (except for lighting):

2.1. Provide a 42 circuit 208Y/120 volt panelboard for each laboratory.

3. Building Automation System (BAS) - The BAS is configured as a network with control functions at multiple levels and with multiple points of operator control and supervision. The BAS includes central servers, local building engineer's workstations, data transmission systems, field panels and controllers, necessary interfacing controls, sensors and actuators. The controller contains a

microprocessor and other supporting electronics, and performs local control functions and executes application programs without requiring communications with the central server or workstations.

The BAS shall be an integrated digital control system composed of a tiered LAN architecture connecting supervisory servers/interfaces and distributed stand-alone multi-level controllers. Supervisory graphic software system configuration and backup software shall use a client/server architecture to store and serve the graphics, user databases, system configuration databases, site controller programming backup/Upload/download, etc. Refer to Chapter 7 of the NIH Design Requirements Manual for description of which systems are to be monitored and for additional information.

HVAC System:

1. HVAC shall be designed per NIH Design Requirements Manual, version 5-13, Chapter 6.
2. Energy Monitoring and Control System shall be provided.
3. HVAC Systems shall be reliable, redundant and operate without interruption while being efficient to operate, both in terms of energy consumption and from a maintenance perspective.
4. During design phase, studies shall be conducted to determine the feasibility of utilizing heat-recovery systems in research laboratories.
5. Laboratory spaces shall meet the requirements in the "Biosafety in Microbiological and Biomedical Laboratories" published by Center for Disease Control and Prevention and NIH.
6. HVAC systems for laboratories shall include central air-handling systems utilizing 100% outdoor air, which shall also provide adequate ventilation to offset exhaust air requirements. Laboratory supply air shall not be recirculated or reused for other ventilation needs.
7. Indoor design conditions for occupied spaces shall be as follows:
    a. Summer: 73 degrees F (+ or – 2 degrees) 50% RH (+ or – 5%)
    b. Winter: 70 degrees F (+ or – 2 degrees) 30% RH (+ or – 5%)
8. Heating shall be provided by the use of steam and/or heating water systems. Electric resistance heating shall NOT be used to provide heating.
9. Cooling shall be provided by the use of chilled water/hydronic handling systems. The use of air-cooled, self-contained refrigeration systems for building cooling coils in air handling systems shall be avoided unless chilled water is not available.
10. All air distribution systems shall be ducted, NO air plenums allowed in laboratories.
11. Anterooms (laboratory vestibules)are typically located between the laboratory/isolation/protected room and the corridor, and shall include dedicated supply and exhaust terminal boxes with flow rings. Depending on the type of isolation required, the anteroom may be positive, negative or neutral. The use and type of anterooms needs to be reviewed with user.
12. Fume hoods shall be 72 inches, preferably VAV hoods, unless otherwise specified in room data sheets.
13. Fume hoods shall have sash positioning sensors for rapid response to fume hood flow rate requirements, and actuators on terminal boxes shall be fast acting, less than 1 second.

14. Each lab space shall have dedicated general exhaust, supply, and fume hood VAV terminals with flow rings.
15. The quantity of conditioned air to the corridors shall be sufficient to maintain an overall positive building pressure.
16. Research areas shall be provided with dedicated and separate exhaust air systems from non-research functions in the building. Also, the following systems shall be provided with dedicated and separate/independent exhaust air systems from any other exhaust air system in the building.
    a. Isolation rooms
    b. Laboratory general research areas
    c. Fume hood exhaust, however, fume hood exhaust may be combined with laboratory general research exhaust but only after penetrating the last fire rated partition
    d. Ductwork serving central sterilization processing areas
    e. Ductwork serving areas with ETO sterilizers
    f. Ductwork serving gas cylinders storage spaces
    g. Toilet exhaust air systems (includes janitor's closets and locker rooms)
17. Exhaust air systems shall be arranged with multiple manifold fans designed to achieve N+1 redundancy and maintain the exhaust air system fully operational, at all times.
18. Loading docks and receiving areas shall be maintained as positive to the outdoors and negative to the building to prevent the infiltration of vehicle fumes.
19. Heating and Cooling Load Calculations shall be prepared for each space within a design program and presented in a format similar to that outlined in the ASHRAE Handbook of Fundamentals.
20. Lab Equipment Cooling Loads – The central HVAC system shall provide, as a minimum, a cooling capacity for 1,892 W (6,455 BTUH) (sensible heat) for laboratory equipment in a typical 22 sq. m. (237 Sq.ft.) laboratory module or cooling for the actual calculated load, whichever is greater. See additional info in NIH guidelines.
21. Air Handling Unit (AHU) shall be designed to provide N+1 reliability and maintain 100% capacity in the event of a lead component failure. See NIH guidelines for additional information.
22. Outdoor air intakes and exhaust discharges shall be located away from each other [at least 12m, (40 ft.] and to avoid re-entry of exhaust contaminants from any source.
23. Heating water systems shall be designed to offer N+1 reliability and maintain 100% capacity in the event a lead component fails.

Plumbing

1. A primary goal for distribution systems is to minimize floor penetrations in laboratory areas. Primary equipment, service mains and risers shall be sized to provide 20% overage beyond required design loads to allow for increased future demands and density compression, separate from any known expansion.
2. Redundant risers shall be provided for water service, carbon dioxide, and any additional pressurized service deemed necessary to preclude loss of research and permit continued facility operations during times of renovation or repair.

3. Valves shall be provided above, below, and on each floor take-off from the riser to permit each riser to be utilized in a bi-directional feed mode as may be necessary to allow continued operation with either riser or any segment of a riser isolated.
4. The need for redundant risers for lab vacuum, compressed air, RO and other process services shall be determined on a case by case basis and is not automatically required.
5. Service pipe run outs shall be placed at regular intervals in service shafts or utility corridors to ensure accessibility for future connections with minimum disruption to research programs in adjacent spaces.
6. Piping shall not be buried below the floor under major electrical rooms, telecommunication service entrances, or other critical spaces where need to excavate to repair or renovate such piping would introduce otherwise unnecessary operational disruption, safety or security hazards.
7. All valves shall be clearly identified (labeled/tagged), and correspond to the facility valve numbering and identification system, keyed to submitted charts.
8. Piping, fittings, and joint materials and methods shall be compatible with system application and specified in accordance with Exhibit X 6-3-A of NIH Design Requirements Manual, version 5-13.
9. Equipment and piping installations shall be designed to preclude noise and vibration transfer beyond referenced limits, including but not limited to use of resilient supports, vibration dampening equipment bases, flexible connectors or braided hoses as appropriate, and other considerations as required for the intended operation of the facility.
10. Utility metering shall be provided for primary utility services, capable of automatically registering peak flow and totalization to building automation utility monitoring systems.
11. Plumbing systems shall meet the requirements of the current edition of one of the three following national model plumbing codes, in addition to written requirements of the NIH Design Requirements Manual, version 5-13.
    - International Plumbing Code, International Code Council.
    - Uniform Plumbing Code, International Association of Plumbing and Mechanical Officials.
    - National Standard Plumbing Code, National Association of Plumbing, Heating, and Cooling Contractors.
12. Water closets, urinals, lavatories and sinks, shall be selected in accordance with sec 8-2 of NIH Design Requirements Manual, version 5-13.
13. Plumbing fixture count shall comply with the requirements of the local adopted building code.
14. Plumbing fixtures shall be selected in accordance with applicable national standards to provide appropriate function, durability, quality, and ease of maintenance.
15. In spaces where a significant hazard exists and it is likely a user may be present without supervision, a flow alarm shall be provided to indicate emergency shower operation.
16. Emergency shower and eyewash fixtures shall be served from potable cold water systems and incorporate backflow protection and proper identification to safeguard the potable water supply.
17. Piping serving emergency fixtures shall be of adequate size to supply the maximum quantity of emergency fixtures to be in simultaneous use, but not less than the flow rate of the single most demanding emergency fixture plus the total simultaneous flow of the flushing purge fixture.
18. Emergency shower and eyewash fixtures shall be of the on-off type, operable with a single hand under partially distorted vision, with valves designed to remain open upon initial operation until manually turned off.
19. Eyewash facilities shall be installed with pressure regulators as necessary to prevent injury due to water pressure and provide proper flow control, as well as incorporate sediment screens.

20. Where drench hose-type emergency fixtures are utilized, the unit shall incorporate a dual check laboratory backflow preventer with intermediate atmospheric vent (such as an ASSE 1035 device) that is located at the inlet of the fixture hose.
21. Backflow prevention devices shall be installed in compliance with plumbing code and the device listing requirements.
22. PH treatment systems in drainage are not automatically required at all laboratories, however automatic monitoring systems (as a minimum) are required for all lab and vivaria buildings. The A/E shall discuss the need for pH treatment systems based on the specific facility, though practice is generally to install pH treatment systems for most lab and vivaria facilities to protect campus infrastructure and ensure compliance with regulations.

GENERAL SERVICES ADMINISTRATION PUBLIC BUILDING SERVICE **LESSOR'S ANNUAL COST STATEMENT** IMPORTANT - Read attached "Instructions"	1. SOLICITATION FOR OFFERS 5KS0070		2. STATEMENT DATE 3/31/2017
	3. RENTAL AREA (SQ. FT.)	3A. ENTIRE BUILDING 51,984	3B. LEASED BY GOV'T 51,984
4. BUILDING NAME AND ADDRESS (No., street, city, state, and zip code)			

SECTION I - ESTIMATED ANNUAL COST OF SERVICES AND UTILITIES FURNISHED BY LESSOR AS PART OF RENTAL CONSIDERATION

SERVICES AND UTILITIES	LESSOR'S ANNUAL COST FOR (a) ENTIRE BUILDING	(b) GOV'T-LEASED AREA	*FOR GOVERNMENT USE ONLY*
A. CLEANING, JANITOR AND/OR CHAR SERVICE 5. SALARIES		[redacted]	
6. SUPPLIES *(Wax, cleaners, cloths, etc.)*			
7. CONTRACT SERVICES *(Window washing, waste and snow removal)*			
B. HEATING 8. SALARIES			
9. FUEL *("X" one)* ☐ OIL ☐ GAS ☐ COAL ☐ ELEC-TRIC			
10. SYSTEM MAINTENANCE AND REPAIR			
C. ELECTRICAL 11. CURRENT FOR LIGHT AND POWER *(Including elevators)*			
12. REPLACEMENT OF BULBS, TUBES, STARTERS			
13. POWER FOR SPECIAL EQUIPMENT			
14. SYSTEM MAINTENANCE AND REPAIR *(Ballasts, fixtures, etc.)*			
D. PLUMBING 15. WATER *(For all purposes) (Include sewage charges)*			
16. SUPPLIES *(Soap, towels, tissues not in 5 above)*			
17. SYSTEM MAINTENANCE AND REPAIR			
E. AIR CONDITIONING 18. UTILITIES *(Include elecricity, if not in C11)*			5 U.S.C. (b)(4)
19. SYSTEM MAINTENANCE AND REPAIR			
F. ELEVATORS 20. SALARIES *(Operators, starters, etc.)*			
21. SYSTEM MAINTENANCE AND REPAIR			
G. MISCELLANEOUS *(To the extent not included above)* 22. BUILDING ENGINEER AND/OR MANAGER			
23. SECURITY *(Watchmen, guards, not janitors)*			
24. SOCIAL SECURITY TAX AND WORKMEN'S COMPENSATION INS.			
25. LAWN AND LANDSCAPING MAINTENANCE			
26. OTHER *(Explain on separate sheet)*			
27. TOTAL			
SECTION II - ESTIMATED ANNUAL COST OF OW			**CHARGES**
28. REAL ESTATE TAXES			
29. INSURANCE *(Hazard, liability, etc.)*			
30. BUILDING MAINTENANCE AND RESERVES FOR REPLACEMENT			
31. LEASE COMMISSION			
32. MANAGEMENT			
33. TOTAL			

LESSOR'S CERTIFICATION - The amounts entered in Columns (a) and (b) represent my best estimate as to the annual costs of services, utilities and ownership.	34. SIGNATURE OF ☒ OWNER ☐ LEGAL AGENT	
TYPED NAME AND TITLE	**SIGNATURE**	**DATE**
34A. [redacted]	34B. [redacted]	34C. 3/31/2017
35A. 5 U.S.C. (b)(6)	35B. 5 U.S.C. (b)(6)	35C.

GENERAL SERVICES ADMINISTRATION

GSA FORM 1217 (REV. 7-94)

Lessor _____ Gov't _____

LESSOR'S ANNUAL COST STATEMENT
GSA FORM 1217
GSA RLP NO. 5KS0070 LENEXA, KS
LINE 26. OTHER

	LESSOR'S ANNUAL COST FOR	
	ENTIRE BUILDING	GOV'T LEASED AREA
General Repairs	[redacted]	
Roof Repairs		
Pest Control		
Fire, Life & Safety		
Association Dues		
TOTAL, LINE 26 OTHER		

5 U.S.C. (b)(4)

Notes to Form 1217

C. Electrical Line 11. Current for Light and Power
The amount shown is a component of the total allowance for Utilities and HVAC Overtime as described in Items #2 and #4 of Amendment No. 6.

C. Electrical Line 14. Electrical System Maintenance and Repair
The amount shown is an allowance for Services and Mantenance as described in Items #1 and #3 of Amendment No. 6.

Operating Costs exclude phone and cable (TV and internet) services for the Building which shall be paid directly by the Government. The annual cost for Lessor's security phone line is included on Form 1217, Line A.7 Contract Services.

Lessor _____ Gov't _____

GENERAL CLAUSES
(Acquisition of Leasehold Interests in Real Property)

CATEGORY	CLAUSE NO.	48 CFR REF.	CLAUSE TITLE
GENERAL	1		SUBLETTING AND ASSIGNMENT
	2	552.270-11	SUCCESSORS BOUND
	3	552.270-23	SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT
	4	552.270-24	STATEMENT OF LEASE
	5	552.270-25	SUBSTITUTION OF TENANT AGENCY
	6	552.270-26	NO WAIVER
	7		INTEGRATED AGREEMENT
	8	552.270-28	MUTUALITY OF OBLIGATION
PERFORMANCE	9		DELIVERY AND CONDITION
	10		DEFAULT BY LESSOR
	11	552.270-19	PROGRESSIVE OCCUPANCY
	12		MAINTENANCE OF THE PROPERTY, RIGHT TO INSPECT
	13		FIRE AND CASUALTY DAMAGE
	14		COMPLIANCE WITH APPLICABLE LAW
	15	552.270-12	ALTERATIONS
	16		ACCEPTANCE OF SPACE AND CERTIFICATE OF OCCUPANCY
PAYMENT	17	52.204-7	SYSTEM FOR AWARD MANAGEMENT
	18	52.204-13	SYSTEM FOR AWARD MANAGEMENT MAINTENANCE
	19	552.270-31	PROMPT PAYMENT
	20	52.232-23	ASSIGNMENT OF CLAIMS
	21		PAYMENT
	22	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER—SYSTEM FOR AWARD MANAGEMENT
STANDARDS OF CONDUCT	23	52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT
	24	552.270-32	COVENANT AGAINST CONTINGENT FEES
	25	52-203-7	ANTI-KICKBACK PROCEDURES
	26	52-223-6	DRUG-FREE WORKPLACE
	27	52.203-14	DISPLAY OF HOTLINE POSTER(S)
ADJUSTMENTS	28	552.270-30	PRICE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY
	29	52.215-10	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA
	30	552.270-13	PROPOSALS FOR ADJUSTMENT
	31		CHANGES
AUDITS	32	552.215-70	EXAMINATION OF RECORDS BY GSA
	33	52.215-2	AUDIT AND RECORDS—NEGOTIATION

INITIALS: _____ & _____
LESSOR GOVERNMENT

DISPUTES	34	52.233-1	DISPUTES
LABOR STANDARDS	35	52.222-26	EQUAL OPPORTUNITY
	36	52.222-21	PROHIBITION OF SEGREGATED FACILITIES
	37	52.219-28	POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION
	38	52.222-35	EQUAL OPPORTUNITY FOR VETERANS
	39	52.222-36	EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES
	40	52.222-37	EMPLOYMENT REPORTS ON VETERANS
SUBCONTRACTING	41	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
	42	52.215-12	SUBCONTRACTOR CERTIFIED COST OR PRICING DATA
	43	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS
	44	52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN
	45	52.219-16	LIQUIDATED DAMAGES—SUBCONTRACTING PLAN
	46	52.204-10	REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS
	47	552.219-73	GOALS FOR SUBCONTRACTING PLAN

The information collection requirements contained in this solicitation/contract that are not required by regulation have been approved by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act and assigned the OMB Control No. 3090-0163.

INITIALS: _____ & _____
LESSOR GOVERNMENT

GENERAL CLAUSES
(Acquisition of Leasehold Interests in Real Property)

1. SUBLETTING AND ASSIGNMENT (JAN 2011)

The Government may sublet any part of the premises but shall not be relieved from any obligations under this lease by reason of any such subletting. The Government may at any time assign this lease, and be relieved from all obligations to Lessor under this lease excepting only unpaid rent and other liabilities, if any, that have accrued to the date of said assignment. Any subletting or assignment shall be subject to prior written consent of Lessor, which shall not be unreasonably withheld.

2. 552.270-11 SUCCESSORS BOUND (SEP 1999)

This lease shall bind, and inure to the benefit of, the parties and their respective heirs, executors, administrators, successors, and assigns.

3. 552.270-23 SUBORDINATION, NON-DISTURBANCE AND ATTORNMENT (SEP 1999)

(a) Lessor warrants that it holds such title to or other interest in the premises and other property as is necessary to the Government's access to the premises and full use and enjoyment thereof in accordance with the provisions of this lease. Government agrees, in consideration of the warranties and conditions set forth in this clause, that this lease is subject and subordinate to any and all recorded mortgages, deeds of trust and other liens now or hereafter existing or imposed upon the premises, and to any renewal, modification or extension thereof. It is the intention of the parties that this provision shall be self-operative and that no further instrument shall be required to effect the present or subsequent subordination of this lease. Government agrees, however, within twenty (20) business days next following the Contracting Officer's receipt of a written demand, to execute such instruments as Lessor may reasonably request to evidence further the subordination of this lease to any existing or future mortgage, deed of trust or other security interest pertaining to the premises, and to any water, sewer or access easement necessary or desirable to serve the premises or adjoining property owned in whole or in part by Lessor if such easement does not interfere with the full enjoyment of any right granted the Government under this lease.

(b) No such subordination, to either existing or future mortgages, deeds of trust or other lien or security instrument shall operate to affect adversely any right of the Government under this lease so long as the Government is not in default under this lease. Lessor will include in any future mortgage, deed of trust or other security instrument to which this lease becomes subordinate, or in a separate non-disturbance agreement, a provision to the foregoing effect. Lessor warrants that the holders of all notes or other obligations secured by existing mortgages, deeds of trust or other security instruments have consented to the provisions of this clause, and agrees to provide true copies of all such consents to the Contracting Officer promptly upon demand.

(c) In the event of any sale of the premises or any portion thereof by foreclosure of the lien of any such mortgage, deed of trust or other security instrument, or the giving of a deed in lieu of foreclosure, the Government will be deemed to have attorned to any purchaser, purchasers, transferee or transferees of the premises or any portion thereof and its or their successors and assigns, and any such purchasers and transferees will be deemed to have assumed all obligations of the Lessor under this lease, so as to establish direct privity of estate and contract between Government and such purchasers or transferees, with the same force, effect and relative priority in time and right as if the lease had initially been entered into between such purchasers or transferees and the Government; provided, further, that the Contracting Officer and such purchasers or transferees shall, with reasonable promptness following any such sale or deed delivery in lieu of foreclosure, execute all such revisions to this lease, or other writings, as shall be necessary to document the foregoing relationship.

(d) None of the foregoing provisions may be deemed or construed to imply a waiver of the Government's rights as a sovereign.

4. 552.270-24 STATEMENT OF LEASE (SEP 1999)

(a) The Contracting Officer will, within thirty (30) days next following the Contracting Officer's receipt of a joint written request from Lessor and a prospective lender or purchaser of the building, execute and deliver to Lessor a letter stating that the same is issued subject to the conditions stated in this clause and, if such is the case, that (1) the lease is in full force and effect; (2) the date to which the rent and other charges have been paid in advance, if any; and (3) whether any notice of default has been issued.

(b) Letters issued pursuant to this clause are subject to the following conditions:

(1) That they are based solely upon a reasonably diligent review of the Contracting Officer's lease file as of the date of issuance;

(2) That the Government shall not be held liable because of any defect in or condition of the premises or building;

(3) That the Contracting Officer does not warrant or represent that the premises or building comply with applicable Federal, State and local law; and

(4) That the Lessor, and each prospective lender and purchaser are deemed to have constructive notice of such facts as would be ascertainable by reasonable pre-purchase and pre-commitment inspection of the Premises and Building and by inquiry to appropriate Federal, State and local Government officials.

5. 552.270-25 SUBSTITUTION OF TENANT AGENCY (SEP 1999)

The Government may, at any time and from time to time, substitute any Government agency or agencies for the Government agency or agencies, if any, named in the lease.

6. 552.270-26 NO WAIVER (SEP 1999)

No failure by either party to insist upon the strict performance of any provision of this lease or to exercise any right or remedy consequent upon a breach thereof, and no acceptance of full or partial rent or other performance by either party during the continuance of any such breach shall constitute a waiver of any such breach of such provision.

7. INTEGRATED AGREEMENT (JUN 2012)

This Lease, upon execution, contains the entire agreement of the parties and no prior written or oral agreement, express or implied, shall be admissible to contradict the provisions of the Lease. Except as expressly attached to and made a part of the Lease, neither the Request for Lease Proposals nor any pre-award communications by either party shall be incorporated in the Lease.

8. 552.270-28 MUTUALITY OF OBLIGATION (SEP 1999)

The obligations and covenants of the Lessor, and the Government's obligation to pay rent and other Government obligations and covenants, arising under or related to this Lease, are interdependent. The Government may, upon issuance of and delivery to Lessor of a final decision asserting a claim against Lessor, set off such claim, in whole or in part, as against any payment or payments then or thereafter due the Lessor under this lease. No setoff pursuant to this clause shall constitute a breach by the Government of this lease.

9. DELIVERY AND CONDITION (JAN 2011)

(a) Unless the Government elects to have the space occupied in increments, the space must be delivered ready for occupancy as a complete unit.

(b) The Government may elect to accept the Space notwithstanding the Lessor's failure to deliver the Space substantially complete; if the Government so elects, it may reduce the rent payments.

10. DEFAULT BY LESSOR (APR 2012)

(a) The following conditions shall constitute default by the Lessor, and shall give rise to the following rights and remedies for the Government:

(1) Prior to Acceptance of the Premises. Failure by the Lessor to diligently perform all obligations required for Acceptance of the Space within the times specified, without excuse, shall constitute a default by the Lessor. Subject to provision of notice of default to the Lessor, and provision of a reasonable opportunity for the Lessor to cure its default, the Government may terminate the Lease on account of the Lessor's default.

(2) After Acceptance of the Premises. Failure by the Lessor to perform any service, to provide any item, or satisfy any requirement of this Lease, without excuse, shall constitute a default by the Lessor. Subject to provision of notice of default to the Lessor, and provision of a reasonable opportunity for the Lessor to cure its default, the Government may perform the service, provide the item, or obtain satisfaction of the requirement by its own employees or contractors. If the Government elects to take such action, the Government may deduct from rental payments its costs incurred in connection with taking the action. Alternatively, the Government may reduce the rent by an amount reasonably calculated to approximate the cost or value of the service not performed, item not provided, or requirement not satisfied, such reduction effective as of the date of the commencement of the default condition.

(3) Grounds for Termination. The Government may terminate the Lease if:

(i) The Lessor's default persists notwithstanding provision of notice and reasonable opportunity to cure by the Government, or

(ii) The Lessor fails to take such actions as are necessary to prevent the recurrence of default conditions,

and such conditions (i) or (ii) substantially impair the safe and healthful occupancy of the Premises, or render the Space unusable for its intended purposes.

(4) Excuse. Failure by the Lessor to timely deliver the Space or perform any service, provide any item, or satisfy any requirement of this Lease shall not be excused if its failure in performance arises from:

(i) Circumstances within the Lessor's control;

(ii) Circumstances about which the Lessor had actual or constructive knowledge prior to the Lease Award Date that could reasonably be expected to affect the Lessor's capability to perform, regardless of the Government's knowledge of such matters;

(iii) The condition of the Property;

(iv) The acts or omissions of the Lessor, its employees, agents or contractors; or

(v) The Lessor's inability to obtain sufficient financial resources to perform its obligations.

(5) The rights and remedies specified in this clause are in addition to any and all remedies to which the Government may be entitled as a matter of law.

11. 552.270-19 PROGRESSIVE OCCUPANCY (SEP 1999)

The Government shall have the right to elect to occupy the space in partial increments prior to the substantial completion of the entire leased premises, and the Lessor agrees to schedule its work so as to deliver the space incrementally as elected by the Government. The Government shall pay rent commencing with the first business day following substantial completion of the entire leased premise unless the Government has elected to occupy the

leased premises incrementally. In case of incremental occupancy, the Government shall pay rent pro rata upon the first business day following substantial completion of each incremental unit. Rental payments shall become due on the first workday of the month following the month in which an increment of space is substantially complete, except that should an increment of space be substantially completed after the fifteenth day of the month, the payment due date will be the first workday of the second month following the month in which it was substantially complete. The commencement date of the firm lease term will be a composite determined from all rent commencement dates.

12. MAINTENANCE OF THE PROPERTY, RIGHT TO INSPECT (APR 2015)

The Lessor shall maintain the Property, including the building, building systems, and all equipment, fixtures, and appurtenances furnished by the Lessor under this Lease, in good repair and tenantable condition so that they are suitable in appearance and capable of supplying such heat, air conditioning, light, ventilation, safety systems, access and other things to the premises, without reasonably preventable or recurring disruption, as is required for the Government's access to, occupancy, possession, use and enjoyment of the premises as provided in this lease. For the purpose of so maintaining the premises, the Lessor may at reasonable times enter the premises with the approval of the authorized Government representative in charge. Upon request of the Lease Contracting Officer (LCO), the Lessor shall provide written documentation that building systems have been properly maintained, tested, and are operational within manufacturer's warranted operating standards. The Lessor shall maintain the Premises in a safe and healthful condition according to applicable OSHA standards and all other requirements of this Lease, including standards governing indoor air quality, existence of mold and other biological hazards, presence of hazardous materials, etc. The Government shall have the right, at any time after the Lease Award Date and during the term of the Lease, to inspect all areas of the Property to which access is necessary for the purpose of determining the Lessor's compliance with this clause.

13. FIRE AND CASUALTY DAMAGE (JUN 20126)

If the building in which the Premises are located is totally destroyed or damaged by fire or other casualty, this Lease shall immediately terminate. If the building in which the Premises are located are only partially destroyed or damaged, so as to render the Premises untenantable, or not usable for their intended purpose, the Lessor shall have the option to elect to repair and restore the Premises or terminate the Lease. The Lessor shall be permitted a reasonable amount of time, not to exceed **270 days** from the event of destruction or damage, to repair or restore the Premises, provided that the Lessor submits to the Government a reasonable schedule for repair of the Premises within **60 days** of the event of destruction or damage. If the Lessor fails to timely submit a reasonable schedule for completing the work, the Government may elect to terminate the Lease effective as of the date of the event of destruction or damage. If the Lessor elects to repair or restore the Premises, but fails to repair or restore the Premises within **270 days** from the event of destruction or damage, or fails to diligently pursue such repairs or restoration so as to render timely completion commercially impracticable, the Government may terminate the Lease effective as of the date of the destruction or damage. During the time that the Premises are unoccupied, rent shall be abated. Termination of the Lease by either party under this clause shall not give rise to liability for either party.

Nothing in this lease shall be construed as relieving Lessor from liability for damage to, or destruction of, property of the United States of America caused by the willful or negligent act or omission of Lessor.

.

14. COMPLIANCE WITH APPLICABLE LAW (JAN 2011)

Lessor shall comply with all Federal, state and local laws applicable to its ownership and leasing of the Property, including, without limitation, laws applicable to the construction, ownership, alteration or operation of all buildings, structures, and facilities located thereon, and obtain all necessary permits, licenses and similar items at its own expense. The Government will comply with all Federal, State and local laws applicable to and enforceable against it as a tenant under this lease, provided that nothing in this Lease shall be construed as a waiver of the sovereign immunity of the Government. This Lease shall be governed by Federal law.

15. 552.270-12 ALTERATIONS (SEP 1999)

The Government shall have the right during the existence of this lease to make alterations, attach fixtures, and erect structures or signs in or upon the premises hereby leased, which fixtures, additions or structures so placed in, on, upon, or attached to the said premises shall be and remain the property of the Government and may be removed

or otherwise disposed of by the Government. If the lease contemplates that the Government is the sole occupant of the building, for purposes of this clause, the leased premises include the land on which the building is sited and the building itself. Otherwise, the Government shall have the right to tie into or make any physical connection with any structure located on the property as is reasonably necessary for appropriate utilization of the leased space.

16. ACCEPTANCE OF SPACE AND CERTIFICATE OF OCCUPANCY (APR 2015)

(a) Ten (10) working days prior to the completion of the Space, the Lessor shall issue written notice to the Government to schedule the inspection of the Space for acceptance. The Government shall accept the Space only if the construction of building shell and TIs conforming to this Lease and the approved DIDs is substantially complete, and a Certificate of Occupancy has been issued as set forth below.

(b) The Space shall be considered substantially complete only if the Space may be used for its intended purpose and completion of remaining work will not unreasonably interfere with the Government's enjoyment of the Space. Acceptance shall be final and binding upon the Government with respect to conformance of the completed TIs to the approved DIDs, with the exception of items identified on a punchlist generated as a result of the inspection, concealed conditions, latent defects, or fraud, but shall not relieve the Lessor of any other Lease requirements.

(c) The Lessor shall provide a valid Certificate of Occupancy, issued by the local jurisdiction, for the intended use of the Government. If the local jurisdiction does not issue Certificates of Occupancy or if the Certificate of Occupancy is not available, the Lessor may satisfy this condition by providing a report prepared by a licensed fire protection engineer that indicates that the Space and Building are compliant with all applicable local codes and ordinances and all fire protection and life safety-related requirements of this Lease to ensure an acceptable level of safety is provided. Under such circumstances, the Government shall only accept the Space without a Certificate of Occupancy if a licensed fire protection engineer determines that the offered space is compliant with all applicable local codes and ordinances and fire protection and life safety-related requirements of this Lease.

17. 52.204-7 SYSTEM FOR AWARD MANAGEMENT (JUL 2013)

This clause is incorporated by reference.

18. 52.204-13 SYSTEM FOR AWARD MANAGEMENT MAINTENANCE (JUL 2013)

This clause is incorporated by reference.

19. 552.270-31 PROMPT PAYMENT (JUN 2011)

The Government will make payments under the terms and conditions specified in this clause. Payment shall be considered as being made on the day a check is dated or an electronic funds transfer is made. All days referred to in this clause are calendar days, unless otherwise specified.

(a) *Payment due date—*

(1) *Rental payments.* Rent shall be paid monthly in arrears and will be due on the first workday of each month, and only as provided for by the lease.

(i) When the date for commencement of rent falls on the 15th day of the month or earlier, the initial monthly rental payment under this contract shall become due on the first workday of the month following the month in which the commencement of the rent is effective.

(ii) When the date for commencement of rent falls after the 15th day of the month, the initial monthly rental payment under this contract shall become due on the first workday of the second month following the month in which the commencement of the rent is effective.

(2) *Other payments.* The due date for making payments other than rent shall be the later of the following two events:

(i) The 30th day after the designated billing office has received a proper invoice from the Contractor.

(ii) The 30th day after Government acceptance of the work or service. However, if the designated billing office fails to annotate the invoice with the actual date of receipt, the invoice payment due date shall be deemed to be the 30th day after the Contractor's invoice is dated, provided a proper invoice is received and there is no disagreement over quantity, quality, or Contractor compliance with contract requirements.

(b) *Invoice and inspection requirements for payments other than rent.*

(1) The Contractor shall prepare and submit an invoice to the designated billing office after completion of the work. A proper invoice shall include the following items:

(i) Name and address of the Contractor.

(ii) Invoice date.

(iii) Lease number.

(iv) Government's order number or other authorization.

(v) Description, price, and quantity of work or services delivered.

(vi) Name and address of Contractor official to whom payment is to be sent (must be the same as that in the remittance address in the lease or the order).

(vii) Name (where practicable), title, phone number, and mailing address of person to be notified in the event of a defective invoice.

(2) The Government will inspect and determine the acceptability of the work performed or services delivered within seven days after the receipt of a proper invoice or notification of completion of the work or services unless a different period is specified at the time the order is placed. If actual acceptance occurs later, for the purpose of determining the payment due date and calculation of interest, acceptance will be deemed to occur on the last day of the seven day inspection period. If the work or service is rejected for failure to conform to the technical requirements of the contract, the seven days will be counted beginning with receipt of a new invoice or notification. In either case, the Contractor is not entitled to any payment or interest unless actual acceptance by the Government occurs.

(c) *Interest Penalty.*

(1) An interest penalty shall be paid automatically by the Government, without request from the Contractor, if payment is not made by the due date.

(2) The interest penalty shall be at the rate established by the Secretary of the Treasury under Section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611) that is in effect on the day after the due date. This rate is referred to as the "Renegotiation Board Interest Rate," and it is published in the **Federal Register** semiannually on or about January 1 and July 1. The interest penalty shall accrue daily on the payment amount approved by the Government and be compounded in 30-day increments inclusive from the first day after the due date through the payment date.

(3) Interest penalties will not continue to accrue after the filing of a claim for such penalties under the clause at 52.233–1, Disputes, or for more than one year. Interest penalties of less than $1.00 need not be paid.

(4) Interest penalties are not required on payment delays due to disagreement between the Government and Contractor over the payment amount or other issues involving contract compliance or on

amounts temporarily withheld or retained in accordance with the terms of the contract. Claims involving disputes, and any interest that may be payable, will be resolved in accordance with the clause at 52.233-1, Disputes.

(d) *Overpayments.* If the Lessor becomes aware of a duplicate payment or that the Government has otherwise overpaid on a payment, the Contractor shall—

(1) Return the overpayment amount to the payment office cited in the contract along with a description of the overpayment including the—

(i) Circumstances of the overpayment (*e.g.,* duplicate payment, erroneous payment, liquidation errors, date(s) of overpayment);

(ii) Affected lease number; (iii) Affected lease line item or sub-line item, if applicable; and

(iii) Lessor point of contact.

(2) Provide a copy of the remittance and supporting documentation to the Contracting Officer.

20. 52.232-23 ASSIGNMENT OF CLAIMS (MAY 2014)

(Applicable to leases over the micro-purchase threshold.)

(a) The Contractor, under the Assignment of Claims Act, as amended, 31 U.S.C. 3727, 41 U.S.C. 6305 (hereafter referred to as "the Act"), may assign its rights to be paid amounts due or to become due as a result of the performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency. The assignee under such an assignment may thereafter further assign or reassign its right under the original assignment to any type of financing institution described in the preceding sentence.

(b) Any assignment or reassignment authorized under the Act and this clause shall cover all unpaid amounts payable under this contract, and shall not be made to more than one party, except that an assignment or reassignment may be made to one party as agent or trustee for two or more parties participating in the financing of this contract.

(c) The Contractor shall not furnish or disclose to any assignee under this contract any classified document (including this contract) or information related to work under this contract until the Contracting Officer authorizes such action in writing.

21. PAYMENT (MAY 2011)

(a) When space is offered and accepted, the amount of American National Standards Institute/Building Owners and Managers Association Office Area (ABOA) square footage delivered will be confirmed by:

(1) The Government's measurement of plans submitted by the successful Offeror as approved by the Government, and an inspection of the space to verify that the delivered space is in conformance with such plans or

(2) A mutual on-site measurement of the space, if the Contracting Officer determines that it is necessary.

(b) Payment will not be made for space which is in excess of the amount of ABOA square footage stated in the lease.

(c) If it is determined that the amount of ABOA square footage actually delivered is less than the amount agreed to in the lease, the lease will be modified to reflect the amount of ABOA space delivered and the annual rental will be adjusted as follows:

ABOA square feet not delivered multiplied by one plus the common area factor (CAF), multiplied by the rate per rentable square foot (RSF). That is: (1+CAF) x Rate per RSF = Reduction in Annual Rent

22. 52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—SYSTEM FOR AWARD MANAGEMENT (JUL 2013)

This clause is incorporated by reference.

23. 52.203-13 CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (OCT 2015)

(Applicable to leases over $5.5 million total contract value and performance period is 120 days or more.)

This clause is incorporated by reference.

24. 552.270-32 COVENANT AGAINST CONTINGENT FEES (JUN 2011)

(Applicable to leases over the Simplified Lease Acquisition Threshold.)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover the full amount of the contingent fee.

(b) *Bona fide agency,* as used in this clause, means an established commercial or selling agency (including licensed real estate agents or brokers), maintained by a Contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

(1) Bona fide employee, as used in this clause, means a person, employed by a Contractor and subject to the Contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

(2) Contingent fee, as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

(3) Improper influence, as used in this clause, means any influence that induces or tends to induce a *Government* employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

25. 52.203-7 ANTI-KICKBACK PROCEDURES (MAY 2014)

(Applicable to leases over the Simplified Lease AcquisitionThreshold.)

This clause is incorporated by reference.

26. 52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

(Applicable to leases over the Simplified Lease Acquisition Threshold, as well as to leases of any value awarded to an individual.)

This clause is incorporated by reference.

27. 52.203-14 DISPLAY OF HOTLINE POSTER(S) (OCT 2015)

(Applicable to leases over $5.5 Million total contract value and performance period is 120 days or more.)

(a) Definition.

"United States," as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) Display of fraud hotline poster(s). Except as provided in paragraph (c)—

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites—

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Poster(s)	Obtain from
GSA Office of Inspector General "FRAUDNET HOTLINE	Contracting Officer

(Contracting Officer shall insert—

(i) Appropriate agency name(s) and/or title of applicable Department of Homeland Security fraud hotline poster); and

(ii) The website(s) or other contact information for obtaining the poster(s).)

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed $5.5 million, except when the subcontract—

(1) Is for the acquisition of a commercial item; or

(2) Is performed entirely outside the United States.

28. 552.270-30 PRICE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JUN 2011)

(Applicable to leases over the Simplified Lease Acquisition Threshold.)

(a) If the head of the contracting activity (HCA) or his or her designee determines that there was a violation of subsection 27(a) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in the Federal Acquisition Regulation, the Government, at its election, may—

(1) Reduce the monthly rental under this lease by five percent of the amount of the rental for each month of the remaining term of the lease, including any option periods, and recover five percent of the rental already paid;

(2) Reduce payments for alterations not included in monthly rental payments by five percent of the amount of the alterations agreement; or

(3) Reduce the payments for violations by a Lessor's subcontractor by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was placed.

(b) Prior to making a determination as set forth above, the HCA or designee shall provide to the Lessor a written notice of the action being considered and the basis thereof. The Lessor shall have a period determined by the agency head or designee, but not less than 30 calendar days after receipt of such notice, to submit in person, in writing, or through a representative, information and argument in opposition to the proposed reduction. The agency head or designee may, upon good cause shown, determine to deduct less than the above amounts from payments.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this lease.

29. 52.215-10 PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA (AUG 2011)

(Applicable when cost or pricing data are required for work or services over $750,000.)

This clause is incorporated by reference.

30. 552.270-13 PROPOSALS FOR ADJUSTMENT (SEP 1999)

(a) The Contracting Officer may, from time to time during the term of this lease, require changes to be made in the work or services to be performed and in the terms or conditions of this lease. Such changes will be required under the Changes clause.

(b) If the Contracting Officer makes a change within the general scope of the lease, the Lessor shall submit, in a timely manner, an itemized cost proposal for the work to be accomplished or services to be performed when the cost exceeds $100,000. The proposal, including all subcontractor work, will contain at least the following detail—

(1) Material quantities and unit costs;

(2) Labor costs (identified with specific item or material to be placed or operation to be performed;

(3) Equipment costs;

(4) Worker's compensation and public liability insurance;

(5) Overhead;

(6) Profit; and

(7) Employment taxes under FICA and FUTA.

(c) The following Federal Acquisition Regulation (FAR) provisions also apply to all proposals exceeding $500,000 in cost—

(1) The Lessor shall provide cost or pricing data including subcontractor cost or pricing data (48 CFR 15.403-4) and

(2) The Lessor's representative, all Contractors, and subcontractors whose portion of the work exceeds $500,000 must sign and return the "Certificate of Current Cost or Pricing Data" (48 CFR 15.406-2).

(d) Lessors shall also refer to 48 CFR Part 31, Contract Cost Principles, for information on which costs are allowable, reasonable, and allocable in Government work.

31. CHANGES (MAR 2013)

(a) The LCO may at any time, by written order, direct changes to the Tenant Improvements within the Space, Building Security Requirements, or the services required under the Lease.

(b) If any such change causes an increase or decrease in Lessor's costs or time required for performance of its obligations under this Lease, whether or not changed by the order, the Lessor shall be entitled to an amendment to the Lease providing for one or more of the following:

(1) An adjustment of the delivery date;

(2) An equitable adjustment in the rental rate;

(3) A lump sum equitable adjustment; or

(4) A change to the operating cost base, if applicable.

(c) The Lessor shall assert its right to an amendment under this clause within 30 days from the date of receipt of the change order and shall submit a proposal for adjustment. Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, the pendency of an adjustment or existence of a dispute shall not excuse the Lessor from proceeding with the change as directed.

(d) Absent a written change order from the LCO, or from a Government official to whom the LCO has explicitly and in writing delegated the authority to direct changes, the Government shall not be liable to Lessor under this clause.

32. 552.215-70 EXAMINATION OF RECORDS BY GSA (FEB 1996)

The Contractor agrees that the Administrator of General Services or any duly authorized representative shall, until the expiration of 3 years after final payment under this contract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of the Contractor involving transactions related to this contract or compliance with any clauses thereunder. The Contractor further agrees to include in all its subcontracts hereunder a provision to the effect that the subcontractor agrees that the Administrator of General Services or any duly authorized representatives shall, until the expiration of 3 years after final payment under the subcontract, or of the time periods for the particular records specified in Subpart 4.7 of the Federal Acquisition Regulation (48 CFR 4.7), whichever expires earlier, have access to and the right to examine any books, documents, papers, and records of such subcontractor involving transactions related to the subcontract or compliance with any clauses thereunder. The term "subcontract" as used in this clause excludes (a) purchase orders not exceeding $100,000 and (b) subcontracts or purchase orders for public utility services at rates established for uniform applicability to the general public.

33. 52.215-2 AUDIT AND RECORDS—NEGOTIATION (OCT 2010)
(Applicable to leases over the Simplified Lease Acquisition Threshold.)
This clause is incorporated by reference.

34. 52.233-1 DISPUTES (MAY 2014)
This clause is incorporated by reference.

35. 52.222-26 EQUAL OPPORTUNITY (APR 2015)
This clause is incorporated by reference.

36. 52.222-21 PROHIBITION OF SEGREGATED FACILITIES (APR 2015)
This clause is incorporated by reference.

37. 52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (JUL 2013)
(Applicable to leases exceeding the micro-purchase threshold.)
This clause is incorporated by reference.

38. 52.222-35 EQUAL OPPORTUNITY FOR VETERANS (OCT 2015)
(Applicable to leases $150,000 or more, total contract value.)

(a) Definitions. As used in this clause—

"Active duty wartime or campaign badge veteran," "Armed Forces service medal veteran," "disabled veteran," "protected veteran," "qualified disabled veteran," and "recently separated veteran" have the meanings given at FAR 22.1301.

(b) Equal opportunity clause. The Contractor shall abide by the requirements of the equal opportunity clause at 41 CFR 60-300.5(a), as of March 24, 2014. This clause prohibits discrimination against qualified protected veterans, and requires affirmative action by the Contractor to employ and advance in employment qualified protected veterans.

(c) Subcontracts. The Contractor shall insert the terms of this clause in subcontracts of $150,000 or more unless exempted by rules, regulations, or orders of the Secretary of Labor. The Contractor shall act as specified by the Director, Office of Federal Contract Compliance Programs, to enforce the terms, including action for noncompliance. Such necessary changes in language may be made as shall be appropriate to identify properly the parties and their undertakings.

39. 52.222-36 EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES (JUL 2014)
(Applicable to leases over $15,000 total contract value.)

(a) *Equal opportunity clause.* The Contractor shall abide by the requirements of the equal opportunity clause at 41 CFR 60-741.5(a), as of March 24, 2014. This clause prohibits discrimination against qualified individuals on the basis of disability, and requires affirmative action by the Contractor to employ and advance in employment qualified individuals with disabilities.

(b) *Subcontracts.* The Contractor shall include the terms of this clause in every subcontract or purchase order in excess of $15,000 unless exempted by rules, regulations, or orders of the Secretary, so that such provisions will be binding upon each subcontractor or vendor. The Contractor shall act as specified by the Director, Office of Federal Contract Compliance Programs of the U.S. Department of Labor, to enforce the terms, including action for noncompliance. Such necessary changes in language may be made as shall be appropriate to identify properly the parties and their undertakings.

40. 52.222-37 EMPLOYMENT REPORTS ON VETERANS (FEB 2016)
(Applicable to leases $150,000 or more, total contract value.)
This clause is incorporated by reference.

41. 52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (OCT 2015)
(Applicable to leases over $35,000 total contract value.)
This clause is incorporated by reference.

42. 52.215-12 SUBCONTRACTOR CERTIFIED COST OR PRICING DATA (OCT 2010)
(Applicable if over $750,000 total contract value.)
This clause is incorporated by reference.

43. 52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (OCT 2014)
(Applicable to leases over the Simplified Lease Acquisition Threshold.)
This clause is incorporated by reference.

44. 52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (OCT 2015) ALTERNATE III (OCT 2015)
(Applicable to leases over $700,000 total contract value.)
This clause is incorporated by reference.

45. 52.219-16 LIQUIDATED DAMAGES—SUBCONTRACTING PLAN (JAN 1999)
(Applicable to leases over $700,000 total contract value.)
This clause is incorporated by reference.

46. 52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (OCT 2015)
(Applicable if over $30,000 total contract value.)
This clause is incorporated by reference.

47. 552.219-73 GOALS FOR SUBCONTRACTING PLAN (JUN 2005), ALTERNATE I (SEP 1999)
(Applicable if over $700,000 total contract value.)
This clause is incorporated by reference.

ADDENDUM to the System for Award Management (SAM) REPRESENTATIONS AND CERTIFICATIONS (Acquisitions of Leasehold Interests in Real Property)	Request for Lease Proposals Number **5KS0070**	Dated **10/31/2016**

Complete appropriate boxes, sign the form, and attach to offer.
The Offeror makes the following additional Representations. NOTE: The "Offeror," as used on this form, is the owner of the property offered, not an individual or agent representing the owner.

1. ANNUAL REPRESENTATIONS AND CERTIFICATIONS FOR LEASEHOLD ACQUISITIONS (APR 2015)

(a) (1) The North American Industry Classification System (NAICS) code for this acquisition is 531120, unless the real property is self-storage (#531130), land (#531190), or residential (#531110).

(2) The small business size standard is 38.5 Million in annual average gross revenue of the concern for the last 3 fiscal years.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) The System for Award Management (SAM) is a centrally located, searchable database which assists in the development, maintenance, and provision of sources for future procurements. The Offeror, by signing this addendum, hereby certifies he is registered in SAM.

[x] Registration Active and Copy Attached

2. 552.203-72 REPRESENTATION BY CORPORATIONS REGARDING AN UNPAID DELINQUENT FEDERAL TAX LIABILITY OR A FELONY CONVICTION UNDER ANY FEDERAL LAW (DEVIATION) (OCT 2013)

(a) In accordance with Sections 630 and 631 of Division of the Consolidated Appropriations Act, 2012 (Pub. L. 112-74), and Section 101 of the Continuing Appropriations Act, 2014 (Pub. L. 113-16) none of the funds made available by the Continuing Appropriations Act 2014 may be used to enter into a contract action with any corporation that—

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government, or

(2) Was convicted, or had an officer or agent of such corporation acting on behalf of the corporation convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation or such officer or agent and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Contractor represents that—

(1) It is [ ] is not [x] a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or

have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(2) It is [ ] is not [x] a corporation that was convicted, or had an officer or agent of the corporation acting on behalf of the corporation, convicted of a felony criminal violation under any Federal law within the preceding 24 months.

3. OFFEROR'S DUNS NUMBER

(a) Enter number: [redacted] 5 U.S.C. (b)(4)

(b) An offeror may obtain a DUNS number (i) via the Internet at http://fedgov.dnb.com/webform or if the offeror does not have internet access, it may call Dun and Bradstreet at 1-866-705-5711 if located within the United States; or (ii) If located outside the United States, by contacting the local Dun and Bradstreet office. The offeror should indicate that it is an offeror for a U.S. Government contract when contacting the local Dun and Bradstreet office.

OFFEROR OR LEGALLY AUTHORIZED REPRESENTATIVE	NAME, ADDRESS (INCLUDING ZIP CODE)	TELEPHONE NUMBER
[redacted] 5 U.S.C. (b)(6)	[redacted] 5 U.S.C. (b)(6) Signature	[redacted] 5 U.S.C. (b)(6) 4/25/2017 Date

INITIALS: EC & KM
LESSOR GOVERNMENT

SAM

Entity Overview Details

[redacted]

5 U.S.C (b)(4) and (b)(6)

Lessor _____ Gov't _____

SAM™
SYSTEM FOR AWARD MANAGEMENT

Entity Overview Details

Purpose of Registration
All Awards

Financial Information

[redacted]

5 U.S.C (b)(4) and (b)(6)

Lessor SB Gov't KM

SAM

Entity Overview Details

Size metrics:

[redacted]

5 U.S.C (b)(4) and (b)(6)

Point of Contacts:

Mandatory Point of Contact

Accounts Receivable POC
Title:
First Name:
Middle Name:
Last Name:
Email:
US Phone:
Extension:
NON US Phone:
Notes:

Electronic Business POC
Title:
First Name:
Middle Name:
Last Name:
Email:
US Phone:
Extension:
NON US Phone:
Notes:
Address Line 1:
Address Line 2:
City:
State/Province:
Country:
ZIP/Postal Code:

Government Business POC
Title:
First Name:
Middle Name:
Last Name:
Email:
US Phone:
Extension:
NON US Phone:
Notes:
Address Line 1:
Address Line 2:
City:
State/Province:
Country:
ZIP/Postal Code:

[redacted]

5 U.S.C. (b)(6)

Optional Point of Contact:

Past Performance Alternate POC
Title:
First Name:
Middle Name:
Last Name:
Email:
US Phone:
Extension:
NON US Phone:
Notes:
Address Line 1:
Address Line 2:
City:

[redacted]

SAM

Entity Overview Details

State/Province
Country
ZIP/Postal Code

Past Performance POC
Title:
First Name
Middle Name
Last Name
Email:
US Phone
Extension
NON US Phone
Notes:
Address Line 1
Address Line 2
City
State/Province
Country
ZIP/Postal Code

Electronic Business Alternate POC
Title:
First Name
Middle Name:
Last Name
Email.
US Phone
Extension
NON US Phone
Notes:
Address Line 1
Address Line 2
City
State/Province
Country
ZIP/Postal Code

Government Business Alternate P
Title.
First Name
Middle Name
Last Name
Email
US Phone
Extension
NON US Phone
Notes.
Address Line 1
Address Line 2
City
State/Province
Country
ZIP/Postal Code

[redacted]

5 U.S.C. b)(6)

General Decision Number: KS170057 01/06/2017 KS57

Superseded General Decision Number: KS20160057

State: Kansas

Construction Type: Building

County: Johnson County in Kansas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017

ASBE0027-005 10/01/2015

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (MECHANICAL (Duct, Pipe & Mechanical System Insulation))	$ 33.97	24.58

BRKS0015-011 06/01/2014

	Rates	Fringes
TILE SETTER	$ 33.76	13.16

BRKS0015-012 04/01/2015

	Rates	Fringes
BRICKLAYER	$ 34.06	17.50

BRKS0015-014 06/01/2015

	Rates	Fringes
TILE FINISHER	$ 16.70	7.55

CARP0315-003 05/01/2014

	Rates	Fringes
CARPENTER (Acoustical Ceiling Installation Only)	$ 36.05	15.05

CARP0315-004 05/01/2014

	Rates	Fringes
CARPENTER (Excludes Acoustical Ceiling Installation, Drywall Hanging and Floor Laying Carpet)	$ 36.05	15.05

CARP1181-001 05/01/2015

	Rates	Fringes
CARPENTER (Floor Laying-Carpet Only)	$ 34.32	15.75

ELEC0124-010 08/31/2015

	Rates	Fringes
ELECTRICIAN (Low Voltage Wiring Only)	$ 34.16	20.37

ELEC0124-011 08/31/2015

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring)	$ 36.69	20.62

ELEV0012-004 01/01/2013

	Rates	Fringes
ELEVATOR MECHANIC	$ 42.34	25.185+a+b

a. VACATION PAY: 6% for 6 months to 5 years service; 8% with 5 or more years of service.

b. PAID HOLIDAYS: Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Friday after, and Christmas Day.

ENGI0101-042 04/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Backhoe/Excavator/Trackhoe	$ 37.63	15.97
Bobcat/Skid Steer/Skid Loader	$ 37.63	15.97
Crane	$ 38.44	15.97
Forklift	$ 36.29	15.97
Grader/Blade	$ 37.63	15.97
Oiler	$ 32.08	15.97
Paver (Asphalt, Aggregate, and Concrete)	$ 38.44	15.97

---

* IRON0010-032 04/01/2016

	Rates	Fringes
IRONWORKER (Ornamental, Reinforcing and Structural)	$ 32.00	28.15

LABO1290-011 04/01/2016

	Rates	Fringes
Laborers: (Asphalt, Includes Raker, Shoveler, Spreader and Distributor)	$ 30.35	14.77

LABO1290-012 04/01/2016

	Rates	Fringes
LABORER		
Common or General	$ 27.15	15.40

LABO1290-013 04/01/2016

	Rates	Fringes
LABORER		
Mason Tender - Brick	$ 27.55	15.40

PAIN0558-006 05/01/2011

	Rates	Fringes
GLAZIER	$ 26.47	19.98

PAIN2012-008 05/01/2012

	Rates	Fringes
PAINTER (Brush, Roller, and Spray)	$ 22.93	11.51

PAIN2012-010 04/01/2013

	Rates	Fringes
PAINTER (Drywall Finishing/Taping)	$ 28.58	15.07

PLAS0518-009 04/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 31.24	18.78

PLUM0008-020 06/01/2016

	Rates	Fringes
PLUMBER	$ 42.64	21.04

PLUM0533-013 06/01/2016

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe, Unit, and Installation of HVAC Electricial/Temperature Controls)	$ 45.33	19.32

ROOF0020-021 06/01/2016

	Rates	Fringes
ROOFER	$ 32.55	17.09

SHEE0002-011 07/01/2015

	Rates	Fringes
SHEET METAL WORKER (HVAC Duct Installation Only)	$ 39.85	20.11

SHEE0002-012 07/01/2015

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct Installation)	$ 39.85	20.11

TEAM0541-010 04/01/2016

	Rates	Fringes
TRUCK DRIVER (Lowboy Truck)	$ 32.04	13.45

TEAM0541-011 04/01/2016

	Rates	Fringes
TRUCK DRIVER (Semi-Trailer Truck)	$ 32.04	13.45

TEAM0541-012 04/01/2014

	Rates	Fringes
TRUCK DRIVER: Dump (All Types)	$ 31.14	13.01

SUKS2015-021 07/08/2015

	Rates	Fringes
CARPENTER (Drywall Hanging Only)	$ 30.00	1.62
LABORER: Concrete Saw (Hand Held/Walk Behind)	$ 31.51	11.60
LABORER: Landscape	$ 12.48	0.00
LABORER: Mason Tender - Cement/Concrete	$ 17.86	1.01
OPERATOR: Bulldozer	$ 33.12	13.96
OPERATOR: Loader	$ 30.35	12.04
OPERATOR: Roller	$ 32.68	13.57
PLASTERER	$ 29.85	13.29
SPRINKLER FITTER (Fire Sprinklers)	$ 26.68	11.61

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that

no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

==========

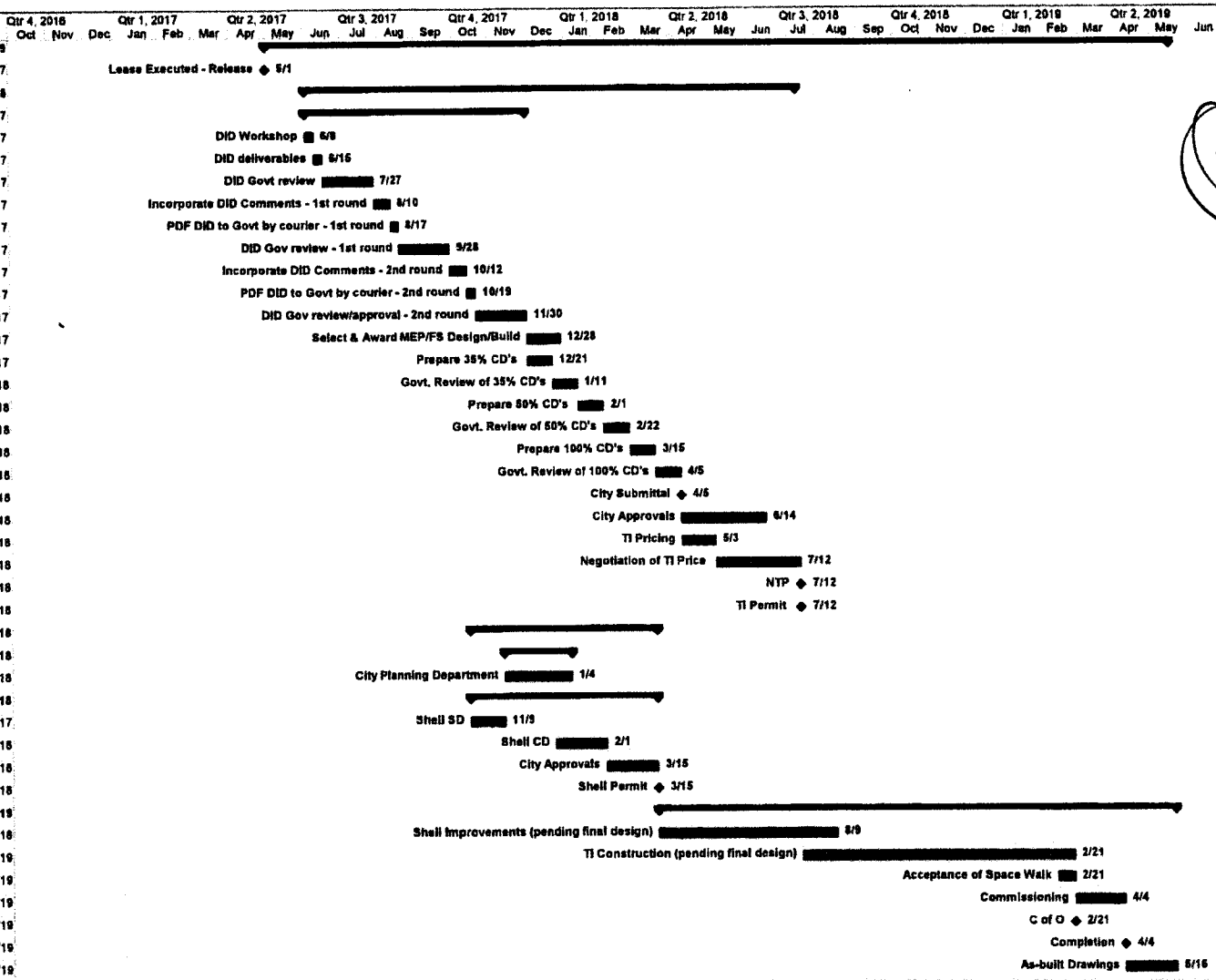
END OF GENERAL DECISION

LUSARDI CONSTRUCTION COMPANY / Easterly Government Properties

FDA Laboratory
Lenexa, KS
Preliminary Design & Construction Schedule

GSA

ID	Task Name	Duration	Start	Finish
1	**Design & Construction**	534 days	5/1/17	5/16/19
2	Lease Executed - Release	0 days	5/1/17	5/1/17
3	Design/Permit - Tenant Improvement	290 days	6/2/17	7/12/18
4	Produce DID's	130 days	6/2/17	11/30/17
5	DID Workshop	5 days	6/2/17	6/6/17
6	DID deliverables	5 days	6/9/17	6/15/17
7	DID Govt review	30 days	6/16/17	7/27/17
8	Incorporate DID Comments - 1st round	10 days	7/28/17	8/10/17
9	PDF DID to Govt by courier - 1st round	5 days	8/11/17	8/17/17
10	DID Gov review - 1st round	30 days	8/18/17	9/28/17
11	Incorporate DID Comments - 2nd round	10 days	9/29/17	10/12/17
12	PDF DID to Govt by courier - 2nd round	5 days	10/13/17	10/19/17
13	DID Gov review/approval - 2nd round	30 days	10/20/17	11/30/17
14	Select & Award MEP/FS Design/Build	20 days	12/1/17	12/28/17
15	Prepare 35% CD's	15 days	12/1/17	12/21/17
16	Govt. Review of 35% CD's	15 days	12/22/17	1/11/18
17	Prepare 50% CD's	15 days	1/12/18	2/1/18
18	Govt. Review of 50% CD's	15 days	2/2/18	2/22/18
19	Prepare 100% CD's	15 days	2/23/18	3/15/18
20	Govt. Review of 100% CD's	15 days	3/16/18	4/5/18
21	City Submittal	0 days	4/5/18	4/5/18
22	City Approvals	50 days	4/6/18	6/14/18
23	TI Pricing	20 days	4/6/18	5/3/18
24	Negotiation of TI Price	50 days	5/4/18	7/12/18
25	NTP	0 days	7/12/18	7/12/18
26	TI Permit	0 days	7/12/18	7/12/18
27	Design/Permit - Site & Shell	110 days	10/13/17	3/15/18
28	Agency Approvals	40 days	11/10/17	1/4/18
29	City Planning Department	40 days	11/10/17	1/4/18
30	Design & Permit	110 days	10/13/17	3/15/18
31	Shell SD	20 days	10/13/17	11/9/17
32	Shell CD	30 days	12/22/17	2/1/18
33	City Approvals	30 days	2/2/18	3/15/18
34	Shell Permit	0 days	3/15/18	3/15/18
35	Construction	308 days	3/16/18	5/16/19
36	Shell Improvements (pending final design)	105 days	3/16/18	8/9/18
37	TI Construction (pending final design)	180 days	7/13/18	2/21/19
38	Acceptance of Space Walk	10 days	2/8/19	2/21/19
39	Commissioning	30 days	2/22/19	4/4/19
40	C of O	0 days	2/21/19	2/21/19
41	Completion	0 days	4/4/19	4/4/19
42	As-built Drawings	30 days	4/5/19	5/16/19



Date 3/20/17

Task		Rolled Up Task		Split		Inactive Milestone		Manual Summary Rollup		External Tasks	
Critical Task		Rolled Up Critical Task		External Tasks		Inactive Summary		Manual Summary		External Milestone	
Milestone		Rolled Up Milestone		Project Summary		Manual Task		Start-only		Progress	
Summary		Rolled Up Progress		Group By Summary		Duration-only		Finish-only		Deadline	

Lessor ___ Gov't ___

Lease GS-06P-LKS00076: Exhibit cc