



DIGITAL REALTY

Data Center Solutions

Data Center Rules & Regulations

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SECTION 11102: TURN-KEY DATACENTER®

RULES & REGULATIONS

I. THE TURN-KEY DATACENTER ®

Each Digital Realty Turn-Key Datacenter facility is physically secure and features a state-of-the-art power and cooling architecture that has been optimized for green operation. Every Turn-Key Datacenter is built using the Company's proprietary POD Architecture® and uses metered power to ensure that clients pay only for the power that they use. The facility also comes standard with Digital Realty's PowerVU software, which enables centralized monitoring and management of datacenter power consumption, energy efficiency and load analysis. Each Turn-Key Datacenter® is a physically separate entity, not a shared cage, that operates as a "building within a building" to ensure datacenter security and resiliency.

II. THE PURPOSE OF THESE STANDARDS

This section applies to properties that are managed and operated by Digital Realty Trust ("DLR") along with its providers for its' Customers. The purpose of this document is to establish rules and operation standards to be adhered to at all times. The goal for all properties owned, managed and operated by DLR is to provide the highest quality product with zero unplanned outages.

- A. In order to achieve this standard, all Customers and their visitors must comply with the following rules and regulations at all times. Customer is responsible for insuring the compliance of their employees and all third parties that a Customer allows to enter the facility.

DEFINITION OF MISSION CRITICAL AREAS

- A. All space within DLR Data Centers and the Turn-Key Datacenter are designated as Mission Critical Areas including (but not limited to) all areas, rooms, systems, and equipment associated with network and data processing operations including Meet-Me-Rooms, Point of Presence Rooms, and Turn-Key Datacenter spaces. These areas are typically on raised floors with precision air conditioning and redundant electrical power systems. Mission Critical Areas also include the areas containing the UPS modules, heat rejection systems, electrical distribution systems, and the computer equipment that depends on these systems.
- B. Mission Critical Areas need to maintain continuous up-time for all primary systems: 24 hours a day; 7 days a week, 365 days a year.

III. UNPLANNED OUTAGES:

- A. Unplanned outages are most often caused by human intervention (not system failure). It is of vital importance that Customers are aware of the importance of maintaining the integrity of these spaces and understand that many of the Mission Critical systems are

connected / interdependent. **Failure to follow proper rules and regulations can lead to unplanned outages for all or a part of the Customers of the datacenter.**

1. An unplanned outage can cause:
 - a) Loss of data.
 - b) A decline in customer service.
 - c) Lost revenue.
 - d) Financial liability.
 - e) Noncompliance with federal and state regulations.
 - f) ALL OF THE ABOVE.

2. Examples of actions that can cause emergencies include items that Customers accustomed to occupying typical commercial office spaces might not normally consider. These items include:
 - a) Plugging into an electrical outlet.
 - b) Replacing a fuse.
 - c) Spray painting, vacuuming, or any other dust producing activity in an area.
 - d) Pulling a loose cable and unplugging an equipment connection.
 - e) Opening or closing a power distribution panel and jarring a circuit breaker.
 - f) Use of a toxic, odor-causing solvent without proper ventilation.

IV. GENERAL RULES

- A.** Customer will provide an access and authorization plan (the customer's "Access and Authorization Plan") before move-in that specifies process and permissions for granting access to the customer space.

- B.** If you observe any problems with doors not closing properly or you notice any other possible security concern, be sure to report the issue to Security promptly.

- C.** Should Customer require installation of additional video or security equipment Customer must submit detailed drawings and specifications for DLR approval

- D.** All DIGITAL REALTY TRUST facilities are designated as 'Non-smoking facilities'. There is no smoking inside any building. Smoking is allowed outside but not within 25 feet of the main entrance of the building or such distance as defined by local jurisdiction.

- E.** No food or drink is allowed in the Turn-Key Datacenter at any time.

- F.** All Customers and their clients, vendors, and other personnel shall conduct themselves in a courteous professional manner while visiting the Data Center. Customers shall refrain from using any profanity or offensive language.

- G.** DLR is not responsible for any loss, damage or theft of vehicle or the contents thereof, while located in a Data Center parking area.

- H.** Alcohol, controlled substances, firearms and explosives are not permitted on any DLR property.

- I. Persons under 18 years of age or requiring adult supervision are not permitted within the datacenter without the express written permission of DLR.
- J. All visitors to the datacenter must wear appropriate footwear and attire.
- K. Unless otherwise expressly permitted by DLR in writing, storage of combustible materials (e.g. wood, cardboard and corrugated paper, plastic or foam packing materials, flammable liquids or solvents) are prohibited within the datacenter.
- L. Customers are expected to be familiar with and adhere to all OSHA standards associated with work in a computer room environment.
- M. Customers may use cell phones inside the datacenter. Two-way radios are not permitted the Data Center. Cell phones with camera capabilities may not be used for picture or video capture.
- N. All boxes, bags, laptops, purses, backpacks, or equipment carried into or out of the datacenter are subject to inspection by site staff or security personnel.
- O. Upon activation of a smoke detector or emergency alarm, all Customers (their employees and vendors) must be prepared to evacuate the building and to receive further instructions from security, property staff, or emergency services personnel.
- P. Tampering for any reason with DLR access control systems, camera equipment, fire alarm/smoke detectors, electrical or HVAC systems within the building is strictly prohibited.
- Q. The use of cameras, video and other photographic equipment along with but not limited to audio monitoring and audio capture devices are prohibited within the datacenter without the express written permission of DLR. No person, other than datacenter personnel, shall be permitted to take photo or videotape records within the datacenter.
- R. Customers are not permitted to take pictures or videos of the datacenter. Customer site pictures or videos must be arranged in advance and according to site security regulations. Should pictures or video be required for insurance or marketing purposes, contact DLR for assistance.

V. ACCESS POLICY

- A. Prior to providing access to the DLR Facility, it is required that everyone that will enter the space read, fully understand and sign and be compliant with the **11101 - Pre-Work Information & Acknowledgement**. A copy of the signed form will be kept on file with the Building Management. For a copy of this document, please contact Building Management.
- B. Customer shall provide an **Access and Authorization Plan("AAP")** before move-in that specifies process and permissions for granting access to the customer space. The plan should designate those that can grant access into the customer's space **"Customer Authorizers"**
 1. The plan must include the following:

- a. The names of all employees of the customer that will require access into the Turn-Key Datacenter® space.
 - b. Names of Company(s), Vendors and Contractors that will be authorized to enter the facility must be provided. The AAP will detail the name of any third party employees and under what condition the employee will be allowed into the Customer space.
 - c. It is the responsibility of the Customer to provide and update the access list every thirty ("30") days. Customer is obligated to provide an immediate update for any changes in personnel that require removal from access to the DLR Facility.
 - d. All personnel will be required to badge in and badge out for accountability every time they enter or egress the facility. "Tailgating" or entering the space without use of a badge is not allowed at any time.
2. For security purposes Customer will designate a person or persons within their organization who will be solely responsible for updating the AAP.
 3. Visitor(s) not on the approved access list will not be allowed to enter the customer space without authorization under any circumstances. Security will contact the "**Customer Authorizers**" and inform them that a visitor(s) has arrived and is in the waiting area. It will be the customer's responsibility whether to escort the visitor(s) or have Security issue an access badge.
 4. Access cards will expire upon 60 consecutive days of non-usage.
 5. Access badges shall be worn conspicuously above the waist.

C. ACCESS FOR EMPLOYEES

1. Security will issue access cards to each employee of the Customer on the "**AAP**".
2. The Customer should contact Building Management to schedule the issuing of employee access cards. All employees on the approved AAP list must provide a non-expired Government issued Photo ID in order to be issued a building ID and access card.
3. Many DLR facilities utilize biometric readers, which require programming prior to first-time entry.

D. VENDORS/CONTRACTORS ACCESS

1. Vendors/Contractors that require access to the Customer's space must meet the DLR insurance requirements prior to performing any work in the building. For a copy of the Building's insurance requirements, please contact Building Management.

E. EMERGENCY ACCESS

1. Emergency access of individuals not on the approved list can only be approved by the **“Customer Authorizers”**.
2. The **“Customer Authorizers”** should contact Security and provide a complete description of the scope of work and the nature of the emergency. Some work scope may require the approval of Building Management prior to granting access to the vendor.

F. SECURITY

1. All DLR facilities require the use of a DLR issued access card to gain entry. Individuals on the AAP will not loan their card to a third party. Failure to comply will cause offending parties removal from the site.
2. Access badges must be displayed at all times and must be worn above the waist.
3. In the event an ID badge is lost or stolen, the Customer is obligated to report the loss, immediately to Security so that the badge can be deactivated. DLR is not responsible for providing access to or for the activities of individuals whose authorization is reflected in a Customer's access list that has not been properly updated by Customer to revoke such authorization at the time such access was granted by DLR. The Customer remains responsible for the activities of these individuals as with any other authorized Customer employees, contractors or vendors.
4. “Tailgating” into a controlled space is prohibited. An employee or vendor is required to utilize their own badge to gain access to the DLR facility. Each person entering the Facility must swipe their individual card and will not gain access by following close behind other authorized personnel.
5. All DLR Facilities are under 24-hour closed circuit TV cameras surveillance. Cameras are deployed throughout the Facility and surrounding areas to monitor the security of exits and entrances. Activity viewed by these cameras is recorded and may be used for investigative purposes or when a security policy, such as tailgating, is violated. Only DLR may install cameras on the exterior of the Facility.
6. DLR Facilities are secured with an access control system utilizing combinations of access cards and/or biometric readers.
7. In multi-customer facilities, all ingress and egress to the Facility will be monitored and controlled by a DLR access control system. This applies to all common areas, so as to not impede access by any other Customers or Building Management.
8. Tenant may, upon approval, install their own access control systems only on the entrance into their leased space. Tenant must grant access to all DLR, Building Management employees and authorized third party provider's to perform work on systems and equipment that are within the Customer's space. DLR and/or Building Management will provide and maintain an updated access list of these employees. The Customer may request this list and inspect it at any time.

G. SMOKE, ODOR, DUSTY WORK OR HEAT PRODUCING TOOLS/EQUIPMENT

1. Any work that may produce smoke, dust, debris, or strong odors, (i.e. heat guns, drills, hammer drills, grinders, sanders, vacuuming, etc.) must be scheduled and approved in advance by Building Management. Any such work typically requires the disabling of the fire alarm enunciation, smoke detection and suppression systems and must be carefully coordinated in advance.
2. An approved **DLR Fire Impairment Form** must be submitted to Building Management for review and approval along with appropriate **Change Management** documentation.
3. The Customer is responsible for any accidental discharge will be liable for any costs associated with this action.
4. The Customer is responsible for all third party costs should Local or State Authorities require the presence of Fire Department Personnel while any work is taking place.
5. All fines imposed by the Fire Department resulting from events or alarms created by such work will be the full financial responsibility of the Customer performing such work.
6. Extensive dirty or dusty work may further require the replacement of HVAC unit filters and the Customer will incur an associated charge for this material. The installation of pre-filter media over the HVAC unit intake may also be required at the Customer's expense.
7. Any vacuuming requires the use of a properly labeled and certified HEPA filtered vacuum.

H. COMMON AREAS AND CONFERENCE FACILITIES

1. The common areas, Customer lounge, and conference room areas within the datacenter are for the common use of all Customers with sites within their respective datacenters.
2. Customer lounge areas and any associated Internet access are provided as a courtesy to Customers. Customers shall use such Internet access for business purposes only.
3. The datacenter common areas are offered as a convenience and not as a work area. Extended use of the working assets of a datacenter common area, as listed above, for more than 2 hours (total) in a 24-hour period is not permitted.
4. Customers using the common areas must throw away their trash in the appropriate receptacles. If you reserve and use a conference room, please be responsible for clean up after using the facilities. Coordinate any food delivery or catering events through Building Management.
5. Some Facilities may provide a temporary staging area available, on a first-come, first-served basis, for the temporary unpacking and configuration of servers. The

staging areas are offered as a convenience and not as a permanent storage area. Extended use of the staging areas is not permitted in the datacenter staging area.

6. Equipment assembly and similar functions are restricted to the staging area may not be conducted in common areas. DLR is not liable for Customer assets left unattended in this area. If you wish to lease a staging cage for regular (non-temporary) basis, please contact Building Management.

I. REMOVING RAISED FLOOR TILES

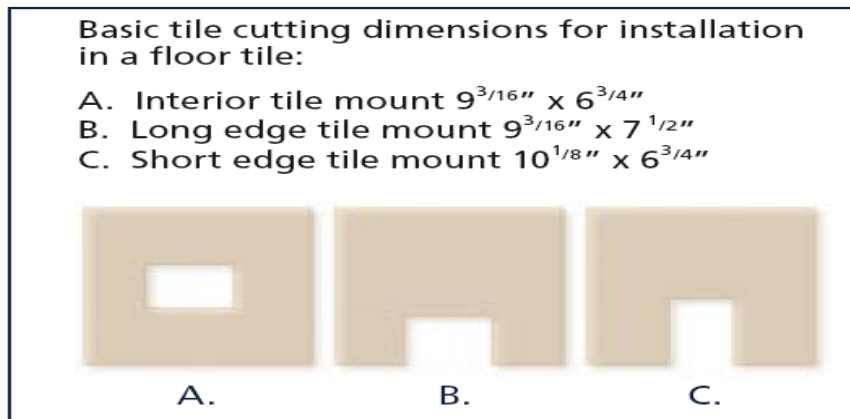
1. In order to maintain static pressure for proper cooling of equipment, all installation or removal of raised floor **perforated** tiles, are to be performed by the Building Management Staff only.
2. Customers may remove and replace **solid** floor tiles within their space. To maintain structural integrity of the raised flooring, no more than 5 floor tiles or 3 floor stringers may be removed at any given period of time.
3. Customers are allowed to perform tile cuts for cable access provided prior approval from the Building Management Staff is received and the opening and grommet are in compliance with DLR's standards (Sample standard listed below):

- a. **Koldlock Integral**, Model # 1010.

Overall size: 11" x 8¹/₄" x 1⁵/₈"

Grommet usable cable opening size: 8" x 4"*

Grommet total cable opening size: 8" x 5"



*Ensures easy passage of cable heads and power connectors including a 100 amp Hubbell™ power plug (or equivalent 4.125" x 4.125" connector).

- b. **AirGuard** Part # 116-800-001
 - i. Overall Size 6.0" H x 12.0" W x 1.5"D inches
 - ii. Hole open 5-3/8" H x 10.5" W
- c. Any deviation from standard size opening must be approved in advance by Building Management.

4. Raised floor cutting and installation services may be requested through Building Management to be performed by approved vendors. The Customer will be responsible for all costs.
5. Floor tiles must all be flat with no raised edges when the tiles are replaced.
6. No tile cutting is permitted on the Turn-Key Datacenter® floor, surrounding exterior hallways, or any raised floor areas. Building Management will designate areas where this work shall be performed.
7. Use safety cones, barricades, caution tape, or other safety equipment or devices to direct people away from hazardous areas, especially when a floor tile is removed and the under floor area is open.

J. REMOVAL OF CEILING TILES

1. Customers may not lift ceiling tiles within their own leased space or the common areas without prior approval from DLR Building Management.
2. Customers and Vendors/Contractors are not allowed to perform ANY work (i.e. cabling, electrical, conduit, etc.) outside the Customer's space at any time without the approval of Building Management.

K. DRILLING

1. All work must conform to the Building drilling policy. The use of a hammer drill with a tool interrupter device or similar protective shutoff is required. X-rays or infrared scans (ex: Hilti Farroscan) may also be required in advance. All locations with Post-Tensioned slabs require strict review and approval. Contact Building Management to review the current Construction Policies. Building Management must review and approve all plans prior to any work being performed.
2. When drilling is performed, an inspected and approved HEPA filtered vacuum cleaner must be used during the drilling to minimize the amount of dust particles emitted into the space.
3. All such work shall require the disabling of the fire alarm enunciation, smoke detection and suppression systems and requires advance approval from Building Management.

VI. CABLE INSTALLATIONS

- A.** Wiring refers to all materials for power, communications, signal, and control distribution including network cables and optical fibers.
- B.** Cabling work may require the disabling of the fire alarm enunciation, smoke detection and suppression systems by DLR Building Management.
- C.** The following requirements only apply to shared, common space outside of the Customer leased space. Customer cable work inside customer premises is exempt; provided:

1. All work is performed in a workman like manner and meet established engineering best practices and standards.
2. Customers are allowed to interconnect between any of their own equipment and to/from their customer's within the Customer's leased premises. No "Customer to Customer" cable connections are permitted between DLR datacenters.
3. Cross connects between the Meet-me-room and the point of presence for the internet (Commonly called the "PoP" or Internet Exchange Point) requires prior approval from DLR Building Management.
4. The overhead cable management systems are to be used for all cable runs. No cabling shall be run underneath the raised floor areas without advance written approval from DLR Building Management.
5. Customers may run overhead ladder rack or cable tray affixed to the top of customer cabinets within customer's premises.
6. All cables installations must be secured and bundled together using approved materials such as wax-coated string, Velcro-ties or plastic tie-straps.
7. Cables are not allowed to extend beyond the rack/tray edges. Cable bundles must be kept in a neat and orderly fashion to maintain workability and appearance.
8. All cables must be run on top of the rack/tray and are not allowed to be run underneath them.
9. All cable trays or ladder racks must be installed per DLR grounding specifications.
10. All cabling must be plenum rated unless installed in conduit directly on location, or in a plenum rated inner duct.
11. Previously installed, non-plenum rated cables shall not be reused for new applications. PDU cables which are UL-listed for use under a raised Information Technology Equipment room floor may also be used in areas meeting the requirements of NEC 645.5D.
12. As required by the NEC, any cable which is no longer used must be removed from beneath the raised floor; cables must not be abandoned in place.
13. Rack to rack connections shall be made through patch panels whenever possible.

VII. COMMUNICATIONS CABLE LABELING STANDARDS

- A.** Prior to commencement of any "Customer to Customer" interconnections, DLR must review and approve the pathway and engineering of said connections. All interconnections must occur in the Building Meet-Me-Room.
- B.** All cables to and from the Customer space must run in the common area cable management system in a space designated by DLR.

- C.** If cables extend into DLR space, then cables must be labeled according to the following Labeling Standard:
1. Customer conduit runs in common space may be labeled at the ends and junctions only.
 2. Tagging of all cables must be performed at the beginning and end points of each cable. Cable bundles may be labeled as single units. Customer standard tags are acceptable. "Write-on" labels are allowed for the identification of circuits due to the potential for change, but must be legible.
 3. Tags must have the following:
 - i. Customer name;
 - ii. cage location;
 - iii. Interconnection rack area or port number(s).

VIII. ELECTRICAL DISTRIBUTION

- A.** The following requirements only apply to the last demarcation point of DLR supplied power (the "DLR/Customer Demarcation Point"). Demarcation is the output power of the Power Distribution Unit (PDU).
1. All electrical switching will be required to adhere to the DLR Change Management Process and will require a Method of Procedure (MOP).
 2. DLR Building Management and Engineering personnel will manage all electrical distribution requirements. All electrical distribution installations and/or changes must be specified and approved in advance by Building Management.
 3. Building Operations staff will control all main distribution electrical breaker positions. All distribution panels will remain locked at all times. Coordination of breaker operation must be requested by the Customer to the Building Management in writing, and approved by the Building's Chief Engineer and/or his designated representative, prior to activation.
 4. Power distribution wiring shall only be installed by qualified electricians.
 5. Power distribution Unit (PDU) circuit breakers may be operated by Turn-Key Data Center ® staff and electricians. Electricians shall perform all other work inside of the PDUs. Appropriate [personal protective equipment](#) (PPE) must be used.
 6. Customers may not make or modify electrical connections on remote power panels (RPP's) without prior written approval. This also includes any power strips or equipment connected to the UPS circuits within their cage(s) or cabinets.
 7. Racks of equipment are commonly powered by more than one circuit breaker. All sources of electricity must be disconnected to be sure that the rack is electrically safe.
- B.** Customers are responsible for the termination of all DC voltage cabling to Customer fuse panels within their cage(s).

- C. For all work performed on shared electrical infrastructure, performed by a contractor, under the direction of the customer, will require inspection sign off by DLR Building Management prior to any power activation.
- D. Under floor AC power connections to the computer equipment must be made using twist lock connectors unless the circuit is permanently hard wired.
- E. DLR can provide quotes for electrical engineering and installations. If a customer would like to have a contractor of their choice provide this service, the contractor must meet all DLR insurance requirements. A list of approved electrical contractors is maintained by the Building Management.

IX. FIRE ALARM; FIRE SUPPRESSION; SMOKE, HEAT AND WATER DETECTION SYSTEMS

- A. Customers are not authorized to tamper with or alter the Building's existing Fire Alarm/Suppression Systems at any time.
- B. The fire suppression system within the DLR Facility must be disabled for any work, which may cause smoke, odor, or dust, including the use of heat guns. A minimum of five (5) business days advanced written notice to the Building Management office is required and the customer will be responsible for any costs associated for the work to be performed after normal working hours.
- C. All requests for fire suppression system work will be required to follow the DLR Change Management process with any required supporting documentation submitted at the time of the request.
- D. Only DLR or designated representatives may disable/impair the Fire Alarm/Suppression Systems. A "Fire System Impairment" form will need to be completed and approved by DLR, all tasks and notifications must be done as listed in the instructions contained on the form.
- E. Doors and Partitions - Turn-Key Data Center ® rooms and under floor areas are designed to divide the air conditioning and fire suppressant systems into different zones. Do not prop open normally closed doors or open holes in the under floor partitions.

F. FIRE SUPPRESSION SYSTEMS

1. DLR Turn-Key Data Centers are protected by a complicated array of fire alarm, detection and suppressant systems. Many of these systems are described in this section. The most important thing to remember is very simple: LEAVE THE FACILITY BY THE NEAREST EXIT IF YOU HEAR THE FIRE ALARM OR SEE THE FLASHING STROBE LIGHTS. The fire department will respond to the alarm and are trained to handle any emergency. DO NOT STOP TO COLLECT YOUR POSSESSIONS, EXIT IMMEDIATELY.

2. Interlocking, pre-action water sprinklers typically protect the Mission Critical Areas, offices and support spaces. The sprinklers will function automatically when the space temperature exceeds a preset level and the fire detection system is in alarm.

Some facilities may also have clean agent / gaseous suppression systems in addition to the pre-action systems mentioned above. Both types of systems are described in further detail below: {Note that TKD does not typically have gaseous protection. As such, the language below does not need to be in the "standard" Rules and Regulations document but may be utilized in instances where gas is present}

- a. Halon can safely suppress a fire before the water sprinklers are activated, but must reach sufficient gas concentration to be effective. Open floor tiles can reduce the effectiveness of the Halon system. Opening partitions under the raised floor will also allow Halon to escape and defeat its effectiveness. Halon is released either by excessive temperatures that trigger heat sensors beneath the floor in the protected areas or by activating a manual release. Activation of the Halon system will automatically notify local building security and the fire department.
 - b. Halon systems will sound a very loud buzzer before the Halon is released. Strobe lights labeled "Halon" will also flash. Immediately leave the datacenter through the nearest door if you hear this alarm. Release of the Halon will make an extremely loud noise as the gas is expelled at high velocity and may send debris flying through the room. As a precaution, DO NOT REMAIN IN THE DATA CENTER AFTER A HALON RELEASE.
 - c. Inergen - Inergen is composed of the nontoxic gasses argon, nitrogen, and carbon dioxide (CO₂). Heat sensors activate each Inergen release system as do manual release buttons in some locations.
 - d. The Inergen system will sound an audible alarm and cause a strobe light to flash before releasing the Inergen. Release of the Inergen will expose you to the same noise and high velocity gas hazards as from Halon. Although the Inergen gas is nontoxic, the manufacturer states that you should not enter a room where Inergen has been released to suppress a fire for 15 minutes after release to avoid exposure to toxic combustion products.
 - e. Some older Inergen systems may have higher concentrations in the occupied areas. For these systems, follow lock out and tag out of the Inergen systems. This is considered an Oxygen Deficiency Hazard (ODH) area.
3. Fire rated doors must not be propped open. Leaving fire doors open can help fires to spread and can prevent fire suppressant gases from reaching sufficient concentration. Leaving doors open also affects computer room temperature, humidity stability and security.

G. SMOKE DETECTION SYSTEMS

1. The fire detection systems consist of various ceiling and under floor mounted smoke detectors. These systems are activated by dust or fumes which will in turn activate the fire suppression systems mentioned above. Please reference the

section regarding **SMOKE, ODOR, DUSTY WORK OR HEAT PRODUCING TOOLS/EQUIPMENT** above.

2. Many DLR facilities utilize high sensitivity smoke detection (HSSD) or VESDA®, Very Early Smoke Detection system. These systems are capable of detecting microscopic particles of combustion. Generally air is drawn in through a network of small-bore pipes laid out above or below a ceiling in parallel runs covering a protected area. A HSSD or VESDA® detector will trigger automatic fire response systems. The HSSD does not activate fire sprinklers or clean agent fire suppression systems.

H. UNDER FLOOR LEAK DETECTION AND HEAT SENSING SYSTEMS

1. Under floor leak detectors are provided to sense the presence of water. The detectors and, in some cases, the attached water sensing cables, must not be lifted above the floor or they will not be able to detect the presence of water at floor level.
2. Under floor heat sensors are used to activate the fire suppressant systems. Do not pull any cables or do any other work beneath the raised floor that may damage the sensors unless the fire suppressant system has been deactivated in the area in which you are working. Contact the DLR Building Management staff to arrange for this. This work must be scheduled for day shift (prior to 4 PM). Customers must notify Building Management when work is complete so they can reactivate the systems.

X. HVAC STANDARDS

Alteration of or tampering with the Building HVAC settings, related airflows or any other HVAC systems within the Turn-Key Datacenter® is strictly prohibited.

XI. SIGNAGE STANDARDS

DLR and / or the authority having jurisdiction shall approve the initial signage for each Customer and may require the use of the Building Standard signage. DLR must approve any changes requested by any Customer.

XII. DELIVERIES

DLR facilities do not have shipping and receiving departments. This section has been developed to aid customers with their delivery needs.

All Customer deliveries made to the property must follow the procedures listed below:

1. All Vendors and their cargo must be authorized and cleared in advance by Building security. (See section V. included in this document regarding ACCESS POLICY).
2. Customers may bring small “hand carry” equipment through the lobby. Customers may contact Building Management or Security for assistance. Large amounts of

equipment, shipments or large devices must enter the datacenter through the shipping/receiving dock. Customers must notify Building Management of any such deliveries that require processing through the loading dock.

3. All packages shipped to the datacenter must have the Customer's name and site ID on the shipping label. Unidentified packages are a security risk and unidentified packages delivered to the datacenter may be refused for delivery.
4. Deliveries must be received by the Customer or Customer's designee, at the freight dock and immediately deposited by Customer (or such designee) within the Customer's premises.
5. If available, the Customer may lease lockable storage space in the Building for an additional monthly charge. Additionally, if resources permit, temporary/short term storage may be available from Building Management. Please contact Building Management for more information and with regard to the availability of such space(s).
6. All Customers are required to ensure delivery and moving companies provide required insurance certificates to Building Management BEFORE the delivery arrives.
7. Breakdown of all cartons and crating materials must be done in the Building storage area prior to transporting the equipment to the datacenter.
8. It is the sole responsibility of the customer receiving the shipment to discard all crating material and/or pallets in a timely manner. If DLR has to arrange for disposal of any customer material, the customer is responsible for all related charges.

Under no circumstances shall DLR, building security, Building Management be held responsible for the safety or condition of any deliveries.

XIII. WORK SCHEDULING, PREPARATION, PLANNING AND CONTROL

- A. The following requirements only apply to the last demarcation point of DLR supplied power or outside of the Customer's own space (the "DLR/Customer Demarcation Point"). This also applies to work requested by Customer that is considered shared infrastructure.
 1. Only Building Management can approve any activity that affects the electrical and mechanical systems of the buildings. Notify Building Management prior to beginning any work for the day and upon completion of the work each day.
 2. All work (electrical, mechanical, telecommunication , etc.) must conform to the DLR Change Management process which will require appropriate supporting documentation such as a "Method of Procedure" (MOP) that provides specific work plans. Before work begins, all documentation must be completed and approved and a final Change Management approval must be in Customer's possession.
 3. All work must conform to the approved MOP. If any additional work is needed or if dates/times change, a new request will need to be submitted for review and approval, before the work can begin. All approvals will be made in writing.

4. Only Building Management can approve any activity that affects the electrical and mechanical systems of the buildings. Notify Building Management prior to beginning any work for the day and upon completion of the work each day.
5. Power receptacles and other hardware connection points will be identified by Building Management. Vendors/Contractors are not to plug in any hardware, laptops, power tools, or diagnostic equipment without prior written approval.
6. Vendor personnel are expected to have their own tools and equipment necessary for the work tasks to be performed.
7. Cables, tools and accessories are to be properly stowed or removed when work is complete or at the end of each business day.
8. All doors, panels and covers will be installed when work is complete or at the end of each business day.
9. See section above regarding removal and cutting of floor tiles.
10. Nothing shall ever be stored under the raised floor.
11. Penetrations to rated fire walls or smoke barriers must be sealed on a daily basis.
12. Do not set ANYTHING on top of equipment or block access to any aisles, doors, air conditioning or Power Distribution Units, Emergency Power Off (EPO) buttons, chillers, or electrical panels.
13. Nothing may be placed within 36" in front of the door to any electrical panel, Uninterruptible Power Supply (UPS), or Power Distribution Unit (PDU).
14. Use safety cones, barricades, caution tape, or other safety equipment and devices to direct people away from hazardous areas.
15. Do not cross protective barriers or devices without asking permission. Be especially aware in areas where floor tiles can be removed exposing the under floor area.
16. No more than the required daily quantity of paints, solvents, adhesives, or any other flammable materials needed for a job may be brought into the Turn-Key Data Center®. At no time shall the total quantity of flammable liquids exceed 2 gallons. Sealed and opened cans must be stored in metal fire rated cabinets when not in use.
17. The movement of heavy equipment (over 300 lbs.) must be approved in writing by Building Management prior to commencement.
18. Protective floor coverings (such as masonite) will be used at all times to protect the path of travel as well as the raised floor tile where the work is being performed against damage.

XIV. GENERAL SAFETY PRACTICES

1. Customers are required to report any actual or suspected safety violations to Building Management immediately.
2. Customer must ensure that all aisles and exits are free of obstructions at all times.
3. The procedures for reporting and responding to a medical emergency can be provided by Building Management.

XV. EQUIPMENT INSTALLATION

- A.** The following requirements only apply to the last demarcation point of DLR supplied power or outside of the Customer's own space (the "DLR/Customer Demarcation Point"). This would also apply to work requested by Customer that is considered shared infrastructure.
- B.** See Sections above regarding installation of cabling, racks, and tray systems; removal of floor tiles; ceiling and / or floor tile modifications; fire and smoke detection systems.
- C.** Installation of ladder racks, cable management tray, fiber guide / inner duct and floor tiles within, above, below any Customer area must be pre-approved by DLR Building Management and must match existing systems installed.
- D.** All connection points must be "bonded" between sections to maintain the integrity of the existing rack/tray system including appropriate grounding (reference DIGITAL REALTY TRUST Signal Reference Grid standards).
- E.** To ensure effective grounding, the paint must be removed down to the bare metal and Customer agrees to install according to common practices and/or manufacturer instructions in order to provide a metal contact point for the bonding connection(s).
- F.** The frames of all cabinets, PDU's, CRAC'S, etc. installed in the DLR Facilities must be bonded to the single reference grid (SRG) located under the raised floor.
- G.** The use of manufacturer specified floor stands are required and all equipment will be anchored to the slab via mechanical fasteners. PDU's, CRAC's, etc, will not be installed directly onto the datacenter raised floor.

XVI. HOUSEKEEPING

- A.** Customers are expected to keep their areas safe, neat and clean. Contact Building Management with any questions or for assistance with any issues.
 - 1. Unpack equipment outside the computer room and dispose of the combustibles in areas designated by DLR.
 - 2. Storage of combustible material on the raised floor is never allowed.
 - 3. Never leave an area with dirt and debris, even temporarily. Remove dust or dirt immediately using an approved and inspected vacuum.
 - 4. All vacuums used must be certified and labeled with a HEPA filter on the discharge.
 - 5. Immediately report any spills or hazards to Building Management so that corrective action can be taken.

XVII. TRASH REMOVAL

- A.** In general, all Customers are responsible for removal and proper disposal of their own waste products and trash. If assistance is needed, Customers may request assistance with large or initial trash removal from the Turn-Key Datacenter® spaces by contacting Building Management.
1. In the event that a Customer requests waste removal by Building Management, Customer must label the trash and provide in as tidy of a pile as possible outside of any locked or caged areas.
 2. Unpacking of equipment should take place in the storage. Once equipment is unpacked, all cardboard boxes are to be removed from the Turn-Key Datacenter®. Always properly dispose of all combustibles immediately.
 3. At no time will wooden pallets or spools be allowed to remain unattended in the datacenter as they are a fire hazard.
 4. Report any spills or fire hazards so corrective action can be taken.

XVIII. EMERGENCY POWER OFF SYSTEMS

1. Emergency power-off (EPO) buttons may be located within the datacenter for use in an emergency situation where the shutdown of power and cooling is necessary to prevent loss of life or to prevent the spread of a significant electrical fire.
2. The activation of the EPO will turn off all power and cooling to all server equipment within the Turn-Key Datacenter®.

XIX. APPROVED LABELING AND BINDING MATERIALS



APPROVED CABLE IDENTIFICATION METHODS



APPROVED CABLE AND ELECTRICAL CIRCUIT IDENTIFICATION METHODS

XX. HEARING PROTECTION

1. High Noise levels may be present in certain areas. People in these areas may be required to wear hearing protection (ear muffs or foam plugs).

Personal Accountability

These procedures and guidelines have been developed for safety and to reduce the chance of errors and unintended events. Failure to comply with these procedures is grounds for immediate removal from the facility and may result in permanent loss of access. Every person allowed access to the facility must review these procedures annually.

I have read the Digital Realty Trust (DLR) Operations and Maintenance Guide and have had an opportunity to ask clarifying questions about the procedures, the reasons for this guide and the intent. I agree to follow these procedures and I will make every effort to avoid accidents and mistakes.

Name [print] _____

Signature _____ Date _____

Customer Name [print] _____

Department [print] _____ Number _____

Approved by _____ Date _____

Revision History

Revision	Date	Page(s)	Description / Changes Made	Author
V6	7/20/09		Revised entire document	DIGITAL REALTY TRUST TechOps
V6	7/20/09		Changed all instances of "DIGITAL REALTY TRUST" to Digital Realty Trust	Rebecca Brese
V6	7/20/09	8	Section III/A/1/c added "vacuuming, or any other dust producing activity"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	8	Section III/A/2/f changed "cause the staff to flee the building" to cause an inadvertent evacuation"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	8	Section IV/E added building or as defined by local jurisdiction	DIGITAL REALTY TRUST TechOps
V6	7/20/09	9	Section V/B/1 added items (c) and (d)	DIGITAL REALTY TRUST TechOps
V6	7/20/09	9	Section V/D/1 replaced "A copy of the Certificate of Insurance matrix will be kept with the Building Management" with "For a copy of the Building's insurance requirements, please contact Building Management"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	10	Section V/F/8 added "Only DIGITAL REALTY TRUST may install cameras on the building exterior perimeter.	DIGITAL REALTY TRUST TechOps
V6	7/20/09	11	Section V/H/1 added "vacuuming"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	11	Section V/H/2 added "along with appropriate Change Management documentation	DIGITAL REALTY TRUST TechOps
V6	7/20/09	12	Section V/J/4 changed "can be performed by Digital Realty Trust at an additional cost" to "may be requested through DIGITAL REALTY TRUSTDIGITAL REALTY TRUST by approved vendors. The customer will be responsible for all costs.	DIGITAL REALTY TRUST TechOps
V6	7/20/09	12	Section V/J/5 added "surrounding exterior hallways, or any raised floor areas"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	13	Section V/K/1 added "Any locations with Post-Tensioned slabs will require strict review and approval." Changed "work" to "plans"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	13	Section V/K/2 replaced "portable" with "an inspected and approved HEPA filtered"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	13	Section VI/B added Item 8	DIGITAL REALTY TRUST TechOps
V6	7/20/09	14	Section VI added Item C	DIGITAL REALTY TRUST TechOps
V6	7/20/09	14	Section VIII/A/1 changed "require the completion of Digital Realty Trust Electrical Switch Procedures" to "be required to adhere	DIGITAL REALTY TRUST TechOps

			to the Change Management Process and will require a Method of Procedure (MOP)”	
V6	7/20/09	15	Section VIII/A/3 changed “Engineering” to “Operations Staff”. Added “ main distribution” before” electrical breaker positions”	DIGITAL REALTY TRUST TechOps
V6	7/20/09	15	Section IX/B changed “24 hours” to “five (5) business days”. Added “and the customer will be responsible for any costs associated for the work to be performed after normal working hours. “	DIGITAL REALTY TRUST TechOps
V6	7/20/09	15	Section IX/C replaced “Email replies received directly from the Building Manager are considered acceptable notice. Receipt confirmations will not be valid. All notices must be accompanied with a detailed description outlining the scope of work “with “All requests for fire suppression system work will be required to follow the DIGITAL REALTY TRUST Change Management process with any supporting documentation also submitted.”	DIGITAL REALTY TRUST TechOps
V6	7/20/09	15	Section IX/D replaced “Building Management” with “DIGITAL REALTY TRUST or designated representatives”	DIGITAL REALTY TRUST TechOps
V6	7/20/09	17	Section XII/6 replaced “Any equipment with a “footprint” weight of 1250lbs or greater requires the review and placement approval of the building structural engineer prior to installation. All costs associated with the structural review are the responsibility of the Customer” with “Any equipment with a “footprint” weight of 1250lbs or greater requires the review and placement approval of the building structural engineer prior to installation. All costs associated with the structural review are the responsibility of the Customer. Any equipment footprint must be reviewed and approved prior to installation and may require the review of a structural engineer. All surfaces (floors, walls, doors, etc.) must be adequately protected while the equipment is moved. These requirements will be at the customers sole cost.	DIGITAL REALTY TRUST TechOps
V6	7/20/09	17	Section XII added Item 9	DIGITAL REALTY TRUST TechOps
V6	7/20/09	17	Section XIII/A/1 changed “All work must have a completed “Method of Operation” (MOP) that provides specific work plans before you begin work must be completed and approved before a “Change Management Work Request” number will be granted” with “All	DIGITAL REALTY TRUST TechOps

			work (electrical, mechanical, telecommunication , etc.) must conform to the DIGITAL REALTY TRUST Change Management process which will require appropriate supporting documentation such as the "Method of Procedure" (MOP) that provides specific work plans. Before you begin work, all documentation must be completed and approved and you must have received final Change Management approval."	
V6	7/20/09	17	Section XIII/A deleted Items 2 and 3 and renumber remaining items	DIGITAL REALTY TRUST TechOps
V6	7/20/09	17	Section XIII/A/3 added "Notify Building Management prior to beginning any work for the day and upon completion of the work each day.	DIGITAL REALTY TRUST TechOps
V6	7/20/09	18	Section XIII/A/4 deleted "an authorized" before "Building Management"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	18	Section XIII/A/13 added " Protective floor covering (such as Masonite) will be used to protect the path of travel as well as the raised floor tile against damage due to equipment."	DIGITAL REALTY TRUST TechOps
V6	7/20/09	19	Section XV/B added "(reference DIGITAL REALTY TRUST Signal Reference Grid standards)	DIGITAL REALTY TRUST TechOps
V6	7/20/09	19	Section XV/D replaced "raised floor" with Turn-Key Datacenter®	DIGITAL REALTY TRUST TechOps
V6	7/20/09	19	Section XV added Item E	DIGITAL REALTY TRUST TechOps
V6	7/20/09	19	Section XVI/A/6 added "HEPA" before "filter". Added "and must be inspected and approved by Building Operations staff."	DIGITAL REALTY TRUST TechOps
V6	7/20/09	19	Section XVI/A/8 deleted "Please use the break rooms"	DIGITAL REALTY TRUST TechOps
V6	7/20/09	20	Section XVII/A deleted Item 4 and renumbered remaining bullets	DIGITAL REALTY TRUST TechOps
V6	7/20/09	20	Section XVIII added Item B	DIGITAL REALTY TRUST TechOps
V6.1	4/21/10		Moved Revision history to end of document	Ted Martin
V6.1	4/21/10		Changed font size on title page	Ted Martin
V6.1	4/21/10	6	Section V.F.2. Replaced mandatory display of badges above the waist	Ted Martin
V6.1	4/21/10	4	Section V.B.4. Changes badge expiration days to 60	Ted Martin
V7	01/02/12		Refreshed Document	Danny Lane
V7.1	8/27/13	20	Removed Internal note "Please have legal review" from section XX.	Danny Lane