

SERVICE DELIVERY MANAGEMENT PLAN**A. Key personnel contact information**

The Key personnel contact information which includes at a minimum, the following role definitions:

Account Manager

John Fanelli
Senior Sales Director
301-548-1953

John is responsible for managing the relationship between Hughes and Texas DIR. Provides the first point of contact for information regarding new requirements for Texas DIR and the DIR Customers. John will provide the quotes to the customer.

Contract Manager

David Tuscano
Sr. Director, Sales operations
301-548-1950

David is responsible for managing Hughes contract operations, including contract modifications of products and services to support Texas DIR and the DIR customers.

Technical Sales Support

Paul Rabenhorst
Solution Consultant Director
301-548-2950

Paul is responsible for technical sales support, including mapping Hughes products and services to meet specific Texas DIR requirements.

Program Management

Pat Olesen
Senior Program Director
301-428-5593

Pat is responsible for Program Management of the Department of Public Safety program with Hughes

Bill Snider
Business Systems Director
3016017235

Bill is responsible for the execution of the contract and overall management of the Texas DIR program.

Billing Manager

Bryan Gustafson
Senior Director, Business Processing
301-428-5973

Bryan is the manager of the Hughes support organization that supports billing, invoicing, and ongoing contract administration support.

Contract Administrator

Phil O'Brien
Vice President
301-601-6463

Phil is responsible for all contractual and legal matters in the relationship between Hughes and Texas DIR.

Other key personnel as proposed

Deb Chowdhury
Senior Director, Programs
301-601-4030

Deb leads the program management team responsible for managing government programs at Hughes. Deb will hold regular program reviews with the Hughes Program Managers assigned to Texas DIR to ensure that the program and performance objectives are being met.

B. Service ordering process for fixed satellite (which includes DIR)

Hughes has experience with the type of service ordering process that is described in the TEX-AN Next Generation RFO. There will be two ways to place orders. 1) The SoHo orders will be handled by the Hughes call center with accompanied P.O. or credit card. The call center number is 844-817-5287. 2) FSS orders and quote requests will be sent via email from the DIR Remedy to a centralized email address and will be processed to the Sales Director (John Fanelli). John can also be reached at 301-548-1953.

Hughes will publish a catalog of the products and services for the state of Texas and post on their web site. <http://government.hughes.com/how-to-buy/tex-an-ng>

The Account Manager will provide a quote for the specific equipment and services. An example of this quote is attached at the end of this section. Once the contract line items that are required have been identified, it is expected that the Texas DIR will submit a purchase order to Hughes identifying the deliverables, Customer contacts, and schedule requirements. The FSS order will be received by the Hughes Program Manager via DIR Remedy and the Work Order Acknowledgement task will be provided to Texas DIR within three business days.

The Hughes Program Manager and the supporting program management organization will enter the FSS order in the Hughes provisioning system. If there is additional specific information required to complete the order, the Program Manager will contact the appropriate Texas DIR or DIR Customer personnel to ensure that these details are entered in the provisioning system. For orders larger than (typically) five remote locations, we will request that a spreadsheet (template provided by Hughes) be completed by the Customer with all of the site-specific details. This spreadsheet will be reviewed by Hughes and then used to electronically upload the site-specific details into the Hughes provisioning system.

The Hughes provisioning system will automatically transmit the detailed information to all of the appropriate support systems within Hughes (network management, Help Desk, billing, installation, field service, etc.) to enable the delivery and support process. The Hughes Program Manager will be able to track and report on the status of each order.

C. Scheduling processes and standard service intervals for installation, changes and disconnects of SOHO and fixed satellite

Upon acceptance of an order, Hughes will begin scheduling each site for installation and return the Service Order Confirmation task to DIR. Installations will generally be scheduled in relation to the date the order was placed for installation by Texas DIR and in accordance with the service levels.

Once the orders are entered by Hughes into our provisioning system, the scheduled installation dates will be made available to Texas DIR on the Firm Order Commitment task. The information will contain the current confirmed date and a history of any schedule changes. The standard Service interval for Fixed Satellite Installations and Small Office/Home Office Business Internet installations is 30 business days from receipt of order.

Installation Specification and Template

Upon receipt of an order for a network implementation, Hughes will work with Texas DIR and the Customer agency to develop an installation specification. This document will be provided to each Hughes installer for review prior to the commencement of any installation activity. It details the appropriate contact procedures, required equipment, and any necessary configuration information. The installation specification also details coordination information, including the signoff procedures required to certify that the installation is complete.

The following details will be included in the installation specification document:

- Site contact and installation coordination information and procedures
- Equipment configuration and installation specifications (location, mounting, etc.)
- Cabling and connection specifications
- Special instructions regarding integration with Customer devices, if any
- Testing procedures
- Service activation and cutover procedures
- Signoff and release procedures

The Installation Specification will be maintained by Hughes and will be updated over time to reflect changing requirements and lessons learned through the process. The Customer shall sign off on all changes to the installation specification.

Site Installation

Hughes will dispatch one or more technicians to each site to install the applicable Data Service or Fixed Satellite Customer premises equipment. The installer(s) will follow the defined installation process and installation specification for each site to install the equipment, integrate it with other devices, test it, and activate it. If the technician is not able to complete the installation for any reason, the technician will revert the site to the previous technology and report this failure and the reasons for it immediately to the Customer point of contact and the Hughes dispatcher. Upon completion of the installation, the technician will obtain acceptance signoff from the site contact, initiate cutover procedures, and initiate the process to update the tracking database to indicate date and time completed. The Hughes technician will use best efforts to minimize the disruption and any downtime experienced by the site. The technician will clean up all tools and debris before leaving the site. Upon order completion of the fixed satellite service instance, Hughes will return the Order Completion task via Remedy to DIR. The task will contain the customer service pricing by service element and the effective billing date, the installation and acceptance date.

D. Billing procedures for both SOHO and fixed satellite

All billing will be generated by Hughes to Texas DIR. The only exception to this will be the Small Office/Home Office Internet Services, where Hughes will directly bill the end user. Non-Recurring Charges (typically hardware and installation charges) will be billed in the month after the equipment and installation is delivered. Monthly Recurring Services will be billed at the beginning of each month for that month's service.

E. Support for DIR or Customer(s) conferences

During the network planning and implementation phases of a program, communication between Hughes and Texas DIR and its Customer will be essential to ensure that the Customer's day –

to - day operations are not being impacted by the Hughes implementation and that the network implementation is proceeding as planned.

Based on guidance from Texas DIR, the Hughes Program Manager will establish regular program updates, either through face – to - face meetings, teleconferences, or regular electronic or written reports.

The Hughes program team is on call 24x7 and always available in the event that there are immediate issues that need resolution. Furthermore, through the Hughes Customer Gateway, Texas DIR can always get real-time updates with respect to installation status and schedule, remote site status, trouble ticket updates, etc.

Hughes will continue to provide ongoing support through the

- Account Manager, as needed
- Program Manager, as needed
- Quarterly Program reviews with functional group representation from Hughes
- Semi-annual on-site network audits, as needed
- Annual Executive Briefing, as needed

F. Ongoing Training procedures. - Hughes has a professional Technical Training Group whose objective is to provide Customers with world-class training in support of Hughes' products and services. Hughes' state-of-the-art training facility in Gaithersburg, Maryland has fully functioning laboratories and professionally qualified staff. A training registrar is available to take Customer course reservations through the Hughes Program Manager.

Courses taught at the Hughes training facility are hands-on courses dealing with equipment installation, maintenance, and operation. This training is not required for Customers using Hughes managed network services, but is available for those individuals who want to have a detailed knowledge of the technical aspects of Hughes products.

Hughes will also provide training to Texas DIR on use of the Customer Gateway. This training is typically conducted online and can be easily conducted in 1- or 2-hour-long sessions. Topics include:

- Login and navigate the Customer Gateway
- Manage their account password
- View scheduled installation activities
- Report and view the Remote, Network Management, and Network Engineering - related issues
- Update site information and locate sites
- View the reports and documentation provided by Hughes
- Report and view quality issues
- View Hughes company contacts

The Customer training will ensure that once the network implementation begins, the appropriate Texas DIR personnel are familiar with Hughes products and services and will know how to access the proper information that they need to do their jobs.

G. Processes and Procedures for Technical Support

SoHo – Call 1-800-347-3272

Fixed Satellite Services – Dedicated Networks (Customer Gateway) or call 1-800-788-6000

24x7 standard technical support procedures for all Service disruptions when:

- **Reported by DIR or a DIR Customer**

The Hughes Help Desk's role is to perform Tier 3 troubleshooting and to attempt to recover a site remotely before dispatching a field service technician. When a service disruption is reported by DIR or a DIR Customer a trouble ticket will be opened in DIR's Remedy System to track this problem resolution. DIR will warm transfer the customer to the Hughes Help Desk where Hughes will perform Tier 3 and open a trouble ticket in the Hughes system. Updates to the Hughes ticket will be emailed to DIR referencing the DIR trouble ticket number. The Help Desk technicians have many real-time tools available for their troubleshooting efforts and knowledgebase articles to assist in the diagnosis and isolation of remote issues. If it is determined to be necessary, the Help Desk will dispatch a field service technician to the remote site to troubleshoot and replace any failed equipment.

Note: DPS places trouble tickets directly to Hughes

H. Processes and procedures for support of Customers

Processes and procedures for technical support;

For each network implementation, Hughes will work with Texas DIR and the Customer agency to develop an installation specification. This document will be provided to each Hughes installer for review prior to the commencement of any installation activity. It details the appropriate contact procedures, required equipment, and any necessary configuration information. The installation specification also details coordination information including the signoff procedures required to certify that the installation is complete.

The installer(s) will follow the defined installation process and installation specification for each site to install the equipment, integrate it with other devices, test it, and activate it. If the technician is not able to complete the installation for any reason, the technician will revert the site to the previous technology and report this failure and the reasons for it immediately to the Customer point of contact and the Hughes dispatcher. Upon completion of the installation, the technician will obtain acceptance signoff from the site contact, initiate cutover procedures, and initiate the process to update the tracking database to indicate date and time completed.

I. Processes and Procedure for Inventory/Asset Management

Hughes maintains a database of all service components that will be provided to deliver services to DIR and DIR Customers. This database is available on the Hughes Customer Gateway for DIR to view and download reports.

J. Standard Reporting capabilities;

Managed Services monthly customer reports provide detailed information and analysis regarding aspects of the dedicated network with dedicated IP gateway and its performance. Each month a report package will be posted to the Customer Gateway consisting of:

- Monthly availability analysis percentage in bar chart format
- Outage analysis detail report
- Remote outage analysis percentage report
- Master site list summary
- Master site list report
- Newly commissioned sites list
- Customer remote service performance summary
- Remote maintenance field services metrics

This report package, which is compiled from Hughes' in-house database, is posted within the first 10 days of each month. The following paragraphs contain a detailed description of the monthly report components.

Monthly Availability Analysis % in Bar Chart Format

This report is a bar graph that shows a sliding 12-month breakdown of the NOC, remote, and network availability (weighted mean average). A line of data at the bottom of the columns shows the number of active sites recorded in the database.

Outage Analysis Detail Report

This report contains trouble ticket breakdown with Case ID, Site ID, Reported Problem, Resolution Code, Resolution Description, Covered Hours, Elapsed Hours, Outage Time, % of Service Lost, Non-Available Hours, Date Resolved, and Date Opened. The outage analysis detail and outage analysis percentage report from the Hughes Ticket System database allows you to view the breakdown by problem, date and time the trouble ticket was opened, date and time it was closed, site number, who the problem was assigned to, and the covered and elapsed hours. Outage analysis by site lists each site that had an outage during the reporting month.

Remote Outage Analysis

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This analysis includes a breakdown of the trouble tickets for the reporting month, by cause, in the form of a color pie chart. In addition to the total number of sites in your network, the MTTR for both clock and actual outage period are provided.

Trouble Tickets

Actual trouble tickets from Hughes Ticket System are available through the Customer Gateway at <https://customergateway.hns.com>. Tickets can be selected for viewing on the Case Search screen using such selections as date ranges and case status. Categories of tickets can be selected for viewing or printing from the Problem Status screen. The various categories include Open, Hold, Pending, Closed, or (All). Any of the categories can be selected with a specific date range specified. Any ticket that can be viewed can be printed using the Print Frame capability under the File Selection.

Master Site List Summary

This summary provides a count of the total number of sites broken down by Active Sites, Inactive Sites, Not Yet Commissioned Sites, Decommissioned Sites, Decommissions in Progress, Installations in Progress, and the Total # of Sites. This report is produced at the beginning of the month as well as mid-month to accommodate customer billing cycles.

Master Site List

This list contains a listing of all customer-commissioned sites to date. This information comes from data gathered by Hughes CRM Ticket System database. This list is sorted by site ID number and includes the following fields: Site ID, Site Status, location name, Site address, City, State, ZIP code, Primary contact name, Primary phone number, Date created, Adapter model, NOC, Commission date, and Decommission date. This report is produced at the beginning of the month as well as mid-month to accommodate customer billing cycles.

Newly Commissioned Sites List

This list shows all the sites that were commissioned during the reporting month. The information, which is gathered through Hughes' database, lists the site ID number and includes the following fields: location name, site address, city, state, contact name and phone number, commission date, type of unit installed, and the National NOC facility on which the site is supported.

Customer Remote Service Performance Summary

This summary lists the total number of commissioned sites to date, total number of decommissioned sites to date, total number of active sites at the end of the reporting month, total available hours (for remote network), total non-available hours (for remote network), Mean time between maintenance activity (remote network), remote availability, percent of tickets requiring remote dispatches, and percent of tickets not requiring dispatch. In addition, the report includes a table that displays a breakdown of the trouble tickets for the reporting month by cause area, total count by cause area, % of cause of breakdown by area, hours of outage by area, and the average outage time by breakdown area.

Remote Maintenance Field Service Metrics

These metrics contain the Number of Sites, Contract Calls, Monthly Contract Call Rate, First Call Fixed, % of First Call Completion, Dispatches Meeting Response Time,

Dispatches Meeting Restore Time, Average Response Time (Hrs), % of Response Time within Target, Average Restoral Time (Hours), % of Restoral time within Target, Calls Open > 24 hours, Calls Open > 48 hours, % of Calls Open > 24 Hours, and % of Calls Open > 48 Hrs.

K. Enhanced Reporting capabilities;

Optional On-Demand Report capability can be made available for dedicated network customers. This option provides the ability to run reports based on criteria such as time duration, traffic flow, individual site, etc. There is a wide variety of reports available allowing network managers and support personnel to view network traffic at the TCP/IP application level by a variety of parameters including port, servers, hosts, host conversations, protocols, such as IP/TCP/UDP, etc.

The enhanced reporting capability allows users of the Customer Gateway to take the standard monthly reports (e.g., top talkers, top applications, application throughput) and create custom reports on demand based on a variety of input criteria.

The query-based capability provides the ability to select traffic flow by inbound and outbound, different networks defined for the traffic (different agencies, traffic flowing through different hubs, etc.), and the time duration. The query also provides the capability to view the data for an individual site or the entire network.

The data is available starting with the previous 15 minutes up to a year. This data range allows you to use these reports for monitoring the network to see what has been happening in near real time, troubleshooting, and long-term capacity planning and trending. The granularity level of the report is based on the duration of time selected for the report. The reports can be as granular as 5 minutes.

L. Processes and Procedure for Trouble Resolution**Customer Care technician standard skills, certifications and qualifications**

The Hughes Help Desk is staffed with professional, experienced technicians. These technicians go through a formal training process that covers a wide range of topics that includes system architecture, troubleshooting, and problem resolution. The Help Desk technicians have access to the Customer Gateway as well as a library of knowledge base articles, which provide a full suite of diagnostic, configuration, and status tools. In addition, customized training in Customer care procedures and the Web – based Customer Gateway trouble ticketing system are also provided.

Standard business hours and after-hours support coverage

The Hughes Help Desk operates 24x7 and can be reached

- SoHo – Call 1-800-347-3272
- Fixed Satellite Services – Dedicated Networks (Customer Gateway) or call 1-800-788-6000

24x7 standard technical support procedures for all Service disruptions when:

- **Reported by DIR or a DIR Customer or**

The Hughes Help Desk's role is to perform Tier 3 troubleshooting and to attempt to recover a site remotely before dispatching a field service technician. When a service disruption is reported by DIR or a DIR Customer (either via telephone or via the Customer Gateway), a trouble ticket will be opened to track this problem resolution. The Help Desk technicians have many real-time tools available for their troubleshooting efforts and knowledgebase articles to assist in the diagnosis and isolation of remote issues. If it is determined to be necessary, the Help Desk will dispatch a field service technician to the remote site to troubleshoot and replace any failed equipment.

- **Detected by the Vendor via monitoring activities or systems.**

As part of our managed service, Hughes proactively monitors all elements of the network and will automatically generate a trouble ticket if a service disruption is detected.

Once the Tier 1 process is completed by the DIR or DIR Customer Tier 1 Help Desk, the ticket (which is accessed via the Hughes Customer Gateway) can be closed by the Tier 1 Help Desk (problem resolved) or escalated to the Hughes Tier 3 Help Desk for resolution.

Any issues that are determined to be network issues (and not unique to a particular remote site) are immediately escalated to the Hughes Network Engineering for problem isolation and resolution. The Network Engineering team is responsible for network troubleshooting, database changes, network event status updates and escalations to network engineering. In the event of a network issue, the Hughes Help Desk will open a trouble ticket and provide the ticket information to DIR and DIR Customer's Help Desk. The Network Engineering team will provide status updates and event notifications.

NOTE: Dedicated NOC(s) are responsible for managing their own network(s)

Joint technical support to DIR and any other TEX-AN NG Vendor(s) in order to re-solve Service disruptions efficiently and expeditiously

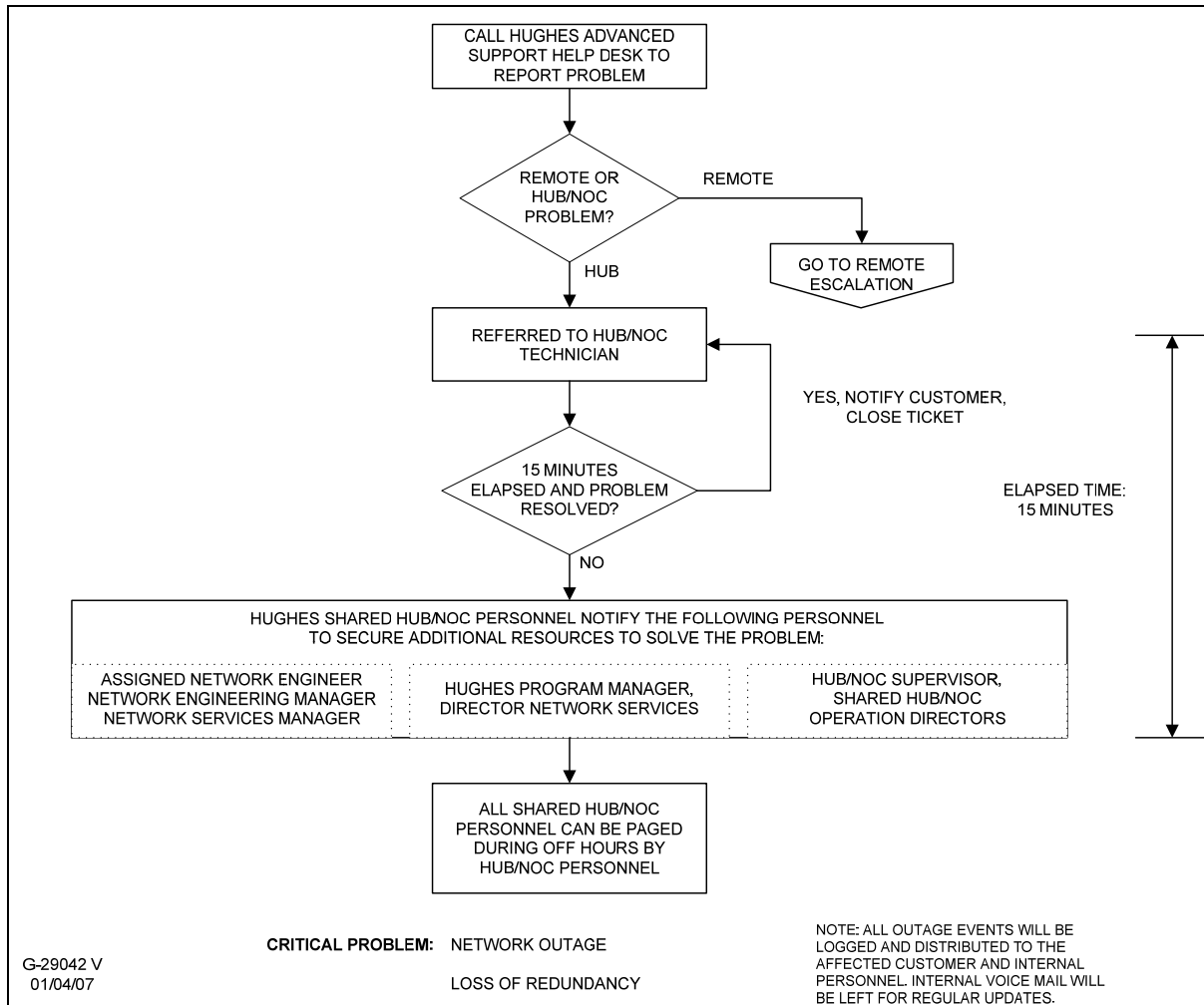
Hughes will work with DIR and any other TEX-AN NG Vendor(s) to resolve Service disruptions efficiently and expeditiously. This is accomplished via our experienced 24x7 support team of Help Desk personnel, network engineers, and operational support staff. Based on our 20+ years of experience of supporting critical enterprise and government networks, the team has created a support process that ensures that the proper people and systems are available to respond to problems when they occur, but more importantly, prevent problems from occurring in the first place. The Hughes team understands that this requires accurate and timely communications among Customers, Hughes, and other vendors that are involved in the overall network.

M. Escalation Procedure

Hughes escalation policies provide a communication path for the Hughes team to solve network problems. In the event that traffic is not interrupted and the customer agrees on the status, a noncritical problem notification will be sent to the Network Engineering team. However, if traffic is interrupted and/or there is a disagreement on the status, the critical problem notification procedure is followed.

- In the event of a problem, affected customers are notified immediately. When a problem is observed or reported, a Network Management ticket is opened and subsequent status entries displayed on the Customer Gateway.
- Hughes provides customers with status reports. Verbal updates are provided for critical outages and through the Program Manager when multiple customers are involved. Status entries are also displayed on the Customer Gateway. The ticket through the Customer Gateway is updated later and made visible when approved.
- On the next business day, the details of an outage are investigated and an After Action Report (AAR) is prepared. This AAR is submitted to the Program Manager for review and approval. Once the Program Manager releases the AAR, it is provided to the customer and posted to the outage ticket in a form viewable by the customer on the Customer Gateway.
- Critical problems that cannot be resolved within 15 minutes are escalated.
- Escalation policies can be used for Network or remote service problems the customer is experiencing. All requests for escalations related to Network or remote issues are submitted to the Hughes Help Desk. The Hughes Help Desk escalates the request through all appropriate channels.

Table 1 - Depict the remote maintenance support procedure.



N. Customer Notification of new Services awarded under the CTSA

Hughes will publish a catalog of the products and services proposed here as part of this RFO response. The Hughes team (Account Manager, Technical Sales Support, and Program Management) will be available, if needed, to answer questions and design specific solutions to meet specific Customer requirements using the products and services in the catalog. Many standard Hughes services can be implemented without this type of interaction, but the support is available for larger or more complex requirements.

Small Office/Home Office Service orders will be received and supported by the Hughes Call Center at 844-817-5287 which was implemented specifically to provide efficient and accurate

support for receiving orders for this service. The Call Center will be trained in the specific details of the CTSA and the Texas DIR program to ensure that quality service is provided during the ordering process.

6.1 FIXED VSAT INSTALLATION DESCRIPTION

Standard Enterprise installation applies to enterprise locations 1-2 stories from the ground and includes:

- Antenna installation on an outside wall, roof, ground, or other approved structure with one of the following mounting options:
 - All non penetrating roof mounting options (appropriate mount for the antenna size)
 - Tri-mast wall mount
 - Ground pole mount up to approx. 8 ft. (approx. 2 ft. in ground, 5 – 6 ft. out of ground)
 - All antennas must be mounted a minimum of 5 ft. off the ground (from base of antenna) and out of the reasonable reach of small children. Wall mounts must not be mounted to surfaces or building materials that cannot support the wall mount (for example, stucco, aluminum, or vinyl siding).
- Single or dual IFL Cable run (according to published HNS Guidelines) from antenna location to Indoor Unit (IDU) location. For networks larger than 50 locations, a Customer Installation Specification will define the indoor equipment location.
- Install the indoor unit at designated location. Indoor unit will be located according to the Customer Installation Specification. The designated IDU location must be temperature and environmentally controlled for proper operation.
- Single or Dual IFL cable run (according to HNS guidelines) from antenna to indoor unit. This assumes that the typical cable run will be less than 150 feet, based on the profile of the Customer remote locations. For network implementations where greater than 30% of the locations are in large buildings requiring cable runs longer than 150 feet, additional charges will apply.
- Wall fish and wire mold as required.
- Cat 5 data cable if required and termination at labeled wall plates for all devices.
- Wall fish and wire mold as required.
- The use of necessary tools, including laptop computer and appropriate commissioning software, to install, commission, test, and cutover HNS and Customer systems.
- Grounding in accordance with HNS FSB 1057C.
- Installation of weather seal appropriate cable bushings for all cable points of entry.

- Ballast the mount according to HNS ballast guidelines.
- Activation and commissioning of the system, including cutover of specified devices according to Customer installation specification.
- Comply with all HNS Installation Quality Process Guidelines including signed and completed Installation Reference Sheet with Quality Checklist/Audit Form.
- Installation and activation of VADB Service if ordered with the installation.
- Clean up site and remove any unnecessary boxes and materials.
- Antenna mounting options:
 - Non penetrating roof mount
 - Tri-mast wall mount
 - Ground pole mount (Limited to 30% of all of the Customer's network)

The Hughes installer will choose the type of antenna mount, based on the specific details of the location. Network implementations that require more than 30% of the locations to have ground pole mounts, or for locations where Customer request a pole mount, even though one is not required, additional charges will apply (see Section B.).

- All ground pole mount antennas will be installed a minimum of 5 ft. off the ground (from base of antenna) and out of reasonable reach of small children. Wall mounts will not be mounted to surfaces or building materials that cannot support the wall mount (for example, stucco, aluminum, or vinyl siding).

6.2 FIXED VSAT DEINSTALLATION DESCRIPTION

De-installing an existing VSAT at a site is performed by a HNS authorized technician who will:

- De-install the antenna and non penetrating mount and terminate the IFL cable at the Point of Entry (POE).
- De-install the radio transmitter assembly.
- Remove the cable from POE to the antenna system.
- De-install the indoor VSAT component (IDU) as described in Section B.2.2.
- Pack all of the above VSAT components in a container for safe transport.

6.2.1 Fixed VSAT Relocation/Move Description: Local

Through this service, HNS' authorized installer removes the VSAT from an existing site and moves it to and installs it at a new VSAT site within the same city and/or 100 miles from the first site. HNS technician visits Customer's existing site and performs the de-installation process as

described in the previous section. The installer then packs the de-installed VSAT and travels to Customer's new site whereby the VSAT is installed as described in Section B.7.1, above.

6.2.2 Fixed VSAT Relocation/Move Description: Non-local

Through this service, HNS' authorized installer removes the VSAT from an existing site, packs it and ships it to for installation at a new VSAT site that would be in a different city or state. HNS technician visits Customer's existing site and performs the de-installation process as described in Section B.7.2. The installer then packs the de-installed VSAT and ships it to Customer's new site whereby another installer will install it per Section B.7.1, above. Depending on the time required for the actual shipment of the de-installed VSAT, the new installation may occur up to 21 days from the date of the de-installation.

6.3 INSTALLATION SPECIFICATION AND TEMPLATE

Upon receipt of an order for a network implementation, Hughes will work with Texas DIR and the Customer agency to develop an installation specification. This document will be provided to each Hughes installer for review prior to the commencement of any installation activity. It details the appropriate contact procedures, required equipment, and any necessary configuration information. The installation specification also details coordination information, including the signoff procedures required to certify that the installation is complete.

The following details will be included in the installation specification document:

- Site contact and installation coordination information and procedures
- Equipment configuration and installation specifications (location, mounting, etc.)
- Cabling and connection specifications
- Special instructions regarding integration with Customer devices, if any
- Testing procedures
- Service activation and cutover procedures
- Signoff and release procedures

The Installation Specification will be maintained by Hughes and will be updated over time to reflect changing requirements and lessons learned through the process. The Customer shall sign off on all changes to the installation specification.

6.3.1 Site Installation

Hughes will dispatch one or more technicians to each site to install the applicable Data Service or Fixed Satellite Customer premises equipment. The installer(s) will follow the defined installation process and installation specification for each site to install the equipment, integrate it with other devices, test it, and activate it. If the technician is not able to complete the installation for any reason, the technician will revert the site to the previous technology and report this failure and the reasons for it immediately to the Customer point of contact and the Hughes dispatcher. Upon completion of the installation, the technician will obtain acceptance signoff from the site contact, initiate cutover procedures, and initiate the process to update the tracking database to indicate date and time completed. The Hughes technician will use best efforts to minimize the

disruption and any downtime experienced by the site. The technician will clean up all tools and debris before leaving the site.

6.3.2 Installation/De-installation Services

The installation and/or de-installation process for a Fixed VSAT system as described in Section B.2.2.1, above, consists of the following major steps:

1. Customer informs onsite personnel of the planned installation and arranges for access to sites. Customer provides the required installation/de-installation information for the sites. The required installation information includes:
 - a. Contact, Address, Telephone Number
 - b. Alternate Contact, Address, Telephone Number
 - c. Site Number, Address
 - d. Building Manager, Address, Telephone Number
 - e. Building Owner, Address, Telephone Number
 - f. Such other information as HNS may reasonably request
2. For Installation orders, HNS performs site surveys at sites identified by HNS as requiring site surveys.
3. Customer obtains necessary landlord approvals.
4. For Installation orders, HNS installs and commissions the remote terminal equipment.
5. Standard installation timeframe is 30 days after receipt of Order (ARO). Expedited installation time frame is 15 days or less. Expedited VSAT installation requires Special Item number (SIN) to be ordered simultaneous to original order.

A.1.1 Corrective Maintenance (Fixed VSAT)

HNS will provide corrective maintenance for remote satellite terminals in accordance with the terms provided in this Agreement and will restore Customer's malfunctioning Equipment to good working condition by performing the following corrective maintenance as required:

1. Diagnostic testing to determine the existence and cause of the malfunction
2. Removal and replacement of any malfunctioning field replaceable unit ("FRU")
3. Reorientation (re-pointing) of the antenna subsystem in the event of misalignment
4. Repair or replacement of Equipment interconnecting cables
5. Reloading initializing instructions and re-commissioning
6. Verification of proper operation and completion of service report
7. Notification to HNS and the Customer host that Equipment has been restored to operational status

A.1.2 Remote Maintenance Excludes Any of the Following (Fixed VSAT)

1. Maintenance, repair, or replacement of parts damaged or lost through catastrophe, accident, lightning, theft, misuse, fault, or negligence of the Customer or end-user, or causes external to the Equipment, including, but not limited to, failure of, or faulty, electrical power or air conditioning, operator error, failure, or malfunction of data communication Equipment not provided to Customer by HNS, or from any cause other than intended and ordinary use.
2. Changes, modifications, or alterations in or to the Equipment by anyone other than HNS or its Affiliates, subcontractors, and other agents, other than HNS-approved upgrades and configuration changes.
3. De-installation, relocation, or removal of the Equipment or any accessories, attachments, or other devices.
4. Tier 1 and Tier 2 Call Center support.

A.1.3 Response Time and Service Coverage (Fixed VSAT)

At time of contract, Customer will select Service coverage hours to apply to all of its locations for which premium service coverage has been selected from the following list of available coverage plans. Once selected, HNS shall have no obligation to provide any enhanced service coverage, except by mutual written agreement of both parties (including payment to HNS of an additional, agreed upon charge).

1. Next Day Coverage (calls accepted from 8:00 a.m. to 5:00 p.m., local time, Monday through Sunday, holidays excepted)
2. Next Business Day Coverage (calls accepted from 8:00 a.m. to 5:00 p.m., local time, Monday through Friday, holidays excepted)
3. Same Day Service Coverage (8:00 a.m. to 5:00 p.m., local time, Monday through Friday, holidays excepted)

For each of the first two Service Coverage Options listed above, HNS personnel will determine the cause of a problem and isolate the fault. Thereafter, the HNS will authorize field Service dispatch, and HNS will dispatch a customer service representative ("CSR") to end-user's premises. Customer's call shall be considered received the same day when received by the HNS Call Center between the hours of 8:00 a.m. and 5:00 p.m., local time at the remote site, Mondays through Fridays, holidays excluded. Calls shall be considered received the following business day if received by the HNS Call Center at any other time.

If Customer has selected Next Business Day Coverage, HNS personnel will dispatch a CSR to be onsite at the end-user's premises on the next business day after the trouble ticket has been logged by the HNS Call Center.

If Customer has selected Next Day Coverage, HNS personnel will dispatch a CSR to be onsite at the end-user's premises on the next calendar day after the trouble ticket has been logged by the HNS Call Center.

For locations at which Same Day Service Coverage has been selected, HNS personnel will determine the problem and isolate the fault within Thirty (30) minutes of a request for maintenance. Thereafter, the HNS Call Center will authorize field Service dispatch, and the Customer Service Representative (CSR) will be onsite at end-user's premises, according to the maintenance response time table given below, from the time of authorization by the HNS Call Center. Customer's call shall be considered received the same day when received by the HNS Call Center between the hours of 8:00 a.m. and 1:00 p.m., local time at the remote site, Mondays through Fridays, holidays excluded. Calls shall be considered received the following business day if received by the HNS Call Center at any other time. The response time for sites at which Same Day Service Coverage has been selected is set forth below:

Maintenance Response Time Table

<u>Distance from Service Office</u>	<u>Response Time</u> ¹
0 - 50 miles	4 hours
51 - 100 miles	5 hours
101 - 150 miles	6 hours
151 - 200 miles	10 hours

A.1.4 Spare Parts Support (Fixed VSAT)

Spares will be provided as part of HNS Field Services. An inventory of spare parts will be placed at HNS-designated local maintenance facilities that cover Equipment sites used by end-user.

Spares for the Equipment antenna subsystem, including reflectors, mounts, anti-icing equipment, modems, and, if applicable, certain video equipment will be centrally stocked at a designated location in the continental United States.

HNS will replace malfunctioning Equipment components on a one-for-one exchange basis with a functionally equivalent spare part.

A.1.5 Customer Responsibilities

1. Customer hereby grants HNS and HNS' authorized representatives access, subject to Customer's reasonable security restrictions, to Equipment and related locations and areas of Customer's facilities and premises, and will arrange permitted access to areas of third-party facilities and premises for the purpose of HNS performing the work required under this Agreement. HNS will comply with any of Customer's reasonable rules and regulations for access of which HNS has been notified. Any delays or return calls resulting from lack of free access or authorization to perform maintenance may, at HNS' option, be billed at the Demand Service Charges indicated in Exhibit A.
2. Customer shall keep the HNS Program Manager apprised of any Customer contacts who will act as a point of contact for Remote Equipment maintenance administration within Customer's organization.
3. Customer shall provide HNS Service representatives with access to electrical power, water, and other utilities, as well as telephone access to the Customer hub as required

1. Response time estimates will be honored 90% for all Customer requests received during applicable Service coverage hours.

for efficient Service. Customer shall also provide at each Remote Equipment site, telephone access to the hub for maintenance service personnel.

4. Customer shall provide safe access to Equipment on Customer premises and will maintain the environment where the Equipment is located in a safe and secure condition.
5. Customer hub and/or data center personnel shall cooperate with and assist the HNS Service representative in providing maintenance services. The Customer hub shall be adequately staffed during service coverage hours to provide such assistance.
6. Customer will maintain minimum site-environment conditions, as specified in Remote Equipment system documentation.
7. Customer agrees not to place or affix any type of identification or accounting mark or tag on any FRU covered by this Agreement, which may have to be returned to HNS for repair or replacement.
8. Customer agrees to conduct reasonable Tier 1 and 2 support in an attempt to diagnose and localize the remote site issue to HNS provided equipment or HNS supported installation.