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CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: October 7, 2008

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

Agenda Item No. 9(A)(3)
Resolution R-1049-08

From: George M. Burgess
County Manager

Subject: Resolution Waiving Formal Bid Procedures to Authorize the Execution of an Agreement with T-Mobile USA, Inc. to Replace a Microwave Radio System Pursuant to a Federal Communication Commission Mandate

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Recommendation

It is recommended that the Board waive formal bid procedures pursuant to Section 4.03(D) of the Home Rule Charter and non-competitive bid waiver procedures of Section 2081(b) of the Code of Miami-Dade County by a two thirds (2/3) vote of the Board members present, and authorize the County Mayor or his designee to execute the attached Turnkey Relocation Agreement for Point to Point Fixed Service with T-Mobile USA, Inc. to upgrade equipment at two County operated radio tower sites, consistent with a Federal Communication Commission (FCC) mandate to vacate certain radio frequencies to commercial enterprises.

Scope

Although this agreement only covers a link between two radio towers, the impact is Countywide because the link is an integral part of the overall radio communication network which supports public safety and general government functions countywide.

Fiscal Impact/Funding Source

If approved, under this agreement T-Mobile would pay the labor and hardware costs associated with the migration of the County's operations to equipment operating on new frequencies, estimated at $850,000. In order to meet future antenna requirements to reduce future capital costs by approximately $15,000 and to eliminate related downtime, the County recommends that T-Mobile upgrade four antennas from those normally used for this type of frequency relocation. The County would be required to pay the difference in cost for the upgraded antennas in the amount of $30,716 to be funded with Series 2007 Capital Asset Bond Radio Tower Project proceeds.

Track Record/Monitor

There are no known contractual issues between the County and T-Mobile. Felix Perez, Radio Services Division Director at the Enterprise Technology Services Department, will be responsible for monitoring this agreement.

Background

Beginning in 2000, in an effort to find ways to support new emerging technologies, the FCC began a process to identify spectrum frequencies that could be allocated for the use of commercial entities in such applications as video streaming, mobile data and messaging. On a Report and Order released on November 15, 2002 by the FCC, certain frequencies below the 3 GHz band were reallocated for these purposes, which are now commonly known as Advanced Wireless Services (AWS).

In 2006, as part of this initiative, the FCC conducted auctions on the affected frequencies with the participation of interested commercial entities. In the Miami market, T-Mobile won the rights to microwave radio frequencies that Miami-Dade County operates in the 2110-2155 MHz band, in support

of a microwave radio link between two of its radio towers. These two towers, known as the Miccosukee and Trail Glades sites, are located in the southwestern part of the County.

Pursuant to FCC regulations, T-Mobile could negotiate with the County to find a way to co-exist on the same frequencies. As the best option for both parties, T-Mobile has offered, at their expense, to relocate the County's operations to available frequencies on the spectrum. The County would benefit by receiving and operating new equipment with longer term reliability, in a frequency not encumbered by interference. This is critical for a system that supports public safety.

T-Mobile has worked cooperatively with the County in addressing issues of concern. Because the radio system supports public safety operations, the County negotiated an expanded testing period (seven days to 90 days) to ensure that testing is done under a variety of atmospheric conditions. If approved, the County will relocate its operations to the new frequencies after all omissions or deficiencies found during this period are corrected and the system performs without material defects for a seven consecutive day period. In addition to the longer testing period, the County also negotiated the inclusion of a 30-day acceptance and reliability period, to further ensure that the link is not accepted unless it performs as required for this extended period.

Assistant County Manager

MEMORANDUM

(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: October 7, 2008

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 9(A)(3)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

✓ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 9(A)(3)
10-7-08

RESOLUTION NO. R-1049-08

RESOLUTION WAIVING FORMAL BID PROCEDURES PURSUANT TO SECTION 4.03(D) OF THE HOME RULE CHARTER AND NON-COMPETITIVE BID WAIVER PROVISIONS OF SECTION 2-8.1(B) OF THE CODE OF MIAMI-DADE COUNTY BY A TWO-THIRDS (2/3) VOTE OF THE BOARD MEMBERS PRESENT; AUTHORIZING EXECUTION OF A TURNKEY RELOCATION AGREEMENT FOR POINT TO POINT FIXED SERVICE BETWEEN T-MOBILE USA INC. (T-MOBILE) AND MIAMI-DADE COUNTY TO RELOCATE CERTAIN MICROWAVE FREQUENCIES OPERATED BY THE COUNTY TO NEW FREQUENCIES PURSUANT TO FEDERAL COMMUNICATION COMMISSION (FCC) ORDERS AND TO EXPEND $30,716 TO UPGRADE ANTENNAS; AND AUTHORIZING THE COUNTY MAYOR OR HIS DESIGNEE TO EXERCISE ANY AND ALL OTHER RIGHTS CONFERRED THEREIN

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board finds it is in the best interest of Miami-Dade County to waive formal bid procedures pursuant to Section 5.03(D) of the Home Rule Charter and Section 2-8.1(b) of the Code of Miami-Dade County by a two-thirds (2/3s) vote of the Board members present; authorizing the execution of a Turnkey Relocation Agreement for Point-To-Point Fixed Service between T-Mobile and Miami-Dade County, providing for T-Mobile to acquire and install a new system to enable the relocation of certain microwave frequencies currently operated by Miami-Dade County in support of its radio communication network, as mandated by orders from the FCC and to expend $30,716 to upgrade

antennas; and authorizing the County Mayor or his designee to execute the agreement on behalf of the County and exercise all provisions contained therein.

The foregoing resolution was offered by Commissioner **Carlos A. Gimenez**, who moved its adoption. The motion was seconded by Commissioner **Joe A. Martinez** and upon being put to a vote, the vote was as follows:

Bruno A. Barreiro, Chairman **aye**
Barbara J. Jordan, Vice-Chairwoman **aye**

Jose "Pepe" Diaz	**aye**	Audrey M. Edmonson	**aye**
Carlos A. Gimenez	**aye**	Sally A. Heyman	**aye**
Joe A. Martinez	**aye**	Dennis C. Moss	**absent**
Dorrin D. Rolle	**aye**	Natacha Seijas	**absent**
Katy Sorenson	**absent**	Rebeca Sosa	**aye**
Sen. Javier D. Souto	**absent**		

The Chairperson thereupon declared the resolution duly passed and adopted this 7th day of October, 2008. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: **Kay Sullivan**
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Oren Rosenthal

TURNKEY RELOCATION AGREEMENT
FOR POINT-TO-POINT FIXED SERVICE
Miami-Dade County

This Agreement is executed as of this ____day of _____, 2008, between Miami-Dade County ("Miami-Dade") and T-Mobile USA, Inc. ("T-Mobile") (each a "Party" and, collectively, the "Parties").

WHEREAS, Miami-Dade or its Affiliate operates a fixed point-to-point microwave radio system on certain frequencies within the 2110 to 2155 MHz band that is utilized for Miami-Dade's communication needs on the path(s) identified on Schedule A hereto (the "Affected Path"), incorporated by reference herein; and

WHEREAS, The Federal Communications Commission ("FCC"), pursuant to ET Docket No. 00-258, reallocated and auctioned the 2110 to 2155 MHz frequencies, including those used by Miami-Dade for the Affected Path, to commercial enterprises for use by emerging technologies known as Advanced Wireless Services ("AWS"); and

WHEREAS, T-Mobile has determined that the AWS system(s) in the Market indicated on Schedule A (the "Market") may cause interference to the Miami-Dade's Affected Path and desires that Miami-Dade permanently vacate, in accordance with the FCC's stated priorities, its licenses to operate in the Affected Path and relocate its operation onto other microwave frequencies available to Miami-Dade; and

WHEREAS, Miami-Dade and T-Mobile desire to negotiate the replacement of the microwave system used by Miami-Dade on the Affected Path (the "Current System") in the Market and to reach a formal agreement with respect to the design, funding and implementation of a replacement microwave system (the "New System") as more specifically defined hereinafter in Schedule B hereto.

WHEREAS, subject to the obligations and representations herein, the parties shall take reasonable actions to gain Acceptance of the New System, and cease operations of the former fixed point-to-point microwave radio system, **by Nov. 1, 2009** (the "Current System Termination Date").

NOW, THEREFORE, In consideration of the mutual promises of the parties contained hereinafter and for other valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, T-Mobile and Miami-Dade agree as follows:

1. Definitions

a) **Defined Terms** As used in this Agreement, the following terms have the following meanings:

i) **"Affiliate"**: with respect to a Party, means any individual or entity that directly or indirectly controls, is controlled by or is under common control with the Party.

ii) **"Microwave Path":** means a one way or two-way, fixed or temporary fixed, point-to-point or point-to-multipoint radio system consisting of transmitters, receivers and other associated equipment, which transmits or receives, in whole or in part, on frequencies in the 2110 to 2155 MHz Band.

iii) **"New System":** the microwave facilities generally described on Schedule B hereto that will replace the Affected Path and which will encompass part or all of the equipment listed on Schedule B hereto or other comparable equipment.

2. Relocation Plan

T-Mobile shall, at T-Mobile's expense and schedule, construct the New System for the Affected Path as further specified in Schedule B hereto (the "Scope of Work"). Within three (3) business days after delivery of the Certificate of Acceptance for the New System by Miami-Dade to T-Mobile as provided in Section 3 below, and provided that Miami-Dade is authorized pursuant to FCC regulations to operate its microwave system for the Affected Path on the New System, Miami-Dade shall permanently discontinue the use of the Affected Path and shall file with the FCC and other applicable authority(ies) all forms, applications, requests, authorizations or other documentation necessary to terminate all licenses associated with the Affected Path. Within three (3) business days after filing with the FCC, Miami-Dade shall provide to T-Mobile copies of the paper documents, screen prints of those electronically filed documents or other demonstrable evidence showing that cancellation of the licenses pertaining to the Affected Path was effectuated.

3. Turnkey Services

3.1 In constructing the New System, T-Mobile shall provide Miami-Dade, at T-Mobile's expense, the following turnkey microwave relocation services (the "Services") necessary to relocate the Affected Path in accordance herewith:

a) Program manage the acquisition, installation and testing of the radio equipment for the New System;

b) Obtain, or as may be requested by Miami-Dade, assist Miami-Dade in securing governmental and third-party permits, authorizations and inspections for relocation of the Affected Path to the licensed frequencies selected for the New System;

c) Assist Miami-Dade, as may be reasonably requested by Miami-Dade, in securing FCC licenses for the New System;

d) Oversee, coordinate and manage the construction of the New System, including engaging subcontractors; and replacing the existing radio system with the New System; and

e) Provide technical and engineering support as required.

3.2 T-Mobile shall comply with applicable governmental laws, ordinances, and regulations in performing the Services. The Parties to this Agreement intend that the performance by T-Mobile of its obligations under this Agreement will satisfy, release and discharge in full its obligations under the existing FCC's AWS microwave relocation rules.

3.3 Miami-Dade will be responsible for the following:

a) Transferring title to the Current System (less equipment and material incorporated in the New System) to T-Mobile to be effective upon the Certificate of Acceptance, and warranting to T-Mobile that title to the Current System is free of any and all liens and other encumbrances, and otherwise acting as necessary for T-Mobile to remove and dispose of the Current System equipment and material that is not required for the New System;

b) Providing personnel and/or resources necessary to ensure the project schedule is met;

c) Assisting T-Mobile in securing governmental and third-party permits, authorizations, and inspections;

d) Preparing all forms and/or applications to be filed by Miami-Dade with the FCC or other applicable authorities in connection with the cancellation or modification of the licenses for the Affected Path and the applications for licenses for the New Path in a timely manner so as not to negatively affect the project schedule;

e) Obtaining the consents from the Miccosukee Tribe of Indians of Florida (Miccosukee Tribe) that may be necessary for the New System prior to start of T-Mobile's installation of the system.

4. Testing and Acceptance of New System

The New System shall be implemented in two phases as more fully described in Schedule B Scope of Work. Phase One will be a transition from existing 2.1 GHz microwave system to a temporary 2.4 GHz microwave system. This 2.4 GHz system will utilize existing antennas and cables already part of the 2.1 GHz system. Contemporaneous with Phase One, T-Mobile, through its subcontractor, Granger Telecom, will construct Phase Two. Phase Two will be the permanent 6 GHz microwave system. This section shall be apply to Phase 1, relocation from 2.1GHz to 2.4 GHz, and Phase 2, relocation from 2.4GHz to 6GHz.

a) **Ninety Day Intentional Testing Period.** After each Phase is constructed, T-Mobile will give notice to Miami-Dade that the system is ready for testing. T-Mobile and Miami-Dade shall inspect and test the New System for a period of ninety (90) consecutive calendar days (the "Initial Testing Period"). The objective of this Initial Test Period will be to reasonably predict if the New System is ready for the relocation of the communications channels. Any omissions and deficiencies discovered by Miami-Dade during the Initial

Testing Period will be immediately reported to Granger in writing. After ninety (90) days and once all omissions and deficiencies have been corrected, the System must perform without material defect for seven (7) consecutive calendar days. After this seven day period, Miami-Dade will, within four (4) days, deliver to T-Mobile a certificate of installation in the form which is attached as Schedule C hereto (the "Certificate of Installation").

b) **Relocation.** Within four (4) calendar days of receipt of the Certificate of Installation T-Mobile, with the assistance of Miami-Dade, shall commence relocation of the communication channels from the Current System on the Affected Path to the New System, such relocation to be completed within twenty (20) calendar days after receipt of the Certificate of Installation.

c) **Acceptance and Reliability Period.** Upon completion of the communications channels' relocation, a thirty (30) consecutive day acceptance and reliability period (the "Acceptance and Reliability Period"), as further defined in Schedule B Scope of Work, shall commence. Miami Dade shall advise T-Mobile in writing of a qualified performance deficiency as defined in Schedule B Scope of Work at any time during this period, and T-Mobile shall have the opportunity to cure any such deficiencies at any time provided that such corrections must be performed with no operational impact. Once the deficiencies are cured, the Acceptance and Reliability Period begins again. In the event that it is not possible to correct some or all the deficiencies without operational impact, then the County reserves the option to temporarily relocate the channels back to the Affected Path to allow T-Mobile the opportunity to cure the deficiencies.

d) **Certificate of Acceptance.** Within three (3) business days of the system having passed the Acceptance and Reliability Period, Miami-Dade shall deliver to T-Mobile a signed certificate of acceptance for the New System in the form which is attached as Schedule D hereto (the "Certificate of Acceptance"), which shall signify Acceptance. In the event that Miami-Dade does not deliver the final Certificate of Acceptance within this time period, then the New System shall be deemed Accepted.

e) Upon Acceptance, T-Mobile shall assign title to the equipment included in the New System to Miami-Dade free and clear of any liens and encumbrances. As of the date of Acceptance, Miami-Dade acknowledges and accepts potential RF interference to its microwave operations on the Affected Path from T-Mobile's AWS systems in the Market, and Miami-Dade agrees not to cause interference with T-Mobile's AWS systems in the Market from the Affected Path. Except, in the event of a prolonged outage of the 2.4 GHz Phase One system that cannot be remedied by T-Mobile, Miami-Dade may notify T-Mobile in writing of its to return to its 2.1 GHz system. T-Mobile shall then have fourteen (14) calendar days to discontinue use of the 2.1 GHz frequencies so it will not interfere with Miami-Dade's 2.1 GHz system.

5. Cost of the New System

Except as expressly provided herein, (i) T-Mobile shall pay T-Mobile's third-party costs associated with the relocation of the microwave operations on the Affected Path to the New System, including the cost of equipment, installation, engineering, FCC licensing, contractors, and other costs incurred by T-Mobile or its designees, and (ii) each party shall bear its own expenses for any other New System costs not otherwise specifically allocated herein, except that T-Mobile shall be responsible during the performance of this agreement for any unanticipated costs as a result of actions from regulatory agencies other than Miami-Dade that directly affect the scope of this agreement.

In order to meet future requirements, Miami-Dade finds that it would be in its best interest as part of this relocation implementation to upgrade an antenna identified under Scheduled B, Scope of Work. Therefore, Miami-Dade will pay T-Mobile $30,716.00 for the cost of this upgraded antenna, a cost representing the price difference between the upgraded antenna required by the County and that which would have been provided by T-Mobile to otherwise satisfy its obligations.

6. Miami-Dade Cooperation

6.1 During the course of this Agreement, Miami-Dade shall provide T-Mobile with reasonable cooperation, support and assistance necessary to permit T-Mobile (and its designees) to properly and timely effectuate the Services, including but not limited to the following:

a) T-Mobile acknowledges that it has received from Miami Dade all known necessary and appropriate documents and licenses issued by the FCC, records and reports related to the Affected Path, including evidence of title and ownership, leasing arrangements (if applicable), tower and foundation drawings, equipment drawings, floor plans, wiring diagrams, and all other information concerning the Current System which may be reasonably needed by T-Mobile (collectively, the Miami-Dade information"). T-Mobile further understands and accepts that the Miccosukee Tribe is separately securing the necessary tower construction permits with the United States Corps of Engineers.

Provide reasonable access to an opportunity for storage of materials and equipment at all the facilities, plants, towers, and equipment that are utilized in or related to the Affected Path for the purpose of delivering, installing and testing the New System;

Provide the equipment manufacturer and any other relevant information regarding the Current System, including equipment model and manufacturer, and channel plans;

Provide such assistance as is specified in Schedule B; and

Provide such other support and assistance as T-Mobile or its designees may reasonably request.

6.2 During the course of this Agreement, Miami-Dade agrees not to do any of the following without the prior written consent of T-Mobile:

a) Create or permit any lien or other encumbrance on the equipment of the Current System or operation on the Affected Path.

b) Directly or indirectly sell, lease or otherwise dispose or remove equipment comprised in the Current System or operations on the Affected Path.

c) Enter into or become bound by any agreement under which Miami-Dade's rights to the operations on the Affected Path would be altered, or permit the Miami-Dade's leasehold interests for the Current System facilities to expire or be terminated.

6.3 During the course of the Agreement and subsequently until the FCC's Microwave Relocation cost sharing sunset date, Miami-Dade agrees that, at T-Mobile's request, Miami-Dade will furnish reasonable cooperation and assistance to T-Mobile as may be necessary for T-Mobile to participate in a cost-sharing plan with other AWS (or other relevant service) licensees benefiting from the relocation hereunder, including but not limited to the assignment, exercise, or assertion of Miami-Dade's rights to interference protection for the Affected Path. In addition, Miami-Dade represents and warrants that it has not already recovered cost for the relocation of the Affected Path, shall in the future not seek recovery of such duplicative costs, and will inform AWS license holders seeking relocation of the Affected Path that relocation already has been arranged.

7. Term

This Agreement will commence on the Effective Date and will remain in effect until Acceptance of the New System and Miami-Dade has in all respects terminated all licenses associated with the Affected Path(s) ("Term"). T-Mobile may terminate this Agreement immediately following notice to Miami-Dade. Upon any termination of this Agreement or expiration of the Term, all rights and obligations of the parties under this Agreement shall be extinguished, except that the rights and obligations of the parties under Sections 4, 6.3, 9, 10 and 12 shall survive such termination or expiration.

8. Force Majeure

Each Party shall not be liable for any delays due to causes beyond its reasonable control, including, but not limited to, acts of the public enemy, fires, floods, acts of any government, strikes, embargoes, acts of God, acts of the other Party or its vendors or contractors and their respective employees or agents, unusually severe weather conditions, acts of terrorism or any other condition beyond the reasonable control and without the fault of the first Party. In the event of any such contingency, the Party whose performance obligation is adversely affected will be given a reasonable period of time in which to complete the performance of its obligations.

9. Representations, Warranties and Certain Additional Covenants

9.1 T-Mobile makes the following representations, warranties and additional covenants, as follows:

a) T-Mobile is duly organized and validly existing in the jurisdiction of its organization and has all the necessary power and authority to execute, deliver and perform its obligations contemplated by this Agreement.

b) The execution, delivery and performance by T-Mobile of this Agreement does not conflict with any law, regulation, order, contract or instrument to which T-Mobile is subject or by which T-Mobile is bound.

c) This Agreement constitutes the valid and binding agreement of T-Mobile, enforceable against it except as enforceability is limited by the laws governing bankruptcy, insolvency and creditors rights and the general principles of equity.

d) The Services will be performed in accordance with the Scope of Work and manufacturer's specifications.

e) Miami-Dade will receive good title to any equipment furnished to Miami-Dade for the New System, subject to the conditions to delivery of title set forth in Section 4.

f) Only new equipment and materials shall be furnished as part of this agreement, in undamaged condition. No refurbished or used equipment shall be furbished without the expressed written consent of the County.

g) All applicable warranties, attached hereto as Schedule D, for labor and equipment will be transferred to Miami-Dade upon Acceptance.

h) THE WARRANTIES IN THIS SECTION ARE THE ONLY WARRANTIES OF T-MOBILE THAT SHALL APPLY, ARE IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND EXCLUDE ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SAVE FOR ANY MANUFACTURER WARRANTY, FOR WHICH T-MOBILE SHALL PASS THROUGH TO MIAMI DADE. T-MOBILE DOES NOT MAKE, AND HEREBY DISCLAIMS, ANY AND ALL OTHER WARRANTIES OTHER THAN THOSE FROM MANUFACTURERS OR SUBCONTRACTORS.

9.2 Miami-Dade makes the following representations, warranties and additional covenants to T-Mobile, as follows:

a) Miami-Dade is duly organized and validly existing subdivision of the State of Florida. and has all the necessary power and authority to execute, deliver and perform its obligations contemplated by this Agreement. Miami Dade and T-Mobile expressly acknowledge that all the necessary consents from the Miccosukee Tribe have been secured, shown as Exhibit A to this agreement.

b) The execution, delivery and performance by Miami-Dade of this Agreement does not conflict with any law, regulation, order, contract or instrument to which Miami-Dade is subject or by which Miami-Dade is bound.

c) This Agreement constitutes the valid and binding agreement of Miami-Dade enforceable against it except as enforceability is limited by the laws governing bankruptcy, insolvency and creditors' rights and the general principles of equity.

d) The Miami-Dade information is true, complete and accurate to the best of Miami-Dade's knowledge and belief.

e) The FCC authorizations for the Affected Path are in full force and effect, and have not been assigned, suspended, modified or revoked. There is not pending or threatened by any entity, including the FCC, having jurisdiction over Miami-Dade or the Affected Path, any application, petition, objection or pleading which questions the validity or contests the authorizations or their primary status, which, if accepted or granted, would result in the revocation, cancellation, suspension or any materially adverse modification of any authorizations, and Miami-Dade is not aware of any reason that such a proceeding could be commenced.

f) The licensed paths comprising the Current System are, in fact, operational and carrying commercial communications traffic as required by FCC regulations.

g) Miami-Dade either owns the real property on which the towers, equipment, and other facilities included in the New System are to be located or has sufficient rights or interests therein to permit performance by T-Mobile of its obligation under this Agreement, and there are no restrictions or encumbrances on or pertaining to such property, including access to real property, that would restrict such performance and that the equipment comprising the Current System is, or as of the date of conveyance to T-Mobile shall be, free and clear of all liens and encumbrances. T-Mobile recognizes that the portion of the system located on Miccosukee tribal land may require special permitting at T-Mobile's expense.

h) As part of the preparation of the plan for the New System described in Schedule B, Miami-Dade has identified to T-Mobile any and all hazardous

or toxic materials or environmentally sensitive facilities located at or adjacent to the facility which are known to Miami-Dade. The costs of removal of any such hazardous or toxic materials or special treatment of and any liability for environmentally sensitive facilities shall be the responsibility of Miami-Dade.

i) The Miami-Dade has not received or contracted to receive any payment, whether monetary or in kind, for the relocation of the Affected Path.

10. Limitation of Liability

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, EACH PARTY AND SUCH PARTY'S OFFICERS, DIRECTORS, AGENTS, REPRESENTATIVE, DESIGNEES, AFFILIATES AND EMPLOYEES SHALL NOT BE LIABLE TO THE OTHER PARTY FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, SPECIAL, EXEMPLARY, PUNITIVE DAMAGES OF ANY NATURE WHATSOEVER, OR FOR ANY LOST PROFITS OR BUSINESS INTERRUPTION, ARISING OUT OR RELATED TO ACTIONS TAKEN OR OMISSIONS OF SUCH FIRST PARTY IN CONNECTION WITH THIS AGREEMENT.

11. Insurance and Subrogation and Indemnification

(a) T-Mobile will maintain Commercial General Liability Insurance in amounts of One Million and no/100 Dollars ($1,000,000.00) per occurrence and Two Million and no/100 Dollars ($2,000,000.00) aggregate. T-MOBILE may satisfy this requirement by obtaining the appropriate endorsement to any master policy of liability insurance such party may maintain.

(b) T-Mobile understands and agrees that Miami Dade is self-insured. As such, there is no requirement for Miami Dade to purchase Commercial General Liability Insurance

(c) T-Mobile shall not be responsible to Miami-Dade, or any third-party, for any claims, costs or damages (including, fines and penalties) attributable to any pre-existing violations of applicable codes, statutes or other regulations.

12. Relocation Waiver

So long as T-Mobile successfully satisfies all material obligations under this Agreement, Miami-Dade agrees to waive the right it may have under the *FCC's ET Docket N0. 00-258* and rules promulgated thereunder and any related proceeding and rules, to relocate its microwave operations on the Affected Path back to 2.1 GHz microwave operations.

13. Default

It shall be a "Default" hereunder, except as delayed pursuant to Section 8, if either Party fails to: (a) perform any material obligation herein; and (b) implement steps to cure such failure within thirty (30) calendar days after written notice from the other Party of such failure, and then to continuously pursue such steps to correct the failure as soon as possible but in no event later than

such ninety (90) calendar days after written notice from the other Party of such failure. Upon occurrence of such a Default, the non-defaulting Party may terminate this Agreement.

14. General Provisions

14.1 Subcontractors: Miami-Dade acknowledges and agrees that the Services to be provided under this Agreement may be performed in whole or in part by outside contractors and subcontractors. Miami-Dade acknowledges and agrees that the general contractor for T-Mobile for the relocation project contemplated under this Agreement is expected to be Granger Telecom. T-Mobile shall be responsible for all matters of performance under this agreement, including but not limited to the quality of the Services performed by its contractors and subcontractors.

14.2 Entire Agreement – Waiver: This Agreement and the schedules hereto constitute the entire agreement and understanding between the parties and supersede all previous agreement and understanding between the parties and supersede all previous agreements, understandings, discussions or presentations, whether oral or written, concerning its subject matter. This Agreement may not be modified or changed in whole or in part in any way except in a writing executed by authorized representatives of the parties. No waiver of any right under this Agreement shall be effective unless in writing by the Party granting such waiver.

14.3 Authorized Signatory; Binding Effect: The signatories hereto represent that they are duly authorized to sign this Agreement on behalf of their respective companies. For T-Mobile, only employees with the title of Vice President or higher are authorized to sign. Each Party signing this Agreement acknowledges that it has had the opportunity to review this Agreement with legal counsel of its choice, and there shall be no presumption that ambiguities shall be construed or interpreted against the drafter. No broker, investment banker, legal adviser, financial advisor or other person is entitled to any broker's, finder's, legal advisor's or other similar fee or commission in connection with this Agreement. This Agreement shall be binding upon and inure to the benefit of the parties, their respective successors, assignees and transferees. Excluding parent, subsidiary or affiliated entities, neither Party may assign its respective rights or obligations hereunder without the express written consent of the other Party.

14.4 Counterparts: This Agreement may be signed in one or more counterparts, each of which shall be an original for all purposes but all of which taken together shall constitute only one instrument. Signed facsimile copies of this Agreement shall legally bind the parties to the same extent as original documents.

14.5 Severability: If any term or provision of this Agreement is determined to be void, unenforceable or contrary to law by a court of competent jurisdiction, or any regulatory or governmental entity having jurisdiction over the parties or the subject matter of this Agreement, the remainder of this Agreement shall remain in full force and effect.

14.6 Notices: All Notices and other communications hereunder required to be in writing shall be deemed duly given if personally delivered, or mailed by registered or

certified mail, return receipt requested, or by overnight courier, addressed to the following:

Miami-Dade	**T-Mobile**
Miami-Dade County	T-Mobile USA, Inc.
Attn: Felix Perez	Attn: Engineering Spectrum Clearing
6010 SW 87th Ave	12920 Se 38th St
Maimi, FL 33173	Bellevue, WA 98006
	CC: Director – Legal Affairs FSC ENGR
Other Notice Information	Other Notice Information:
Phone: 305-596-8098	Phone: 425-383-2153
Email: fap@miamidade.gov	Email: SpectrumClearing@T-Mobile.com
Fax:	Fax: 425-383-3990

14.7 Control: Nothing in this Agreement is intended or shall be construed to grant control of Miami-Dade's microwave system to T-Mobile or otherwise to prevent Miami-Dade from exercising its duties and obligations as an FCC licensee.

14.8 Fees and Expenses: The substantially prevailing Party in any court action or proceeding to enforce the terms of this Agreement is entitled to receive its reasonable attorney's fees and other reasonable enforcement costs and expenses from the non-prevailing Party.

14.9 Miscellaneous: Miami-Dade and T-Mobile expressly agree to submit to the jurisdiction of the federal or circuit courts of Miami Dade County, Florida for purposes of any disputes under this Agreement and for enforcement of any judgments arising out of such actions. Miami-Dade and T-Mobile agree to the application of the Communications Act of 1934, the Omnibus Reconciliation Act of 1993, the Telecommunications Act of 1996, other relevant federal law and regulation in any such actions. Both parties acknowledge and agree that time is of the essence in the performance of this Agreement.

15 Confidentiality

Each Party agrees to keep strictly confidential the terms of this Agreement, and not to disclose the same except (a) to its employees, agents and representatives to the extent necessary to perform its obligation hereunder, or (b) to the extent disclosure is required by any Freedom of Information Request, in which case T-Mobile will be notified in writing and Miami-Dade will assist T-Mobile where possible to object or (c) to the extent compelled by State law or by order of any court or governmental agency of competent jurisdiction. Notwithstanding the foregoing, the filing with the Miami-Dade to secure approval of this agreement, and any related disclosure required by state law or the filing with any agency of any form, documents or correspondence necessary to or to voluntarily cancel, delete, discontinue, surrender or terminate Miami-Dade's operations on the Affected Paths as contemplated by this Agreement shall not constitute a violation of this Section. For further clarification, Miami Dade is a state of Florida subdivision. As such, Miami Dade is subject to the provisions of Chapter 119 of the Florida statutes, Public

Records. T-Mobile understands and agrees that Miami Dade must comply with any requests that are made pursuant to Florida's Public Records law.

16 Further Assurances

From time to time hereafter, each Party will execute and deliver, or will cause to be executed and delivered, such additional instruments, certificates or documents, and will take all such actions, as the other Party may reasonably request, for the purpose of implementing and/or effectuating the provisions of this Agreement, or to ensure that the frequencies formerly used on the Affected Path are available for use in the Market in the operation of the T-Mobile AWS systems free from interference from Miami-Dade on and after the date on which Miami-Dade has delivered the Certificate of Acceptance for the New System.

IN WITNESS WHEREOF; the parties hereto by their duly authorized representative have executed this Agreement the day and year first above written.

Miami-Dade County

Date: _____

By: _____

Name: _____

Title: _____

T-Mobile USA, Inc.

Date: _____

By: _____

Dave Mayo
Vice President - Engineering
Finance,Strategy & Development

Name: _____

6/20/08

Title: _____

T-Mobile Legal Approval By:

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY

_____
Miami Dade Attorney

Schedule A – Affected Path

T-Mobile Link ID	Market	Call Sign A	Frequency A	Call Sign B	Frequency B	Specific Link Decommission Date
21-07858	Miami	WHJ491	2194.4000V	WHJ472	2144.4000V	11/1/2009

Schedule B

Scope of Work for Miami-Dade County

Deal ID #157

Microwave Path to be relocated:

Link ID	Call Sign A		Call Sign B		
21-07858	**WHJ491 "E"- (Miccosukee)**		**WHJ472 Tamiami (Trail Glade)**		

1. OVERVIEW

T-Mobile desires to relocate the 2.1 GHz frequencies that are presently in use by Miami-Dade County Florida, as listed above.

In order to meet the needs of Miami-Dade County T-Mobile, T-Mobile proposes to replace the existing 2.1 GHz analog equipment in two steps. First step is to, relocate the communications from 2.1 GHz to a temporary 2.4 GHz microwave radio system. The second step will relocate from 2.4 GHz to a permanent 6 GHz radio system. The interim step will allow time for T-Mobile to construct the facilities required for the 6 GHz microwave path.

Installation of the 2.4 GHz Alcatel MDR-8000 equipment will utilize the existing antennas on the tower and therefore do not further increase the tower loading. The 2.4 GHz radios were installed with County approval to test out the feasibility of relocating, on an interim basis, to 2.4 GHz. When the 2.4 GHz performance is proven by Alcatel to be interference free and has been tested to Miami-Dade County's satisfaction, in accordance with the contract, then moving the existing traffic from 2.1 GHz to 2.4 GHz will take place.

The 2.4 GHz digital multiplex equipment currently installed will be configured to replicate the existing 2.1 GHz analog multiplex for each individual channel. At a time designated by Miami-Dade County each circuit will be cutover from the 2.1 GHz to the 2.4 GHz, one circuit at a time in order to keep circuit outage to a minimum. Cut over will be completed in approximately 15 to 20 minutes per circuit, which should be the maximum time for each circuit to be out of service. Once Miami-Dade has accepted the 2.4 GHz system, the 2.1 GHz system will cease operations to allow for T-Mobile to use its 2.1 GHz frequencies. Miami-Dade may keep its 2.1GHz licenses active until the final 6GHz solution has been tested and accepted. In the event the 2.4 GHz system fails and cannot be repaired and provide 99.999% reliability, Miami-Dade may request to relocate back to its 2.1 GHz system within fourteen (14) business days of its request. During the fourteen days, T-Mobile will reconfigure its network so not to cause interference to Miami-Dade's 2.1 GHz link. In no event will an outage caused by a force majeure, such as high winds or a hurricane, that

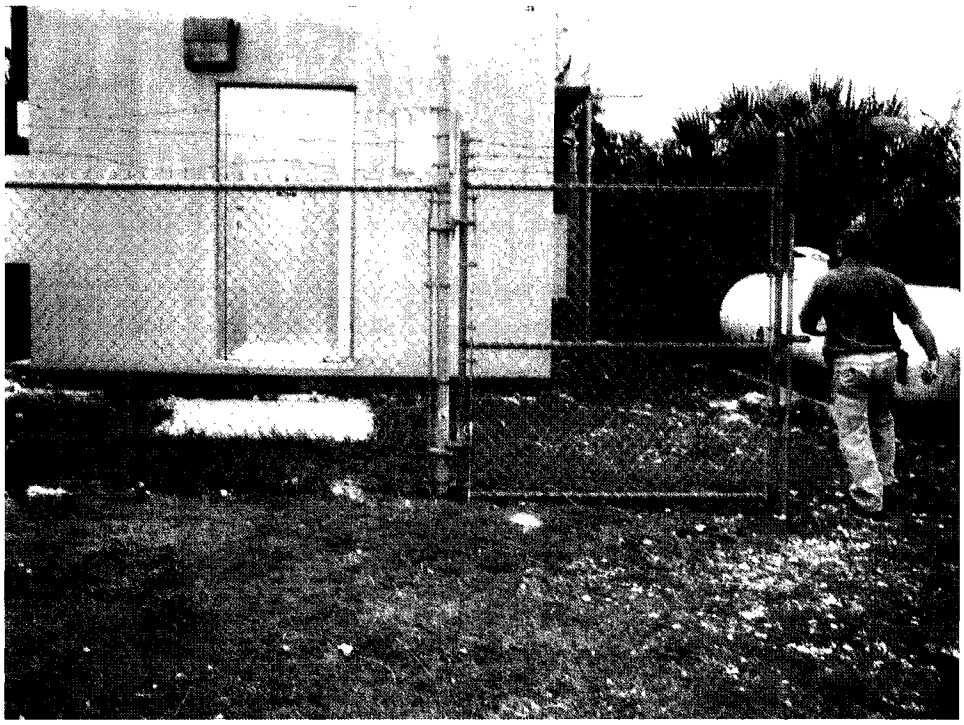
reduces the 2.4 GHz system's reliability to below 99.999% be a reason for relocation by Miami-Dade back to its 2.1 GHz system.

T-Mobile will provide new links of microwave equipment for the temporary 2.4 GHz and permanent 6 GHz systems, including digital channel bank equipment, antenna system, DC power as required and miscellaneous materials and labor to complete the project. The 6GHz microwave link will be Harris Truepoint 6000 6 GHz MHSB, Space-Diversity, 8DS1 radios. These radios will be licensed with a 3.75 MHz bandwidth, if available. If it is necessary for alternate bandwidths to be chosen, this could impact the radio capacity and antennae for this relocation. T-Mobile will prioritize reliability over capacity when finding alternate bandwidth. Resultant capacity may be less than previously stated but in no case, will the New System capacity fall below the Current System capacity. T-Mobile will provide a leased T1 circuit and switching hardware to provide backup to the interim 2.4 GHz radio and permanent 6 GHz radio solution for six (6) months, beginning at the date of acceptance, between Miccosukee and Trail Glades. T-Mobile will maintain the leased T1 circuit and loop switching hardware in accordance with the Contract.

T-Mobile has contracted with Granger Telecom (Granger) to provide the necessary engineering, equipment and services to accomplish the goal of relocating the subject microwave link, which will clear the existing frequencies for AWS use by T-Mobile.

At the Miccosukee Site (WHJ491), the existing tower is not structurally capable of modifying to allow satisfactory operation of 6 GHz antennas. It is necessary to build a new tower, which in-turn, due to site conditions, requires additional site preparations. It is necessary to build up part of the site elevation that is currently underwater to a safe level to accommodate building of a new tower and equipment shelter, as well as an emergency generator and propane tank. The perimeter of the new site/pad will be security fenced. T-Mobile has contracted with Granger to install these facilities to meet the needs of Miami-Dade County. Please see below for details of proposed additions at the Miccosukee location. The following pictures show the present condition of the Miccosukee Site.

Miccosukee



These pictures show the present condition of Miccosukee site.
The proposed new site addition will be to the right of the propane tank (North).

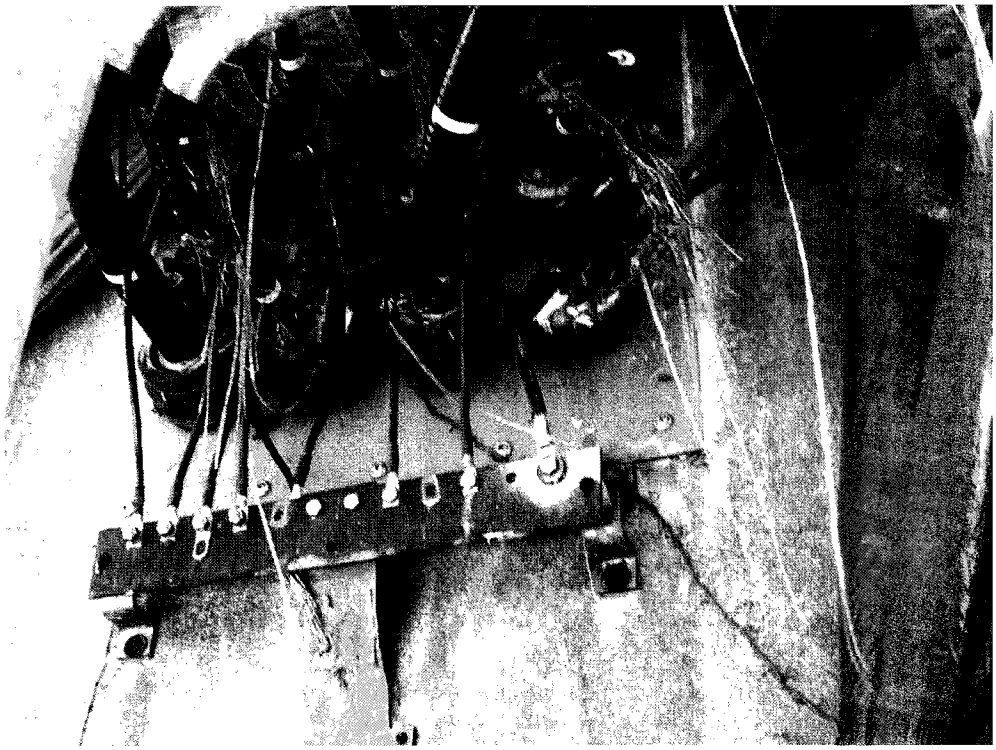
Miccosukee

Present condition of Miccosukee

22

Miccosukee

Existing Site. New Site will be built to the right (North) of this picture



Existing site conditions at Miccosukee

23

WHJ491 Miccosukee Site Requirements
The existing site/pad will be expanded a minimum amount required to facilitate building of a new self-supporting tower, equipment shelter and emergency generator to support the new microwave radio system. New security fencing will be installed on the perimeter of the new expansion, connecting with the existing fence. After the new perimeter fence is installed the section of the existing fence between the old and new will be removed. As illustrated on the attached Site Plan drawing, the following will be provided on the new expanded site pad:

New 200' self-supporting tower constructed to meet required local building codes, TIA/EIA 222-G standards and Florida State Codes, capable of supporting all microwave and VHF/UHF antenna loading requirements provided by Miami-Dade County.

New Miami-Dade County Public Safety standard 12' X 24' equipment shelter, which includes a generator room. The new shelter will be concrete aggregate finish secured on a concrete slab type foundation, equipped with Miami-Dade County Public Safety standard facilities such as redundant HVAC, cable ladder, grounding, electrical and alarm contacts.

New emergency generator will be installed in the generator room of the new shelter. Generator will be 60 KW capacity and operate on propane fuel. Generator system make and model will match that of the new generators being installed in the County. Automatic transfer panel, remote control, and remote alarm contact closures will be included.

New propane tank will be installed and the existing propane tank relocated.

New security fencing installed to enclose new pad expansion

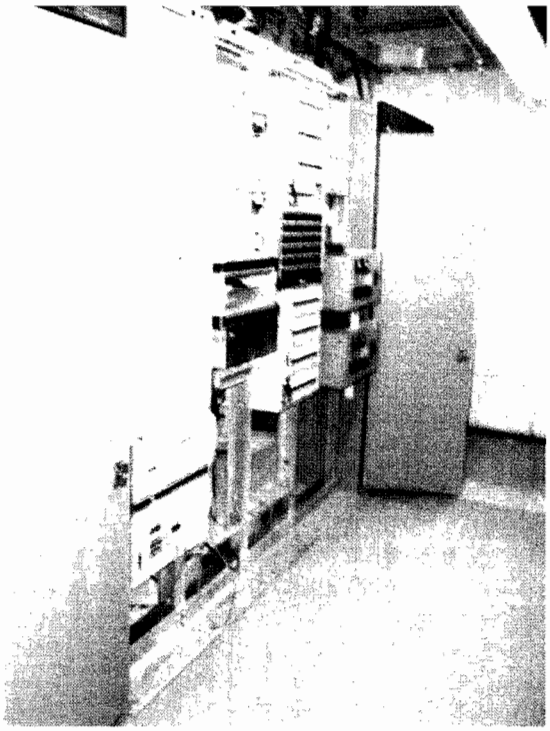
Grounding and bonding of the new tower, shelter, propane tank, and fencing to Motorola R56 standards..

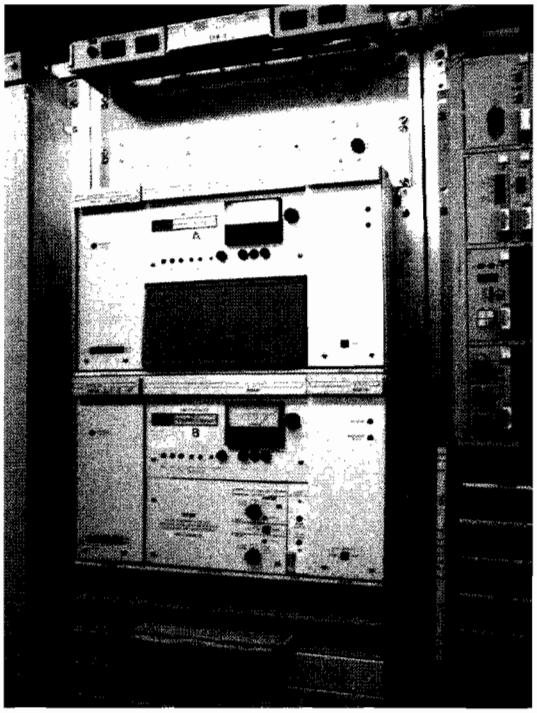
WHJ472 Trail Glade Site Requirements
The existing facilities will be used to accommodate installation of the new 6 GHz digital microwave radio equipment. The new 6 GHz microwave equipment rack will be placed in the same position as the existing 2.1/2.4 GHz equipment. The 2.1/2.4 GHz will be moved forward and remain in operation and the new 6 GHz placed behind and installed. After the 6 GHz is tested and placed in service, the 2.1/2.4 GHz radio will be relocated to a location inside the shelter, powered, and connected to a load instead of an antenna until such time as the 6GHz system is accepted. Attached pictures show the existing 2.1/2.4 GHz rack and also the wall where new 66 blocks will be installed.

TCC Site Requirements
In lieu of installing channel bank equipment at the Trail Glade site, the channel bank will be installed at the TCC site. Miami-Dade County will provision a T1 circuit from

Trail Glade to TCC. At Trail Glades, Granger will connect a single T1 circuit from the Miccosukee-Trail Glade microwave link to the County provided T1 circuit. At TCC, Granger will connect the channel bank to the County provided T1 circuit, providing channel bank to channel bank connectivity between TCC and Miccosukee. The channel bank at TCC will be installed in a location as dictated by the County and connected to existing -48 VDC power available from a GMT fuse panel located in the equipment rack.

Trail Glade





View of 2.1 GHz equipment to be replaced. This picture shows the rack line up.

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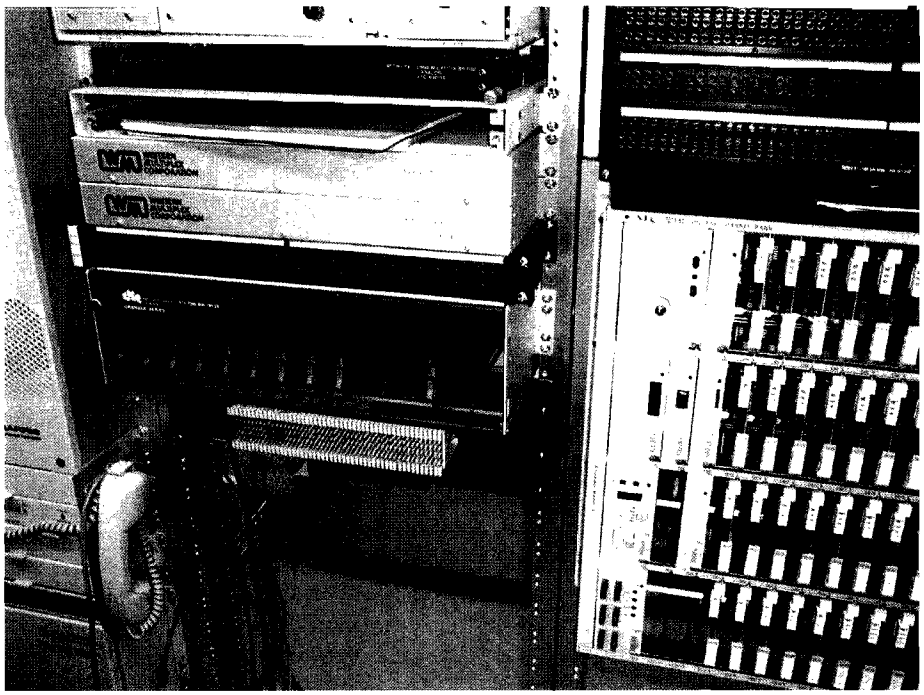
Trail Glade



This picture shows the bottom section of the 2.1 GHz rack

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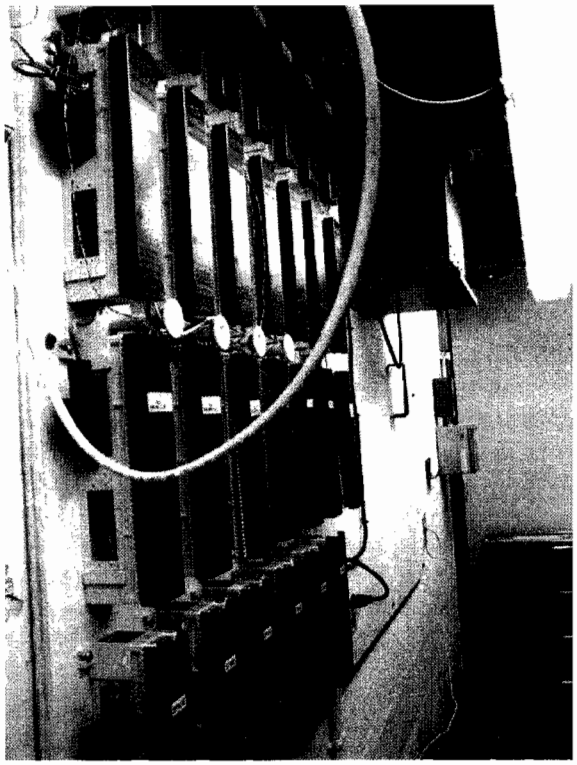
Trail Glade



This picture Shows wall to mount new 66 blocks for 6 GHz.

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2. RF and Multiplex Replacement

Granger will perform a field site and path survey to visually verify path clearance prior to ordering the frequency coordination and ordering materials.

The existing RF to be replaced is 2.1 GHz Harris/Farinon LR1-2, 96 channel capacity analog, MHSB, SD, microwave equipment. Granger Telecom will provide a new link of Alcatel MDR-8000 for an interim basis and a Harris Truepoint 6000 6 GHz, 8 DS1, MHSB, Space-Diversity microwave for the permanent solution.

New Harris Intraplex digital channel banks with the required number of circuit cards will be provided.

Miami-Dade County will provide Granger with an existing channel plan to facilitate ordering of the required equipment to interface to the existing system.

New equipment will be supplied in 7' x 19" racks that will include fuse and alarm panels, as standard from Harris. Granger Telecom will provide all other installation materials as well. Racks will be physically mounted and secured using good engineering practices and requirements for the geographical area.

3. D.C. Power Replacement

At WHJ491 Miccosukee new redundant -48 VDC DC power with a minimum of 8 hours of backup time will be provided to accommodate existing equipment, new equipment and 50% reserve for future needs. Existing DC power will be used at Trail Glade WHJ472 and TCC.

4. Towers, Antenna & Waveguide System

New 6 GHz antennas and waveguide are required at both sites to accommodate the new 6 GHz digital microwave equipment. All new antennas will be installed with radomes and two tie-backs per antenna. Proposed equipment to be supplied will be manufactured by RFS Cablewave and Andrew Comscope. Antennas will be Andrew HSX6-59-P3A High Perfromance Super High Cross Polarization Discrimination Dual Polarized 5.925 to 6.424 GHz with white teglar long life radome and CPR flanges. These antennas are for the lower portion of the 6GHz band. If for any reason there is not a lower 6 band frequency available at time of frequency coordination and an upper 6 GHz frequency is all that is available, an alternate antenna (UHX6-59-P3A) would have to be used. Waveguide will be RFS E65 with pre-tuned connectors. Waveguide runs will be installed to an appropriate position then 24" flex will be used to connect to the microwave equipment in the building. Waveguide will be connected directly to the antennas without flex. Grounding will be installed as required and all hardware will be stainless steel. Waveguide will be grounded at top and bottom and at building entrance. RFS Pressurization equipment will be provided where needed.

Each antenna and waveguide run will be tested, including sweep tests after installation and records of results furnished. New antenna mounting hardware and other steel required will be hot-dipped galvanized. Waveguide hangers and associated hardware will be stainless steel.

5. Spares

Granger will provide one set of Harris Radio spares including frequency selective components as recommended by Harris, based on the standard spares kit available from Harris.

6. Installation and Testing

Granger will undertake the physical installation and testing of the new 6 GHz microwave link. Cut over will be scheduled and closely monitored by Miami-Dade County. The new system will be installed and tested and circuits reconnected as directed by Miami-Dade County.

Site development construction will begin at Miccosukee. Construction will take the following steps;

- Site pad build - Approximately 45 days
- Construct New Tower - Approximately 30 days
- Foundations - Two weeks - Can run in the same time frame as Tower construction
- Set building, generator & propane tank, electrical and inside preparations - 60 days
- New Fencing - 5 days
- Install microwave and associated equipment - 14 days

When the Miccosukee site is built to the point of installing microwave equipment then equipment installation will begin at Trail Glade with a duration of approximately 10 days.

At each site, the microwave racks will be transported to the site by Granger and physically bolted in place. Racks will be supported using standard engineering practices. Racks will be grounded in accordance with Miami-Dade County procedures, which will be provided to Granger.

Granger will transport the antennas, waveguide, and accessories to each site. Antennas will be installed at predetermined centerlines for each site. New waveguide entry boots will be provided on each run and new entry ports installed where needed.

The microwave equipment and digital multiplex will be installed at each site and be tested by Granger in accordance with manufacturer's specifications. The link will be tested on a per-hop basis. Testing will include BER tests on a minimum of one DS1 for less than 1X10E-6 errors over the system for a 24 hour period. These shall be bi-directional tests. After per link tests have proved satisfactory, Granger will test from end to end. Complete test records will be provided at each site with a composite for the Miami-Dade County main office. Each individual circuit will be tested to insure

proper operation at cut over. After these tests are performed, Granger will notify the County that the system is available for County witnessed testing in accordance with the Contract.

Once testing specified by the Contract is complete and the System has been accepted by Miami-Dade County, a final detailed cut over plan will be prepared in advance for Miami-Dade County approval. Subsequently, circuit cut over will be completed according to a plan approved by Miami-Dade County. Granger recognizes the critical nature of these circuits and understands that cut over may be scheduled at odd hours and will require personnel at various locations.

After cut over, Granger will ensure that all circuits are working properly on the new digital system.

With Miami-Dade County approval, at the appropriate time following cut over, and in accordance with the Contract, Granger will then remove the 2 GHz equipment, antennas, and transmission lines. The 2 GHz equipment will be returned to a Miami-Dade County location for their disposal.

Path Calculations and Profiles:

Basic **preliminary** path calculations are included below. The path reliability figures are as close to 99.9995% as can be engineered.

Permanent Harris Truepoint 6000 radio path calculations

Microwave Worksheet - Site E-Tamiami 6GHz TRuepoint 6000 and Andrew Dual antennas.pl4

	Site "E"	Tamiami
Elevation (ft)	3.28	3.28
Latitude	25 45 41.30 N	25 45 50.30 N
Longitude	080 47 48.20 W	080 28 35.20 W
True azimuth (°)	89.44	269.58
Vertical angle (°)	-0.09	-0.13
Antenna model	UHX6-59W	UHX6-59W
Antenna height (ft)	170.00	207.00
Antenna gain (dBi)	38.80	38.80
Radome loss (dB)	0.50	0.50
TX line type	EW63	EW63
TX line length (ft)	200.00	237.00
TX line unit loss (dB /100 ft)	1.37	1.37
TX line loss (dB)	2.74	3.25
Connector loss (dB)	0.25	0.25
Miscellaneous loss (dB)	0.50	0.50
TX switch loss (dB)	0.40	0.40
Other RX loss (dB)	0.50	0.50
Antenna model	UHX6-59W	UHX6-59W
Antenna height (ft)	127.00	157.00
Antenna gain (dBi)	38.80	38.80
Radome loss (dB)	0.50	0.50
TX line type	EW63	EW63
TX line length (ft)	157.00	187.00
TX line unit loss (dB /100 ft)	1.37	1.37
TX line loss (dB)	2.15	2.56
Connector loss (dB)	0.25	0.25
Div RX circulator loss (dB)	0.00	0.00
Other div RX loss (dB)	0.00	0.00
Frequency (MHz)	6525.00	
Polarization	Vertical	
Path length (mi)	19.97	
Free space loss (dB)	138.90	
Atmospheric absorption loss (dB)	0.29	
Main net path loss (dB)	70.97	70.97
Diversity net path loss (dB)	69.38	69.29
Radio model	TRuepoint 6000	TRuepoint 6000
TX power (watts)	1.41	1.41
TX power (dBm)	31.50	31.50
EIRP (dBm)	65.91	65.40
Emission designator	3M75D7W	3M75D7W
RX threshold criteria	BER 10-6	BER 10-6
RX threshold level (dBm)	-85.00	-85.00
Maximum receive signal (dBm)	-20.00	-20.00
Main RX signal (dBm)	**-39.47**	**-39.47**
Diversity RX signal (dBm)	**-37.88**	**-37.79**
Thermal fade margin (dB)	**47.12**	**47.21**
Dispersive fade margin (dB)	69.00	69.00

Dispersive fade occurrence factor	1.00	
Effective fade margin (dB)	47.09	47.18
Climatic factor	6.00	
Terrain roughness (ft)	20.00	
C factor	19.75	
Fade occurrence factor (Po)	2.56E+00	
Average annual temperature (°F)	70.00	
SD improvement factor	200.00	200.00
Worst month - multipath (%)	**99.99997**	**99.99998**
(sec)	**0.66**	**0.64**
Annual - multipath (%)	**99.99999**	**99.99999**
(sec)	2.77	2.71
(% - sec)	99.99998 - 5.47	

Thu, Jun 12 2008
Site E-Tamiami 6GHz TRuepoint 6000 and Andrew Dual antennas.pl4
Reliability Method - Vigants - Barnett
Space Diversity Method Harris Baseband Switching

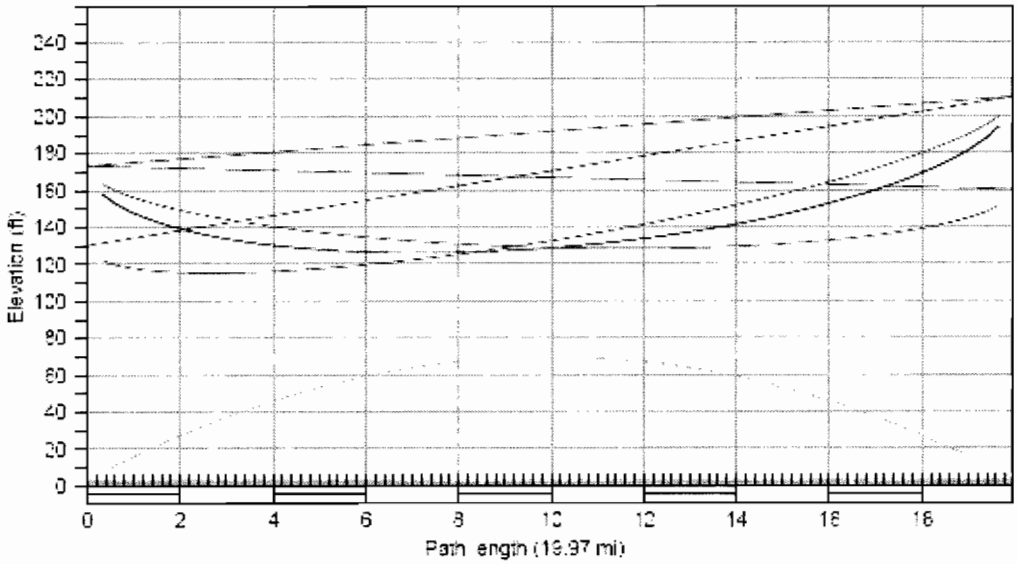
Temporary Licensed 2.4 GHz Alcatel 8000 Radio Path Calculations

Microwave Worksheet - Site E-Tamiami licensed 2.4.pl3

	Site "E"	**Tamiami**
Elevation (ft)	10.00	10.00
Latitude	25 45 41.30 N	25 45 50.30 N
Longitude	080 47 48.20 W	080 28 35.20 W
True azimuth (°)	89.44	269.58
Vertical angle (°)	-0.09	-0.13
Antenna model	SPF6-23A	SPF6-23A
Antenna height (ft)	170.00	207.00
Antenna gain (dBi)	30.60	30.60
Radome loss (dB)	0.50	0.50
TX loss (dB)	6.85	7.70
RX loss (dB)	6.35	7.20
Antenna model	SPF6-23A	SPF6-23A
Antenna height (ft)	127.00	157.00
Antenna gain (dBi)	30.60	30.60
Radome loss (dB)	0.50	0.50
RX loss (dB)	4.36	5.05
Frequency (MHz)	2400.00	
Polarization	Vertical	
Path length (mi)	19.97	
Free space loss (dB)	130.21	
Atmospheric absorption loss (dB)	0.20	
Main net path loss (dB)	83.26	83.26
Diversity net path loss (dB)	81.27	81.11
Radio model	Alcatel MDR-8502	Alcatel MDR-8502
TX power (watts)	1.26	1.26
TX power (dBm)	31.00	31.00
EIRP (dBm)	54.75	53.90
RX threshold criteria	BER 10-6	
RX threshold level (dBm)	-87.00	-87.00
Maximum receive signal (dBm)	-20.00	-20.00
Main RX signal (dBm)	-52.26	-52.26
Diversity RX signal (dBm)	-50.27	-50.11
Thermal fade margin (dB)	36.73	36.89

Dispersive fade margin (dB)	80.00	80.00
Dispersive fade occurrence factor	1.00	
Effective fade margin (dB)	36.73	36.89
Climatic factor	6.00	
Terrain roughness (ft)	20.00	
C factor	19.75	
Average annual temperature (°F)	70.00	
SD improvement factor	46.34	62.65
Worst month - multipath (%)	99.99957	99.99969
(sec)	11.36	8.10
Annual - multipath (%)	99.99985	99.99989
(sec)	47.71	34.01
(% - sec)	99.99974 - 81.71	

Thu, Mar 20 2008
Site E-Tamiami licensed 2.4.pl3
Reliability Method - Vigants - Barnett
Space Diversity Method Harris Baseband Switching



Site "E"	Frequency (MHz) = 6525.0	Tamiami
Latitude 26 45 41.30 N	K = 1.33	Latitude 26 45 50.30 N
Longitude 080 47 48 20 W	%F1 = 100.00, 60 00	Longitude 080 28 35 20 W
Azimuth 89.44°		Azimuth 269.58°
Elevation 3 ft ASL		Elevation 3 ft ASL
Antenna CL 170.0, 127.0 ft AGL	Granger Telecom	Antenna CL 207.0, 157.0 ft AGL

Licensed 6.7 GHz	Apr 15 08	
Same ACL's as Existing Path		

8. Materials List

			157	157
			21-07858	21-07858
			WHJ491	WHJ472
			E	Tamiami
	MANUF.	PART NUMBER	*Qty*	*Qty*
Radio Equipment				
Harris TRuepoint 8DS1 (3.75 MHz) MHSB, SD,	Harris	TruePoint 6000	1	1
Orderwire, Rack and Fuse and Alarm panel, Keypad, Manuals	Harris	TruePoint 6000	1	1
Wire, Cables, Connectors, Hardware, and Misc.	Various	Various	1	1
Antenna Systems				
Andrew HSX6-59-P3A Antenna with two sway bars	Andrew	HSX6-59-P3A	2	2
RFS E65 Waveguide	RFS	E65	370	460
RFS C137-065TG Waveguide Connectors	RFS	C137-065TG	4	4
RFS PW-C137 Pressure Window	RFS	PW-C137	2	2
RFS TF137-CC1-0241 Twist Flex, 24"	RFS	\TF137-CC1-0241	2	2
RFS CLAMP-65 Hanger Kits	RFS	CLAMP-65	12	13
RFS Angle Adapter	RFS	Angle Adapter	12	13
RFS GKIT24-065 Ground Kit, Factory attached lug, 24"	RFS	GKIT24-065	6	6
RFS GKIT60-065 Ground Kit, Field attached lug, 60"	RFS	GKIT60-065	2	2
RFS HOIST1-65L Hoisting Grip	RFS	HOIST1-65L	2	2
RFS 915006 Hardware Kit	RFS	915006	12	12
RFS 920635 Dehydrator (RFS APD-20)	RFS	920635 (RFS APD-20)	1	0
RFS 940008 Dehydrator Shelf	RFS	940008	1	0
RFS 920204 Pressure Manifold and Hardware for Dehydrator	RFS	920204	1	1
RFS BOOT4-65 Entry Boots	RFS	BOOT4-65	2	2
Custom Entry Port, Granger Custom	Granger	Custom	1	0
VHF/UHF Antennas				
DB812k			4	0
SRL320			3	0
Heliax cable, 7/8' w/connectors	RFS		660'	0
Heliax cable, 1 5/8" w/connectors	RFS		1320'	0
RF Jumpers w/connectors	RFS		1 lot	0
Tower Top Amp.	TBD		1	0
Channel Bank Equipment				
ADC DSX-1 Panel	ADC	DSX-1C/28	1	1
Harris Intraplex Channel banks & modules	Harris	Intraplex	1 lot	1 lot

T1 Switching Equipment	Larus	Larus	1	1
Cables and Connectors	Various		1 lot	1 lot
Punch Blocks for Cross Connect of DS0 Circuits	Various		1 lot	1 lot
Tower Mounts & Mechanicals				
Tower Leg Mount	Granger	Custom	2	2
Trapeze Kits or other waveguide supports as needed.	Granger	Custom	2	2
Cut new entry port in shelter	Granger		2	2
Ground Bar	Granger			
Tie Back Supports	Granger	Custom	2	2
Misc antenna installation Hardware	Granger	Misc	2	2
Mounting Brackets for VHF/UHF antennas			9	0
New Tower, 200' Self-Supporting	TBD		1	0
DC Power System w/8 hr. backup.	C&D		1	0
Equipment Shelter W/HVAC	TBD	TBD	1	0
Emergency Generator & Propane Tank			1	0
Spare Equipment - Price per set divided equally and applied to each site.				
Radio Spares	Harris		1	1
ENGINEERING, INSTALLATION AND LABOR				
Frequency Coordination and PCN			1	1
FCC 601 Applications and Filing Fees			1	1
Project Management			1	1
Engineering	Granger		1	1
Delivery of Equipment to site			1	1
Civil Site development			1	0
Tower foundation & installation			1	0
Equipment Shelter Foundation			1	0
Installation of inside shelter equipment, cable ladder, grounding, alarms, MDF/Demarcation Blocks, electrical – complete.			1	0
Installation of Emergency Generator			1	0
Foundation & Installation of Propane Tank			1	0
New fence & installation			1	0

Installation of Microwave Antenna System			2	2
Installation of VHF/UHF antennas, transmission lines, brackets, jumpers & Tower Amps.			1	0
Installation of Microwave Radios, channel banks and inside equipment			1	1
Cutover from old system to new			1	1
De-Install 2 GHz System			1	1
Mobilization / Demobilization			0.5	0.5
Job Completion Documentation			1	1

9. Warranty

MICROWAVE INSTALLATION SERVICES WARRANTY
Equipment Installations

Equipment Installations

Granger Telecom warrants its microwave system installations for a period of 12 months from the date of delivery to the Customer. This warranty covers faulty or incorrect installations performed by Granger personnel.

Customer's sole remedy under this warranty shall be that Granger Telecom will provide the labor and material to correct the installation deficiency. In the event that such deficiency is not directly related to Granger Telecom's installation efforts, expenses for such labor and material shall be borne by the customer.

Equipment Warranties

All equipment provided is new and includes manufacturer's original equipment warranties from date of original shipment.

CXR Larus Products – 12 months
C&D Sageon (rectifiers) – 12 months
C&D Batteries – 4 years.
Alcatel Equipment 24 months

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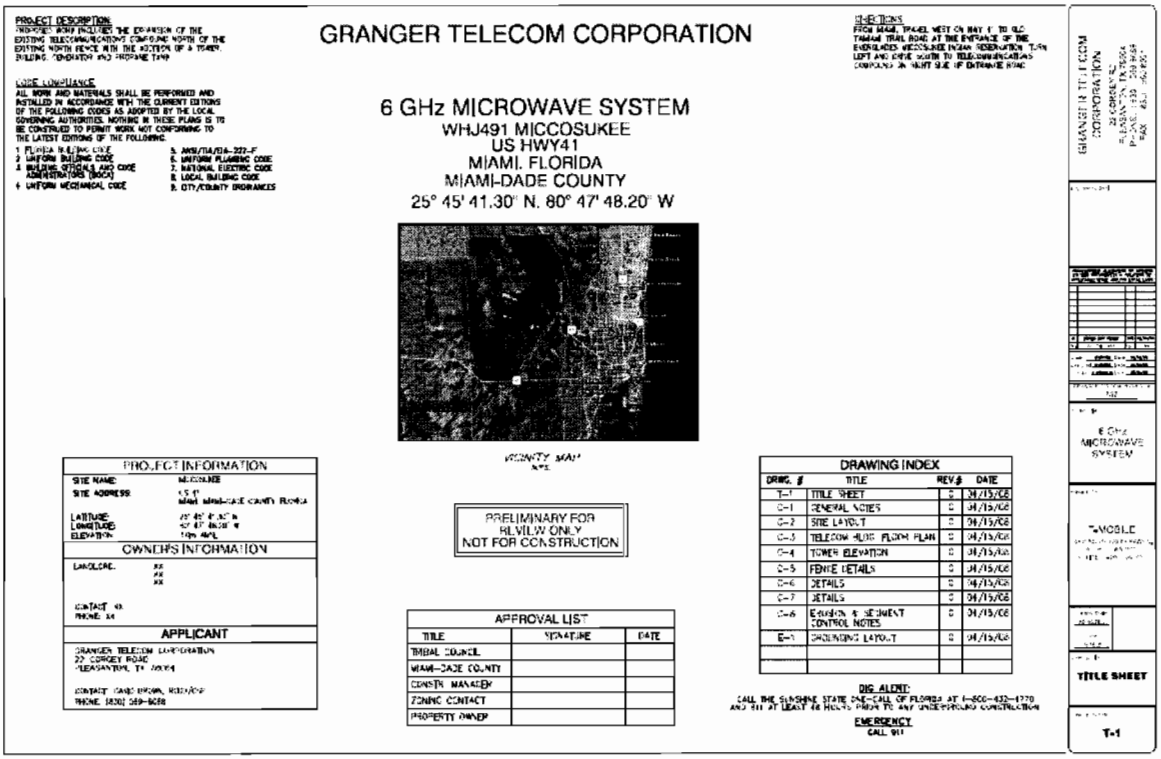
Harris Equipment – 24 months
Andrew – 12 months
RFS – Radio Frequency Systems – 12 months
Other manufactures – Per original equipment warranty.



PROJECT DESCRIPTION:
THIS PROJECT WORK INCLUDES THE EXPANSION OF THE EXISTING TELECOMMUNICATIONS COMPOUND NORTH OF THE EXISTING NORTH RENCE WITH THE ADDITION OF A TOWER, BUILDING, GENERATOR AND PROPANE TANK

CODE COMPLIANCE
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

1. FLORIDA BUILDING CODE
2. UNIFORM BUILDING CODE
3. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA)
4. UNIFORM MECHANICAL CODE
5. ANSI/TIA/EIA-222-F
6. UNIFORM PLUMBING CODE
7. NATIONAL ELECTRIC CODE
8. LOCAL BUILDING CODE
9. CITY/COUNTY ORDINANCES

GRANGER TELECOM CORPORATION

6 GHz MICROWAVE SYSTEM
WHJ491 MICCOSUKEE
US HWY41
MIAMI, FLORIDA
MIAMI-DADE COUNTY
25° 45' 41.30" N, 80° 47' 48.20" W

DIRECTIONS
FROM MIAMI, TRAVEL WEST ON WAY 1 TO OLD TAMIAMI TRAIL ROAD AT THE ENTRANCE OF THE EVERGLADES MICCOSUKEE INDIAN RESERVATION. TURN LEFT AND DRIVE SOUTH TO TELECOMMUNICATIONS COMPOUND ON RIGHT SIDE OF ENTRANCE ROAD

VICINITY MAP
N.T.S.

PRELIMINARY FOR REVIEW ONLY
NOT FOR CONSTRUCTION

PROJECT INFORMATION	
SITE NAME:	MICCOSUKEE
SITE ADDRESS:	US 41 MIAMI-DADE COUNTY, FLORIDA
LATITUDE:	25° 45' 41.30" N
LONGITUDE:	80° 47' 48.20" W
ELEVATION:	10ft AMSL
OWNER'S INFORMATION	
LANDLORD:	xx xx xx
CONTACT:	xx
PHONE:	xx
APPLICANT	
GRANGER TELECOM CORPORATION 22 COREY ROAD PLEASANTON, TX 78064	
CONTACT: DANIEL BROWN, REGULATORY	
PHONE: (830) 569-8088	

APPROVAL LIST		
TITLE	SIGNATURE	DATE
TRIBAL COUNCIL		
MIAMI-DADE COUNTY		
CONSTR. MANAGER		
ZONING CONTACT		
PROPERTY OWNER		

DRAWING INDEX			
DRWG. #	TITLE	REV.#	DATE
T-1	TITLE SHEET	0	04/15/08
G-1	GENERAL NOTES	0	04/15/08
C-2	SITE LAYOUT	0	04/15/08
C-3	TELECOM HUT FLOOR PLAN	0	04/15/08
C-4	TOWER ELEVATION	0	04/15/08
C-5	FENCE DETAILS	0	04/15/08
C-6	DETAILS	0	04/15/08
C-7	DETAILS	0	04/15/08
C-8	EROSION & SEDIMENT CONTROL NOTES	0	04/15/08
E-1	GROUNDING LAYOUT	0	04/15/08

DIG ALERT:
CALL THE SUNSHINE STATE ONE-CALL OF FLORIDA AT 1-800-432-4770 AND 811 AT LEAST 48 HOURS PRIOR TO ANY UNDERGROUND CONSTRUCTION

EMERGENCY
CALL 911

GRANGER TELECOM CORPORATION
22 COREY RD
PLEASANTON, TX 78064
PH: (830) 569-8088
FAX: (830) 569-8087

6 GHz MICROWAVE SYSTEM

T-MOBILE

TITLE SHEET

T-1

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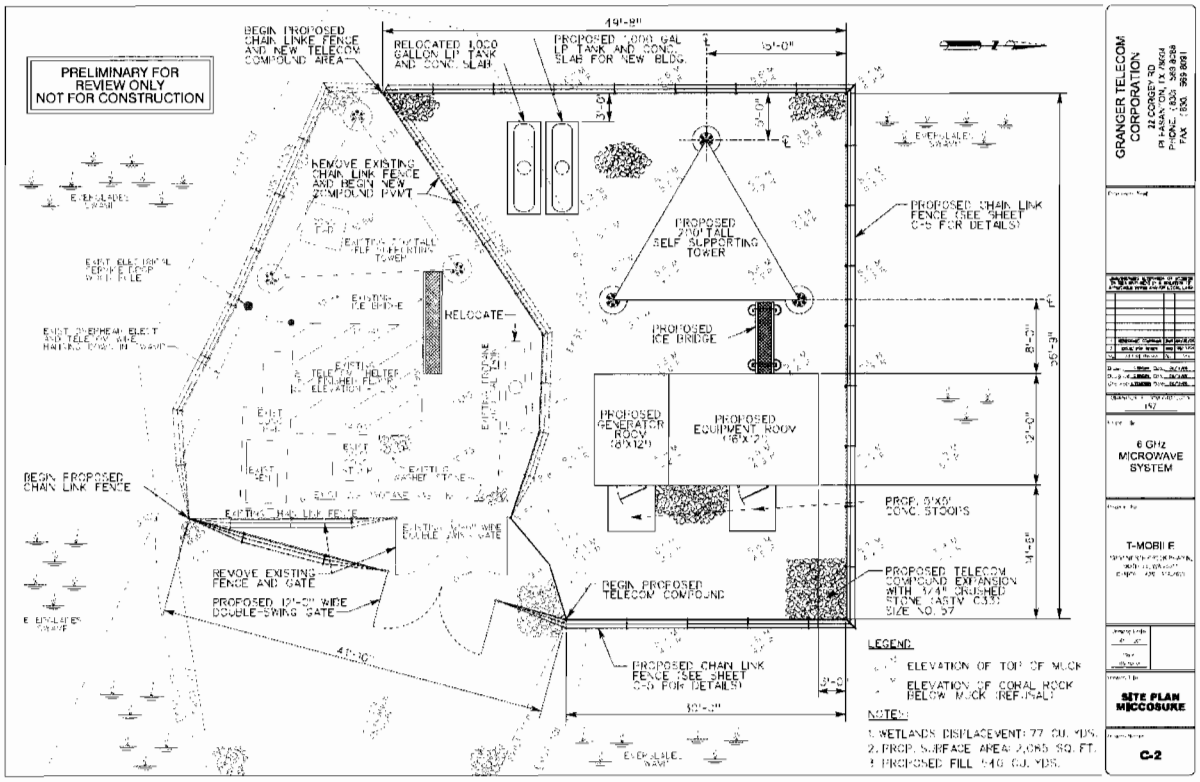
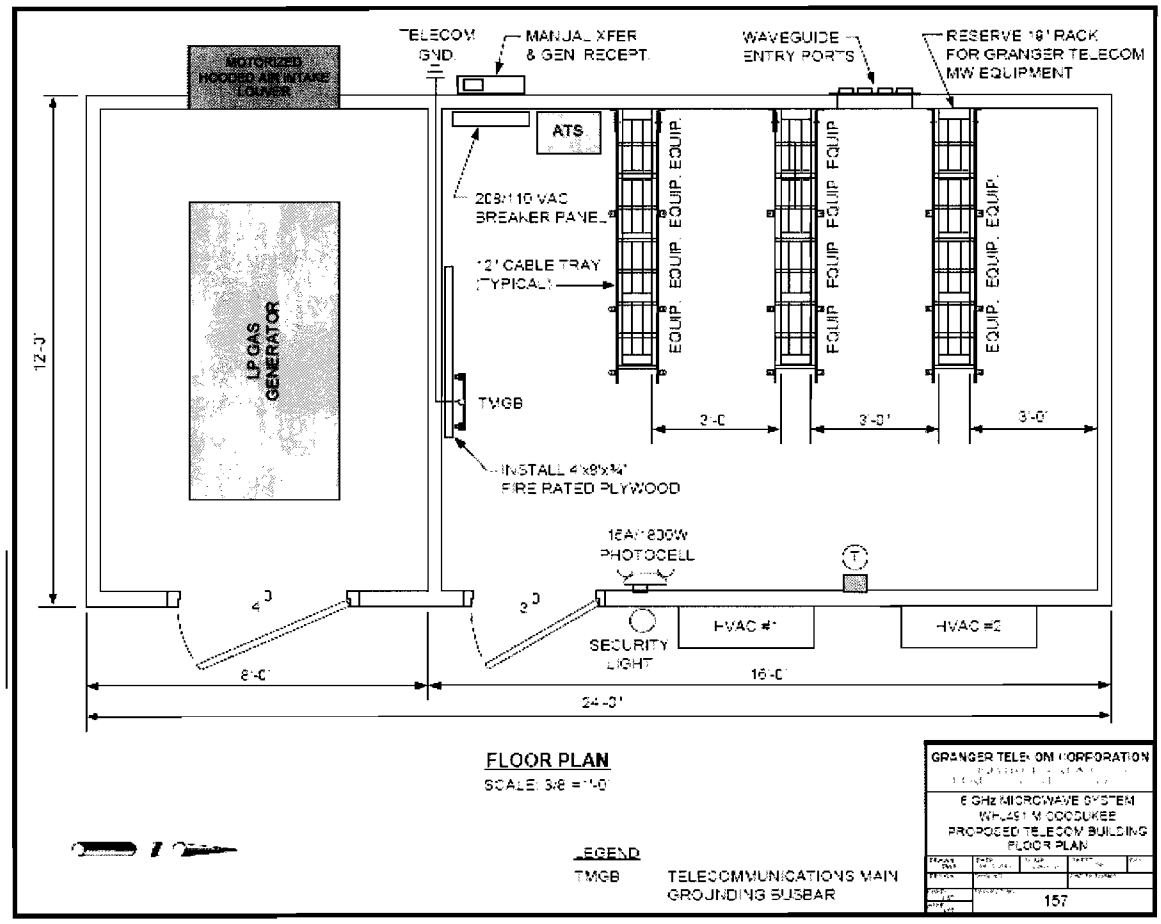

PRELIMINARY FOR REVIEW ONLY NOT FOR CONSTRUCTION
BEGIN PROPOSED CHAIN LINKE FENCE AND NEW TELECOM COMPOUND AREA
RELOCATED 1,000 GALLON LP TANK AND CONC. SLAB
PROPOSED 1,000 GAL LP TANK AND CONC. SLAB FOR NEW BLDG.
49'-8"
15'-0"
REMOVE EXISTING CHAIN LINK FENCE AND BEGIN NEW COMPOUND PVMT
PROPOSED 200' TALL SELF SUPPORTING TOWER
PROPOSED CHAIN LINK FENCE (SEE SHEET C-5 FOR DETAILS)
RELOCATE
PROPOSED ICE BRIDGE
PROPOSED GENERATOR ROOM (8'X12')
PROPOSED EQUIPMENT ROOM (16'X12')
8'-0"
26'-3"
12'-0"
14'-6"
PROP. 5'X5' CONC. STOOPS
BEGIN PROPOSED CHAIN LINK FENCE
REMOVE EXISTING FENCE AND GATE
PROPOSED 12'-0" WIDE DOUBLE-SWING GATE
BEGIN PROPOSED TELECOM COMPOUND
PROPOSED TELECOM COMPOUND EXPANSION WITH 1/4" CRUSHED STONE (ASTM C33 SIZE NO. 57)
PROPOSED CHAIN LINK FENCE (SEE SHEET C-5 FOR DETAILS)
41'-10"
32'-0"
LEGEND:
ELEVATION OF TOP OF MUCK
ELEVATION OF CORAL ROCK BELOW MUCK (REF. INAL)
NOTES:
1. WETLANDS DISPLACEMENT: 77 CU. YDS.
2. PROP. SURFACE AREA: 2,065 SQ. FT.
3. PROPOSED FILL: 640 CU. YDS.
GRANGER TELECOM CORPORATION
22 CORGEY RD
PH PASADENA, TX 78504
PHONE: (713) 943-0138
FAX: (832) 399 8991
6 GHz MICROWAVE SYSTEM
T-MOBILE
SITE PLAN MICCOSUKE
C-2


MOTORIZED HOODED AIR INTAKE LOUVER
TELECOM GND.
MANUAL XFER & GEN. RECEPT.
WAVEGUIDE ENTRY PORTS
RESERVE 19" RACK FOR GRANGER TELECOM MW EQUIPMENT
ATS
208/110 VAC BREAKER PANEL
12' CABLE TRAY (TYPICAL)
EQUIP. EQUIP. EQUIP.
EQUIP. EQUIP. EQUIP.
EQUIP. EQUIP. EQUIP.
LP GAS GENERATOR
12'-0"
TMGB
INSTALL 4'x8'x¾" FIRE RATED PLYWOOD
3'-0"
3'-0"
3'-0"
16A/120V PHOTOCELL
SECURITY LIGHT
HVAC #1
HVAC #2
8'-0"
16'-0"
24'-0"
FLOOR PLAN
SCALE: 3/8 = 1'-0"
LEGEND
TMGB
TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
GRANGER TELECOM CORPORATION
6 GHz MICROWAVE SYSTEM
WHL451 M COOSUKEE
PROPOSED TELECOM BUILDING
FLOOR PLAN
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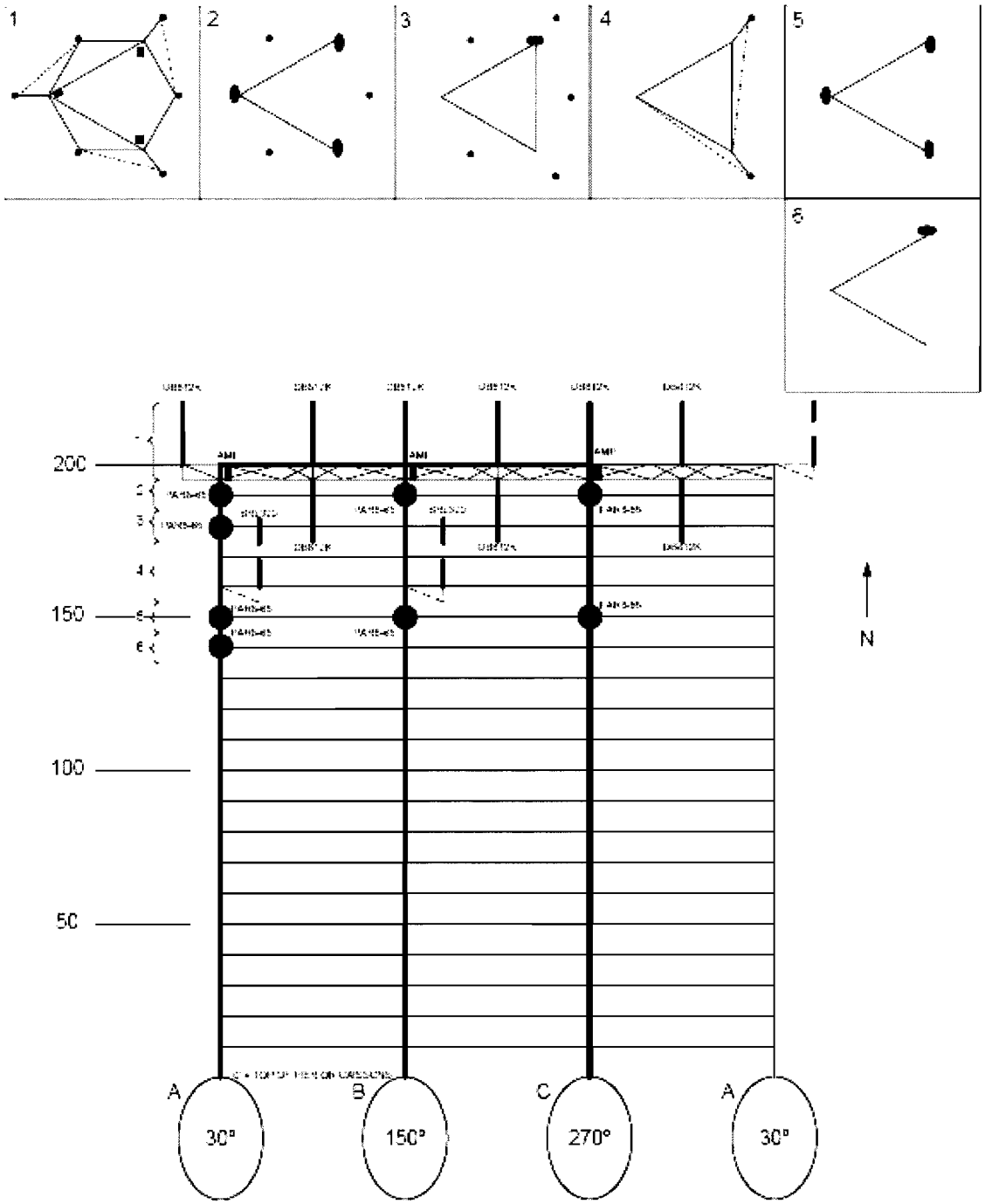
PROPOSED MICCOSUKEE TOWER LOADING



Date Printed: 12/13/2007 M:\ccosukeeProposedAntennaLoadingDiagram20071206a Drawn by: RBF 7/25/03

Schedule C – Certificate of Installation

T-Mobile Link ID	Call Sign A	Call Sign A Frequency	Call Sign B	Call Sign B Frequency	Specific Link Decommission Date
21-07858	WHJ491	2194.4000V	WHJ472	2144.4000V	12/1/2008

____ Initial Testing / ____ Retesting Period – xx/xx/xx – xx/xx/xx:
(check applicable)

This serves as notification to Miami-Dade that as of xx/xx/xx, T-MOBILE has installed the New System.

According to Section 4 of this agreement, Miami-Dade now has seven (7) calendar days to inspect and test the New System.

The seven day Initial Testing Period ends at 11:59 P.M. on xx/xx/xx.

Results of Testing Period – xx/xx/xx:
Within four (4) calendar days (xx/xx/xx 11:50 P.M.) of the Initial Testing or Retesting Period and after completing the appropriate section below in "Testing Results", this Certificate shall be returned to:

Name
Fax
Email

Testing Results (check appropriate box):
_____ - Testing confirmed New System is operating as designed and in accordance with the Scope of Work.

Miami-Dade shall commence relocation of the communication channels from the Current System to the New System, such relocation to be completed within ten (10) calendar days (xx/xx/xx 11:59 P.M) after the conclusion of the testing period which results in no further corrections necessary.

_____ - Testing indicates omissions and/or deficiencies in New System which must be corrected. Omissions and/or deficiencies are as follows:

_____
_____
_____
_____
_____
_____
_____

T-Mobile Project Manager _____
Phone: _____
Email: _____

RELOCATION PROJECT CONTRACTOR: _____
Title: _____
Phone: _____
Email: _____

Date Provided to Miami-Dade: _____

Miami-Dade SIGNATORY _____

Name: _____
Title: _____
Phone: _____
Email: _____
Date: _____

Schedule D – Certificate of Acceptance

T-Mobile Link ID	Call Sign A	Call Sign A Frequency	Call Sign B	Call Sign B Frequency	Specific Link Decommission Date
21-07858	WHJ491	2194.4000V	WHJ472	2144.4000V	12/1/2008

T-Mobile to complete:

Date Initial Testing or Retesting was completed: _____

Date Relocation to be complete (10 days after testing is complete): _____

Miami-Dade to complete:

Actual Relocation date: _____

On behalf of Miami-Dade, I am authorized to accept title and responsibility for the New System that T-Mobile USA, Inc. has constructed in accordance with the Scope of Work and manufacturer's specifications.

Within 3 business days after delivery of this Certificate of Acceptance to T-Mobile, Miami-Dade shall permanently discontinue the use of the Affected Path(s) and shall file with the FCC and other applicable authority(ies) all forms, applications, requests, authorizations or other documentation necessary to terminate all licenses associated with the Affected Path(s).

Also within three (3) business days after filing with the FCC, Miami-Dade shall provide to T-Mobile copies of the paper documents, screen prints of those electronically filed documents or other demonstrable evidence showing that cancellation of the licenses pertaining to the Affected Path was effectuated.

Signature: _____
Name: _____
Phone: _____
Email: _____

Please return this Certificate of Acceptance, as well as documents demonstrating license cancellation to:
Xxxxxxxxxx, T-Mobile Microwave Relocation Project Manager
Fax: **xxx-xxx-xxxx**
Email: **xxxxxxxxx@t-mobile.com**

Schedule E – Warranties

Granger Telecom Telecommunications Systems Specialist

MICROWAVE INSTALLATION SERVICES WARRANTY

Equipment Installations

Granger Telecom warrants its microwave system installations for a period of 12 months from the date of delivery to the Customer. This warranty covers faulty or incorrect installations performed by Granger personnel.

Customer's sole remedy under this warranty shall be that Granger Telecom will provide the labor and material to correct the installation deficiency. In the event that such deficiency is not directly related to Granger Telecom's installation efforts, expenses for such labor and material shall be borne by the customer.

Equipment Warranties

All equipment provided is new and includes manufacturer's original equipment warranties.

CXR Larus Products – 12 months
C&D Sageon (rectifiers) – 12 months
C&D Batteries – 4 years.
Alcatel Equipment 24 months
Harris Equipment – 24 months
RFS – Radio Frequency Systems – 12 months
Other manufactures – Per original equipment warranty.

22 Corgey Road * Pleasanton, TX 78064 * Phone 830-569-8088 * Fax 830-569-8091

EQUIPMENT RETURN POLICY

a. Equipment Damaged in Shipment. Upon receipt of shipments, Customer must open and inspect all boxes immediately for possible freight damage. If damage is found, Customer must notify the delivering carrier within 48 hours and request an inspection. After notifying the freight carrier, Customer promptly shall contact Harris Stratex for further instructions. Damaged Equipment shall not be returned without Harris Stratex's prior authorization.

b. Items Shipped in Error. If the Equipment Customer receives is not what the Customer ordered, Customer will promptly notify the Harris Stratex Program or Territory Manager responsible for the fulfillment of the Order. Customer agrees not to discard packing material. Harris Stratex will issue a return authorization. Equipment shipped in error is not subject to a restocking fee provided it is returned without damage and in complete and unused condition.

c. Defective Equipment. If the Equipment Customer receives is defective, it is covered under the Harris Stratex or manufacturer's standard equipment warranty. Upon discovery of a warranty problem, Customer promptly must contact the appropriate Harris Stratex service center for warranty support. Customer agrees not to return the Equipment until a service representative has issued a return authorization, including a form Customer must fill out describing the nature of the Equipment defect.

d. Other Reasons. If Customer needs to return Equipment for other reasons, Customer must contact Harris Stratex for a return authorization. Harris Stratex's Program or Territory Manager will require a clear statement of the reason for the return request. Upon approval of Customer's request, a return authorization will be issued. Customer agrees not to return any Equipment without a return authorization. Equipment being returned is subject to a restocking fee and other charges. CUSTOM MANUFACTURED OR SPECIAL ORDER ITEMS ARE NOT RETURNABLE. Excess components and materials used during Harris Stratex systems installation will be evaluated on a case-by-case basis.

e. Upon Receipt of a Return Authorization. Return authorization numbers must appear on each individual package being returned. Customer is responsible for insuring the return for the full invoice amount and all shipping costs. Harris Stratex may refuse shipments of Equipment returned without return authorization numbers. All Equipment being returned for credit must be returned in a timely manner and in good condition. Harris Stratex will inspect all Equipment returned. If there is damage, wear and tear, or if there are missing components or accessories, Harris Stratex will charge Customer for repair/refurbishment in addition to a restocking fee and other charges.

f. No Fault Found Fee. Harris Stratex may charge a fee on all Equipment returned for repair, for which there was no fault found. The no fault found fee is $295.00 per unit irrespective of whether the unit/module is under warranty.

EQUIPMENT WARRANTY

a. This warranty is extended to Customer and applies to all Harris Stratex_manufactured Equipment purchased, installed, and used for the purpose for which such Equipment was originally designed.

b. Harris Stratex warrants that the Equipment i) is free from defects in materials and workmanship and ii) substantially conforms to Harris Stratex's published specifications. If the Equipment does not function as warranted during the warranty period, Harris Stratex will determine to either i) make it do so, or ii) replace it with equivalent Equipment.

c. Items not manufactured by Harris Stratex to be utilized in conjunction with or independently of Harris Stratex - manufactured Equipment shall be covered only by the specific warranty terms of the supplier or manufacturer of those items.

d. Harris Stratex does not warrant, guarantee and is not responsible for: (1) Defects or failures caused in whole or in part by (A) power failures, surges, fires, floods, accidents, actions of third parties, or other events outside of Harris Stratex's control, (B) Customer's abuse, mishandling, misuse, negligence, improper storage, servicing or operation, or unauthorized attempts to repair or alter the Equipment in any way, (C) for items normally consumed during the Equipment operation, or (D) failures caused by non-Harris Stratex Equipment. Customer must provide qualified technical personnel to operate, maintain and handle the equipment. (2) Consequential expenses incurred for transportation, removal, replacement, evaluation, testing, or non-Harris Stratex repair or service costs. Consequential damages from any causes such as downtime costs, costs for substituting Equipment or loss of anticipated profits or revenue are not covered. (3) Equipment built to Customer's specifications that is later found not to meet Customer's needs or expectations. (4) The performance of the Equipment when used in combination with equipment not purchased, specified, or approved by Harris Stratex. (5) Signal coverage delivered by antenna equipment whether or not supplied by Harris Stratex. (6)

Damages and performance limitations due to outside forces such as snow, ice, lightning, excessive heat or cold, or highly corrosive environments. (7) Cost to ship Equipment to Harris Stratex to provide the repair, replacement, or return of a defective part or unit. Equipment shall be returned to Harris Stratex in accordance with the terms and conditions of the Harris Stratex Equipment Return Policy described above.

e. Warranty On Replacement Parts and Repair of Harris Stratex Manufactured items Outside the Equipment Warranty Period: Replacement parts and repairs are warranted to be free from defects in material or workmanship for a period of ninety (90) days from date of shipment or the balance of the original warranty, whichever is longer. Harris Stratex will replace parts or repair unit(s) at its factory per its authorization.

f. Scope of Harris Stratex Equipment Warranty: Harris Stratex Equipment Warranty does not cover on-site trouble shooting or first level maintenance services. On-site trouble shooting services can be provided at Harris Stratex's option if a reasonable effort by Customer's qualified technical personnel has not corrected the problem. If so, Customer will be responsible for the labor, travel and living expenses associated with the field service of Harris Stratex's personnel. A ONE-DAY MINIMUM CHARGE APPLIES TO ALL ON-SITE TROUBLE SHOOTING VISITS. First level maintenance services can be provided under a separate Service Level Agreement ("SLA").

g. **USED EQUIPMENT. IF THE EQUIPMENT SPECIFIED IN THE AGREEMENT IS DESCRIBED AS USED, IT IS SOLD "AS IS" AND THE WARRANTY PERIOD WILL BE SPECIFIED AT THE TIME OF SALE. IF THE AGREEMENT COVERS EQUIPMENT NOT OWNED BY HARRIS STRATEX, IT IS SOLD SUBJECT TO HARRIS STRATEX'S ACQUISITION OF POSSESSION.**

h.. Equipment and Software Warranty Coverage Matrix:

EQUIPMENT/SERVICES/SOFTWARE	WARRANTY
Equipment Warranty – North America, including the Caribbean	24 Months from ship date or 27 months from ship date, if installed by Harris Stratex or a certified service partner of Harris Stratex
Non-Harris Stratex OEM Equipment	OEM warranty is a pass through from Harris Stratex from the ship date, maximum OEM warranty plus 3 months if the equipment is installed by Harris Stratex
Radio Operating Software	Same as associated product warranty period
Network Management Software – including NetBoss, Farscan and Starview	90 days from Final Acceptance
Installation Services	6 months from Commissioning
Path Engineering Services	24 months from date of survey or 12 months from installation, whichever comes first
Civil Engineering Services	6 months from Commissioning
Repair Services	90 days from the return shipment date or the balance of the original warranty, whichever is longer
Advance Exchange program	When units are available this service will be supplied and the associated cost for each Advance Exchange unit is $250.00USD
24 X 7 Telephone Support	24 X 7 telephone support is available for all customers during normal working hours, after-hours support is limited to emergency situations. Full 24 X 7 support for customers is available and requires a Customer Support Services Agreement (i.e. Synergy Support Program) to be in place.
Turn Around Time on Repairs (TAT)	Harris Stratex will repair and return customer's units with a competitive turnaround time. The turnaround time for returns exceeding thirty (30) days will be mutually agreed upon by the parties. TAT will be specific to each geographic location of where the repair is to be completed.
Warranty Extension and Post – Sales Support Programs	Synergy Support Programs are available based on the Customer selected service options.

LICENSES AND SOFTWARE WARRANTY

a. License. Harris Stratex grants to Customer, and Customer hereby accepts, a nontransferable (except as expressly provided in this Section, a nonexclusive license to use Harris Stratex's Software, firmware, and related documentation provided hereunder ("Licensed Harris Stratex Programs") solely in connection with the use of the Equipment purchased by Customer. If the Customer utilizes the Licensed Harris Stratex Programs with other Equipment then an additional license fee may be assessed by Harris Stratex. The Licensed Harris Stratex Programs furnished with the Equipment shall be Harris Stratex's latest commercial generation available at the time of shipment of the Equipment, and Harris

Stratex shall be under no obligation to supply updates to such Licensed Programs (as defined below) except where so stated in writing. In addition to the Licensed Harris Stratex Programs, other Software or documentation provided by Harris Stratex may originate from third party licensors ("Licensed Third Party Programs"), and may require that the terms of their respective licenses be accepted prior to use. Such license terms, if any, are either attached or will appear as a part of the delivered or downloaded Software and must be accepted by Customer prior to installation of the Licensed Third Party Programs. Third party licensors shall be deemed to be third party beneficiaries with respect to any Licensed Third Party Programs. The terms of the third party licenses shall be controlling with respect to any Licensed Third Party Programs provided hereunder. The term "Licensed Programs," as used herein, refers to both the Licensed Harris Stratex Programs and the Licensed Third Party Programs. Customer's license for the Licensed Programs shall be subject to the following additional rules:

(1) Unless expressly stated, the Licensed Harris Stratex Programs are limited to object code programs and related documentation only and do not apply to any of the corresponding source code or program listings. Title in and to the Licensed Harris Stratex Programs is and shall continue to be solely and exclusively vested in Harris Stratex and the third party licensors, as the case may be.

(2) Customer acknowledges that Harris Stratex and the third party licensors have and shall continue to have valuable intellectual property rights in the, the Licensed Harris Stratex Programs and the Licensed Third Party Programs, as the case may be, and that such intellectual property rights are and shall continue to be the sole and exclusive property of Harris Stratex or the third party licensors, as the case may be.

(3) Customer shall keep the Licensed Harris Stratex Programs confidential by affording access to such only to those of Customer's employees, agents, or consultants having a need to know and shall require such individuals agree in writing to the obligations contained herein. In addition, Customer shall employ reasonable measures to prevent any unauthorized use, copying, publishing, reproduction, or disclosure of the Licensed Harris Stratex Programs and shall not treat such with lesser care than Customer's own confidential information. Customer shall not make copies of the Licensed Harris Stratex Programs without the prior written permission of Harris Stratex.

(4) Customer may copy machine-readable Licensed Harris Stratex Programs to the extent reasonably necessary for normal use with the Equipment. All originals and copies of the Licensed Harris Stratex Programs shall be and shall remain the property of Harris Stratex.

(5) Customer shall label each copy of the Licensed Harris Stratex Programs with the copyright, trademark, and proprietary notices, in the same form, which appear on the Licensed Harris Stratex Programs delivered to Customer by Harris Stratex. All copies of the and Licensed Harris Stratex Programs, when not in use, shall be destroyed or maintained in a secure place within Customer's business premises under access and use restrictions compatible with this Section 13. Customer shall be deemed to own only the magnetic or other physical media in which the Licensed Harris Stratex Programs (original and all copies) are recorded.

(6) The Licensed Harris Stratex Programs and Licensed Third Party Programs may be used solely in connection with the Equipment or Software system purchased by Customer and on which the Licensed Programs were originally installed. Customer may not rent, lease, assign, transfer, network, display, or distribute the Licensed Harris Stratex Programs except as specifically provided herein or in the third party license terms, nor may Customer reverse engineer, disassemble, decompile, modify, alter, translate, or adapt the Licensed Programs or create any derivative thereof, except as permitted by the option selections contained within the Licensed Harris Stratex Programs or as permitted in the third party license terms. The licenses granted herein to the Licensed Harris Stratex Programs exclude the use of any functionality resident in the software application, unless specifically identified in the Order. Customer agrees to not use any functionality which is not specifically identified in the Order without first adding such to the license with Harris Stratex's written consent.

(7) Customer agrees that a violation of the license terms would cause irreparable injury to Harris Stratex or the third party licensor, and that Harris Stratex or the third party licensor, as a third party beneficiary, shall be entitled, in addition to any other rights and remedies it may have, at law or in equity, to an injunction enjoining and restraining Customer from doing or continuing to do any such act and any other violations or threatened violations of the licenses granted herein. Furthermore, Customer agrees that if Harris Stratex or the third party licensor should waive any breach of any provision of the license terms it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of the license terms.

(8) The terms and conditions of the licenses granted herein shall apply to any and all upgrades, enhancements, updates and modified versions of the Licensed Harris Stratex Programs which may be provided by Harris Stratex to Customer in connection with the Agreement. Harris Stratex may provide such versions of the Licensed Programs via electronic download or on media, such as CDs or diskettes. If required by Harris Stratex, Customer agrees to substitute such version for the previous version being used with the Equipment and to delete and destroy any previous version and all copies thereof.

(9) The term of the licenses to the Licensed Harris Stratex Programs shall be coextensive with Customer's ownership of the Equipment, subject to early termination by Harris Stratex upon notice to Customer in the event of a material breach of the terms of these Conditions or of the Agreement. The term of the license to any Licensed Third Party Programs may be different. Upon any such termination, Customer shall immediately discontinue use of the Licensed Harris Stratex Programs, shall comply with the terms of the license applicable to the Licensed Third Party Programs, and in the case of any termination other than a [permitted] transfer to a subsequent owner, promptly shall return to Harris Stratex all copies of the Licensed Harris Stratex Programs. In the event of non-payment by Customer, Harris Stratex reserves the right to deactivate or remove the Software.

b. Software Warranty. Harris Stratex warrants all Licensed Software as follows:

(1) Harris Stratex warrants all physical media ("software media") for the Licensed Programs, including custom software and traffic translators to be free of defects in material or workmanship for a period of ninety (90) days from the date of completed installation, or if Customer should assume responsibility for installation of the Software, for a period of ninety (90) days from the date of shipment of the Licensed Programs by Harris Stratex (the "Software Warranty Period"). This limited warranty extends only to Customer as the original licensee. Customer's exclusive remedy and the entire liability of Harris Stratex and the third party licensors under this limited warranty will be, at Harris Harris Stratex's option, repair or replacement of the software media.

(2) Harris Stratex warrants that during the Software Warranty Period the Licensed Harris Stratex Programs shall operate substantially in compliance with Harris Harris Stratex's specifications for the Licensed Harris Stratex Programs. Harris Stratex does not warrant that such Programs are error free or that Customer will be able to operate such Programs without problems or interruptions. The entire liability of Harris Stratex under this limited warranty is to provide, free of charge, a corrected copy of any portion of the Licensed Harris Stratex Programs which is found by Harris Stratex inspection not to be in substantial compliance with its specifications. If Harris Stratex is unable to provide a corrected copy of the Licensed Harris Stratex Programs within a reasonable time, Harris Stratex will replace the same with a functionally similar program or refund to Customer the amounts Customer paid Harris Stratex to purchase or license such Licensed Harris Stratex Programs. Corrections to the Licensed Harris Stratex Programs beyond the Software Warranty Period will only be made by Harris Stratex pursuant to a software maintenance agreement (attached to the Agreement, if any). The software maintenance agreement does not cover hardware replacement, hardware upgrades or emergency service for hardware; an expanded software maintenance agreement is required for such.

(3) During the Software Warranty Period, Harris Stratex will bear the material cost and shipment of corrected or replacement Software at no charge to Customer. In the rare event Customer requires a Harris Stratex customer support engineer to visit the site, related reasonable pre-approved on-site time and travel expenses will be billed at the prevailing daily rates, unless otherwise agreed to in writing prior to the visit. A ONE-DAY MINIMUM CHARGE APPLIES TO ALL ON-SITE VISITS.

(4) This warranty does not apply to any software media or Licensed Harris Stratex Program that (A) has been altered or modified, except by Harris Stratex; (B) has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Harris Stratex; (C) has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident; or (D) is used in ultra-hazardous activities.

LIMITATIONS ON EQUIPMENT AND SOFTWARE WARRANTIES

a. For purposes of Harris Stratex's warranties for Equipment and Software media, a defect is defined as a failure of any unit or component manufactured or supplied by Harris Stratex that is not attributable to unauthorized modification or alteration, lack of care in operation, maintenance or handling. The

written notice of claim of defect must include a description of the defect with detailed information, which will enable Harris Stratex to identify the defect and determine its probable cause. Components that Customer claims to be defective must be available to Harris Stratex for inspection and test. No defective Equipment or parts are to be returned without first receiving written authorization and instructions from Harris Stratex. Customs clearance for all repaired and replacement parts under the warranty or otherwise will be Customer's sole responsibility.

b. CLAIMS UNDER ANY OF THE FOREGOING WARRANTIES ARE WAIVED UNLESS MADE WITHIN THE EQUIPMENT WARRANTY PERIOD, IN THE CASE OF EQUIPMENT, OR WITHIN THE SOFTWARE WARRANTY PERIOD, IN THE CASE OF SOFTWARE MEDIA, OR THE SOFTWARE WARRANTY PERIOD, IN THE CASE OF LICENSED HARRIS STRATEX PROGRAMS, OR THE SERVICES WARRANTY PERIOD IN THE CASE OF SERVICES. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTIES OR TO ASSUME ANY OTHER LIABILITIES ON HARRIS STRATEX'S BEHALF, UNLESS MADE OR ASSUMED IN WRITING BY A DULY AUTHORIZED REPRESENTATIVE OF HARRIS STRATEX.

c. HARRIS STRATEX'S LIABILITY FOR BREACH OF ANY OR ALL WARRANTIES FOR EQUIPMENT, SOFTWARE MEDIA, SERVICES AND LICENSED HARRIS STRATEX PROGRAMS IS EXPRESSLY LIMITED TO THE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE OF DEFECTIVE EQUIPMENT, SOFTWARE MEDIA OR LICENSED HARRIS STRATEX PROGRAMS, LESS A REASONABLE CHARGE FOR USE AND IN NO EVENT WILL HARRIS STRATEX OR ITS LICENSORS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES BY REASON OF ANY BREACH OF WARRANTY OR DEFECT IN MATERIALS OR WORKMANSHIP. HARRIS STRATEX WILL NOT BE REQUIRED TO REPAIR, REPLACE, OR REFUND THE PURCHASE PRICE OF EQUIPMENT OR LICENSED HARRIS STRATEX PROGRAMS WHICH HAVE BEEN SUBJECTED TO NEGLECT, ACCIDENT, OR IMPROPER USE, OR WHICH HAVE BEEN ALTERED OTHER THAN BY AUTHORIZED HARRIS STRATEX PERSONNEL.

d. THIS LIMITED WARRANTY CONSTITUTES HARRIS STRATEX'S SOLE AND EXCLUSIVE LIABILITY HEREUNDER AND CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR DEFECTIVE OR NON-CONFORMING EQUIPMENT, SERVICES, AND SOFTWARE MEDIA OR LICENSED HARRIS STRATEX PROGRAMS. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES (EXCEPT AS TO TITLE), WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, ANY IMPLIED WARRANTY OR CONDITION OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OR CONDITION ARISING OUT OF COURSE OF DEALING, COURSE OF PERFORMANCE, OR CUSTOM OR USAGE OF TRADE. CUSTOMER AGREES THAT NO CIRCUMSTANCE CAUSING CUSTOMER EXCLUSIVE AND LIMITED REMEDIES TO FAIL IN THEIR ESSENTIAL PURPOSE SHALL INCREASE OR EXTEND ANY HARRIS STRATEX WARRANTY. THE TOTAL LIABILITY OF HARRIS STRATEX AND ITS LICENSORS UNDER THIS WARRANTY SHALL IN ANY EVENT BE SUBJECT TO THE LIMITATIONS IN THIS SECTION.

894 Faulstich Court
San Jose, CA 95112-1361
408-573-2700 Phone
800-999-9946 Toll Free
408-573-2708 Fax

August 16, 2006

CXR Larus Corporation Warranty & Service Policy

Warranty: CXR Larus products are warranted to be free from defects in material and workmanship, given proper installation and required maintenance. CXR Larus' obligations under this warranty are limited to correction and replacement, at a CXR Larus production facility, of any defective items received, transportation prepaid, for a period of twelve (12) months from the date of original shipment on timing, transmission and network access products or fifteen (15) months for Stocking Distributors and for a period of twenty-four (24) months on the Halcyon line of test equipment. Warranty and remedies on products not manufactured by CXR Larus are in accordance with the warranty of the respective manufacturer. CXR LARUS MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED.

Return Procedures: If a product is to be returned, notify CXR Larus Customer Service by phone, letter or e-mail. Provide information regarding product part number, your company name and address, the name and phone number of person to contact for further information, a Purchase Order for reference and to ensure proper receipt of the returned unit to your facility, and a brief, but specific, description of the equipment malfunction. A Return Material Authorization (RMA) number will be assigned. This number should be referenced on the box when the defective unit is returned. The unit is then forwarded, prepaid, to CXR Larus for repair.

In-Warranty Repair: Returned units that have not been mis-handled, abused, modified, damaged or rendered defective by the customer or natural phenomenon will be repaired at no charge. If it is determined that the failure of the unit is due to one of the above listed conditions, the unit will be repaired and invoiced at the normal out-of-warranty repair charge.

Out-of-Warranty Repair: Repairs made to units that are determined to be out of warranty will be repaired and returned at a charge of forty percent (40%) of the current unit list price or one hundred fifty dollars ($150.00), whichever is greater.

No Problem Found: Units returned to CXR Larus for repair and determined to be operational or designated No Trouble Found (NTF) after undergoing production test and verification, will be charged fifteen percent (15%) of the current list price or one hundred fifty dollars ($150.00), whichever is greater.

Beyond Economical Repair: Out of Warranty units returned to CXR Larus and determined to be Beyond Economical Repair will be charged one hundred fifty dollars ($150.00). The customer will be notified and the unit returned to the customer, if requested.

Repair Warranty: The standard warranty period for repairs made to a unit is ninety (90) days from shipment date from CXR Larus to the customer. This warranty period specifically only covers the repaired portion of the unit and does not cover anything else on the unit.

Normal turn-around time to repair a unit is 15 business days from the date that the product is received at the CXR Larus facility.

Larry Taillie
President
CXR Larus Corporation

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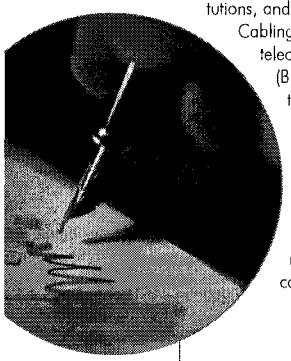
RADIO FREQUENCY SYSTEMS
Limited Warranty

The Seller warrants that, at the time of shipment, the products manufactured by the Seller are free from defects in material and workmanship. The Seller's obligation under this warranty is limited to replacement or repair of such products to the original purchaser within one year from the date of shipment, with the exception of base station antennas and *CELLFLEX®* cables and connectors only. The limited warranty for base station antennas is five years from date of manufacture. The limited warranty for *CELLFLEX®* cables and connectors is three years from date of manufacture. No material is accepted for replacement or repair without written authority of the Seller. Replacement or repair is made only after an examination at the Seller's plant shows defective material or workmanship at the time of manufacture. All shipping charges on the returned material must be prepaid by the Buyer.

The Seller is in no event liable for consequential damages, installation costs or other costs of any nature as a result of the use of the products manufactured by the Seller, whether used in accordance with instructions or not. The Seller is not liable for replacement of any products damaged by lightning or other acts of God.

This warranty is in lieu of all others, either expressed or implied. No representative is authorized to assume for the Seller any other liability in connection with the Seller's products.

Types of Installation



The Extended Warranty is applicable for commercial buildings, educational institutions, medical institutions, and other approved Structured Cabling Systems. A professional telecommunications designer (BICSI RCDD) must design the Structured Cabling System (SCS). The SCS must be installed in accordance with the current ANSI/TIA/EIA telecommunications standards and comply with national and local electrical and building codes.

THIS DOCUMENT IS NOT INTENDED TO CONFER ANY WARRANTY. ONLY UPON COMPLETION ISSUANCE OF OFFICIAL COMMSCOPE WARRANTY CERTIFICATE BY COMMSCOPE WILL RESULT IN THE ISSUANCE OF YOUR WARRANTY. THE N.E.W.S. WARRANTY IS SUBJECT TO THE TERMS & CONDITIONS AS ESTABLISHED OR AMENDED BY COMMSCOPE.

Standard Warranty Claims

"Standard Warranty" refers to the Warranty statement, which is part of the CommScope Terms and Conditions of Sale for CommScope products. The Terms and Conditions are printed on the back of all "CommScope Order Acknowledgement" documents, which are routinely forwarded to the purchasing customer. The Standard Warranty applies to all products sold by CommScope and warrants that all products are free from defects in material and workmanship for a period of one year.

Should the end user/customer encounter a problem with a CommScope cable product covered by the Standard Warranty, they should:

1. Contact the local CommScope Representative or call 800-982-1708 or 828-459-5000 and ask for the Customer Quality Coordinator.
   a. The CommScope Representative will initiate a "Customer Complaint".
2. Provide the following information:
   a. CommScope product (Catalog Number) in question;
   b. Alleged problem; and
   c. All printed information from the CommScope label on the package.

All information must be included to expedite the process.

The CommScope Customer Quality Coordinator will:

a. Process the Customer Complaint;
b. Keep the customer informed of CommScope findings relating to the alleged defective product; and
c. Inform CommScope Management of findings and assist with resolution.

CommScope
3642 U.S. Hwy 70 East
Claremont, NC 28610
866-260-8758 • 828-459-5000
Fax 828-459-5099
www.commscope.com

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01/05

Product Extended Warranty Solution *Guide*

CommScope

Program Overview

CommScope's 20 year Product Extended Warranty Solution ensures the end user that CommScope cables are free from material and workmanship defects and will meet or exceed the requirements of the applicable commercial building telecommunications cabling standards. These requirements are included in ANSI/TIA/EIA 568B series (as adopted through February 2003) for Balanced Twisted Pair, Fiber Optic Cables and the Society of Cable Telecommunications Engineers (SCTE) specifications for 75-Ohm Coaxial Cables. This warranty applies to CommScope cables installed in a Structured Cabling System (SCS), which are properly tested and registered with CommScope.

A Structured Cabling System will be considered for warranty if:

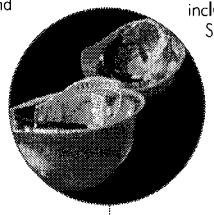
a) Designed by a professional telecommunications designer (i.e. BICSI RCDD) or other recognized professional telecommunications equivalent certification;
b) Installed in strict compliance with the appropriate commercial building telecommunications cabling standards (ANSI/TIA/EIA-568-B series, ANSI/TIA/EIA-569-A, ANSI/TIA/EIA-606-A, ANSI/TIA/EIA-607-A, and ANSI/TIA/EIA-758) to include addendums as adopted through February 26, 2003, and National and local building and electrical codes;
c) Contains only CommScope cable products; and
d) Contains a single manufacturer's connectivity components that are verified by an approved laboratory (like UL or ETL) to the appropriate Category (up to Cat 6) at the time of installation.

Registration Procedures

CommScope must receive the completed warranty registration form and certified test reports within 30 days of installation [and successful testing].

The necessary forms for Warranty Registration may be obtained using one of the following methods:

1. Go to www.commscope.com under Network Products and click on Extended Warranty. Then click on the Registration Form button and save the form to a local disk drive and note where the form is saved locally.
2. Contact the CommScope Warranty Manager toll free at 1-866-260-8758 or via email at warrantymanager@commscope.com.
3. Contact the local CommScope Representative.



Complete the required Warranty Registration form(s). The completed form(s) may then be sent as an Email attachment(s) to warrantymanager@commscope.com along with the proper testing documents as defined below.

Appropriate testing information must include an acceptable test report for each cable submitted for warranty. All Twisted Pair cables must be tested using an approved "Certification Test Set." Fiber optic cables may be tested using an approved "Certification Test Set" or utilizing a power meter and light source. Test reports should be submitted in electronic format. If fiber testing is performed manually using a standard power meter and light source, the necessary form for submitting the test results is available from CommScope. Coaxial cable is normally tested manually; the necessary form for submitting the results is available from CommScope. To obtain the necessary forms for test reports for manual testing of fiber and coax, go to www.commscope.com under Network Products and click on Extended Warranty. Then click on the "Fiber Link" or "Coax" buttons and save the form to a local disk drive and note where the form is saved locally. The test reports may be:

1) Certified test reports from Fluke, Microtest, LanTech or other approved test equipment (Contact CommScope Warranty Manager for approval of test equipment) in electronic format.
2) Handwritten test reports for fiber optic cables and coaxial cables are acceptable. Required forms are available at www.commscope.com.

Moves, Adds, & Changes

Moves, Adds, and Changes commonly known as MACs are on integral part of the normal Structured Cabling System. MACs are considered as relocations or additions to the fixed horizontal or backbone cabling within the existing Structured Cabling System. MACs do not include cross-connections, interconnections, or work area (equipment) cords/cables. MACs may be included as a part of the CommScope Product Extended Warranty System when properly installed and registered. To include a MAC in the Product Extended Warranty System, the following requirements must be met:

1. The MAC must be accomplished using the same termination manufacturer as the original Registered Structured Cabling System.
2. The MAC must be accomplished using only CommScope Cabling Products.
3. The MAC must be tested to the proper Standards.
4. The MAC must be registered with the CommScope Warranty Manager within 30 days of completion.

Once a MAC is deemed necessary, the installation contractor or properly trained personnel should be contacted to perform the installation. Once the installation is completed, the MAC should be tested using an approved certification test set.

To Register a MAC, choose any of the following options:

1. Go to www.commscope.com under Network Products and click on Extended Warranty. Click on the "MAC Registration Form," save the form to a local disk drive, and note where the form is saved locally. Fill out the form and email the completed form with the certified test results for the MAC to the CommScope Warranty Manager.
2. Contact the CommScope Warranty Manager toll free at 1-866-260-8758 or via email at warrantymanager@commscope.com.
3. Contact the local CommScope Representative.

If the MAC involved fiber and a manual power meter and light source was used for testing, submit the test results using the "Fiber Link" form. To obtain the "Fiber Link" form, choose one of the following:

1. Go to www.commscope.com under Network Products and click on Extended Warranty. Click on the "Fiber Link" form and save the form to a local disk drive note where the form is saved locally.
2. Contact the CommScope Warranty Manager toll free at 1-866-260-8758 or via email at warrantymanager@commscope.com.
3. Contact the local CommScope Representative.

The Warranty Manager will verify the test results and if the MAC is eligible to be included in the warranty, forward a letter stating the registered MAC is part of the CommScope Product Extended Warranty Solution for the Registered System.

Extended Warranty Claims

"Extended Warranty" refers to the warranty issued by CommScope under the Product Extended Warranty Solution. This warranty applies to CommScope products after they are installed, tested, registered and verified by the CommScope Warranty Manager and a Certificate of Warranty is issued.

Should the end user encounter a problem with Warranted CommScope Cable, they may notify CommScope using one of the following:

1. Go to www.commscope.com under Network Products and click on Extended Warranty. Then click on "Submit a Warranty Claim." Fill in the proper information and click Submit.
2. Contact the CommScope Warranty Manager toll free at 1-866-260-8758 or via email at warrantymanager@commscope.com.
3. Contact the local CommScope Representative.

The Warranty Claim form must be submitted within a commercially reasonable time not to exceed sixty (60) days of first detection of the alleged problem. CommScope reserves the right to refuse any claim brought after the expiration of the warranty term.

Once the completed Claim form is received, the CommScope Warranty Manager will:

1. Verify the warranty is in effect;
2. Verify cable in question is covered under the listed warranty;
3. Verify the problem with the end user/customer;
4. Audit the installation, if deemed necessary, to determine if the CommScope product is defective and then determine the cause of the defect;
5. If the CommScope product is deemed defective, determine the appropriate corrective action (if any) to correct the problem.

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Issue 7
February 2003

Warranty/Software Handbook

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1150334 Rev B

The term ADC as used herein refers to ADC and all its business units.

PRODUCT AND SERVICE WARRANTY

ADC warrants from the date of shipment to customer that product bearing the ADC name will substantially conform to ADC specifications in effect as of the date of shipment and will be free from substantial defect in material and workmanship under normal use, given proper installation and maintenance, for the period stated in ADC's Warranty Handbook in effect on the date of shipment. ADC further warrants to customer that all services performed by ADC for customer will be provided in a workmanlike manner for the period stated in ADC's Warranty Handbook in effect on date of completion.

Customer must promptly notify ADC of any claimed defect in the product or services. ADC or its agent may inspect the product or workmanship on customer's premises. Product returned to ADC under warranty must be shipped prepaid by customer.

PRODUCT AND SERVICE WARRANTY LIMITATIONS

ADC's entire liability and customer's exclusive remedy whether in contract, tort or otherwise, for any claim related to or arising out of breach of the warranty covering product or services shall be correction of defects by repair, replacement, re-performance of service or credit, at ADC's discretion. Refurbished material may be used to repair or replace the product. ADC has no liability with respect to claims relating to or arising from the use of equipment not bearing the ADC name.

ADC does not warrant that the operation of the product will be uninterrupted or error-free. Similarly, ADC does not warrant that the functions of the product will meet customer's requirements or that the product will operate in combination with other products selected by customer for its use.

Furthermore, ADC assumes no liability with respect to defects caused by modification, repair, installation, operation or maintenance except as described in ADC's documentation or negligent or other improper use of the product.

All equipment not bearing the ADC name is supplied "AS IS" and customer will look solely to the warranties and remedies, if any, provided by the equipment manufacturer or vendor thereof. In addition, ADC assumes no liability for equipment or services furnished by customer, nor does this warranty cover any copy of or update to any user manual for the product.

No agent, distributor, or representative is authorized to make any warranties on behalf of ADC or to assume for ADC any other liability in connection with any Product or Services.

WITH RESPECT TO ALL PURCHASES OF PRODUCT AND SERVICES FROM ADC BY CUSTOMER, THE ABOVE WARRANTY REPLACES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL OTHER OBLIGATIONS OF ADC, INCLUDING ANY WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ALL OTHER WARRANTIES ARE DISCLAIMED AND EXCLUDED BY ADC.

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COAXIAL PRODUCTS

Copper Connectivity

Warranty Classification Code

A 1 Year J 90 Days

Products	Warranty Classification
Baluns	A
Connectors	
RF Coaxial (e.g. BNC, TNC, 1.6/5.6 etc)	A
Crimp	A
Specialty Conversion	A
Twisted Pair	A
Adapters	
BNC – Midsize & Standard Size	A
Coax Plugs	A
Guard, Midsize or Standard Size	A
Looping, Dual, Midsize; or Coaxial	A
Single, Midsize	A
Standard, Single or Dual	A
Terminating, Single or Midsize	A
DS3 Patch Cords	
Conversion	A
Midsize	A
Specialty Conversion	A
Standard Size	A
Tool, Crimp	J
Die, Crimp	J
Strip Tool	J
Strip Gauge	J
Tool, Impact	J
Ultra Patch Bracket, Rack Mount	J
Video Patch Cord Holder, Pro Patch	J

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Alcatel-Lucent Equipment Warranty

Alcatel-Lucent's warranty obligation extends to the repair or replacement of defective products. The warranty period applicable to equipment is 12 months from the date of shipment, except if Alcatel-Lucent performs installation Services in which case the warranty period is 12 months from the date of completion of installation. Software warranties apply to media only and vary from 3 months to 12 months dependent on the particular product. OEM and third party products are covered by the manufacturer's warranty, which Alcatel-Lucent will pass through to the end user customer.

For the MDR-8000 microwave radio, Alcatel-Lucent's Wireless Transmission Division (WTD) warrants the radio hardware for a period of 2 years.

All equipment provided is new and includes manufacturer's original equipment warranties.

C&D TECHNOLOGIES, INC.

POWERCOM DIVISION

ONE-YEAR LIMITED WARRANTY AND PRO RATA ADJUSTMENT COVERING POWERBOARD PANELS AND POWER DISTRIBUTION ASSEMBLIES USED IN THE U.S.A. AND CANADA

WARRANTY: Powerboard panels and power distribution assemblies manufactured by or for C&D TECHNOLOGIES, INC. are warranted against defective materials and workmanship for a period of one year from date of shipment. As the sole and exclusive remedy in discharge of Warranty, C&D TECHNOLOGIES, INC. agrees if powerboard panels and power distribution assemblies failed to perform their designed function when tested under C&D TECHNOLOGIES, INC. specifications for new material prior to one year from date of shipment, C&D TECHNOLOGIES, INC., at its option, will either (a) repair parts of powerboard panels and power distribution assemblies at its expense for both parts and labor, FOB C&D TECHNOLOGIES, INC. destination, freight prepaid and allowed or (b) furnish suitable replacement powerboard panels and power distribution assemblies having rated capacity equal or greater than the published rated capacity of the powerboard panels and power distribution assemblies returned in exchange for the unserviceable powerboard panels and power distribution assemblies. Replacement powerboard panels and power distribution assemblies shall complete only the remaining unused portion of the original warranty.

WARRANTY ADJUSTMENT AGREEMENT: The warranty covers parts replacement only. C&D TECHNOLOGIES, INC. agrees if aforementioned parts/assemblies fail, C&D TECHNOLOGIES, INC. shall replace alleged failed parts/assemblies at a cost equal to current user replacement parts price, multiplied by the months of expired warranted life, divided by 12. Freight, labor and other costs are to be borne by user. Replacement parts and assemblies are warranted for 90 days. User must give C&D TECHNOLOGIES, INC. prompt notice of alleged defects and, if requested by C&D TECHNOLOGIES, INC., return alleged defective goods to C&D TECHNOLOGIES, INC., FOB destination, freight prepaid and allowed, for evaluation.

This LIMITED WARRANTY is subject to the following terms and conditions:

1. User shall install and maintain each powerboard panel and power distribution assembly in accordance with C&D TECHNOLOGIES, INC. Installation and Operating Instructions for powerboard panels and power distribution assemblies and perform all repairs using only C&D TECHNOLOGIES, INC. parts or parts specified by C&D TECHNOLOGIES, INC. in its product literature.
2. User and C&D TECHNOLOGIES, INC. shall mutually agree each powerboard panel and power distribution assembly is of the proper size, design and capacity for the duty it is to perform and will not be required to perform in excess of this agreed value during the period of this warranty.
3. Powerboard panels and power distribution assemblies shall not be subjected to abuse, misuse or physical damage.
4. C&D TECHNOLOGIES, INC. representatives shall be given access to any goods subject to this Limited Warranty for purposes of inspection at reasonable hours and intervals.
5. C&D TECHNOLOGIES, INC., unless otherwise agreed, shall not be obligated to do any installation work in connection with the furnishing of new powerboard panels and power distribution assemblies or repair parts, and undertakes no responsibility for work done or expense incurred.
6. User shall not continue use of powerboard panels and power distribution assemblies after discovery of defect.
7. This warranty is void if the powerboard panels and power distribution assemblies become unserviceable due to fire, wreckage, neglect, abuse, acts of God, or if the powerboard panels and power distribution assemblies have been serviced by other than C&D TECHNOLOGIES, INC. or its authorized representative.

To the extent possible, C&D TECHNOLOGIES, INC. will make available to User manufacturers' warranties for products, parts and accessories manufactured by parties other than C&D TECHNOLOGIES, INC. and supplied by C&D TECHNOLOGIES, INC. without recourse to C&D TECHNOLOGIES, INC. The foregoing is the sole and exclusive remedy in discharge of this warranty. C&D TECHNOLOGIES, INC. liability for damages, whether based upon alleged negligence, breach of warranty, breach of contract or otherwise, shall in no event exceed the purchase price of the specific item with respect to which such damages are claimed.

LIMITATIONS: This Limited Warranty Agreement extends only to original purchaser (User) and is non-transferable. Except as authorized in writing, this warranty does not cover any equipment that has been altered by any party other than C&D TECHNOLOGIES, INC. or which is not manufactured by C&D TECHNOLOGIES, INC. User shall indemnify and save C&D TECHNOLOGIES, INC. harmless from any claims and liabilities arising out of the use, maintenance, transportation, or installation of any equipment warranted hereunder. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. C&D TECHNOLOGIES, INC. MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL C&D TECHNOLOGIES, INC. BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES.

WARNING

At all times, safety must be considered an important factor in the installation, servicing and operation of the product, and skilled, qualified technical assistance always should be utilized.

LONG DURATION SERIES

C&D Technologies, Inc., DYNASTY Division
TEL Series VRLA Batteries
10 Year Limited Warranty and Pro-Rata Adjustment for Batteries Used in the United States and Canada

This warranty does not apply to batteries used in UPS, Cycle, or other non-telecommunications applications.
Except as set forth in Table 2, all batteries are warranted to be free from defects in material and workmanship from the date of shipment according to the terms of the limited warranty and the following warranty schedule.

Table 1

TEL Series Batteries (AGM VRLA Designed)	4 Years Full Replacement, plus 6 Years Adjusted (Pro-Rata)

In the event of an alleged defect, user should promptly notify C&D Technologies, Inc., Dynasty Division. Should C&D Technologies, Inc. determine the batteries to be defective it may, at its sole discretion, repair or replace the material found to be defective — F.O.B. its factory without charge except for freight.
A battery will not be considered defective unless it fails to deliver 80% or less of its rated capacity during stated warranty period.
All claims are subject to the following conditions and limitations.

Conditions and Limitations

1) Warranty is limited to temperature controlled environments not to exceed 77°F (25°C). Appropriate documentation verifying that a controlled environment was maintained will be required for all claims.
2) Warranty does not apply to batteries used in UPS, Cycle, or other non-telecommunications applications.
3) Warranty only applies to batteries used in the United States and Canada.
4) Each battery must be the proper size, design and capacity for its application in order for the warranty to apply.
5) Each battery must be charged, discharged, stored and serviced in accordance with C&D Technologies, Inc. printed instructions (Form No. 41-6965) in order for the warranty to apply.
6) This warranty is void if battery is subject to misuse, abuse or physical damage or if battery becomes unserviceable due to fire, wreckage, freezing, or any act of God.
7) This warranty is void if battery additions other than C&D Technologies, Inc., Dynasty Division TEL products are used in the same string.

C&D Technologies, Inc
DYNASTY Division
900 East Keefe Avenue
Milwaukee, WI 53212
Phone: 800-396-2789
Fax: 414-961-6506

Form 41-7258 (Rev. 05/99) Printed in the U.S.A

DYNASTY DIVISION C&D TECHNOLOGIES, INC. TELE COM

8) User agrees that manufacturer's representative shall have access to equipment furnished hereunder for purposes of inspection at reasonable hours and intervals in order for the warranty to apply.
9) All defective and replacement batteries, if returned, become the property of C&D Technologies, Inc.

Should C&D Technologies, Inc. determine that the battery is defective within the pro-rata portion of the warranty period, C&D Technologies, Inc. agrees to repair or replace the defective battery F.O.B. factory based on the following pro-rata formula to be applied against the purchase of a replacement product of equal or greater ampere hour capacity.

Pro-Rata Calculation for Credit

((Net Original purchase Price) x (Number of Months of Un-expired Warranty)) /Number of Months of Total Warranty = Applied Credit
CREDIT TO BE APPLIED AGAINST THE CURRENT TEL LIST PRICE SHEET DISCOUNTED 50%.

Non-Environmentally Controlled Applications

In the event the user cannot demonstrate a temperature controlled environment (per condition and limitation number 1) the following warranty schedule, Table 2, shall apply instead of Table 1. This schedule, however, shall only apply if conditions and limitations 2 through 6 are satisfied. All other terms and conditions of the limited warranty shall also apply.
The life of a battery is affected by operating temperature, and the warranty is adjusted using the temperature zone breakdown in accordance with Bellcore Technical Reference TR-NWT-000909, Issue 1, December 1991 as follows:

Table 2

Bellcore Quadrant TR-NWT-000909	Latitude Range	Full * Replacement
Zone 1	Above 40 deg.	2 Years
Zone 2	36-40 deg.	2 Years
Zone 3	30-35 deg.	2 Years
Zone 4	Below 30 deg.	1 Year

* There is no pro-rata adjustment warranty [illegible] additional years

Claims

1) Contact original point of purchase for instructions on applicable warranty claim procedures
2) Upon satisfactory proof of claim as determined by C&D Technologies, Inc., we shall repair or replace, at our option, any defective battery based upon the purchase price less the pro-rata adjustment as outlined above exclusive of freight and labor.
3) Not accept any product for return, credit or exchange unless expressly authorized by C&D Technologies, Inc. in writing and returned prepaid to our plant.

C&D TECHNOLOGIES, INC. SHALL NOT BE LIABLE FOR, AND USER SHALL INDEMNIFY AND SAVE C&D TECHNOLOGIES, INC. HARMLESS FROM ANY CLAIMS AND LIABILITIES ARISING OUT OF THE USE, MAINTENANCE, TRANSPORTATION , OR INSTALLATION OF ANY EQUIPMENT WARRANTED HEREUNDER. THE FORGOING LIMITED WARRANTY IS IN LIEU OF ALL WARRANTIES EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE . THE SOLE LIABILITY OF C&D TECHNOLOGIES IS SET FORTH UNDER THE CLAIMS PARAGRAPH ABOVE. C&D TECHNOLOGIES, INC. SHALL NOT HAVE ANY LIABILITY FOR ANY SPECIAL, INCIDENTAL INDIRECT OR CONSEQUENTIAL DAMAGES. THIS LIMITED WARRANTY APPLIES ONLY TO THE ORIGINAL PURCHASER (USER) OF THE EQUIPMENT IS NON-TRANSFERABLE, AND GOVERNED BY AND CONSTRUED UNDER PENNSYLVANIA STATE LAWS.

Exhibit A – Miccosukee Consent

EXHIBIT A

Miccosukee Tribe of Indians
of Florida

Business Council Members
Billy Cypress, Chairman

Jasper Nelson, Ass't. Chairman
Max Billie, Treasurer

Andrew Bert Sr., Secretary
William M. Osceola, Lawmaker

June 26, 2008

VIA FACSIMILE (305) 596-8972 & U.S. MAIL
Cindy Bernal
Radio Systems Manager
Miami-Dade County Enterprise Technology Services
10300 Sunset Drive, Suite 358
Miami, Florida 33173

Re: Installation of Radio Communications Microwave Tower

Dear Ms. Bernal:

This is in response to your request for a Letter of Consent from the Miccosukee Tribe of Indians of Florida, regarding the above-referenced matter.

In that regard, please be advised that the Miccosukee Business Council hereby duly authorizes and gives consent to Miami-Dade County to erect a new self-supporting tower, construct a new shelter, install a new generator and other equipment or components, and perform all necessary associated tasks, including but not limited to, the de-installation of the existing tower and equipment, to support the implementation of a new microwave system, to be located adjacent to and in a northwardly direction of the existing tower site located on Tribal land at MM70, US41.

The replacement of the microwave system shall be made consistent with the agreement between Miami-Dade County and T-Mobile USA, Inc., which includes this Letter of Consent as an exhibit thereto. Consistent with that agreement, the Miccosukee Tribe of Indians agrees to secure all necessary tower construction permits with the United States Corps of Engineers.

The parties to the aforementioned agreement (Miami-Dade County and T-Mobile USA, Inc.) recognize that the Miccosukee Tribe of Indians of Florida is a federally-recognized Indian tribe exercising sovereign powers of self-governance within tribal lands. This Letter of Consent shall not be construed to limit or diminish that sovereignty nor to abridge or waive any sovereign rights, privileges or immunities of the Miccosukee Tribe of Indians of Florida, its agencies, divisions, corporations, commercial enterprises or their respective officers and representatives.

The undersigned is duly authorized by the Miccosukee Business Council to sign this Letter of Consent.

Billy Cypress,
Chairman

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P.O. Box 440021, Tamiami Station, Miami, Florida 33144, (305) 223-8380, fax (305) 223-1011
Constitution Approved by the Secretary of the Interior, January 11, 1962