Collocation Checklist

Date: _____

By: _____ ILEC: _____

Building Name: _____

Floor: _____ Room #: _____

Address: _____ City: _____

CLLI: _____

Network Operations Control Center Phone #: _____

NOC Center Escalation List: _____

NOC Center Phone: _____

NOC Center Pager: _____

NOC Center Cell Phone Number: _____

Attendees

Name*	**Company/Job Title**	**Phone #**
1		
2		
3		
4		

1. Acquire floor plans for the room.
2. Define all aspects: battery plant, BDFB, Colo equipment, electronics, Generator, FDP's.
3. Record model #, manufacturer serial #, and calibration date if available
4. Use the note section of this document for all accounted assets.
5. Included with this report should be rack line-ups, fiber distribution bays, types of connectors, SC/FC/Biconic, power distribution # breakers/sizes.
6. Number of fibers assigned, distance from FDP to equipment space, existing jumpers, or number of jumpers available.
7. Rack elevations hand sketched on Form 1 in checklist, include if possible breaker feed wire size, breaker sizes, and assignment on the BDPB.
8. Fiber building entrance links from street-as built drawings.
9. Meet me room or riser access for terminals.
10. Number of inner-ducts remaining-fiber count into space-type.
11. Conduit fiber testing per DTI specifications.

Collocation Checklist

Building Entrance

Entrance Door: Key Card Door Code Combo _____

Were building access keys/cards given out? Y N

If yes, how many and to whom? _____

If not, why not, and when will they be ready? _____

_____

]

Site Maps: Y N

Manned/Unmanned: Y N Hours: _____ Tel # _____

Other Entrance doors
to get to the common area: Key Card Combo

Room light switch
available: Y N Location _____

Restrooms: Y N Location _____

Elevators: Y N Location _____

Loading Dock: Y N Location _____

Emergency Power: Y N Location _____

Size of Generator: _____kw. External Generator Plug: Y N

Remarks:

_____

_____

_____

_____

_____

_____

_____

_____

_____

Collocation Checklist

Common Area

Entrance Door: Key Card Door Code Combo _____

Access to light switch: Y N

Emergency Lighting: Y N

Enough room to move equipment in & out: Y N

Fire Suppression: Y N Type:_____

Hours of Work: From _____ To: _____

Equipment Installation: From _____ To: _____

Type of floor: _____Raised ____Concrete ____Wood

Remarks:

Cage Size 75' 100' 200' 300' 400' Other _____

Cage
AC Power
110v 20 amps Y N Other _____

CLLI
Clli Stenciled Y N

Cable holes cut: Number _____ Size _____

Door lock: Combo Keys

DC Power
# of Feeds _____ AMPS (drain)

Cable long enough to
reach breaker panel Y N

Size of power cable _____ Color of cables _____

BDFB Location: RR _____ Breaker/BDFB Assignments _____

Collocation Checklist

Distance from cage to BDFB: _____feet.

Cable Rack distance: _____feet.

Cable run to DSX bay: _____feet.

Rack Elevation for DSX Bay: Height_____

DSX Bays
How many: DS0_____ DS1 _____ DS3 _____

DSX BAY CLLI: _____ CAGE CLLI: _____

Number of access providers: _____

	Total # of Circuits	Cable Number	Count	Distance DSX bay to DSX line up in cable ft	Stenciled with cable count & far end location	
Fiber					Y	N
DS0					Y	N
DS1					Y	N
DS3					Y	N

Master Ground Bar

Approximate Location: _____

Size of cable: _____ Type of "H" tap: _____

Visible: Y N

within 100' of cage: Y N

Bonded to cage: Y N

1_____2_____3_____ Tier Cable Racking (fiber communication, power)

Is it extended into the cage? Y N

Type of ladder construction: _____ Post _____Hanger _____other

Remarks:

_____

_____

_____

_____

Collocation Checklist

Keys: Number: _____ Handed off to: _____

Access Cards: Y N

Emergency Access Contact: _____

Building Problems Contact: _____

Collocation Checklist

FIBER CABLE SPLICING, TESTING AND ACCEPTANCE STANDARDS

1. The Party testing fibers hereunder ("Testing Party") will perform all tests on fibers it provides hereunder as laid out in Paragraphs 2, 3 and 4. The tests should follow the requirements and meet the criteria as laid out in Paragraphs 5 and 6. The Testing Party will use the test equipment and follow the testing standards as laid out in Paragraph 7. The Testing Party will confirm operations according to the standards as laid out in Paragraph 8.

2. The Testing Party will take and record power level readings on all fibers in both directions. The Testing Party will then begin bi-directional OTDR testing of all fibers. The Testing Party will produce for its use and provide copies to DTI of the OTDR traces on diskette according to the standards in Paragraph 8.

3. During the initial construction, it is only possible to measure the fiber from one direction. Because of this splices will be qualified by the Testing Party during initial construction by being measured with an OTDR from only one direction.

a. OTDR measurements of the splice losses will be made and recorded. These measurements MUST BE MADE AFTER THE SPLICE HANDHOLE OR MANHOLE IS CLOSED in order to check for macro-bending problems.

b. The Testing Party shall send one notice at the beginning of testing, covering all sites, showing a schedule for the pigtail Tests, to the extent not previously performed.

c. As splice points are completed, OTDR measurements of the splice Losses will be made and recorded by the Testing Party. These measurements must be made after the splice handhole or manhole is closed in order to check for macro-bending problems. The Testing Party will provide copies of these measurements on disk to DTI upon completion of measurements.

4. Continuity tests will be done to verify that no fibers have been "froged" or crossed in any of the splice points. Loss measurements will be recorded using a laser source and a power meter. OTDR traces will be taken and splice loss measurements will be recorded. The Testing Party will also store OTDR traces on diskette and provide copies to DTI.

a. Once the fiber color and buffer tube color have been recorded, a Laser light source will be attached and a power meter reading will be taken at the far end. Then power level readings should be taken in the opposite direction. The power measurements should be made at 1310 nm and 1550 nm. Copies of all measurement documentation will be provided to DTI.

NOTE: 1310 TEST DATA WILL ONLY BE PROVIDED FOR SMF-28 FIBERS.

b. The OTDR traces will be taken at 1550 nm. Loss measurements for each splice should be measured and recorded in both directions. These loss values should then be averaged. The traces for all fibers should be recorded on diskettes and provided to the Non-Testing Party. Copies of all measurement documentation will be provided to the Non-Testing Party.

5. The loss value of the pigtail connector and its associated splice with matching mode field diameters will not exceed .5db at 1550 nm. The loss value of the pigtail connector and its associated splice with mismatched mode field diameters should not exceed .8 dB. For values greater than this, the splice will be broken and re-spliced until an acceptable loss value is achieved. If the loss value is not less than 0.5 dB, the splice will be marked as Out-of Spec (OOS) and will be initialed by the Testing Party representative on the data sheet. The Testing Party will then provide all documentation to DTI. The Party providing the fibers hereunder will remedy the situation per contractual arrangements. The objective for each splice is a loss of 0.0 dB. Since this may not always be achievable, when measured in one direction with an OTDR, a loss of less than 0.15 dB will be acceptable. If after 3 attempts, the Testing Party was not able to produce a loss value of less than 0.15, then a maximum splice loss of 0.3 dB will be acceptable, and the splice will be marked as Out-of-Spec (OOS) and initialed by the Testing Party on the data sheet. It should be noted that if final acceptance of a splice is made based on bi-directional OTDR data that proves to be unacceptable, DTI will notify the Testing Party who will remedy the situation per contractual agreement. Copies of all data will be provided to the Non-Testing Party at completion of testing.

6. The test requirements for the bi-directional testing are as follows (for all testing, it is critical that all test connections are clean during all testing procedures):

a. The continuity test should prove that there is a one-to-one correspondence of all fibers. Any “frogs” or fibers that cross in route will be remedied by the Party providing the fibers hereunder upon notification, per contractual agreement.

b. Bi-directional OTDR data will be the tool used to make acceptance of the fibers. The average loss of each splice should not exceed 0.15 dB. Any splice points that exceed this value will be marked Out-of-Spec (OOS) and initialed by the Testing Party representative on the data sheet. The Testing Party will then provide copies of all data to DTI, and the Party providing the fibers hereunder will remedy the situation per contractual agreement.

7. The OTDR’s that are acceptable for testing are the Laser Precision GNNettest, TD1000A, TD2000, TD3000, CMA 4000, or compatible. These must have a floppy disk drive for storing the trace files. Again, it should be noted that it is vital that during all tests (OTDR, power meter, etc.) that all connectors are clean. This can

dramatically affect results if this is not resolved. The following settings should be used during the various tests:

For all OTDR's the following index of refraction settings should be used:

Index of Refraction	
Fiber type	**1550 nm**
AT&T TruWave	1.4700
AT&T Depress Clading	1.4670
Corning SMF-28	1.4684
Sumitomo	1.4670
Corning SMF-LS	1.4700
LEAF	1.4690

OTDR Parameters	**TD3000**	**TD4000**
	1550 nm	**1550 nm**
Pigtail	8 km Range	8 km Range
	50 ns Pulse	50 ns Pulse
	1 m Resolution	1.0 Resolution
	10 seconds	30 seconds
	NOTE: INSURE VERTICAL AND HORTIZONTAL OFFSETS ARE SET AT ZERO (0)	**NOTE: INSURE VERTICAL AND HORTIZONTAL OFFSETS ARE SET AT ZERO (0)**
Bi-directional	**1550 nm**	**1550 nm**
	64 km Range	64 km Range
	500 ns Pulse	1001 ns Pulse
	4 m Resolution	4 m Resolution
	Medium averaging	Time: 1.5 min.
	NOTE: FOR SPANS LONGER THAN 64 KM, SET AT 128 KM SETTING	**NOTE: FOR SPANS LONGER THAN 64 KM, SET AT 128 KM SETTING**
	2000 ns	**2500 ns**
	4 m resolution	8 m resolution
	Time: 1.5 min	Time: 1.5 min

For spans which are longer than 64 km between regens, a TD 3000 will be required set at 128 km range setting. Bi-directional data will only be required at 1550 nm.

Collocation Checklist

8. Light Source and Power Meter Test

A bi-directional End to End test will be performed on each fiber in a span at 1550 nm with a Light Source and Power Meter. The purpose of this test is to determine actual span loss and to prove there is a one-to-one correspondence of all fibers. It is the Constructing Party's responsibility to insure proper continuity of all fibers at the fiber level, not just the pigtail level.
Any "frogs" or fibers that cross in the route will be remedied by the Constructing Party. The following span loss calculation will be used:

(A*L) + (0.1*N) + C = Acceptable Span Loss

A = Attenuation per KM at 1550 nm
L = Optical length of cable measured in kilometers (from OTDR Trace)
N = Number of splices in a span
C = Connector loss.

The connector loss will not exceed .5dB. The section test will have (2) pigtail connectors/splices under test, so 1.0dB will be allowed for this loss.

NOTE: PROVIDER CAN PROVIDE AN EXCEL SPREADSHEET FORMATTED ON DISK FOR ENTRY OF DATA

9. OTDR traces taken for bi-directional testing, and the OTDR traces of the pigtail launch splice must be recorded on floppy diskette. OTDR traces taken for bi-directional testing, and the OTDR traces of the pigtail splice must be recorded on floppy diskette and provided to the other party. To name the traces, each party will provide alpha abbreviations for the sites. The 8-character file name plus 3-character file extension name should follow this example:

First four letters = source point
Letters 5, 6 7 = destination point
8th letter = wavelength
Extension = fiber number

Examples:
Springfield to Lebanon at 1550 nm, fiber 96 = sgfdlbn5.096
Springfield to Monett pigtail trace on fiber 1 = sgfdmntp.001

The OTDR traces will be taken at 1550 nm.

NOTE: ALL HEADER INFORMATION ON OTDR TRACE MUST BE COMPLETED.