SBC-002-316-006
Line Sharing Deployment M&P for NP&E

Abstract

Important Changes in this document, Presented in this document are the Methods and Procedures to implement ILEC & CLEC Line Sharing Equipment, cabling and layouts within SBC-13STATE Central Offices. This document also compares the differences with Line Splitting.

Audience: The primary audience for this document is **SBC-13STATE** personnel in the following disciplines, Switch Capacity Planner/Engineer, Transport Equipment Engineer (TEE), Facility Equipment Engineer (FEE), Digital Transport Engineer (DTE), Space Planner, Frame Planner, Long Range Technical Planners, Network Operation (LFO), NSS organizations and **SBC-13STATE** Authorized Vendors. This document is to be used internally and have a limited distribution subject to the header/footer information.

Author:
Steve Weinert – 214 858-1355, E-Mail: **sw0872@txmail.sbc.com.**
Additional contributors can be found in the Contact Section of this document.

Table of Contents

1. Reasons for Reissue

Issue 10, Section 2, Paragraph A: Rename convention for **SBC-13STATE** Regions.

Issue 10, Section 2, Paragraph B: Line Sharing compared to Line Splitting.

Issue 10, Section 2, Paragraph B: Update info on the partnering of two CLECs and the ability of one CLEC to provide both the voice and the data.

Issue 10, Section 3, Paragraph C: New Office Deployment updated in its entirety.

Issue 10, Section 3, Paragraph C.1: Added to show Deployment of ILEC owned POTS-SPLITTERS in New C.O.s.

Issue 10, Section 3, Paragraph C.2: Added to show Augment of ILEC owned POTS-SPLITTERS in existing C.O.s.

Issue 10, Section 3, Paragraph C.3: New Section covering the plan to obtain cards and shelves for new and augmented sites.

Issue 10, Section 3, Paragraph D: Deleted with other Paragraphs in Section 3 relettered.

Issue 10, Section 3, Paragraph E: Kit arrangement not applicable. PICS provides new cards, Distributor provides shelves only on a going-forward basis.

Issue 10, Section 3, Paragraph F: PICS information updated.

Issue 10, Section 3, Paragraph I: Removal of shelves is revised in this section.

Issue 10, Section 4, Paragraph B2: Shows the latest **SBC-13STATE** drawing numbers.

Issue 10, Section 4, Paragraph B3: Shows the current **SBC-13STATE** Building Blocks nomenclature.

Issue 10, Section 4, Paragraph E: Clarification of existing Line Sharing Standard by cable and block counts.

Issue 10, Section 4, Paragraph E: Comparison with Line Splitting block counts and assignments.

Issue 10, Section 4, Paragraph E: Generic Aisle/bay/shelf can now be used, but must be unique for each location.

Issue 10, Section 4, Paragraph E: 50-pair grandfathered provisioning in CY 2000 only is deleted.

Issue 10, Section 4, Paragraph E: The CLEC provided POTS-SPLITTER will need to follow the sequential count, without skips as assigned on the ILEC provided connecting block.

Issue 10, Section 5, Paragraphs D1, D2 & D3: New showing more detail on Frame Terminations.

Issue 10, Section 5, Paragraph D4: New Paragraph addressing requests for new Dual CFA assignments.

Issue 10, Section 5, Paragraph E: New, covers the placement of terminations for CLECs and POTS-SPLITTERS.

Issue 10, Section 5, Paragraph E: Existing Para E renumbered to 5F.

Issue 10, Section 8: Paragraph B: Operational Support System (OSS) updated to reflect generic assignments.

Issue 10, Section 8, Paragraph B: Retermination of CLEC end of cable within the Collocation Area does not require re-stenciling unless at the request of the CLEC.

Issue 10, Section 8, Paragraph D: Generic Bay/Shelf nomenclature covered.

Issue 10, Section 9, New Section on "Cost Accounting for X to C Transfers.

Issue 10, Sections 9-11: Renumbered Sections to 10-12.

Issue 10, Section 10: Reference Section updated in its entirety.

Issue 10, Section 11: Contact Section updated in its entirety.

Issue 10, Section 12: Copyright Page updated in its entirety.

2. Introduction

2A. General Overview and Network Serving Arrangement

This document has been updated to reflect Network Planning & Engineering (Common Systems Standards) for the following Incumbent Local Exchange Carriers, henceforth referred to as **SBC-13STATE and as the Incumbent Local Exchange Carrier (ILEC)[1]**:

SBC-Southern New England Telephone (Connecticut)
SBC-West (California, Nevada)
SBC-Southwest (Missouri, Texas, Arkansas, Oklahoma, Kansas)
SBC-Midwest (Illinois, Wisconsin, Indiana, Ohio, Michigan)

FCC Report and Order 99-355 instructed the Incumbent Local Exchange Carriers that the local loop to the end user customer will become unbundled in a Line Sharing Arrangement. The frequency spectrum of the cable pair will be divided into two distinct uses. The order does not specify specific frequency ranges and a particular division point has not been specified. Ultimately when standards are ascertained, this would permit one company to provide the narrow band (dial tone) and another could provide the broadband technology (DSL) over the same pair. This arrangement is only available when **SBC-13STATE** is providing the voice/narrow band service. If this is not the case, the Competitive Local Exchange Carrier (CLEC) is required to purchase a separate Unbundled Network Element (UNE). The FCC recognizes that SDSL can not be line shared and requires a separate UNE. Other xDSL services are candidates and the burden of proof of any claims of incompatibility or interference with POTS services rests with the ILEC.

For the purposes of the first deployments of Line Sharing between **SBC-13STATE** and the CLEC Community [recognized as Data Local Exchange Carriers (DLEC's)], the splitter architecture has been determined through a joint effort of the ILEC's and DLEC's and will follow one of two scenarios:

- **SBC-13STATE** will provide POTS-SPLITTERS on a line-at-a-time basis for Line Sharing for CLECs who provide the applicable semi-annual forecasts.[2] **SBC-13STATE** POTS-SPLITTERS will be placed in the common Collocation Area and will be accessible and testable by both CLEC and ILEC.

- The CLEC/DLEC may provide POTS-SPLITTERS in their own Collocation Area (either Caged or Cageless) in either a Virtual or Physical manner within the Collocation Common Area. These units may be either Integrated or Non-Integrated with the Data Cabling

---

[1] By contrast, the Certified Local Exchange Carriers or Alternate Local Exchange Carriers or the CLEC Coalition will be commonly referred to as CLEC.

[2] It is **SBC-13STATE**'s position that it has no obligation to provision ILEC-owned splitters for purposes of line sharing under the FCC's Line Sharing Order. However, certain **SBC-13STATE** Commissions have ordered **SBC-13STATE** to make available ILEC-owned splitters for purposes of line sharing. Nevertheless, **SBC-13STATE** has voluntarily agreed to provision ILEC-owned splitters for purposes of line sharing throughout its 13 states. **SBC-13STATE**'s obligation to provision ILEC-owned splitters is governed by the interconnection agreements that are in effect with CLECs throughout SBC's 13-state region or the applicable state tariffs (where available), as appropriate."

dedicated directly to that CLEC by shelf. The Bay will be accessible and testable by both CLEC and ILEC per agreement with **SBC-13STATE** and the CLEC Coalition[4].

Line Sharing is being offered within **SBC-13STATE** under the Product Name – High Frequency Portion of the Loop" (HFPL).

The following services are incompatible with Line Sharing:
SDSL/HDSL.
Repeatered T1.
ISDN
56 Kb/s DDS

The following network architectures are not technically feasible to unbundle the upper frequency spectrum using a ***non-integrated*** POTS-SPLITTER:

Fiber to the Curb (FTTC).   Litespan/UMC1000 Subscriber Line Carrier
Fiber to the Home (FTTH).   SLC96, SLC Series 5, DISC*S
Copper loops containing load coils.   Digital Added Main Lines (DAMLs)

2B. Line Sharing compared to Line Splitting

Specifically, Line Sharing provides unbundled access to the High Frequency Portion of the Loop (HPFL) only to carriers seeking to provide xDSL based service that meets one of the Commission's criteria regarding the presumption of acceptability for deployment on the same loop as the incumbent ILEC's analog service. Whereas Line Sharing is only available between **SBC-13STATE**'s incumbent LEC and a data CLEC, Line Splitting arrangements allow a single CLEC to provide both the voice (instead of the **SBC-13STATE**'s incumbent LEC) and data service, or one CLEC to provide the voice and a partnering CLEC provides the data. Currently, ADSL is the most widely deployed line sharing technology meeting the presumption of acceptability for deployment on the same loop as the ILEC's analog voice service. As additional xDSL based technologies that can co-exist on the same loop as the analog service are demonstrated to meet the presumption of acceptability, incumbents may permit requesting carriers to deploy those technologies as well, so long as those technologies do not significantly degrade the voice service.

Line Splitting takes the following scenario:

- Phase I: The CLEC will always provide the POTS-SPLITTER functionality within their Collocation Space and interconnect the voice and data (DSL) services from either itself or any combination of other CLECs, or from the ILEC as a UNE service. This is called an Integrated Arrangement.

- Phase II: The ILEC may be required by some state PUCs to provide the POTS-SPLITTER within the network as a part of the local loop with the CLECs providing both the voice and the data interconnections.[3]

---

[4] On Caged Collocation Sites, the access to the bay will be performed through permission with the CLEC. The only variance to this point will be the instance when the CLEC has a combined DSLAM/POTS-SPLITTER device.

Line Splitting is not Line Sharing. Line Splitting is provided as an Unbundled Network Element (UNE), not as Collocation.

UNE provisioning (for Line Splitting) is provided in only one Operational Support System (OSS) per region, and as such, cannot be requested in a dual mode. **Therefore, requests from a CLEC for Dual CFA for Line Splitting are not applicable or appropriate. (Requests for Dual CFA are only appropriate for Line Sharing. upon request.)**

3. <u>SBC-13STATE</u> POTS-SPLITTER Deployment Plan

3A. Funding

The EF&I activities will be administered by the Equipment Engineer. This product will be considered as a Capital Base Line Activity. The respective Engineer will work closely with their **<u>SBC-13STATE</u>** Approved Vendor (or equivalent) to complete the task on a scheduled basis and within budget allocated within the DARE Project.

3B. Initial Office Deployment Strategy

The Initial deployment was completed in the first half of CY 2000. Previous first deployment plans are no longer valid. Use only Section 3C. for New and Augment Deployments for **<u>SBC-13STATE</u>** POTS-SPLITTER installations.

3C. New and Augment Deployment Configurations

3C.1 New Central Office Deployments for ILEC POTS-SPLITTERS

New Central Office requests without ILEC provisioned POTS-SPLITTERS

Requests for the deployment of ILEC owned POTS-SPLITTERS in new offices will be processed utilizing the existing collocation process. New equipment intervals will be used in all areas. Obtain the Forecast of xDSL services from **<u>SBC-13STATE</u>** forecasting organization if the office forecast is not already listed in the Web Base Capacity Management Tool forecast section. Install only one Shelf of 96 POTS-SPLITTERS when either the forecast or the requests for future service fall below 50 lines for Line Sharing or Line Splitting. If the yearly forecast exceeds 50

---

[3] **<u>SBC-13STATE</u>** is not in favor of this arrangement due to inordinate administrative and mechanization cost issues. The process will use TIRKS instead of SWITCH for Line Sharing. Mixing Line Sharing with Line Splitting within the same MEOE/MECP blocks will be <u>prohibited</u> due to the resulting assignment errors. The keynote: Line Splitting Phase II would use the same ILEC POTS-SPLITTER, but on different shelves and would dictate completely different operational, administrative and rules handling (policies) for each.

lines or the ILEC has received a valid CLEC provided forecast, evaluate the one-year demand versus actuals and check on the capacity using the below listed chart:

ILEC provided POTS-SPLITTER Forecasts

Yes   **No**

1. **If SBC forecasted ILEC POTS-SPLITTER use up to 50, review the WBCM for the Yellow Threshold, place one shelf minimum.**

2   **If SBC forecasted ILEC POTS-SPLITTER is beyond 50, place one shelf only unless the rate of use will exhaust the capacity within 45 days. Then place the expected amount of the forecast.**

3. **If existing POTS-SPLITTER capacity exists, use until within 45 days of exhaust or 65% utilization of WBCM tool.**

4. **If a Binding Forecast is provided for anticipated service at a Central Office within one-year, place shelves to support the forecasted capacity.**

5. **If a Non-Binding Forecast is provided for anticipated service at a Central office, install the first three months of forecast. Check at the 6-month window; if utilization is on track for the full year forecast, equip the balance, if not wait until the WBCM tool reflects 65% utilization before reinforcing the POTS-SPLITTERS.**

Get the WBCM tool updated for that CO

Update WBCM tool with new growth augment RFS date and new model configuration.

3C.2 Augments of Central Office Deployments for ILEC provided POTS-SPLITTERS

Using the Line Sharing Web Base Capacity Management Tool which uses data from SWITCH, establish a 65% threshold for the start of the job ordering; the job must be complete by the time the 95% threshold is reached. The first threshold notification to the engineer will be when capacity reaches 65% utilization. The early warning should allow the engineer to schedule the required augment job to meet the criteria listed previously.

The job complete is expected to be complete within 45 days of exhaust of existing capacity. Completion includes a verification that the new splitter equipment has been properly inventoried in the SWITCH database and is available for Service Order activity. The install plan should last at least one year of forecasted capacity.

Augmentation of existing Central Offices

Yes   **No**

1. **If SBC forecasted ILEC POTS-SPLITTER use up to 50, review the WBCM for the Yellow Threshold, place one shelf minimum.**

2. **If SBC forecasted ILEC POTS-SPLITTER is beyond 50, place the shelves to match the rate of use up until 45 days of the exhaust capacity. Then place the expected amount of the forecast.**

3. **If existing POTS-SPLITTER capacity exists, use until within 45 days of exhaust or 65% utilization of WBCM tool.**

4. **If a __Binding__ Forecast is provided for anticipated service at a Central Office within one-year, place shelves to support the forecasted capacity.**

5. **If a __Non-Binding__ Forecast is provided for anticipated service at a Central office, install the first three months of forecast. Check at the 6-month window; if utilization is on track for the full year forecast, equip the balance, if not wait until the WBCM tool reflects 65% utilization before reinforcing the POTS-SPLITTERS.**

Get the WCBM tool updated for that CO

Update WBCM tool with new growth augment RFS date and new model configuration.

3C.3 Procurement Plan

The most important page in this M&P

**Very Critical Information!
Don't spend new SBC Capital
unless absolutely necessary!**

Important: As of this document issuance, the average utilization of ILEC provided POTS-SPLITTERS throughout the **SBC-13STATE** regions is less than 14%. Even the highest utilization region (SBC-West) has only a 36% utilization based upon a Non-Binding One-Year Forecast from the CLEC Coalition in April 2000.

The Equipment Engineers and Frame Planners need to insure that additional POTS-SPLITTERS are only provisioned at such time that the Central Office in question is at or near exhaust, yet insure that orders are not missed. This means that they must trigger jobs before the 45-day exhaust window. Personnel monitoring the utilization must use the Web Based Capacity Management Tool (WBCM) which is covered in SBC-002-316-005, *POTS-SPLITTER Management Tool M&P*, Issue 2, dated February 2003.

The manufacturers of POTS-SPLITTERS and cable cannot meet the supply and demand within the short intervals specified in MOU/ICA agreements. As a result, it is paramount that Equipment Engineers scrutinize the WBCM tool and remove unused POTS-SPLITTERS and their shelves from low utilization offices as the absolute **first choice** for provisioning. Order shelves and POTS-SPLITTER cards only when your region has exhausted the supply of low utilization offices. **Remember: If you blindly just order new shelves and cards from PICS or direct from the manufacturer, you will be faced with a backorder situation and miss your MOU/ICA dates. Ordering new cards and shelves should be your last option.**

The removal, movement, storage and subsequent installation will be at additional cost and must explicitly follow the PICS/DCPR processes to perform "X" to "C" transfers covered in depth in Section 9, with hot links to educational reference sites.

On the removal site, simply have the POTS-SPLITTER shelf removed with its cards and properly tag each 50-pin connector that was attached to the back of the shelves with the shelf number, the count, the type of connection (Line, Cable Pair or Data) and dress properly in accordance with established technical publications. Show the SWITCH and WBCM system assignments as "Restricted from Use".

One of two things will occur at that site at a later date:

1. Replacement shelves will be reinstalled at the removal site at a later date when the forecast or service order load dictates there need.
2. The removal location will have the cables, connecting blocks and bay fully removed at a later date due (in the next calendar year from the original removal date).

3D. POTS-SPLITTER Kit Configuration

Effective immediately, the method of purchasing the POTS-SPLITTER Kit is not applicable. The POTS-SPLITTER Quad cards will be purchased through PICS. Fully equipped chassis will not be available. The manufacturer will continue to provide all shelves and other components through their authorized distributor, Vetco Inc., and support the following items:

SBC-13STATE
Line Sharing Information

Corning Part Number	Description/CLEI	PID	Unit Price	Total
(Corning Cable Systems)				

COSKOPT20000-KT LED STREAKER CARD FOR POTS-SPLITTER 400103883 $54.35 $54.35
SHELF, INCL 2-AA BATTERY & MINI-TEST PROBE TESTER (1 Kit)

139-N0100R012B Connecting Block 100 pr. 8x25 SWW, Non-Conn, Beige 300137205 $18.18 $54.54
SNET PID 300137205 **(3 Blocks)**

303-1213 MINI-PROBE JUMPER for COSP00S180000 400103875 $5.39 $16.17
(3 Probes)

COSF00S2R007 POTS-SPLITTER SHELF W/O CARDS   400103800 $496.32

Corning Cable Systems will operate through the authorized distributor as follows;
Vetco Sales Incorporated, 3312 Seaton Court**,** Flower Mound, TX 75028
Office, Direct Line, 972-724-4507, Customer Service, 800-485-7198, Fax, 507-334-8926
The Primary Point of Contact is Troy Murphy.

3E. PICS/DCPR CLEI/HECI/CPR Codes

Product Type	CLEI	CPR
ADSL QUAD CARD COSPSA31004-041	VAL217EGAA	099999

Maintenance Spares will be obtained through PICS in each SBC Region on a going-forward basis.

3F. Tie Bar Configurations

The rear tie bar may be purchased locally and augmented by your Installation Vendor. A 2-inch version may be used to substitute the standard 3-inch version
Listed below is a source for the 3-inch rear tie bar:
Nor-Cal Metal Fabricators
Contact: Heather (510) 287-5121, E-Mail: heather@nc-mf.com
Part Name: "Screws and Bracket"
Part Number: PBSD-ED-6001 DET61 (this is a 2-inch tie bar)
SBC PID: 000237362
Cost: $6.57

3G. CLEC POTS-SPLITTER Deployments

SBC-13STATE will support CLEC requests for their own POTS-SPLITTER deployments according to collocation terms and conditions. Each request will be processed through a Collocation Application from the CLEC and installed "upon demand". **Be aware that the cable terminations, OSS assignments and labeling requirements will follow the Integrated Line Sharing deployment plan covered in this document and they will be different from the Line Splitting arrangements further covered in SBC-002-316-012, *Line Splitting Deployment M&P*, Issue 6, dated March 2003.**

3H. ILEC provided POTS-SPLITTER Removals

SBC-13STATE (ILEC) provided POTS-SPLITTERS have been installed based upon CLEC forecasts for line sharing in the SBC Central Offices. POTS-SPLITTERS will not be removed from Central Offices unless one of the following conditions are present:

1. The WBCM tool indicates a need for POTS-SPLITTERS in another office and/or a CLEC forecast is provided that will exceed the pre-provisioned or new level at that other site. Insure that the remaining capacity left in the losing office will support the office demand for at least one-year. This is now the first choice for provisioning new or augmented sites over the purchase of new cards and shelves.

2. The Central Office has been identified as a Pending Office Closure (within two years) and the bay that the POTS-SPLITTER must be removed to preclude the ability to assign space to an ILEC or CLEC.

3. All CLECs have vacated and removed all their equipment within the specific Central Office. This has been verified through NSS.

4. Service Architecture, Infrastructure & Network Components

4A. <u>SBC-13STATE</u> provided POTS-SPLITTER

Mounting
Holes for
Flush-mount
installation

   The POTS-SPLITTER has been **Approved for Use** on Product Approval Notice 20001017, dated March 2000. The Field Reporting Code for Central Office units would be 357C and Remote Terminal Units on 257C. The products will be loaded into PICS-DCPR via a HECI and CPR code. The Siecor Corning Cable Systems COSF00S2R007 shelf has mounting ears that are adjustable for 5-inch, 2-inch or flush front set out. When 5-inch front welded guard boxes are used on 7-foot racks, we will want to use the 5-inch set out. The Chassis has a GRD lug for external grounding. Due to the fact that the equipment does not require AC or DC power, the ground functionality will be provisioned via the existing shelf mounting to the Bay. The external GRD wiring is not necessary in this case. With the backplane mounting, only one of the two screws may be used to provide a secure mounting, As a result, we will need to attach a Tie Wrap to the Chassis Backplane Cable Tie Clamp placed on each Amp termination. Following the documentation set forth in the ADSL Methods and Procedure for the Central Office, the cabling between the POTS-SPLITTER and the MDF for Data and Line (Combined ADSL & Dial Tone), Voice (Dial Tone) and ADSL (Data Only) will be provided over Single Ended Shielded 25-pair AMP 90° Slope Cable (such as the TSI/TeKontrols CA4XXXX101TSD1 Single Ended, 24 AWG shielded 25 pair) for SBC provided POTS-SPLITTERS. **DO NOT USE 180-degree Slope Cable Connectors.** The CA4XXXX101T002 single Ended, 24 AWG non-shielded 25 pair cable can be

used for the MEOE (OE) cable placement to the POTS-SPLITTER. (This will reduce the need for shielded cable by one third.) When the POTS-SPLITTER is provided by the CLEC, Lucent 1249-025C (26 AWG, 25-pair <u>shielded</u>) cable (or equivalent) can be provided for all cabling including "Voice", "DATA" and "DATA over Voice" transmissions. At the local discretion, the 1249-025A (26 AWG, 25-pair <u>non-shielded</u>) cable (or equivalent) can be provided for the voice (OE/MEOE) sections of cable. PBAS or Lucent 609C 25-pair 22-gauge Tinned Shielded w/Drain wire Cable may be substituted for the above listed 25-pair cable.

100 or 50-pair cable may be used in lieu of 25-pair cabling providing that binder groups are properly marked and grounding of same is performed. Insure that all grounding is performed on the head end (POTS-SPLITTER equipment) side of the cable only. Ground terminations of both sides of the cable will results in the creation of an antenna.

> 100-pair cable 24-gauge Tinned Shielded w/ Drain wire Cable may be used in lieu of 25-pair shielded cable under the following requirements (1) This is used in conjunction with this document, (2) cabling must be single ended (connectorized only), (3) The appropriate cable type for the left or right cable route on each side of the bay must be used, (4) use only factory installed connectors, (5) properly dress the cable on the rear tie bar, (6) all four connectors must be provisioned to terminate on the other end to the same connector block and (7) each connector must be staggered in length to permit the correct cable length across the Splitter panel.

> **Important Note:** For all <u>**SBC-13STATE**</u> provided POTS-SPLITTERS, cabling between the Splitter bay and the frame will use single ended connectorized cable with the connector on the Splitter end and the wire wrap on the frame end. For all CLEC provided POTS-SPLITTERS, cabling between the CLEC handoff and the frame will use double ended raw cable without connectors on either end. The frame side will be wire wrapped.

Each CLEC desiring to place and own a POTS-SPLITTER in a <u>new bay</u> may request a 10 square foot area for the placement of one standard bay and request for the cable handoffs in a virtual or physical cageless arrangement covered in SBC-002-316-002, *Collocation Provisioning Guidelines* and the *Interconnector's Collocation Services Handbook*. A POTS-SPLITTER shelf may be placed in an existing CLEC bay providing that the equipment meets the standard bay and equipment dimensions described in the above listed documents. The cable handoff to the CLEC will follow standard CLEC Guidelines and will reflect tagged cable in 100 pair groups (or equivalent) of cable without connections in the CLEC designated space.

All cabling, x-connects, terminal blocks and mounting locations shall follow already established procedures. See SBC-002-316-009, *ADSL for the Central Office Methods & Procedures*, for further details. This document addresses in detail various frame configurations found in Central Offices throughout SBC's territory. Procedures should be put in place dictating a joint acceptance test be performed by the DLEC and ILEC, once the equipment installation is complete. The DLEC and ILEC should both be required to sign off on the equipment installation as acceptable and should take place prior to any working circuit being routed through the splitter.

4B. POTS-Splitter Layout

4B.1 General

The panels will be terminated in a standard 7-foot high unequal flange or network bay located in an area that has joint access to the CLEC/DLEC and the ILEC (i.e., common collocation area). It is recommended the bay be placed in a reasonable and non-discriminatory location in close proximity to the CLEC/DLEC equipment. The POTS-SPLITTERS will be placed with a 5-inch offset and will be flush with the front kickplate of the bay. Each POTS-SPLITTER shelf will have a 3-inch tie bar (a 2-inch can substitute) affixed to it for cable terminations. Each bay will have 2 ½-inch spacers on each side of the bay for a total of 5-inches between POTS-SPLITTER bays. The Shelf count will begin with Shelf One on the bottom of the bay. The shelves will be numbered sequentially up to the top of the bay with number 10. All numerical labeling will use the Floor, Bay, Shelf and Port nomenclature.

4B.2 Drawings

Reference the following standard drawing document for specific layouts for **SBC-13STATE**:

SBC-13STATE SBC-E-01891-W (Wiring Drawings)

SBC-13STATE SBC-E-01891-E (Equipment Drawings)

This drawings replace and the following documents:

SBC-Midwest: AM-E-01578-10

SBC-Midwest: AM-W-01578-11

SBC-Southwest, SBC-West: PBSD-ID-1891

SBC-Southwest, SBC-West: PBSD-ED-1891

SBC-SNET: SNE J95215-71 (Equipment)

SBC-SNET: SNE T95215-13 (Wiring)

SBC-SNET: SNE J99121-71 (Physical Collocation-Equipment)

SBC-SNET: SNE T99121-31 (Physical Collocation-Wiring)

4B.3 Building Blocks

Building Blocks have been developed for E&I Installation activities as follows:

    U09   – one bay and one POTS-SPLITTER shelf installation
    U10   – POTS-SPLITTER Shelf only installation
    U10X – POTS-SPLITTER Supplemental to an existing Job

Building Blocks have not been established for decommission or disconnect activities.

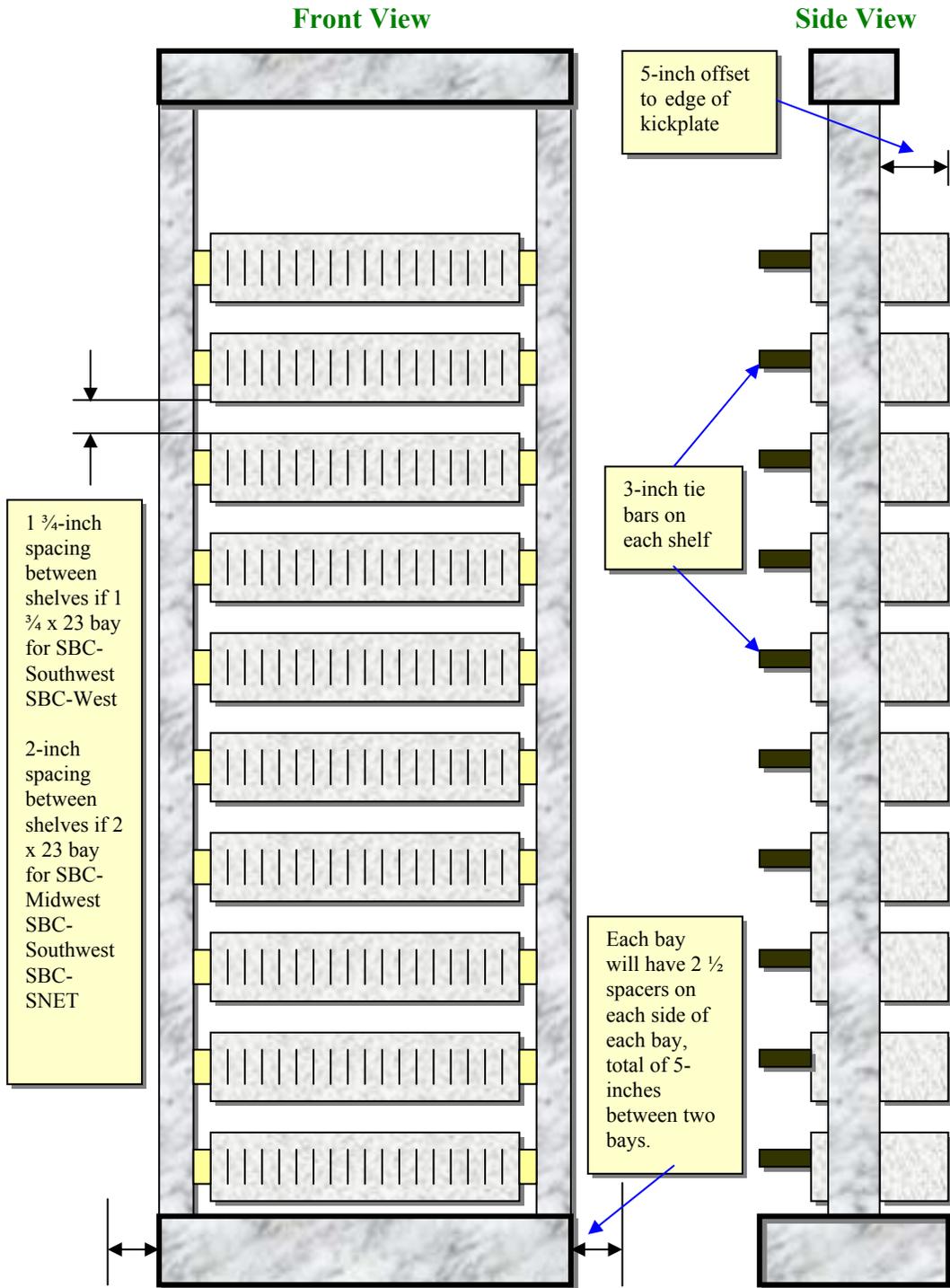**4C. Cable Testing for CLEC or ILEC installed cable**

All cabling, x-connects, terminal blocks and mounting locations shall follow already established procedures. This document addresses in detail various frame configurations found in Central Offices throughout **SBC-13STATE**'s territory. Per an SBC accessible letter (Nov 00), SBC will permit a CLEC's "**SBC-13STATE** Telco Approved Vendor" now has the ability to perform acceptance/connectivity testing between the CLEC's equipment within their Collocation footprint and **SBC 13-STATE**'s frame termination points (MDF, FDF and/or DSX frames) where the CLEC's interconnection cabling terminates. All Installation testing will conform to TP76900MP, SBC Installation Testing Standard Requirements, Issue A, dated 2000.
The following conditions apply:

1. Only "**SBC-13STATE** "Telco Central Office Tier 1 Approved Vendors" will have access to **SBC-13STATE**'s MDF, FDF and/or DSX frame terminations to perform this testing. "**SBC-13STATE** Telco Approved Vendors" are those vendors that have been approved to perform transport work throughout the **SBC-13STATE**'s common spaces. Other approved vendors such as "Collocation (Tier 2) Vendors" are not permitted to have access to **SBC-13STATE**'s frames to perform any testing.

2. The CLEC may direct their "**SBC-13STATE** Telco Approved Vendor" to perform this connectivity testing both during the installation phase and/or anytime thereafter. However, the CLEC must adhere to SBC's Installation Guide (SBC-TP 76300MP-000) when scheduling this testing. The CLEC shall use a written Method of Procedure (MOP) document to detail how, when and where installation work (including acceptance/connectivity testing) is to be performed on the equipment in **SBC-13STATE**'s central offices. A MOP is required to minimize the possibility of a service interruption. SBC-TP76300MP-000, Section D, outlines the process and format for preparing a written MOP.

    This policy does not permit the CLEC's or their **SBC-13STATE**'s Telco Approved Vendor to access the SBC frame to test the local loop or frame cross-connects.   This policy only permits the CLEC to direct their **SBC-13STATE** Telco Approved Vendor to test connectivity between **SBC-13STATE**'s frame and the equipment within the Collocation footprint during or after installation.

3. Within 30 days of the CLEC's space turnover, when **SBC-13STATE** has been responsible for the wiring, the CLEC may elect to contact the **SBC-13STATE** Collocation Project Manager to address any wiring problems discovered during their connectivity testing verification. **SBC-13STATE** will investigate and respond to the CLEC within 10 days.

Pictorial View of the Fully Deployed POTS-SPLITTER Bay

Front View

Side View

5-inch offset to edge of kickplate

3-inch tie bars on each shelf

1 ¾-inch spacing between shelves if 1 ¾ x 23 bay for SBC-Southwest SBC-West

2-inch spacing between shelves if 2 x 23 bay for SBC-Midwest SBC-Southwest SBC-SNET

Each bay will have 2 ½ spacers on each side of each bay, total of 5-inches between two bays.
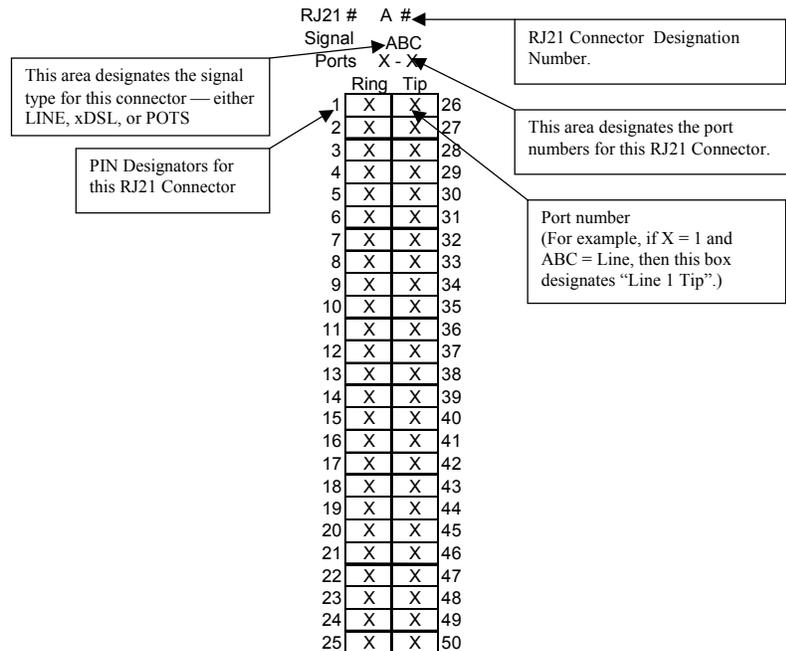
4D. Cabling of the ILEC Provided POTS-SPLITTER Shelf
Each POTS-SPLITTER will have twelve 25-pair cables (or equivalent capacity) routed to the conventional IDF for traditional MEOE and MECP 100-pair terminations. The cabling on the Connector Blocks will be 1-96 sequentially without any breaks in the line count. The last 4 pairs will not be used in the terminations. Three blocks will be placed adjacent to one another for each POTS-SPLITTER, these being CP, DATA and OE. Each will have only the 25-pair counts terminated for that function in sequence. The cabling between the POTS-SPLITTER and the connecting blocks will be as follows (refer to Section 5 for the connecting block frame sequence on the frame):

Cable Type	Count on Cable	Block Termination
Line/CP	1-25	MECP Block
xDSL/DATA	1-25	MEDT Block
POTS/OE	1-25	MEOE Block
Line/CP	26-50	MECP Block
xDSL/DATA	26-50	MEDT Block
POTS/OE	26-50	MEOE Block
Line/CP	51-75	MECP Block
xDSL/DATA	51-75	MEDT Block
POTS/OE	51-75	MEOE Block
Line/CP	76-96	MECP Block
xDSL/DATA	76-96	MEDT Block
POTS/OE	76-96	MEOE Block

Notice the picture amphenol arrangement above. The 50-pin connections alternate Line, xDSL, POTS for OE, DATA, CP terminations. The count is sequential 1-96 on the frame blocks.

RJ21 #   A #

Signal ▸ ABC
Ports   X - X

| | RJ21 Connector Designation Number. |

This area designates the signal type for this connector — either LINE, xDSL, or POTS

	Ring	Tip	
1	X	X	26
2	X	X	27
3	X	X	28
4	X	X	29
5	X	X	30
6	X	X	31
7	X	X	32
8	X	X	33
9	X	X	34
10	X	X	35
11	X	X	36
12	X	X	37
13	X	X	38
14	X	X	39
15	X	X	40
16	X	X	41
17	X	X	42
18	X	X	43
19	X	X	44
20	X	X	45
21	X	X	46
22	X	X	47
23	X	X	48
24	X	X	49
25	X	X	50

PIN Designators for this RJ21 Connector

This area designates the port numbers for this RJ21 Connector.

Port number
(For example, if X = 1 and ABC = Line, then this box designates "Line 1 Tip".)

The above layout shows the RJ21 Pinout of the 50-pin (25-pair) connector.

> In SBC-Midwest, the cabling for CLEC provided POTS-SPLITTERS will be installed by the CLEC on ILEC labeled and placed connector blocks except in Michigan where it is now the ILEC responsibility. In all other states, the CLEC is given the option to install their own cabling in lieu of the ILEC. Where the POTS-SPLITTER is installed by the **SBC-13STATE** all cabling will be performed by the ILEC. **SBC-13STATE** will stencil the blocks. All other Local Exchange Carriers within SBC Corporation will place all cabling for CLEC or ILEC for Line Sharing.

4E. Cabling of Different Manufactures and Layouts of POTS-SPLITTERS

It is expected that some CLECs may elect to deploy their own POTS-SPLITTER from another manufacturer and cable layout on their equipment. Each POTS-SPLITTER will have eight 25-pair cables (or equivalent capacity) routed to the conventional IDF for traditional MEOE and MECP 100-pair terminations. It shall be emphasized here the following requirements:

- On a going-forward basis (after 4/12/00), all terminations on an SBC frame will follow the 1-100 sequential standard (without assignment skips) for block placements on all integrated CLEC provided POTS-SPLITTERS. (The arrangement on ILEC POTS-SPLITTERS is 1-96 sequential). **The SBC 13STATE Frame grouping OE and Cable Pair terminations will be on separate and distinct 100-pair connecting blocks.**

- Assignments will be made referencing the sequential count as shown on the ILEC frame-connecting block. If the CLEC provided POTS-SPLITTER skips pairs such as every 25th pair,

the CLEC will need to insure that assignments given to the ILEC follow the sequential 1-100 sequential count without skips.

- The CLEC may request that existing or future DS0 copper termination pairs may be dual inventoried in both SWITCH and TIRKS at their request. Any Line Sharing request will be processed in this "DUAL CFA" arrangement. If the CLEC is **ONLY** requesting that new or additional DS0 copper pairs be made available for accessing SBC UNEs, neither Line Sharing CFA nor "DUAL CFA" will be provided.

  The CLEC is responsible for maintaining the "working CFA" inventory records associated with the CLEC's DS0 CFA. **ANY new** DS0 CFA requested for Line Sharing use will *automatically* be inventoried as "DUAL CFA". Again, once the "DUAL CFA" information has been provided to the CLEC by SBC, the CLEC is responsible for maintaining the "working CFA" inventory records associated with the CLEC's DS0 CFA.

  On a going forward basis, for CLECs providing their own Splitters and requesting Line Sharing CFA (MEOE and MECP), the CLECs must also provide the quantity of 200 pair complements (100 MEOE and 100 MECP complement in numerical and sequential count) to be utilized for Line Sharing. A new generic Aisle, Bay and Shelf Number must be assigned for each combined 200 pair (MEOE & MECP) related group suitable so that Network Operation personnel can identify and find the unique assigned location for the CLEC in the Central Office. The ILEC may provide a generic aisle number beginning with 001, a generic bay number beginning with 001 and a generic shelf number beginning with 01, but each CLEC assignment in different locations will have different generic assignments. This is a change from the previous policy that the CLEC was required to provide this information or the Application would be returned. The CLEC's failed to abide by this policy and as a result, if a generic aisle/bay/shelf is returned to the CLEC, it will not be suitable for the CLEC to find the location based upon their circuit assignment records.

  Any applications related to **existing** Collocation Arrangements or **existing** DS0 CFA to be used for Line Sharing or as "DUAL CFA" will be processed by SBC according to the specific intervals, methods and rates associated with **Augments** in the specific state in which the Collocation Arrangement is located. Any Applications for a **new** Collocation Arrangement will be processed by SBC according the specific intervals, methods and rates associated with the specific state in which the Collocation Arrangement will be located.

- On a Going-Forward basis, all OE and CP terminations will be placed in 100 pair complements on separate connecting blocks in sequential count, per bay.

- The CLEC POTS-SPLITTER will be required to have a "Make Before Break" cut-through point for POTS services to insure POTS services are maintained when the Data card is removed. The POTS-SPLITTER must be accessible for both CLEC and ILEC personnel.

- Any CLEC testing of the retail-POTS service must be non-intrusive unless utilizing Mechanized Loop Testing (MLT). Prior to a CLEC utilizing MLT intrusive test scripts, the CLEC must have established data service on that loop and have specifically informed the customer that service testing will interrupt both the data and voice telephone services served by that line. CLEC may not perform intrusive testing without having first obtained the express permission of the end user customer and the name of the person providing such permission. CLEC shall make a note on the applicable screen space of the name of the end user customer providing permission for such testing before initializing an MLT test or so note such information on the CLEC's trouble documentation for non-mechanized tests.

- The CLEC may use intrusive testing on its non-integrated DATA-only sections within its equipment. The retail POTS service must be continuous and cannot be opened by the CLEC.

- CLEC hereby agrees to assume any and all liability for any such testing it performs, including the payment of all costs associated with any damage, service interruption, or other telecommunications service degradation or damage to **SBC-13STATE**'s facilities and hereby agrees to release, defend and indemnify **SBC-13STATE**, and hold **SBC-13STATE** harmless, from any claims for loss or damages, including but not limited to direct, indirect or consequential damages, made against **SBC-13STATE** by an end user customer, any telecommunications service provider or telecommunications user relating to such testing by CLEC.

- Per accessible letters date in July 2000, the CLEC may request to have the ILEC inventory "embedded" Line Sharing interconnection cabling assignments (CFA) in both SWITCH/FOMS and TIRKS OSS databases. In addition, the ILEC will provide additional stenciling to reflect both OSS identification nomenclature on the CFA connecting blocks. This letter covers requests made on or before August 31, 2000 at which time **SBC-13STATE** will stencil/restencil up to 400 pairs maximum per CLEC per Central Office within 30 days.

**4F. Continuity Testing of Cabling and Shelves**

Upon the completion of all cabling between Connector Blocks on the Frame and the POTS-SPLITTER Shelf, it will be necessary to perform a end-to-end test through the POTS-SPLITTER. Each lead will be tested for continuity by shorting the Tip and Ring of each pair at the connecting block with another employee observing a set of lights flashing on the POTS-SPLITTER Test Card.

> The Continuity Test for the POTS-SPLITTER is a required test for both ILEC and/or CLEC installed POTS-SPLITTERS. Significant wiring issues will be resolved in the amphenol plug that is attached to any POTS-SPLITTER.

The ADSL Pots Splitter "Streaker" Test Card, P/N COSK0PT20000, is compatible with the 96-position splitter shelf, P/N COSF00S2R007, mounted within the standard 23" NEBS equipment rack.
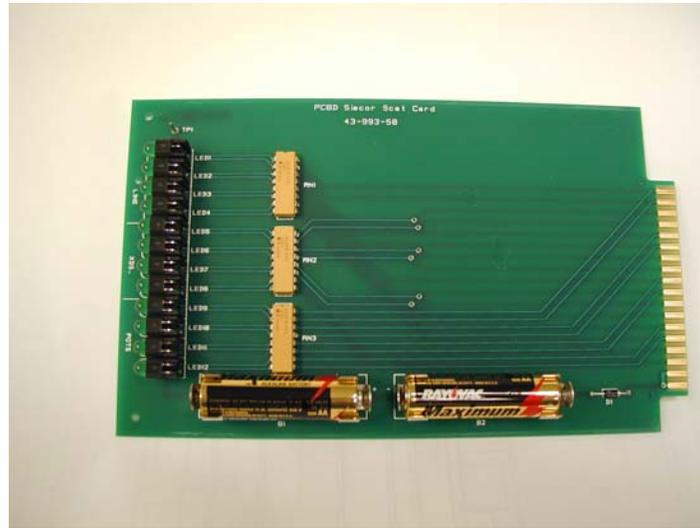
The "Streaker" test card uses two standard "AA" batteries (included with the card) to power the LED's during testing. No external power source is required.
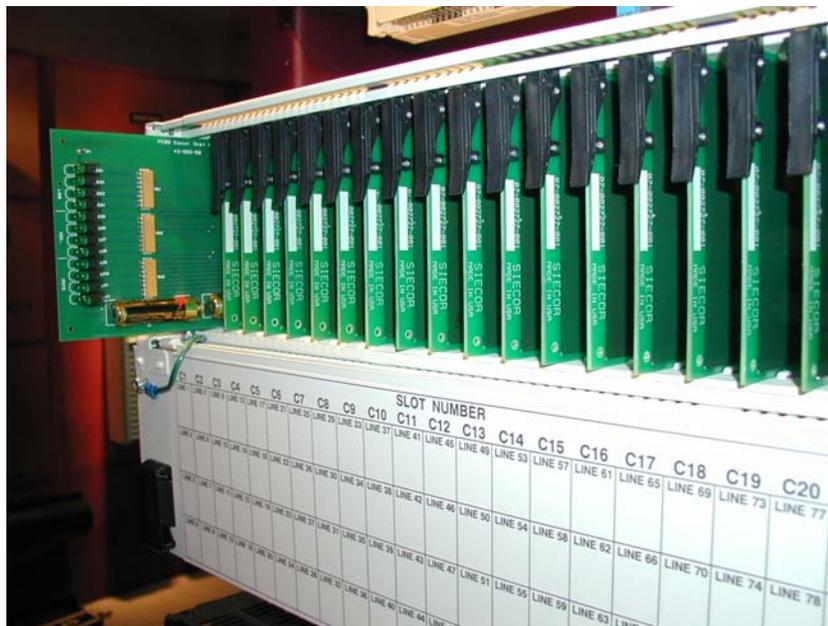

The "Streaker card uses one LED for each Tip and another for Ring on each of the four circuits contained on the circuit card.   A total of 24 LED's address the T/R for each of the four "LINE", "xDSL" and "POTS" circuits.

The procedure for testing the ADSL pots splitter shelf connections is as follows:

1. Complete the RJ21 connector installation on the back of each shelf, total of 12 connector positions, four each for the "line", "xDSL" and "Pots".
2. Insert the batteries into the "Streaker" test card.
3. Fully insert the "Streaker" card into the first card position in the pots splitter shelf. (If cards have been previously installed in the shelf, they will need to be removed and re-inserted after testing is completed.)
4. Using a standard test cord, ground each of the "Tips' and "Rings" on the first four pairs of MDF mounted terminal block for "Line", this will light up the Streaker test card mounted LED. Then repeat the step for the "xDSL" and "Pots" to complete the continuity test for the entire shelf.

> **Caution**: The Streaker card has been designed to operate in an environment without any working voice or data services. The unit uses a 6-volt battery operated circuit for the testing of opens, short and grounds. Do not apply foreign battery or high voltage/current services to the line or you will overload the battery-operated circuit and burn out the LEDs. Do not ground the TPI pin on the Streaker card.

5. After the four pairs associated with the current card position being tested is completed, remove the "Streaker" test card and insert it into the next card position within the shelf. Continue steps 4 & 5 until the shelf is finished.
6. Correct all anomalies and retest.
7. Re-insert all cards within the shelf to complete testing process.
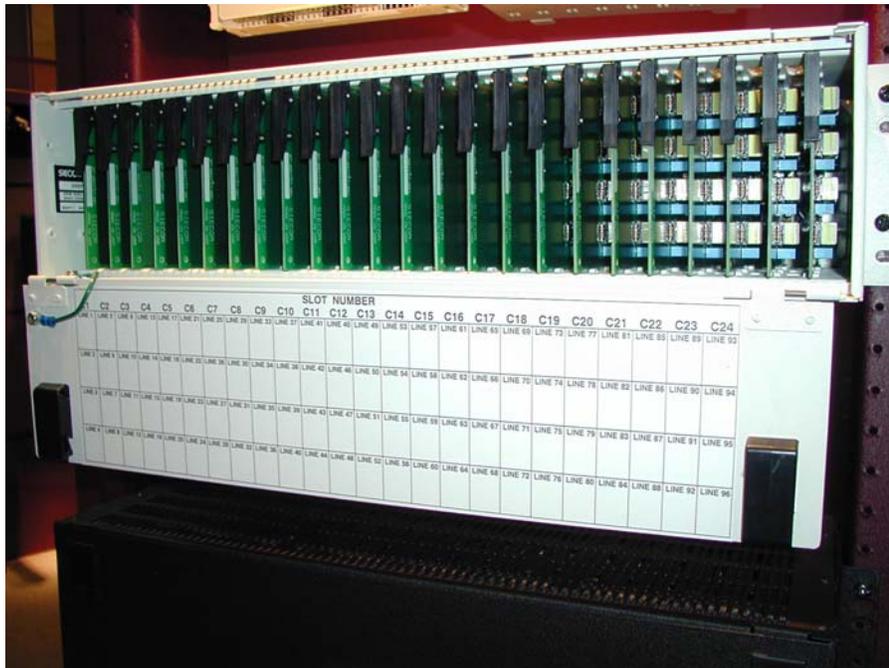
View of the ADSL Pots Splitter Shelf with all of the splitter cards inserted.

View of the ADSL Pots Splitter Shelf with door closed.
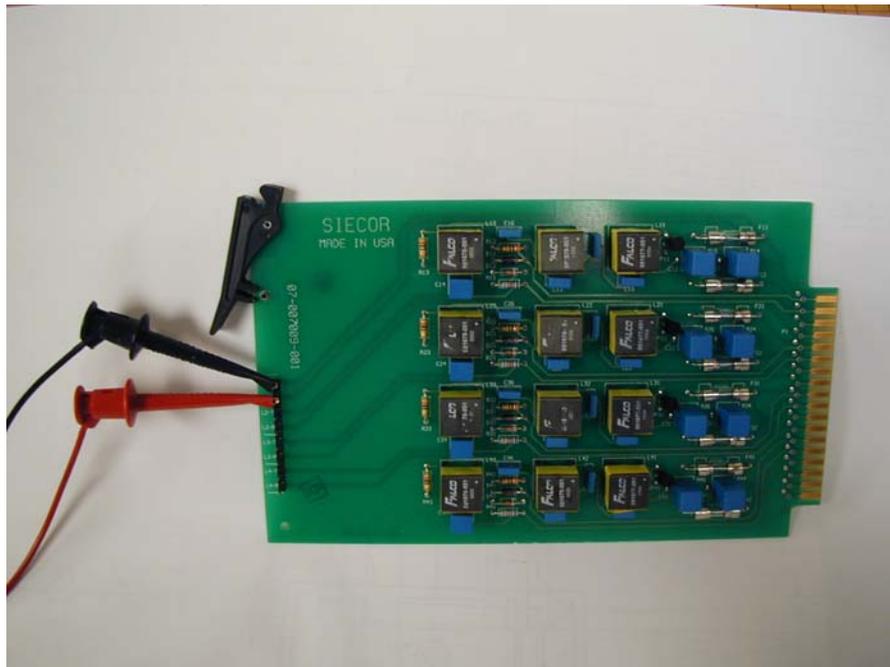
Corning Cable Systems Mini Test Cord, included with the "Streaker" test card, is used with the test access pins located on the ADSL Pots Splitter Card. ADSL Splitter card shown with test cord attached to the card mounted test pins. Each ADSL Splitter card is equipped with a separate test pin for "Tip" and "Ring" (one each) for each of the four circuits contained on the card (total eight pins). These pins can be used to bridge onto the Loop port of the ADSL POTS-SPLITTER.

5. Pictorial View of Product and Cross-Connect Placements

POTS-SPLITTERS will be placed on the horizontal side of a Conventional Frame (except on single sided frames). The Connecting Blocks for each unit will be terminated adjacent to one another in the following format (Left to Right): MEDT, MEOE, and MECP. These blocks are generally placed at a point on the frame located away from the block and jumper placement of 1.544 Mb/s, ISDN, HDSL, 56 Kb/s DDS services. If these blocks are placed haphazardly on the frame, it may become prematurely blocked to due Spectrum Interference issues.

In addition, these terminations will not be placed on a Universal Modular Distributing Frame (UMDF) such as a COSMIC I/II© manufactured by Lucent Technologies. A Modular Frame installation will require the use of a conventional IDF for these terminations. Older existing conventional frame such as TOLL, Crossbar, Step, etc may be converted for use as an IDF. Due to Spectrum Interference and Inordinate Cost Issues, the Modular Frame will be the termination point for indigenous Cable Pairs, LEN/OE and Tie Pairs only. The use of Modular TPDF for terminations of these services is also not supported. If a Modular Frame does not have an accompanying conventional IDF, the installation of one is needed for service applications as soon as possible.

5A. SBC-13STATE Owned Non-Integrated POTS-SPLITTER with Two Frames

SBC-13STATE shall be allowed to specify the splitter vendor of its choice. The splitters are to be physically located in an equipment bay in a Collocation Common Area. Test access is to be provided to the DLEC at the splitter bay through test access points on each line card. The ILEC has the responsibility for maintaining, inventorying and assigning each individual splitter port.

The placement of POTS-SPLITTER Connecting Blocks should be in accordance with the *Frame Forecast Method & Procedures*. Collocation, Special Circuits and supporting equipment terminations (POTS-SPLITTER) should be placed on a IDF when the primary MDF is forecasted to exhaust within 5 years, otherwise the services may be terminated on the existing conventional MDF, not a Modular MDF (COSMIC). The expected normal placement for these items would be on the IDF frames on a "going forward basis". The new IDF is funded by this project when it is necessary to terminate Line Sharing equipment

5B. Tie Pair Placement on Multiple Frames

When multiple Frames are used within the same Central Office tie pairs will be required in sufficient quantities to support the types of services placed there. With the deployment of POTS-SPLITTERS, two connections will be required, the POTS or Dial tone portion (MEOE-OE) and the return leg of the Cable Pair connection supporting the data over voice transmission (MECP-CP). From a technical spectrum interference perspective, the dial tone connection tie pairs do not need shielded cabling, but the ability to provision with one cable and maximize the utilization of assignments may dictate that this portion from an administrative (SWITCH) point-of-view must be provisioned as shielded tie cable altogether. Administrative limitations will dictate the shielded option in all cases. The Cable Pair routing (MECP-CP) over tie pairs dictates and requires shielded cabling.

When using COSMIC or Modular Frames interconnected to a conventional frame, a factor of 1.3 needs to be applied to insure that xDSL services are properly distributed throughout the Modular Frame. This will permit the successful introduction of this service on a Modular frame without having the need to use IntraMod Tie Pairs where other Spectrum Interference issues are

presented with other Special Circuits. **DO NOT USE IntraMod COSMIC Frame (or equivalent) Tie Pairs for xDSL services, including HPFL (Line Sharing).** The use of a combination Shielded and Non-Shielded COSMIC to MDF arrangement will dictate a slightly higher tie pair count over the all-shielded layout as shown below.
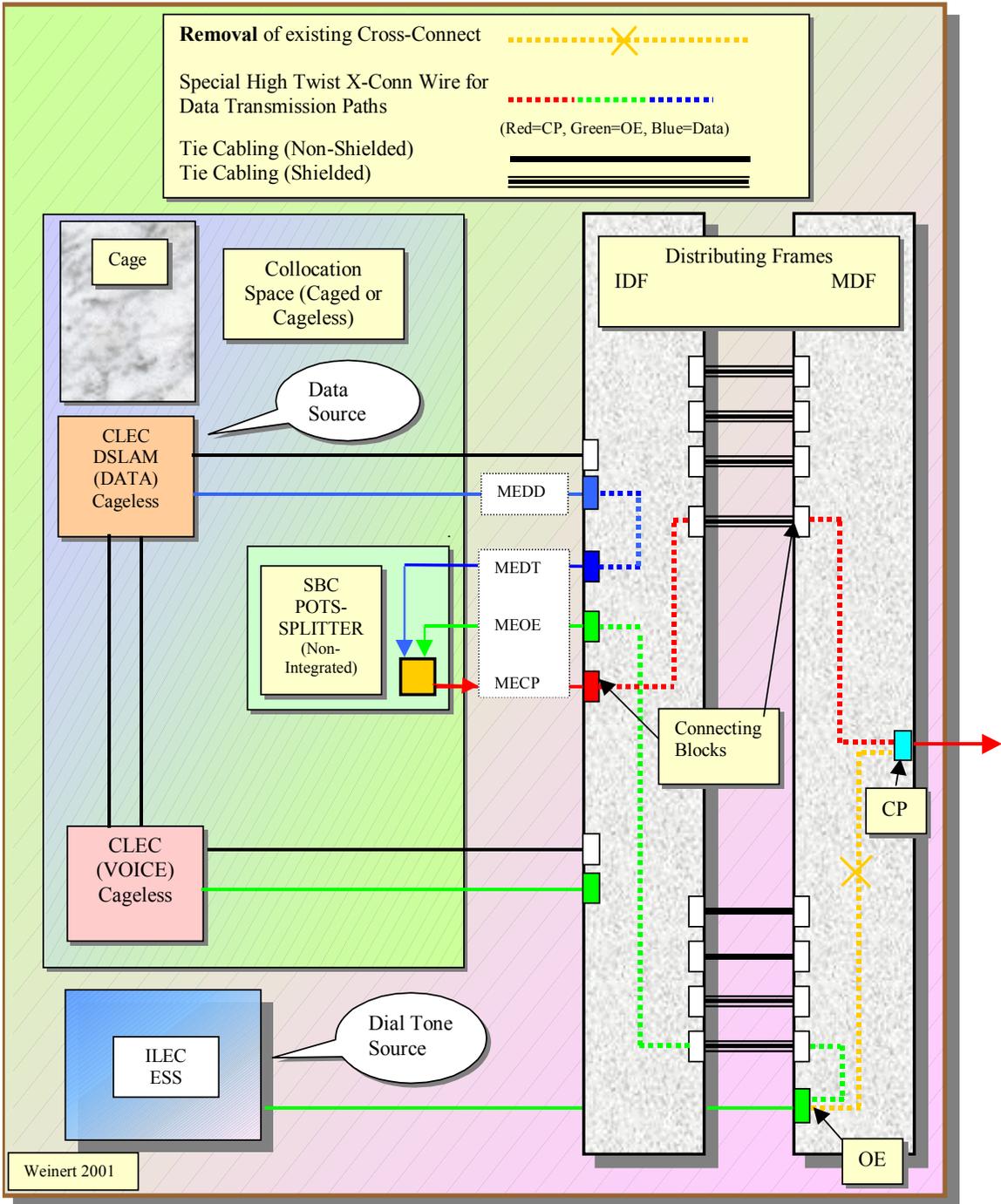
> In many cases, sufficient existing shielded tie pair capacity already exists interconnecting the two Frames. An evaluation should be made if these are suitable for use (compliments do not have T1 or HDSL in them) and they are provided in the correct areas on the Frames. After proper evaluation, these tie pairs could be used and converted from TIRKS to SWITCH management control and reduce or mitigate the need for the installation of additional tie pairs.

Typical Tie Pair Placement for POTS-SPLITTER MODELS

Number of POTS-SPLITTER Shelves Installed (96-port)	Number of Shielded/Non Shielded Tie Pairs used on a Single Frame Arrangement	Number of Shielded/Non Shielded Tie Pairs - Multiple Frame Arrangement (Conv MDF to Conv MDF)	Number of All Shielded Tie Pairs - Multiple Frame Arrangement (Conv MDF to COSMIC) (*)	Number of Shielded/Non Shielded Tie Pairs used on a Multiple Arrangement (Conv MDF to COSMIC) (*)
1	0/0	100/100	300	200/200
3	0/0	300/300	800	400/400
5	0/0	500/500	1300	700/700
10	0/0	1000/1000	2600	1300/1300
20	0/0	2000/2000	5200	2600/2600

(*) COSMIC Frame Model assumes 2 Modular Lineups in one COSMIC Frame Configuration.

POTS-SPLITTER – ILEC (SBC) Owned (Non-Integrated), Double Frame – IDF/MDF

Removal of existing Cross-Connect

Special High Twist X-Conn Wire for
Data Transmission Paths

(Red=CP, Green=OE, Blue=Data)

Tie Cabling (Non-Shielded)
Tie Cabling (Shielded)

Cage

Collocation
Space (Caged or
Cageless)

Distributing Frames
IDF   MDF

Data
Source

CLEC
DSLAM
(DATA)
Cageless

MEDD

MEDT

SBC
POTS-
SPLITTER
(Non-
Integrated)

MEOE

MECP

Connecting
Blocks

CP

CLEC
(VOICE)
Cageless

Dial Tone
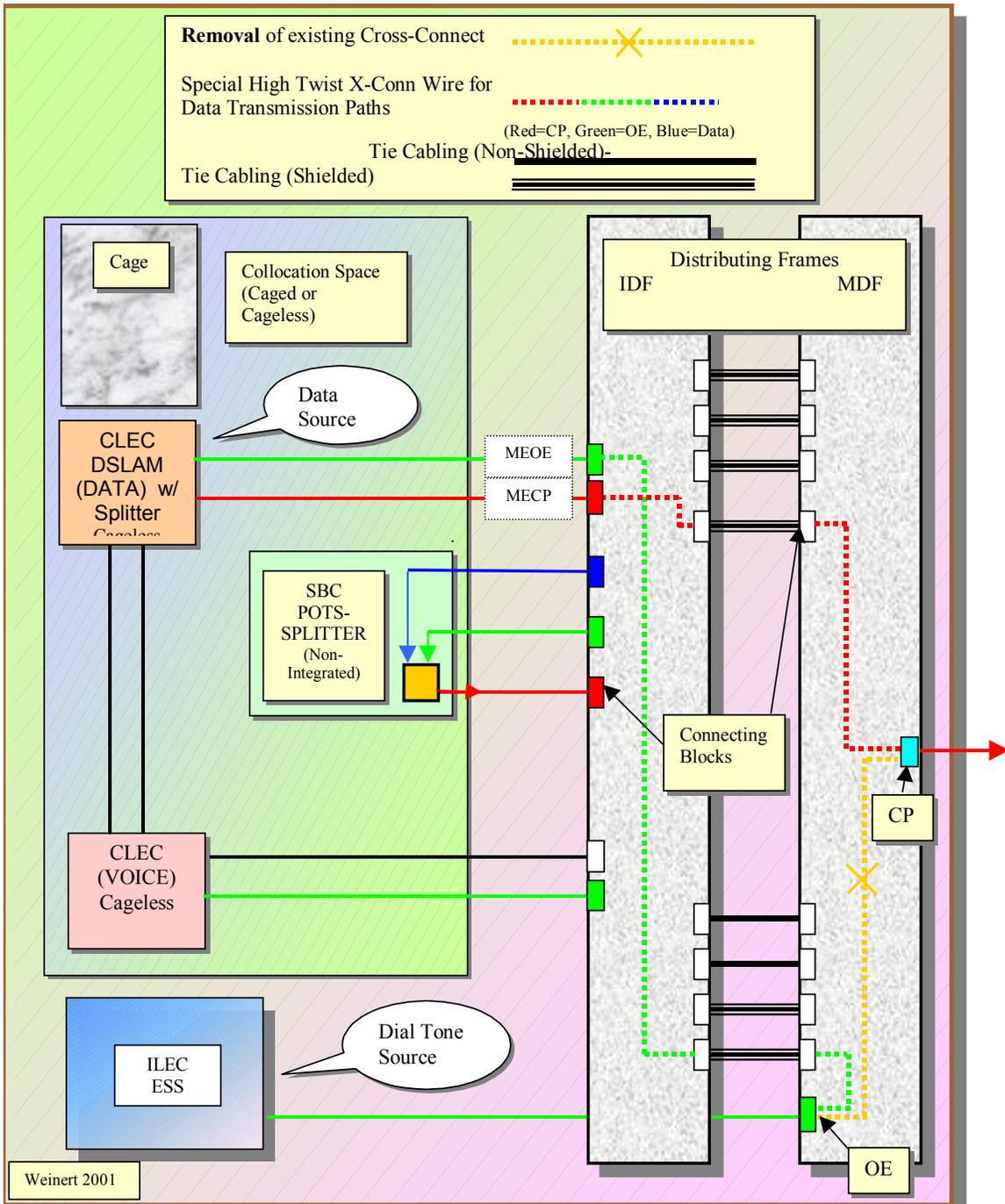Source

ILEC
ESS

OE

Weinert 2001

28

5C. DLEC/CLEC Owned Non-Integrated or Integrated POTS-SPLITTER

When the DLEC chooses to purchase its own splitter, the DLEC shall collocate a bay at a time in the ILEC's central office. The DLEC/CLEC will have test access at the splitter bay for both ILEC and CLEC. The DLEC/CLEC has the responsibility for maintaining, inventorying and assigning each individual splitter port and subsequently providing the **MEOE** and **MECP** assignments for the ILEC to place in the SWITCH/FOMS database. **This is different that the deployment plan for Line Splitting**. The splitters are to be physically located in an equipment bay in a Collocation Area. Test access is to be provided to the DLEC at the splitter bay through test access points on each line card.

The placement of POTS-SPLITTER Connecting Blocks should be in accordance with the *Frame Forecast Method & Procedures*. Collocation, Special Circuits and supporting equipment terminations (POTS-SPLITTER) should be placed on a IDF when the primary MDF is forecasted to exhaust within 5 years. The expected normal placement would be on the IDF frames. This arrangement reflects both Physical and Virtual Collocation. The virtual and physical equipment location will be chosen by the ILEC Space Planner. Bay assignments may only be made to lineups that can support the size and spacing requirements. For instance, a large cabinet sized bay will not be placed in a standard depth bay lineup if it exceeds the 15-inch maximum depth for the aisle spacing. That large bay would need to be placed in a lineup that would support its large space requirements. In addition, the Space Planner working with the Equipment Engineer would need to evaluate any increased need for infrastructure racking placements. If a existing lineup consists of only D4 banks with only standard cable and power racking to support the lineup, a request to place a bay that requires fiber optic cable or fiber ductwork in the lineup to support it would not be cost effective or efficient for either the CLEC or ILEC. The placement of additional racking in existing lineups is exceptionally costly and may require inefficient work arounds. Care and due diligence must be exercised to place the new bay, whether ILEC or CLEC, in the most compatible supporting infrastructure.

POTS-SPLITTER – CLEC Owned (Integrated) with CLEC providing both Data and obtaining Voice from SBC ILEC as Line Sharing, Double Frame – IDF/MDF

Removal of existing Cross-Connect

Special High Twist X-Conn Wire for
Data Transmission Paths

(Red=CP, Green=OE, Blue=Data)

Tie Cabling (Non-Shielded)-
Tie Cabling (Shielded)

Cage

Collocation Space
(Caged or
Cageless)

Distributing Frames
IDF   MDF

Data
Source

CLEC
DSLAM
(DATA) w/
Splitter
Cageless

MEOE

MECP

SBC
POTS-
SPLITTER
(Non-
Integrated)

Connecting
Blocks

CP

CLEC
(VOICE)
Cageless

Dial Tone
Source

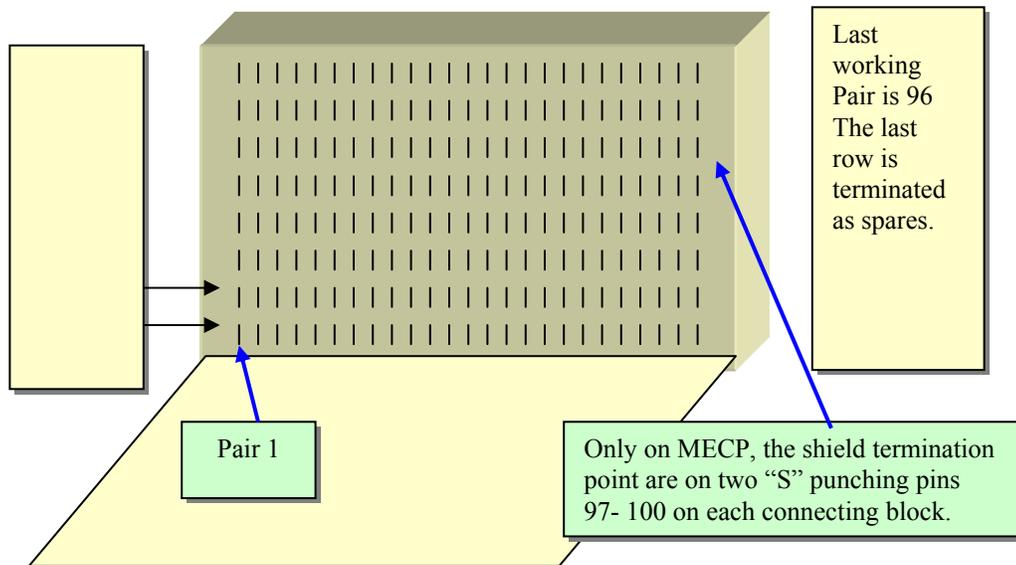ILEC
ESS

OE

Weinert 2001

5D. MDF Terminations

5D.1 ILEC provided POTS-SPLITTER Terminations

The twelve 25-pair POTS-SPLITTER cables (or equivalent) will be terminated in the following manner using the below listed connecting blocks:

Corning Cable Systems Terminal Connecting Block 100 pr. 8x25 SWW, Non-CONN. Beige (or equivalent as provided by Procurement through authorized PANs	139-N0100R012B	SBC PID 300137205 SBC-SNET PID 9508267 (replaces Lucent 89F1F100) POTS-SPLITTER requires three connecting blocks per 96-port shelf

IMPORTANT: Due to the field limitations with SWITCH, all connection block counts must start with 001 and with each successive block must also have the count begin with the label 001. Counts of such as 301-400 should read 001-100. Connecting Blocks will be labeled reflecting the application (MEDT, MEOE, and MECP), and the Relay Rack where the equipment is located. Follow the attached pictures for labeling requirements on the Connecting Blocks:

Last working Pair is 96 The last row is terminated as spares.

Pair 1

Only on MECP, the shield termination point are on two "S" punching pins 97- 100 on each connecting block.

The Connecting Block layout with cover opened. This arrangement follows established pin designations originally specified in BSP 800-610-153, Section 2.11.

IMPORTANT **SBC-13STATE** has made agreements with the CLEC Community and has provided Regulatory Testimony with each state commission concerning consistency of application with regard to Line Sharing. As a result, it is absolutely critical that each geographic area provision, equip and label all panels, blocks and cabling in the same manner in accordance with this document for Line Sharing. Deviations must be mitigated.
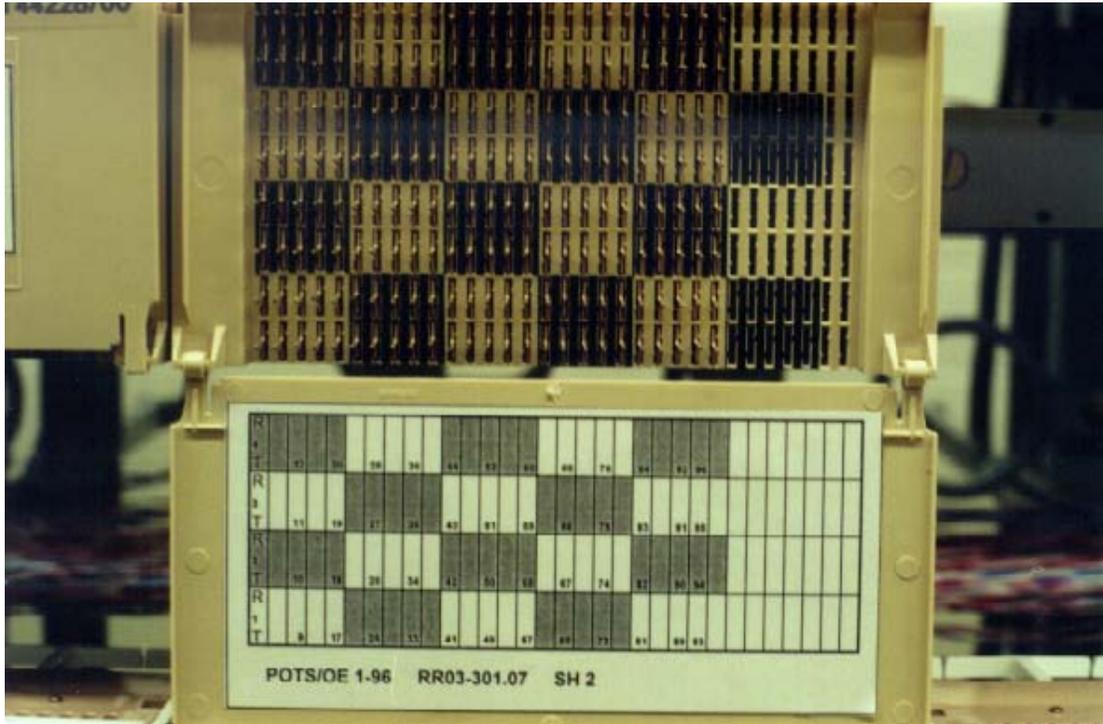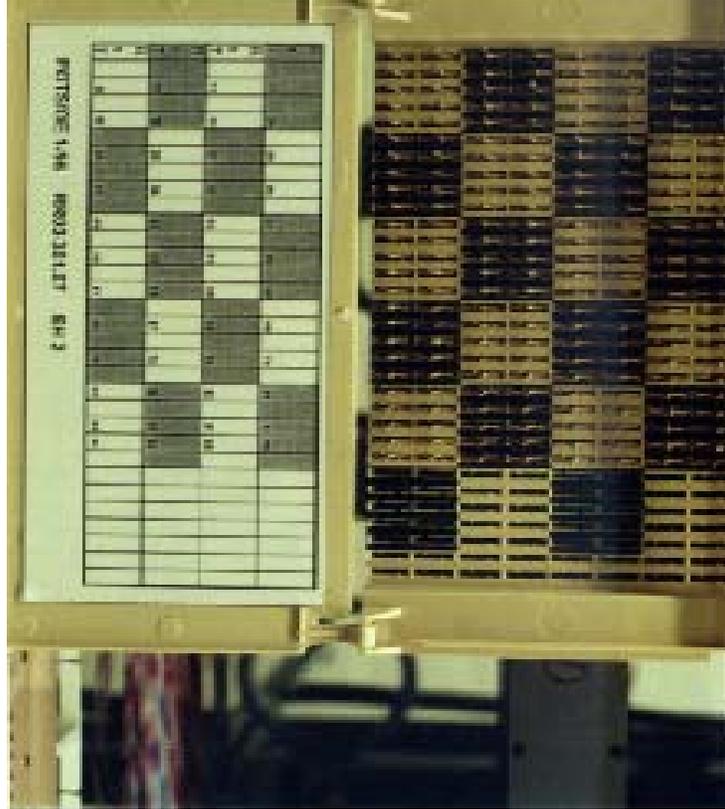
Front View of the 139-N0100R012B terminal block in the horizontal layout.
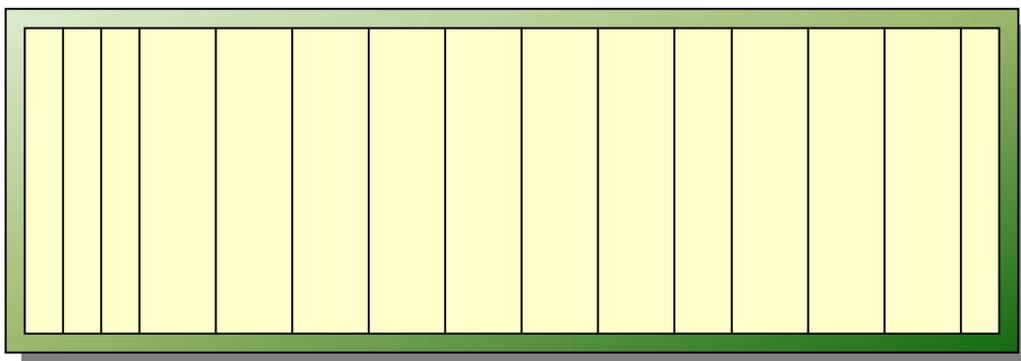
The pin configuration for the horizontal mounted connecting block from the front cross-connect field.

The standard termination location for POTS-SPLITTER connecting blocks will be on the **horizontal** side of the conventional distributing frame. The use of the vertical side for POTS-SPLITTER terminations is strongly discouraged except in situations where the horizontal side of the frame is completely exhausted or a vertical single sided frame is used. Recognizing that there are serious mechanization issues associated with vertical frame usage coupled with the fact that the vertical side is normally the first to exhaust the frame; the use of the vertical side for CLEC or equipment terminations (Line Sharing) should be considered on an exception basis only. Additional information may be obtained on SBC-002-316-003, *Frame Forecast M&P*. For identification purposes, the vertical layout is shown below:

Front View of the 139-N0100R012B terminal block in the vertical layout.

T R	T R	T R	T R
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

The pin configuration for the vertical mounted connecting block from the front cross-connect field.

The last 4 pins on the MECP connecting block for each POTS-SPLITTER will be the connection point for the shielded cable. Ensure that all Tie Cables between frames use this pin for extensions of the ground through the tie cable. When the Tie Cables are being relabeled, it is not necessary to change the existing ground.

The Pair Counts for each block will be labeled and shown in SWITCH/FOMS as follows:

- The Voice/OE Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R/T** for each pair on the Connecting Block.
- The Line/Cable Pair Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R1/T1** for each pair on the Connecting Block.
- The Data Transmission Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R2/T2** for each pair on the Connecting Block.

MEDT	MEOE	MECP
03.301.002.05.001-096	03.301.002.05.001-096	03.301.002.05.001-096
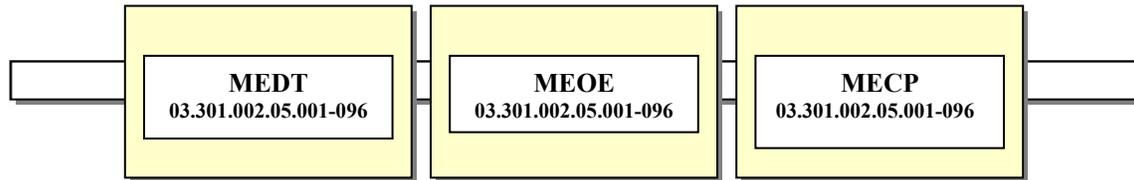
This reflects a **SBC-13STATE** Owned POTS-SPLITTER with all three types of terminations placed directly on the IDF (or equivalent) with the equipment placed in (Collo Area Floor)(Aisle)(Bay)(Shelf)(Ports) This example, Floor 03, Aisle 301, Bay 002, Shelf 05, 96 Ports on POTS-SPLITTER. MEDT=Data connection to POTS-SPLITTER, MEOE= OE/Voice connection to POTS-SPLITTER, MECP=Cable Pair connection to POTS-SPLITTER. (Refer to Section 8 for more information).

Important Note: It is strongly recommended that the CLEC insure that all CLEC owned POTS-SPLITTERS are labeled on the face plate the **SBC-13STATE** provided CFA assignment. The assignment would be in 100 pair connecting blocks using the MEOE and MECP methodology described in this section.

**5D.2 CLEC provided POTS-SPLITTER Terminations**

The CLEC may be providing one of many types and configurations of POTS-SPLITTERS for deployment within their collocation cage, space or bay. In any case, the POTS-SPLITTER will be provisioned in an integrated mode and will terminate on the **SBC-13STATE** frames in a standard sequential (non-skip) format using separate blocks for the MEOE and the MECP. The MEDD and MEDT will not be provisioned on the **SBC-13STATE** frames. The data cabling portion of this arrangement will be direct cabled between the CLEC POTS-SPLITTER and the CLEC DSLAM.

All new POTS-SPLITTER cabling and terminations will be placed in 100 pair compliments on 100 pair connecting blocks on the **SBC-13STATE** frame. The assignments will be provisioned in order that the MEOE and the MECP terminations will not reside on the same 100 pair-connecting block. Each 100-pair count will be terminated to the same bay.

IMPORTANT: Due to the field limitations with SWITCH, all connection block counts must start with 001 and with each successive (non-skip) block must also have the count begin with the label 001. Counts of such as 301-400 should read 001-100. SWITCH has a three digit limit on pair assignments.

> The CLEC will be solely responsible for all assignments and will be required to reference the connecting block connection points on all service orders, trouble reports and correspondence in the manner that **SBC-13STATE** has the documentation loaded into the mechanized Operational Support Systems.
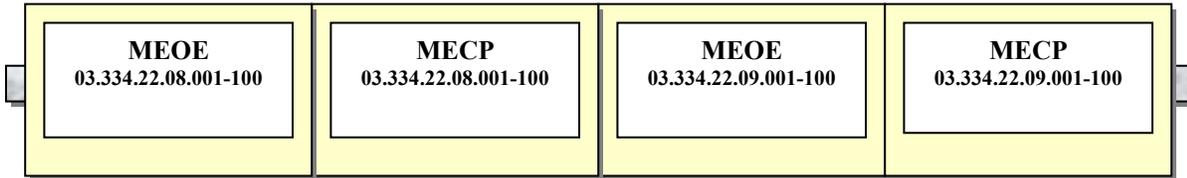
Connecting Blocks will be labeled reflecting the application (MEOE, MECP), including the OWNER. Follow the attached pictures for labeling requirements on the Connecting Blocks:
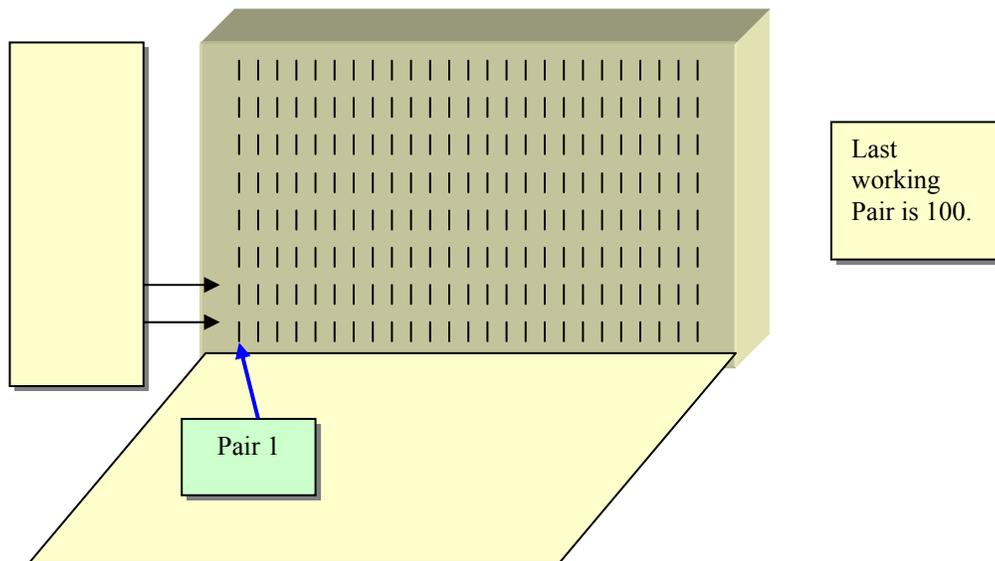
Last working Pair is 100.

Pair 1

The Connecting Block layout with cover opened. This arrangement follows established pin designations originally specified in BSP 800-610-153, Section 2.11.

The Pair Counts for each block will be labeled and shown in SWITCH/FOMS as follows:

- The Voice/OE Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R/T** for each pair on the Connecting Block.

- The Line/Cable Pair Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R1/T1** for each pair on the Connecting Block.

- There will be no skips in sequential counts. If the CLEC owned POTS-SPLITTER skips a pair (for instance, every 25th pair), the CLEC will need to assign the terminations based upon the appearances on the ILEC connecting block, not how it appears on the POTS-SPLITTER.

MEOE 03.334.22.08.001-100	MECP 03.334.22.08.001-100	MEOE 03.334.22.09.001-100	MECP 03.334.22.09.001-100

The illustration above reflects a 400 pair layout for CLEC POTS-SPLITTERS for a maximum capability of 200 Line Sharing provisioned customers. This example shows the CLEC space at Floor 3, Aisle 334, Bay 22, **Shelf 8 and 9,** 100 Ports on POTS-SPLITTER. **Effective with this issue, the ACNA is not needed as a stencil on the connecting blocks.**

Important Note: It is strongly recommended that the CLEC insure that all CLEC owned POTS-SPLITTERS are labeled on the face plate with the ILEC provided CFA assignment. The assignment would be in 100 pair connecting blocks using the MEOE and MECP methodology described in this section.
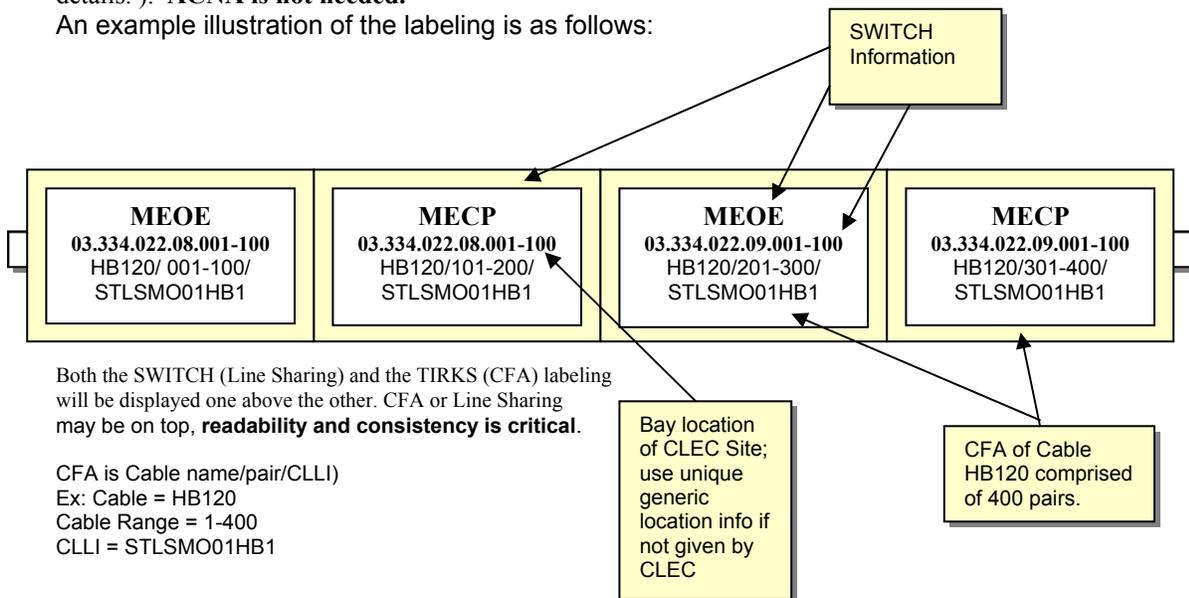
The CLEC may elect to request the termination of their Line Sharing cables to a Point of Termination Panel (POT) called the QCP-W10X20-5 (PID: 300027349) which permits the termination of up to five 100-pair complements for the CLEC use. The CLEC may interconnect this equipment to their POTS-SPLITTER. The panel is a 6" x 23" x 4" panel that is intended for twisted pair and xDSL terminations and includes ground wire pass through terminations.

5D.3 Embedded Dual CFA Assignments
Embedded Line Share Pairs

Embedded pairs are defined as any DS0 pairs requested for Line Sharing on a Collocation Application submitted before the effective date of the Accessible Letter (7/6/00). **The modified Collocation Application to request dual inventory of the DS0 pairs can be submitted through 8/31/00.**

The application to request dual CFA inventory will identify the MEOE, MECP, or MEDD and CFA pairs the CLEC wants available for dual use. The installation interval to provide the dual capability is 30 days from the receipt of the application and the CLEC can request up to 400 pairs. Refer to Section 8 for written details.). **ACNA is not needed.**

An example illustration of the labeling is as follows:

Both the SWITCH (Line Sharing) and the TIRKS (CFA) labeling will be displayed one above the other. CFA or Line Sharing may be on top, **readability and consistency is critical**.

CFA is Cable name/pair/CLLI)
Ex: Cable = HB120
Cable Range = 1-400
CLLI = STLSMO01HB1

SWITCH Information
Block Type (MEOE or MECP)
Floor 3
Aisle 334
Rack/Bay 022
Panel 8
Cable Range (1-100 each block)

5D.4 New Dual CFA Assignment Requests

While there are no provisions via an Accessible Letter for Dual Assignments of Line Sharing facilities for the CLEC, if there is a specific request, **SBC-13STATE** can grant each request and charge on an Individual Case Basis (ICB) in each instance. Do not automatically default and add Dual Assignments without a CLEC request. This is a billable item.

It is not recommended that Dual Assignments are used due to the complexity of assignment management, which is now not only shared, but also split between two support systems within the ILEC at the same time. There is the possibility of double assignment and trouble reports. Caution needs to be the byword.

5E. CLEC and POTS-SPLITTER Termination Locations

The termination blocks for CLEC Line Sharing and UNE CFA placements will follow SBC-002-316-003*, Frame Deployment M&P*, Issue 8, dated July 2001, SBC-002-316-004, *Tie-Pair Management on MDF/IDF Frames*, Issue 2, dated February 2003 and this document. When only one frame is located in the Central Office, terminate all CLEC and ILEC facilities on this frame with the Cable Pair facilities on the vertical side with all other terminations on the horizontal side as follows:

<u>Single Frame</u> Layout Expectations Standard for POTS-SPLITTERS

Termination Type/Frame Type	Cross-Connection to other Termination Type/Frame Type	Tie Pairs Needed
SBC-OE/Primary	MEOE/Primary	No
SBC-CP/Primary	MECP/Primary	No
Data (MEDD)/Primary	MEDT/Primary	No
CLEC-OE/Primary	MEOE/Primary	No

When the triggers covered in SBC-002-316-003, *Frame Deployment M&P* are present, deploy a second frame. Sufficient Tie-Pair facilities needs to be deployed in accordance with SBC-002-316-004, *Tie-Pair Management on MDF/IDF Frames*. On a going-forward basis, terminate the CLEC and ILEC facilities as follows:

<u>Two Frame</u> Layout Expectations Standard for POTS-SPLITTERS

Termination Type/Frame Type	Cross-Connection to other Termination Type/Frame Type	Tie Pairs Needed
SBC-OE/Primary	MEOE/Secondary	Yes
SBC-CP/Primary	MECP/Secondary	Yes
Data (MEDD)/Secondary	MEDT/Secondary	No
CLEC-OE/Secondary	MEOE/Secondary	No

If multiple frames (in excess of two) are used in one office, insure that POTS-SPLITTERS are terminated on the same MDF frame as CLECs are to be terminated on a going-forward basis. This specifically excludes the primary frame used for ILEC OE and Cable Pair terminations.

<u>Three Frame & Beyond</u> Layout Expectation Standard for POTS-SPLITTERS[5]

Termination Type/Frame Type	Cross-Connection to other Termination Type/Frame Type	Tie Pairs Needed
SBC-OE/Primary	MEOE/Secondary	Yes
SBC-CP/Primary	MECP/Secondary	Yes
Data (MEDD)/Secondary	MEDT/Secondary	No
CLEC-OE/Secondary	CLEC-OE/Secondary	No

---

[5] If the CLEC terminations are on the third frame, terminate all POTS-SPLITTER terms to that third frame as well. If the MEDT and MEDD terms are on different frames, they will also need tie-pairs.

5F. Testing Requirements & Capabilities

    SBC-13STATE is provisioning test access pins on every ILEC provisioned non-integrated POTS-SPLITTER card.   Each card has bridged test access pins for the Tip and Ring (T/R) for each pair physically located on the drop side of the circuitry (toward the cable pair).   The CLEC provided POTS-SPLITTER may not provide this feature but must provide the ILEC the capability to perform the same level of testing through their unit. The following information is provided by Corning Cable Systems (the manufacturer of the ILEC deployed POTS-SPLITTER:

TEST ACCESS CAPABILITY

Corning Cable Systems T1.413 ADSL splitter equipped with test access points.

PURPOSE

    This document describes the intended functions and capabilities provided by the Corning Cable Systems T1.413 ADSL splitter equipped with test access points.

BACKGROUND

    Included in Figure 1 below is a reference model for xDSL which highlights the location of the test access point on the central office splitter in reference to the location of other xDSL equipment in the network. The test access point is placed on the network (outside plant) side of the splitter so as to provide a bridging point for unfiltered access to the entire range of frequencies on the tip-ring pair.
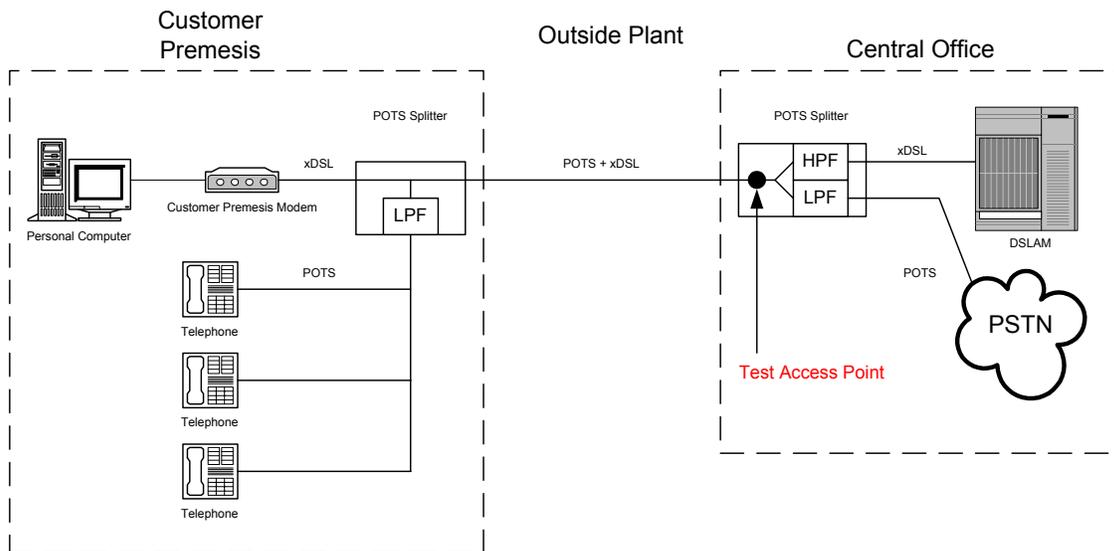

Figure 1: xDSL network reference model showing test access location

USE OF TEST ACCESS POINTS

The test access points on the splitter allow the user to "bridge" onto the tip and ring of a twisted pair. This allows the user to:

1. Test the twisted pair with a standard "handset/buttset" for existence of dialtone and voice services.

2. Measure DC and AC voltages between tip and ring.

3. Test the DSL modem on either end with a modem or modem-emulation test equipment.

USING A TELEPHONE HANDSET WITH THE TEST ACCESS POINT

1. A standard buttset or telephone handset may be used to test the twisted pair for voice service. Clip the tip and ring connections of the buttset to the test access tip and ring connections provided. If you place the buttset into an "off hook" mode, one of three things can result, depending on line and voice service conditions:

2. If no voice traffic is present, the buttset or handset will pull dialtone from the central office switch. In this condition the buttset acts like a customer premises handset. If the buttset is placed into an off-hook mode, then dialtone will be present at the buttset and calls can be made as if the buttset were a customer premises phone. A customer taking a customer premises handset off-hook will hear all traffic on the buttset as if it were another phone in the customer premises. Depending on what the operator is doing with the buttset at the time, the customer may not be able to place a call. The access point will permit the same operations as currently present from the premises, such as ANI, etc. The tester cannot break the circuit but will act like a party line attached to the customer line.

3. If a voice call is already present, the buttset can be used to bridge onto the line as if it were another handset at the customer premises. The customer will probably be aware that another party has bridged onto the line, as the received voice power will drop, and any sound transferred by the buttset onto the line will be audible at the customer premises on both ends of the call.

4. If no voice service is present, the buttset will not pull dialtone when taken off-hook.

Measuring DC and AC voltages with the test access point.

A standard multimeter (or any equipment with high impedance input) may be used to measure DC or AC voltages between tip and ring. Clip the leads of the multimeter to the test access tip and ring connections provided. High impedance inputs are recommended to prevent service disruptions. If sufficiently high-impedance inputs are used, services may be monitored without service disruption or degradation.

1) DC voltages between tip and ring may be checked by setting the multimeter (or other test equipment) to the appropriate DC measurement mode. DC or "CO battery" voltage may be checked using this method.

2) AC voltages between tip and ring may be checked by setting the multimeter (oscilloscope or other test equipment) to the appropriate AC measurement mode.

3) An extension of AC measurements is to measure AC voltages at various frequencies or a range of frequencies of interest. Common signals may include active voice calls, DSL services, ambient noise or ingress signals. The location of the test access points ensures access to the full unfiltered frequency range of the outside plant twisted pairs. All traffic and noise on the twisted pair will be visible at the test access point, regardless of frequency. Using this method, active services and/or disturbers may be identified. Pieces of test equipment common used for this purpose are typically called spectrum analyzers or make claims to be able to measure "wideband noise".

VERIFYING DSLAM OR CUSTOMER PREMISES MODEM OPERATION USING THE TEST ACCESS POINT

Some test equipment and modem manufacturers offer a modem or modem feature in their test equipment intended for use in qualifying services in the field. Some of this equipment has the ability to emulate a CO modem, others the customer premises modem, while others still may be able to emulate both in the same package. Clip the leads of the modem or test equipment to the test access tip and ring connections provided.

If the operation of the DSLAM is what is to be tested, the test equipment must be configured to act as a remote modem, and should use a similar technology as the DSLAM (i.e. ANSI T1.413 Issue 2 DMT), and the DSLAM should be on and the pair in question configured and enabled. If a modem is present at the customer premises, it should be disconnected for the purposes of this test. **NOTE: some equipment may not establish a link with the DSLAM, as the outside plant pair will act as an enormous bridged tap.**

If the operation of the remote modem is what is to be tested, the test equipment must be configured to act as a CO modem, and should use a similar technology as the DSLAM (i.e. ANSI T1.413 Issue 2 DMT), and the customer premises modem in question should be configured and enabled. If a DSLAM is present, it should be either disconnected or disabled for the purposes of this test. Coordination between the ILEC and DLEC will be required should the DLEC determine its tests must be performed on a loop containing no battery. Since voice switches introduce battery on the line, the ILEC will need to have procedures in place for removing the battery while the DLEC performs these tests. Voice service is disrupted during this time, so the cooperation and approval of the end user customer is also needed.

Changes to the existing mechanized loop testing (MLT) procedures will not be required. It is anticipated that MLT tests will not be adversely affected by POTS-SPLITTER placements.

6. Tie Pair Installation & Management

6A. Tie Pair Installation

The placement of Tie Pairs between the Subscriber Main Distributing Frame (SMDF) and the Intermediate Distribution Frame (IDF) will be in accordance with the Method & Procedure *ADSL Method & Procedure for the Central Office*. In summary, 100 pair compliments of Exterior Shielded Cable and terminated on the SMDF using 100 pair connecting blocks. The Shield will not be terminated on the SMDF Frame. The connecting block used on the IDF side of the tie cable will use the (Corning Cable Systems) 139-N0128R001B. The last pin on the 128 IDF tie block will be hard wired to the last pin on the MECP connecting block, pin 100. The shield from the POTS-SPLITTER will be also be terminated on the last set of pins (last 4 of each 100 pair block). We need two pins for shield (S) punchings. Each tie will be 100 pairs or two 1249-050C (or equivalent) cables.

Each cable needs it's own shield lead going through the DF to an associated "S" punching on the CP block (so we don't have a ground loop). The best approach is to use the CP (MECP) block 97th pair Tip and Ring punchings for this (same pattern as existing Collocation tie cable methods). Another potential connection could be through the use of one punching (97th pair Tip) and double wrap the two shield leads going through the DF on that punching.

*** CAUTION ***

When the Tie Wrapping is being performed by the **SBC-13STATE** Authorized Vendors, emphasis must be given to the correct method of termination covered in Tab K, TP 76300MP. The amount of wire wraps per pin is dependent upon the gauge of the terminated cable; as seen below:

Gauge of Wire	Minimum Amount of Wire Wraps
20	5
22	5
24	6
26	7
28	7

The amount of wire wraps per gauge of cable may limit the ability of the **SBC-13STATE** Authorized Vendor. Wire gauge may restrict them to placing only one wire wrap **termination** per pin. In this case, the use of bifurcated rear pins (two pin appearances on rear connected to a single front pin) can be requested. Do not place multiple terminations on a connecting block pin and mis-wire with less wire warps per termination pin.

It is generally recommended that a minimum of six 100 (or equivalent) pair shielded tie cables be used to terminate to the cable frame. Where multiple lineups are present, a maximum of twelve 100 pair shielded tie cables may be placed which are grounded back to the twelve DSLAM and/or POTS-SPLITTER (MECP) Tie Block ground (S) terminations. The shielded cable must be terminated on the end cable frame using the following parameters: **There will be a shielded cable termination on each frame lineup of the cable termination frame, as a minimum.** This means that if the cable is terminated on two lineups of COSMIC® I/II made by Lucent Technologies (or equivalent) or conventional frames, shielded cable must be terminated on each lineup and must not use intra-frame unshielded tie facilities. In addition, **the cross-connect jumper length must not exceed 150 feet on any frame**. In extremely long single frames, the use of tie blocks placed at strategic points through the frame to limit the cross-connect distance is required. The shielded cable would be routed back within close proximity to the (MECP) Tie Blocks. The shielded cable tie blocks must be terminated in such a way as to minimize the cross-connect distance. This means that if an outside plant cable facility is terminated on two lineups of COSMIC or conventional frames, shielded cable tie blocks must be terminated on each lineup and unshielded intra-frame tie pairs must not be used. **Where COSMIC/Modular frames are utilized, use a minimum factor of 1.3 when placing the amount of 100 pair shielded tie block compliments as compared to the provisioning number of ADSL POTS-SPLITTER ports.**

> Tie Pair placement is existing and may be reused in many areas. Where the OSS is TIRKS, the pairs will need to be placed into SWITCH. The existing Tie Pair Ground arrangement does not need to be reterminated. New Tie Pair placements can use the MECP last pin on POTS-SPLITTER cable arrangements.

For the SWITCH Tie Pair naming convention SLAnn 1-nnnn, use the following example:

A Tie Pair Group of 600 pairs will read: SLA01 1-600. Each block will need its own Location Oriented Information System (LOIS) (where the block is located on the frame) on this tie pair sheet. ("SLA" stands for Shared Line Arrangement).

The previous shielded tie pair arrangement predominately used for ADSL UNE placements is ADSnn 1-nnnn. This will continue, predominantly for TIRKS assigned tie pairs.

> Note: Although the shielded tie cable is named SLAxx, SWITCH does not recognize it as being reserved for the exclusive use of Line Sharing. SWITCH bases its assignments on the frame that the cable is inventoried on rather than the name of the cable. SWITCH will assign the nearest available pair on the pseudo frame whether the cable is named SLAxx, ADSxx, etc. If SWITCH should assign to a cable other than SLAxx, this will be acceptable as long as the assigned cable is shielded and does not have T1/HDSL/1.544 Mb/s services.

6B. Frames

6B.1 Frame Naming Conventions

SBC-13STATE Frames will follow the SBC-Midwest frame naming convention. The Shielded tie pairs will be associated with the MDF and the IDF that will be named with a "P" prefix. Today, the SWITCH database uses the standard "F" prefix for the MDF and IDF**. When Line Sharing is deployed in a Central Office for the first time, the SWITCH database will need to be updated using a pseudo name for the IDF and will permit new tie pairs to only be assigned when the "P" type frame is specified. Only one pseudo assignment per frame is necessary.** The below listed example shows the change:

DLLSTXAD Central Office. The MDF is listed in SWITCH as F01. The IDF is listed as F02. We will add the following pseudo frame. The IDF frame, using P02, will represent the pseudo version of the F02.

The group installing these pairs must fill out the Tie Pair Form in Section 8 of this document and forward to the SWITCH DBM. The SWITCH DataBase Managers (DBM) must load not only the tie pairs, but build the pseudo frame via software in the SWITCH database.

For the SWITCH Tie Pair naming convention SLAnn 1-nnnn, use the following example:

A Tie Pair Group of 600 pairs will read: SLA01 1-600. Each block will need its own Location Oriented Information System (LOIS) (where the block is located on the frame) on this tie pair sheet. ("SLA" stands for Shared Line Arrangement).

The previous shielded tie pair arrangement predominately used for ADSL UNE placements is ADSnn 1-nnnn. This will continue, predominantly for TIRKS assigned tie pairs.

6B.2 Frame Exhaust and Management

NP&E Enterprise Technology Support has a parallel document for Frame management called SBC-002-136-003, *Frame Forecast M&P*. This material will describe the forecast strategy and placement for connector blocks on a conventional main distribution frame.

Caution should be advised when Dial-to-Dial conversions are in process in a Central Office. The placement of POTS-SPLITTERS should be frozen along with all other hardwire terminations until such time as the conversion has successfully converted frames. This issue will need to be carefully coordinated through Product Management and Collocation Services.

6C. Tie Pair Management

This document is being developed to provide the TEE Engineers and the Frame Planners with a process to monitor the capacity of central office tie pairs. Tie pairs (cross aisle, tie mains) are inventoried and assigned in SWITCH/FOMS/FUSA for Line Sharing. The SWITCH System has the capability to monitor the capacity of central office equipment. This is accomplished through building Threshold Reports in the SWITCH System, reference SBC-002-316-004*, Tie Pair Management M&P*. SBC-Midwest Engineering Staff has pioneered the use of this system to develop a series of Tie Pair Administration reports that may provide real-time monitoring for Planning and Operations personnel. The key to a successful implementation requires due diligence to the following standards:

- Inventories of Tie Pairs and Frame Assignments must be placed into the SWITCH/FOMS/FUSA databases accurately and promptly. This effort is essential to the success of this report process.

- The set-up of the Threshold Reports must be deployed through SWITCH in advance.

- The Central Office must be Configured for each Central Office using DIP parameters, reuse tie pair distance and maximum jumper length parameters. (Zones need to be determined, generally every 10 Verticals on a MDF).

- Access for pulling reports, Tie Pair updates and changes must be given to Line Engineering, Frame & Space Planners and Network Operations.

- Tie Pair assignments in SWITCH/FOMS/FUSA must be followed. "Picking a pair" must be mitigated.

6D. Mechanized Tie Pair Reports

NP&E Enterprise Technology Support Staff working with Information Services has developed a series of reports that can provide a mechanized method of monitoring tie pair utilization. This document, SBC-002-316-004, *Automated Central Office Tie Pair Capacity Management M&P*. Tie pairs are inventoried and assigned in SWITCH/FOMS/FUSA for Line Sharing. The SWITCH System has the capability to monitor the capacity of central office equipment. This is accomplished through building Threshold Reports in the SWITCH System.

7. Data Gathering Requirements

Network Planning & Engineering (Enterprise Staff) and the Operations Staff will be requesting cost analysis form the providers of Engineering (E), Furnished (F), and Installation (I). Turf (Cluster) Vendors and supporting organizations must be able to provide a breakout of costs by function in support of their charges. Material used should be clearly identified and priced by product. Cable runs must be listed separately. These all may be grouped for a final bill, but it will require an itemized breakout to support our Regulatory and Tariff Cost Study efforts. It is expected that copies of these bills will be requested. Network Operations staff working with NP&E will be ascertaining the Expense costs associated with the installation and maintenance of these Line Sharing services. These times and costs will be input into the Regulatory arena as well. Your cooperation on data submission is greatly appreciated.

8. Operational Support Systems

8A. Collocation Process

Collocators that want to order services in an unbundled line sharing arrangement will need to place a Collocation Application (new or augment) through Industry Collocation Service Center (CSC). If they place an Augment Collocation Application, the collocator will need to specify if they will use existing shielded DS0 interconnection pairs (cable name and pair range) or are ordering new interconnection DS0 cable specifically for line sharing and UNE capability.

In order to provide line sharing a POTS-SPLITTER must be installed in the Central Office where the line sharing services are requested. There are two options and types of splitters. The collocator will need to specify from the following:

- Physical/Virtual Integrated or Non-Integrated CLEC Owned

- Physical Non-Integrated ILEC Owned

- Physical Integrated (ILEC owned) to CLEC

- Pairs will be used for both Line Sharing and UNE orders. Both POTS-SPLITTER or MEDD and CFA (Connecting Facility Assignment) pairs for UNEs need to be inventoried in TIRKS and SWITCH/FOMS.

8B. Network Sales Support (NSS)

Once the Augment Application has been verified it is forwarded to NSS for implementation. NSS will issue the Directive/Application to the Facility/Digital/Transport Equipment Engineer. The Directive/Application needs to include the following:

- Type of POTS-SPLITTER, e.g. Physical Non-Integrated ILEC Owned

- CLEC Bay/RR location when POTS-SPLITTER owned by CLEC, if not available, a unique generic CFA will be used.

- Cable name and range of pairs: new, augment of additional pairs, or reuse of existing pairs.

- Pairs will be used for both Line Sharing and UNE orders. Both POTS-SPLITTER or MEDD and CFA (Connecting Facility Assignment) pairs for UNEs need to be inventoried in TIRKS and SWITCH/FOMS.

If the Collocator provides/owns the POTS-SPLITTER they may provide the Bay/RR location where they will install the splitter. If collocator has a virtual or cageless collocation installation, the Bay/RR will be standard nomenclature, e.g. Bay/RR 01005.014, Shelf 01, Ports 001-100. **If the collocator is caged, is reusing pairs, or is augmenting a cageless/virtual collocation installation and collocator can not provide Bay/RR, we will assign a generic Bay/RR code as follows:**

47

Floor = floor where cage is located	Aisle = unique generic aisle or CLEC ACNA/CLLI/OCN	Bay = unique generic Splitter Bay number	Shelf = unique generic Splitter number	Port = ports
01	AAA/ANN	001, 002, etc.	01, 02, etc.	001-100

Example: MEOE.IR01AKJ.001.01-001-100

When the collocator provides/owns the POTS-SPLITTER it is the collocator's responsibility to maintain, capacity manage, and assign each port. However, in order for SWITCH to assign the POTS-SPLITTER when the collocator places a Service Order utilizing line sharing, the POTS-SPLITTER Bay/RR data must be inventoried in SWITCH. The inventory is required for both the ILEC and CLEC owned POTS-SPLITTERs.

If the POTS-SPLITTER is provided/owned by the collocator and the collocator chooses to reuse/redesignate existing DS0 interconnection pairs for Line Sharing, then the existing CFA pairs **DO NOT** need to be deleted from SWITCH and deleted or restricted as non-assignable in TIRKS. The MDF/IDF frame block where those DS0 pairs are terminated needs to be stenciled for Line Sharing in addition to the current CFA stenciling.

If the Collocator elects to rearrange the DS0 interconnection cabling terminations within their collocation equipment footprint; whether Line Sharing or UNE CFA, the Collocator will be responsible to manage the ILEC provided inventory in the Collocator's inventory database. (An example of this change would be the retermination of cable from the ILEC frame within the CLEC's equipment bay to another point in the Collocator's same space assignment.) Re-stenciling and reinventory of the embedded ILEC provided CFA terminations on ILEC frame systems would not be required unless requested by the CLEC. Charges for this effort would be dependent on tariff or ICA/MOU.

Customer Assignment Data

The collocator will always control and assign their VF/DS0 cable Connecting Facility Assignment (CFA) assignment which is also converted to the MEDD input in SWITCH. In addition, when the collocator owns the splitter they have assignment control and will need to include the splitter assignment in the Remarks Section on the LSR/ASR in the following format:

Integrated/Non-Integrated Hardwired (Data pairs hardwired at CLEC Splitter) -CLEC Owned

SPLT.IRNNNNN.ANN.NN-NNN = Splitter
MEOE.IRNNNNN.ANN.NN-NNN = Voice
MECP.IRNNNNN.ANN.NN-NNN = Voice & Data

Non-Integrated Not Hardwired – CLEC Owned

SPLT.NRNNNNN.ANN.NN-NNN = Splitter
MEDT.NRNNNNN.ANN.NN-NNN = Data
MEOE.NRNNNNN.ANN.NN-NNN = Voice
MECP.NRNNNNN.ANN.NN-NNN = Voice & Data
MEDD.AAACCCCC.PPP = DS0 Interconnection pairs used for Line Sharing.

NOTE: This configuration could only apply when the CLEC owns the POTS-SPLITTER and is reusing/re-designating existing DS0 pairs for Line Sharing.

Non-Integrated – ILEC Owned

<u>SWITCH Line Sharing Inventory</u>
MEDD.AAACCCCC.PPP = DS0 Interconnection pairs used for Line Sharing.
        (Cable Name.pair range)

<u>SWITCH CFA UNE Inventory (SBC-West)</u>
Cable Name/pair range

<u>TIRKS CFA UNE Inventory (SBC-SNET, SBC-Midwest, SBC-Southwest)</u>
Cable Name/Cable Type/Pair/LOCA/LOCZ

<u>Customer CFA – Data Customer Enters on LSR/ASR</u>
Cable Name/Cable Type/Pair/LOCA/LOCZ

NOTE: When the POTS-SPLITTER is owned by the ILEC, the DS0 CFA (MEDD pairs) are the CFA information the CLEC uses for assignment on the LSR/ASR. The DS0 pairs are inventoried in SWITCH as MEDD, however the CFA assignment the CLEC places on their LSR/ASR is in the standard CFA format. The standard CFA format (cable name/cable type/pair/LOCA/LOCZ) is what is given to CLEC for LSR/ASR Line Sharing orders and also their UNE orders. The ILEC owned POTS-SPLITTER is shared by many CLECs and assigned by the ILEC.

8C. Equipment Engineer (TEE/FEE/DTE)

    The Equipment Engineer will receive the Directive/Application from NSS requiring a job to provide DS0 cable pairs for Line Sharing for a collocator. The Directive/Application will include the cable name and pair range and if it's new or reuse of existing cable. Also, if the POTS-SPLITTER will be provided/owned by the collocator. When the collocator provides/owns the POTS-SPLITTER it will always be inventoried and assigned as Integrated even when it is physically Non-Integrated. If the CLEC is requesting new cable, the cable will have dual use (Line Sharing and UNE). This means the inventory must be added to SWITCH/FOMS and TIRKS. For SBC-West the SWITCH/FOMS inventory must be input for both Line Sharing and UNEs and TIRKS as UNEs.

    The Engineer will contact the Common Systems Frame/Space Planner (CSFSP) to determine if an IDF exists or will one be installed. The CSFSP is responsible for providing the H-IDF/H-MDF frame, zone, vertical, and H-Shelf where the POTS-SPLITTER terminating blocks will be installed. The CSFSP is also responsible for initiating a job to install an IDF if required and to determine if shielded tie pairs are required between the IDF and MDF. The Central Office Engineer (COE) will write the job to install the IDF and shielded tie pairs and submit the input of the shielded tie pairs to the SWITCH Database Input Manager.

    Based on the office deployment strategy the ILEC owned POTS-SPLITTER shelves that are installed and wired but not equipped with cards will be inventoried in SWITCH with an unequipped status (UNQ). The SWITCH Utilization Reports that will be provided to Network Engineering Planners will indicate how many ports are installed, working, spare, and unequipped. When spare capacity reaches a level that requires an augment, the Planner will need to issue a directive to equip additional shelves. The Equipment Engineer will need to write a job to order

cards and equip the shelves and also send an update to the SWITCH Database Manager to show the unequipped as working.

The Equipment Engineer is responsible for completing and forwarding to the SWITCH input via the SWING (SWITCH Inventory Gateway) Web Site (M&P located on Transport Data Web Site M&P 01-008) which supports the POTS-SPLITTER and the interconnection cable (Collocator CFA) that is used for Line Sharing and UNEs . Also, the CPC for the TIRKS CFA inventory. (see section on SWITCH Inventory Examples).

If the POTS-SPLITTER is provided/owned by the collocator and the collocator chooses to reuse/redesignate existing or add new DS0 interconnection pairs for Line Sharing, the MDF/IDF frame block where those DS0 pairs are terminated needs to be stenciled for Line Sharing in the following manner:
Note: If reuse of existing CFA pairs, do not remove CFA stenciling. If new pairs add both Line Sharing and CFA stenciling. Line Sharing DS0 (MEOE/MECP) needs to be consecutive on one frame connecting block per OE or CP terminations respectively.

8D. Switch Inventory

The Collocator DS0 interconnection cable (CFA) dedicated for line sharing will be inventoried in SWITCH. SBC-West, where the DS0 interconnection pairs are all currently inventoried in SWITCH, **will not** be removed. All CFA currently inventoried in TIRKS **will not be removed or restricted.**

When the collocator provides/owns the POTS-SPLITTER and requests new DS0 pairs, they will be inventoried in SWITCH (SBC-West as Line Sharing and UNE pairs) and TIRKS as UNE pairs. If the pairs are reused pairs they **will not** to be removed/changed in SWITCH and removed or restricted in TIRKS. These DS0 pairs are used for Line Sharing and also can be used for UNE orders.

For Floor/Aisle: Use unique generic Floor/Aisle (FF/AAA = FF/CLLI ACNA/CLLI/OCN or unique generic aisle as noted below: FF/AAA = Three (3) Numeric Characters and/or Contains Alpha Characters

For Floors 1 to 9:
NOTE: For floors numbered 1 to 9, there is no change in the numbering scheme! Use the below (original) numbering scheme.

Original (ME) Floor and Aisle numbering scheme:
FFAAA
FF   =   Floor   (Floors 01 to 09 - A 0 (zero) is added in front of the one digit floor number)
AAA   =   Aisle   (Aisles 01 to 99 - the one digit **floor number is always repeated** as the first character and, if necessary, a leading 0 (zero) is added to the aisle number)

Example: Floor 3, Aisle 1   = 03301 (FF=03 for Floor 3 and AAA=301 for Aisle 01)

The above scenario would not work if the floor is numbered 10 and above (see new example below).

For Floors 10 and above:

NOTE: For floors numbered 10 and above, there is a change in the numbering scheme! Use the below (new) numbering scheme.

New (ME) Floor and Aisle numbering scheme:
FFAAA
FF   =   Floor   (Floors 10 to 99 - the two digit floor number is used)
AAA   =   Aisle   (Aisles 001 to 999 - Leading 0's (zeros) are added to make the aisle a 3 digit number)
Example: Floor 10, Aisle 15 = 10015 (FF=10 for Floor 10, AAA=015 for Aisle 15)

Non-Standard Aisle Configurations in the Field

Exception 1

If your aisle has 4 numbers, replace the first two with one zero.
        Example: Aisle 3426 would become 026.
        Example: Aisle 0118 would become 018

Exception 2

If your aisle includes a letter, drop the number in the aisle that designates the floor number.
        Example: Aisle 116A would become 16A
        Example: Aisle A117 would become A17

Exception 3

If your aisle includes four digits and an alpha numeric drop the first two digits
        Example: Aisle 0113A would become 13A

EXHIBIT #1

COLLOCATION ARRANGEMENT	INVENTORY POTS-SPLITTER IN SWITCH	ADD, REMOVE/ RESTRICT DS0 PAIRS IN TIRKS	ADD, DELETE, OR CHANGE DS0 PAIRS IN SWITCH	STENCIL IDF/MDF	COLLOCATION PROVISIONING SCHEDULE
Existing Caged Space. Collocator will provide/install POTS-SPLITTER (**IR/NR Data pairs hardwired at Splitter**). Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.	Use generic Bay/RR	NR	NR	Stencil existing DS0 blocks with POTS-SPLITTER (MEOE) (MECP)	Augment
Existing Caged Space. Collocator will provide/install POTS-SPLITTER (**NR Data pairs not hardwired at Splitter**). Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.	Use generic Bay/RR	NR	Add MEDD pairs	Stencil existing DS0 blocks with POTS-SPLITTER (MEDT) (MECP) (MEOE)	Augment
Existing Caged Space. Collocator will provide/install POTS-SPLITTER. Collocator will add DS0 pair range for Line Sharing & UNEs	Use generic Bay/RR	Add UNE CFA pairs	SBC-West Add UNE CFA pairs	Stencil blocks with POTS-SPLITTER (MEOE) (MECP) and CFA pairs	Augment
Existing Caged Space. Collocator will use Telco provided POTS-SPLITTER. Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0		NR	Add MEDD pairs	Do <u>not</u> re-stencil CFA DS0 pairs.	Augment

pair range.					
Existing Caged Space. Collocator will use Telco provided POTS-SPLITTER. Collocator will add DS0 pair range for Line Sharing & UNEs		Add UNE CFA pairs	Add MEDD and SBC-West UNE CFA pairs	Stencil as CFA pairs	Augment
Existing Cageless/Virtual Space. Collocator will provide/install POTS-SPLITTER in existing Bay (**IR/NR Data pairs hardwired at Splitter)**. Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.	Use generic Bay/RR or Collocator Bay/RR	NR	NR	Stencil existing DS0 blocks with POTS-SPLITTER (MEOE) (MECP)	Augment

COLLOCATION ARRANGEMENT	INVENTORY POTS-SPLITTER IN SWITCH	REMOVE/ RESTRICT DS0 PAIRS IN TIRKS	ADD, DELETE, OR CHANGE DS0 PAIRS IN SWITCH	STENCIL IDF/MDF	COLLOCATION PROVISIONING SCHEDULE
Existing Cageless/Virtual Space. Collocator will provide/install POTS-SPLITTER in existing Bay (**NR Data pairs not hardwired at Splitter)**. Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.	Use generic Bay/RR or Collocator Bay/RR	NR	Add MEDD pairs	Stencil existing DS0 blocks with POTS-SPLITTER (MEDT) (MECP) (MEOE)	Augment
Existing Cageless/Virtual Space. Collocator will provide/install POTS-SPLITTER in new Bay. Telco will assign floor space for new Bay and assign Bay/RR. Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.	Use generic Bay/RR or Collocator Bay/RR	NR	NR	Stencil existing DS0 blocks with SPLITTER (MEOE) (MECP)	Initial Installation
Existing Cageless/Virtual Space. Collocator will provide/install POTS-SPLITTER in existing Bay. Collocator will add DS0 pairs for Line Sharing and UNEs.	Use generic Bay/RR or Collocator Bay/RR	Add UNE CFA pairs	SBC-West Add UNE CFA pairs	Stencil new DS0 blocks with POTS-SPLITTER (MEOE) (MECP) and CFA	Augment
Existing Cageless/Virtual Space. Collocator will provide/install POTS-SPLITTER in new Bay. Telco will assign floor space for new Bay and assign Bay/RR. Collocator will add DS0 pairs for Line Sharing and UNEs.	Use generic Bay/RR or Collocator Bay/RR	Add UNE CFA pairs	SBC-West Add UNE CFA pairs	Stencil new DS0 blocks with POTS-SPLITTER (MEOE) (MECP) and CFA	Initial Installation

		NR	Add new MEDD pairs	Do not re-stencil CFA DS0 pairs.	Augment
Existing Cageless/Virtual Space. Collocator will use Telco provided POTS-SPLITTER. Collocator will use existing DS0 pairs for Line Sharing. Collocator needs to designate DS0 pair range.					

COLLOCATION ARRANGEMENT	INVENTORY POTS-SPLITTER IN SWITCH	REMOVE/ RESTRICT DS0 PAIRS IN TIRKS	ADD, DELETE, OR CHANGE DS0 PAIRS IN SWITCH	STENCIL IDF/MDF	COLLOCATION PROVISIONING SCHEDULE
Existing Cageless/Virtual Space. Collocator will use Telco provided POTS-SPLITTER. Collocator will add DS0 pairs for Line Sharing and UNEs.		Add UNE CFA pairs	Add MEDD and SBC-West UNE CFA pairs	Stencil as CFA pairs	Augment
New application for Caged collocation space. Collocator will provide/install POTS-SPLITTER.	Use generic Bay/RR	Add UNE CFA pairs	SBC-West Add UNE CFA pairs	Stencil blocks with SPLITTER (MEOE) (MECP) and UNE CFA	Initial Installation
New application for Caged collocation space. Collocator will use Telco provided POTS-SPLITTER.		Add UNE CFA pairs	Add MEDD and SBC-West UNE CFA pairs	Stencil as CFA pairs	Initial Installation
New application for Cageless/Virtual collocation space. Collocator will provide/install POTS-SPLITTER.	Use generic Bay/RR or Collocator Bay/RR	Add UNE CFA pairs	SBC-West Add UNE CFA pairs	Stencil new DS0 blocks with POTS-SPLITTER (MEOE) (MECP) and UNE CFA	Initial Installation
New application for Cageless/Virtual collocation space. Collocator will use Telco provided POTS-SPLITTER.		Add UNE CFA pairs	Add MEDD. SBC-West UNE CFA pairs	Stencil as CFA pairs	Initial Installation

9. Cost Accounting for X to C Transfers

If the surplus equipment is still charged to an open job and the investment is under – construction (Account 2003) perform a C to C transfer to move the material dollars to the new jobs.

Refer to the following Documents:

Transfer Type	Explanation	Process
Open Job – Under Construction	Defined as Job Open with investment in Account 2003. The types of movements are: • all charges moved to another open job • correcting billing classification • correcting/changing FRC or location • material transferred to another open job	Engineer communicates changes to the DCPR via the form utilized in your region. **Validation**: Job Ledgers from Accounting and/or the Open Asset Search GUI in PICS/DCPR

If the surplus equipment is still charged to an open job but the investment has been turned up (in-service Account 2001) the equipment must be retired prior to moving it. Do an X to C transfer to move the material dollars to the new job.

Transfer Type	Explanation	Process
Open Job – In Service	Defined as Job Orders, Routine Estimates, Big Jobs or open jobs where investment has been placed into service. **Condition**: Equipment not installed and there are no installation dollars on this job at this location.	Engineer notifies DCPR associate of material dollars and possibly engineering dollars that need to be transferred to another job. Dollars are turned down and deleted from PHOIA format in PICS/DCPR. On "To job" dollars are loaded manually as paid dollars in PICS/DCPR. Material detail is input into PHOIA for "To job". **Validation**: Job Ledgers from Accounting and/or the Open Asset Search GUI in PICS/DCPR.

Material that is in-service (no longer associated with an open job) must be retired prior to reuse. Perform an X to C transfer, after the retirement, to move the material dollars to the new job.

Transfer Type	Explanation	Process
Hardwired X To C or Immediate Reuse	Immediate Reuse – to be used when material has been retired and is needed within 60-90 days by another organization. Simply saves the step of moving the equipment into the 1220.142 Reuse Account and then immediately taking it out again. Impacts the budget as "reuse".	The Engineer communicates the need for Immediate Reuse to the Reuse Coordinator. The Reuse Coordinator will assist in the completion of the required forms. **Validation**: Job Ledgers from Accounting and/or the Open Asset Search GUI in PICS/DCPR

Notify your Cost/DCPR group to update the PICS/DCPR records. Additional information regarding transfers can be found in the "General Methods and Procedures for Handling "Found", Excess and Stranded Material" M&P located at http://dcprsupport.ameritech.com/StrandMat.doc or in the training document "Plug In Inventory Control System/Detailed Continuing Property Record An Overview" found at http://dcprsupport.ameritech.com/EngineerDCPRTraining.doc. Any questions regarding this process should be referred to the PICS/DCPR Support Staff.

10. References

   For further information or electronic copies of this document and related information, visit either of the internal **SBC-13STATE** Web sites: **http://home.sbc.com/commonsystems/** or **http://apex.sbc.com**. Drawings may be viewed on the internal **SBC-13STATE** Web Site: **http://woodduck/standarddrawings/sbc/cbc-index.htm**

Document	Description	Issue & Date
SBC-002-203-001, Section 18	SBC-Transport-Infrastructure Deployment Guidelines (IDG) for POTS-SPLITTERS	Issue 1, Jun 2002
SBC-002-316-001	SBC-UNE Deployment in the Central Office	Issue 2.1, Jan 2001
SBC-002-316-002	SBC-Collocation Provisioning Guidelines (CPG) M&P	Issue 14, Mar 2003 (Pending)
SBC-002-316-003	SBC-Frame Deployment M&P	Issue 8, Jul 2001
SBC-002-316-004	SBC-Tie Pair Management on MDF/IDF Frames	Issue 2, Feb 2003
SBC-002-316-005	SBC-POTS-SPLITTER Management M&P	Issue 2, Feb 2003
SBC-002-316-006	SBC-Line Sharing Deployment M&P	Issue 10, Feb 2003
SBC-002-316-007	SBC-Special Interconnection Arrangement (SIA-BFR)	Issue 4.1, Jan 2001
SBC-002-316-008	SBC-CLEC Cable Placement & Removal M&P	Issue 7, Jan 2002
SBC-002-316-009	SBC-ADSL for the Central Office M&P	Issue 12.1, Jan 2001
SBC-002-316-010	SBC-CLEC Line Sharing (CLEC Version) (to be replaced by SBC-TP76702MP-000 in Mar 2003)	Issue 7.0, Nov 2000
SBC-002-316-012	SBC-Line Splitting Deployment M&P	Issue 6, Mar 2003 (Pending)
SBC-002-316-015	SBC-Discontinuance of CLEC Equipment/Wiring M&P	Issue 5, Feb 2003
SBC-002-316-013	SBC-Discontinuance Cost Worksheet	Issue 5, Feb 2003
SBC-002-316-047	SBC-NP&E Discontinuance Finance Cost M&P	Issue 3, Jun 2002
SBC-002-316-075	SBC-SWITCH Inventory Gateway M&P	Issue 1, Jul 2001
SBC-002-316-101	SBC-Wire Center Planning for the Central Office M&P	Issue 9, Dec 2002
SBC-002-531-023	SBC-Transport: Frame: Line Sharing-ADSL	Issue 8, Jan 2003
SBC-002-217-042	SBC-Retirements/Removals and Reapplication/3 Party Purchases for Switching/Transport/Common Systems COE Engineering/Reuse/Coordinators/DCPR/Finance	Issue 1.4, Nov 2002
SBC-002-217-099	SBC-Transport: PICS/DCPR: M&P for Plug-In Retirements/Removals/Returns	Issue 1, Jan 2003
SBC-002-604-007	SBC-PICS/DCPR M&P for the Retirement & Salvage of Central Office Equipment	Issue 2, Feb 2003
SBC-E-01891-W	SBC-POTS-SPLITTER Wiring Drawings	Current
SBC-E-01891-E	SBC-POTS-SPLITTER Engineering Drawings	Current
U09	SBC-Building Block-One Bay with one POTS-SPLITTER Shelf	Current
U10	SBC-Building Block-POTS-SPLITTER Shelf only	Current
U10X	SBC-Building Block-POTS-SPLITTER Supplemental Shelf on same job	Current
SBC-NOTICE-000-000-368	SBC-POTS-SPLITTER Card Inspections & Replacements	Issue 3, Apr 2002
SBC-NOTICE-000-000-609	SBC-POTS-SPLITTER Discontinuance	Issue 1, Nov 2002
SBC-NOTICE-000-000-609	SBC-Revocation Notice of Discontinuance	Issue 2, Feb 2003
TP 76200MP	SBC-Network Equipment – Building Systems	Current Issue
TP 76300MP	SBC-Installation Guide within the Central Office	Current Issue
TP 76400MP	SBC-Detail Engineer Requirements for the C.O.	Current Issue
TP 76900MP	SBC-Installation Standard Requirements	Current Issue

11. Contacts

Steve Weinert, Associate Director-Enterprise Technology Support (Common Systems)
(214) 858-1355, E-Mail: sw0872@txmail.sbc.com

Ernest Riojas, Area Manager-Enterprise Technology Support (Common Systems Standards)
(214) 858-0816, E-Mail: er0873@txmail.sbc.com.

Tony Raucci, Area Manager-Enterprise Technology Support (Common Systems Standards)
(203) 553-2358, E-Mail: ar2878@ctmail.snet.com

Linda McCurley, Area Manager-Enterprise Technology Support (Common Systems Standards)
(405) 291-7282, E-Mail: lm8492@okmail.sbc.com

Sha Hoda, Area Manager-Enterprise Technology Support (Common Systems Standards)
(626) 308-8618, E-Mail: sxhoda@msg.pacbell.com

Mark Powers, Area Manager-Enterprise Technology Support (Common Systems Standards)
(775) 333-3999, E-Mail: mp5645@msg.nvbell.com

Mike Mores, Area Manager-Enterprise Technical Support (TEE Support)
(815) 727-0500, E-Mail: michael.mores@ameritech.com

Ed Granger, Area Manager-Enterprise Technology Support (SNET-Common Systems)
(203) 553-8180, E-Mail: eg1724@ctmail.snet.com

Bill Oakes, Area Manager-Enterprise Technology Support (Engineering Drawings)
(925) 823-4351, E-Mail: wo3696@camail.sbc.com

Bill Markwell, Sr. Contract Manager-Procurement Contracting
(847) 248-2855, E-Mail: william.markwell@msg.ameritech.com

Tom Sappenfield, Area Manager-Product Integration
(317) 265-6090, E-Mail: tom.g.sappenfield@msg.ameritech.com

Michael Odle, Area Manager-Network Regulatory
(214) 858-1398, E-Mail: mo4150@txmail.sbc.com

Kim Forrest, Area Manager-Network Operations
(262) 549-7162, E-Mail: kimberly.a.forrest@msg.ameritech.com

Louise Hutto, Product Manager-DSL
(214) 858-0172, E-Mail: lk9389@txmail.sbc.com

Jason McCoy, Product Manager-Line Sharing
(312) 335-2920, E-Mail: jason.m.mccoy@msg.ameritech.com

Mario Garza Jr., General Manager-Network Regulatory
(214) 858-1337. E-Mail: mg6957@txmail.sbc.com

Mary Cerniglia, General Manager-Network Planning & Engineering (Common Systems &
Transport) (925) 823-4280, E-Mail: mc1856@camail.sbc.com

12. Copyright Page

Trademarks: Windows 95, 97, 98, 2000, NT, ME, XP, Excel, Word for Windows, PowerPoint,
Internet Explorer, Office Professional 97, Visio 2000, Visio Professional 2002, Visio Enterprise
Network Tools and Microsoft are trademarks of the Microsoft Corporation. Netscape Navigator is
a trademark of the Netscape Corporation. AutoCAD 2000, 2000i & 2002 are trademarks of the
Autodesk Corporation. Adobe Acrobat 5.0, 4.0 and PDF are trademarks of the Adobe
Corporation. Common Language®, SWITCH®, TIRKS®, CLEI®, CLLI® and CLFI® are
registered trademarks of Telcordia Technologies Inc.

Publisher: Network Planning & Engineering – Common Systems Standards
SBC Services Inc.
3 Bell Plaza, Rm 1610.A4
Dallas, Texas 75202